



**PALGRAVE STUDIES IN DEMOCRACY, INNOVATION,
AND ENTREPRENEURSHIP FOR GROWTH**

SERIES EDITOR: ELIAS G. CARAYANNIS



Paradigm Shift in Business

Critical Appraisal of Agile
Management Practices

Edited by
Rajagopal · Ramesh Behl

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Palgrave Studies in Democracy, Innovation,
and Entrepreneurship for Growth

Series Editor

Elias G. Carayannis, The George Washington University, Washington,
DC, USA

The central theme of this series is to explore why some areas grow and others stagnate, and to measure the effects and implications in a trans-disciplinary context that takes both historical evolution and geographical location into account. In other words, when, how and why does the nature and dynamics of a political regime inform and shape the drivers of growth and especially innovation and entrepreneurship? In this socio-economic and socio-technical context, how could we best achieve growth, financially and environmentally?

This series aims to address such issues as:

- How does technological advance occur, and what are the strategic processes and institutions involved?
- How are new businesses created? To what extent is intellectual property protected?
- Which cultural characteristics serve to promote or impede innovation? In what ways is wealth distributed or concentrated?

These are among the key questions framing policy and strategic decision-making at firm, industry, national, and regional levels.

A primary feature of the series is to consider the dynamics of innovation and entrepreneurship in the context of globalization, with particular respect to emerging markets, such as China, India, Russia, and Latin America. (For example, what are the implications of China's rapid transition from providing low-cost manufacturing and services to becoming an innovation powerhouse? How do the perspectives of history and geography explain this phenomenon?)

Contributions from researchers in a wide variety of fields will connect and relate the relationships and inter-dependencies among (1) Innovation, (2) Political Regime, and (3) Economic and Social Development. We will consider whether innovation is demonstrated differently across sectors (e.g., health, education, technology) and disciplines (e.g., social sciences, physical sciences), with an emphasis on discovering emerging patterns, factors, triggers, catalysts, and accelerators to innovation, and their impact on future research, practice, and policy.

This series will delve into what are the sustainable and sufficient growth mechanisms for the foreseeable future for developed, knowledge-based economies and societies (such as the EU and the US) in the context of multiple, concurrent and inter-connected "tipping-point" effects with short (MENA) as well as long (China, India) term effects from a geo-strategic, geo-economic, geo-political and geo-technological set of perspectives.

This conceptualization lies at the heart of the series, and offers to explore the correlation between democracy, innovation and growth.

Rajagopal · Ramesh Behl
Editors

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PROLOGUE

Business agility has emerged as an important strategy tool for the firms to cut across the increasing competition in the emerging markets in the twenty-first century. The competitive performance of the firm is significantly driven by the changing customer needs. Business agility influences a firm's performance to manage market complexity with flexible strategies. Effective implementation of strategies with business agility needs firms to develop abilities on market sensing, flexibility, speed, and responsiveness.¹ These attributes allow firms to co-create and coevolve with customer-centric strategies in a changing environment and respond rapidly to the complexities by reconfiguring their business tactics. Start-up enterprises are well known for acting quickly, but continuous evolution maintaining the early momentum is often a big challenge. The large and established companies often become bureaucratic because the rules, policies, and management layers developed to leverage economies of scale deter their ability to move fast. However, agility in business seems to be easy but is hard to practice breaking the conventional management practices. The agile organizations paradoxically learn to be both stable (resilient, reliable, and efficient) and dynamic (fast, nimble, and adaptive). To grow agile companies must design structures, governance arrangements, and

¹ Vaillant, Y. and Lafuente, E. (2019). The increased international propensity of serial entrepreneurs demonstrating ambidextrous strategic agility: a precursor to international marketing agility. *International Marketing Review*, 36 (2), 239–259.

processes with a relatively consistent set of core elements driving their performance.²

Agile business processes tend to easily adjust plans and strategies for responding swiftly to new opportunities and the emerging challenges. While business with the social media channels, companies work in the interactive digital environment, which demands implementing flexible business strategies in view of the crowd behavior and social consciousness of customers. Agile methodology is an alternative to Waterfall methodology—the rigid, top-down approach to project management that most marketers follow.³ The broad goals of agile business include improving the speed, predictability, transparency, and adaptability to changing market scenarios. Managers working with agile business strategies benefit from continuous feedback on products and services by the customers and stakeholders that allow the managers flexibility in developing strategies to adapt to changing market scenarios. Working in an agile business environment is a team approach within the firm. The basic manifesto of agile business encompasses core values and principles that are crucial for achieving performance through co-created and coevolved business strategies.⁴

This book discusses the socialization of business as a corporate philosophy to understand people in general, and customers and stakeholders to motivate the co-creation of value-based business performance. Reviewing a wide range of literature from empirical research studies to best practices followed by the companies, this book analyzes the emerging theories of inclusiveness in business, corporate social responsibility, social learning, and value co-creation. The concepts and models developed in the book are central to people’s involvement and their engagement in business with the increase in social-responsive behavior of companies to support coevolution of business with customers and stakeholders. Thematically,

² Karimi-Alaghehband, F. and Rivard, S. (2019). Information technology outsourcing and architecture dynamic capabilities as enablers of organizational agility. *Journal of Information Technology*, 34 (2), 129–159.

³ Thesing, T., Feldmann, C., and Burchardt, M. (2021). Agile versus Waterfall Project Management: Decision Model for Selecting the Appropriate Approach to a Project. *Procedia-Computer Science*, 181, 746–756.

⁴ Ghezzi, A. and Cavallo, A. (2020). Agile Business Model Innovation in Digital Entrepreneurship: Lean Startup Approaches. *Journal of Business Research*, 100, 519–537.

the discussion on these perspectives is interpreted as an inclusive business process with multi-layered marketing strategies across various geo-demographic segments. The focus of the discussion on inclusive business is precisely on using collective intelligence and collective performance through social networks, leadership, and crowd consciousness. This book deliberates upon critical success factors of firms, which include diversity and cross-functionality by managing the triple and quadruple bottom-line. It is argued in the book that timely deployment of streamlined crowd-based marketing strategies in chaotic markets could enhance the effects of social innovation, increase the value spread among consumers, and reduce the growing complexities in the global and regional markets. Collective intelligence creates intrinsic and extrinsic motivation with distinctive effects on prosocial behavior, which helps firms to understand the effects of crowd behavior.⁵ This book presents new insights on developing inclusive business models using both aggressive (crowd-driven) and defensive (competitive) marketing strategies in the inclusive business models. The book guides managers on both marketing tactics and strategies using the 5Ts concepts for managing time (first mover advantage), territory (new market segments), target (potential consumers), thrust (competitive), and tasks (co-creation).

This edited volume aims at delivering an anthology of articles on inclusive businesses in developing economies with focus on converging people, planet, and profit. The selected articles have global-local business imperatives. This volume critically analyzes inclusive business practices, public policies, social ideologies, and stakeholder values from the perspectives of changing business philosophy. The anthology of selected papers in this volume enriches the knowledge and skills on contemporary entrepreneurship models and convergence stakeholder-centric business strategies. This book contemplates developing inclusive business models to match the changing priorities of regional economic development in the developing countries. This edited volume is divided into six sections consisting of corporate responsiveness, financial management perspectives, human resources management, inclusivity and entrepreneurship, marketing, and case studies. These sections comprise conceptual and empirical research articles and case studies across the geo-demographic

⁵ Festré, A. and Garrouste, P. (2015). Theory and evidence in psychology and economics about motivation crowding out: a possible convergence? *Journal of Economic Survey*, 29 (2), 339–356.

segments of emerging markets. In all, twenty-three chapters covering India, Mexico, Canada, and Africa are included in this volume.

The principal audience of this book are managers, researchers, and students of business economics, business strategy, product development, innovation management, and international trade. Thematically, this book covers varied studies on inclusive business models with a focus on people-led enterprises. This anthology would serve as a guide and think tank for researchers, management students, entrepreneurs, policy makers, and corporate managers.

Mexico City, Mexico
Bhubaneswar, India
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Rajagopal
Ramesh Behl

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PART I

Introduction



Transforming Businesses at the Grassroots: A Drive Through Agile Practices

Rajagopal

CROWD, CONSUMPTION, AND BUSINESS

The values of crowd cognition and collective intelligence are represented as *crowd capital*, which embeds customer perceptions and emotions. Successful firms converge these values with strategic vision and bottom-up management approaches to gain competitive leverage in the market. The crowd capital has been defined as an organizational resource acquired through crowdsourcing in the form of collective intelligence (Prpić et al., 2015). Most companies have experimented radical shifts in business strategies over the conventional wisdom to gain sustainable competitive advantage. Some of these strategies are people-centric and crowd-based, which have encouraged customer engagement in today's heterogeneous and hypercompetitive global business environment. Strategic agility, therefore, is a meta-capability of companies that enables them to create

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customer and stakeholder values and deploy dynamic competitive strategies in a balance over time (Fourne et al., 2014). Companies should aggregate such information to identify the high-risk areas in practicing business agility and develop actions areas to respond to the contingencies. It is also necessary to map potential future scenarios that can consider the reaction of competitors and shifts in consumer behavior. Increased success on corporate and customer fronts has laid the foundation for co-creating business models, which has encouraged alliances between companies and social networks, and improved their capabilities to deliver value (Burgmann & Prahalad, 2007).

Agility and agile transformation are the two facets of business, and both are correlated with business performance. Besides design-driven and technology-oriented marketing strategies, the market competition of the twenty-first century is largely driven by social stimuli, behavioral shifts in consumption, and crowd intervention. Therefore, cutting-edge marketing strategies across geodemographic segments are widely influenced by individual and group behavior, collective intelligence, and neurobehavioral emotions. People (crowd) tend to disseminate persuasive messages, which aim to alter the attitude of consumers and overall consumption behavior. Besides many operational elements, agility in business is primarily linked to the social and economic postulates of consumer behavior. The change of mind among consumers is induced by self- and social concepts that govern the business strategies, technologies, and end-user values to leverage market competition. In addition to customer satisfaction, most agile business models are mainly driven by corporate values by *putting the people first* and by the agility to adopt the revised norms quickly (Nath et al., 2021). The need for agility in business is also driven by crowd behavior, cultural dynamics, shared visions, and the increasing interactivities on social media.

Agile marketing approaches help firms to develop meaningful relationships with their customers and stakeholders through loyalty and business-growth programs, respectively. Holistically, agile practices in business embed various sensitive touch points, offering comprehensive customer services to co-create values, and empower customers and stakeholders to participate in innovation and business processes. Recognizing customers' needs and market gaps, it is possible for marketers to find new customers and market spaces and gain valuable insight into the competitive marketplace. Consequently, it is critical for the firms to establish the congruence between the consumer's own identity and the business goals

of the firm to develop a meaningful relationship by recognizing mutual benefit portfolios that will continually evolve (Biswas, 2019). Agility in business has evolved as a built-in concept among the customer-centric companies, which tend to better understand consumer behavior including neurobehavior perspectives (in-store and online shopping practices) to develop approaches to stay customized, applied, and transformative in the market (Morgan & Page, 2008). The concept of agility at the grassroots of business is founded on the transformative consumer behavior, psychodynamics driving customer-to-customer interactions and creating pull effect, and real-time needs for products and services across geodemographic segments. Such dynamics in consumer behavior stimulate companies to develop agile marketing strategies working with customers (associateship). Consequently, the conventional strategy in marketing needs a critical rethinking in the context of agile leverages and the focus on inclusive and crowd-based business modeling.

AGILE MARKETING CONCEPT AND PRACTICES

Marketing agility is a value-driven, project-oriented, flexible process to develop marketing strategies. The dynamic capability of a company of re-aligning and re-deploying its resources to create value to manage continuity in business uncertainty and the changes in business operations forms the foundation of marketing agility. Agile marketing practices help firms in creating and protecting customer value for attaining high market share and profit through integrating the activities within the business ecosystem (Teece et al., 2016). The success of agile marketing has been observed in the development and launching of advertising campaigns. For example, a marketing project co-created with customers and stakeholders can be developed as the webpage for the products or services, advertising campaign, and content creation. These activities can be operationalized, reviewed, and aligned with the market requirements to ensure high performance. Agility in marketing can be managed using various available methodologies, which include Scrum, eXtreme Programming, Feature Driven Development, Dynamic Systems Development Method, Adaptive Software Development, and Lean Software Development. Companies practicing agile marketing commonly adopt one of, or a combination of, the above methodologies. *CafePress*, an online retailing company in the USA, has adopted agile marketing to improve its social media interaction with customers. This company works with designers to co-create designs

on different products and creates human connection by inspiring people to express themselves. The company has implemented agile process and brought together the legal and marketing team. This practice helped their marketing team to handle social media interactions without controversies and legal issues. Similarly, the marketing team of Dell Computers has moved into implementing agile marketing methodology to take a lead in the market. The company focused on improving marketing performance through social media channels and engaged its lead teams in optimizing the search engines, reorienting channel marketing strategies, improving websites, and co-creating field marketing activities.

The specific attributes of agile marketing are inclusivity and reverse accountability (customer engagement and role in agile governance), which help companies encourage agile teams to participate in co-creation of products, services, brands, and marketing strategies along with the customers and stakeholders. The co-creation will be meaningful for the companies if the problems, needs, and probable solutions are meticulously explored by the agile teams, customers, and stakeholders. Business modeling trends have been rapidly changing from supply-led (manufacture oriented) to demand-driven (innovation based) to challenge-based research (solution driven) since the mid-twentieth century. Such change has been a global phenomenon, which has seeded the concept of challenge-based research, learning, and innovation through agile knowledge modeling. Agility in managing social and technology-based challenges is required to conduct challenge-based research, implement its outcomes, and measure the industry responsiveness in innovation and technology derived from the research (Llamas et al., 2016). This necessity of agility can be achieved through a knowledge-based system. Companies face various organizational and operational challenges while transforming the research challenges and learning the market-induced innovations. Identifying and managing the business units to adapt to the challenge-based research by engineering multidimensional learning and stimulating innovations that are compatible with a sustainable social and economic growth are often challenging.

Contextual marketing helps firms to stay agile in the market by developing marketing strategies congruent with the customer personality, social values and lifestyle, social equity in consumption, and social motivations. Most customer-centric firms lack in delivering enough value to induce customers to encourage repeat buying behavior and grow profitable. These factors significantly affect the neurobehavioral dimensions

of customers and instill social and crowd consciousness. Previous studies have identified consumer attitudes as constructs, which analyze how consumers think about (cognition), feel about (affect), and act toward (conation) developing consumption and buying preferences (Vakratsas & Ambler, 1999). Such approaches would help firms to understand real-time technology effects and improve the marketing capabilities of the firm accordingly. In the digital marketplace today, consumers invest enormous time and effort on information analytics to support their decision toward the purchase of a product or service. Consumers collect the decision-support information from the corporate communications, advertisements, customer-generated contents, and referrals. However, fuzzy consumer decisions often lead to an irrational focus of firms on implementing marketing strategies causing low satisfaction and customer value (Lala & Chakraborty, 2015). Divergent perspectives of agility in business and their influence on business operations have been exhibited in Fig. 1.1.

Agility in business is an integrated sphere with the firm, its growth, competitive skills, internal efficiency, business dexterity, and proximity to society as shown in Fig. 1.1. Agile strategies of a firm can be broadly

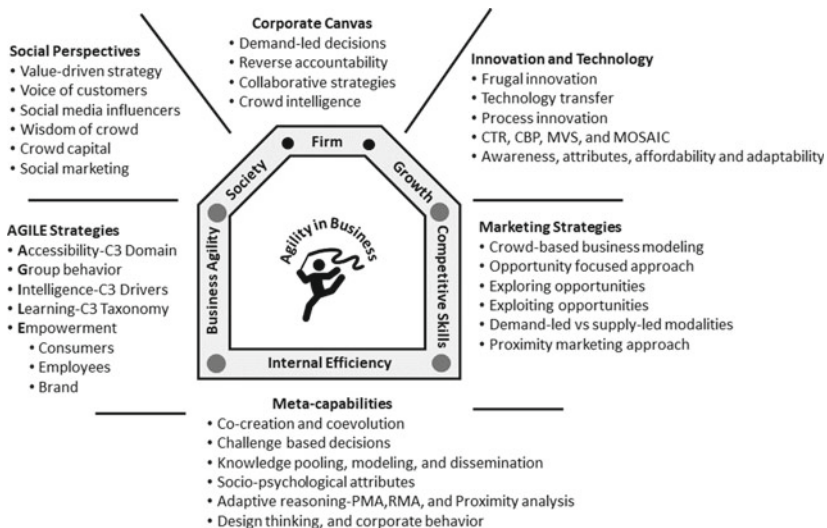


Fig. 1.1 Divergent perspectives of agile business management (Source Author)

defined as accessibility to C3 domain comprising crowd (including gatekeepers and critiques), consumers (potential and actual users), and collaborators (market players engaging in co-creation of products, services, and business operations). Group behavior in the market dominates over the individual consumption behavior and opinions toward the firms and brands. Group behavior is driven by crowd dynamics and often alters individual perceptions and guides them to collective domain, which induces the need for agility in business. Agility in business is driven by the C3 intelligence drivers that include collective, cultural, and consumption intelligence. These drivers are embedded in society, and the interactions with the public on social media help firms understand the collective opinions on brands and markets. C3 drivers of intelligence are largely supported by the C3 learning taxonomy consisting of contemporary, continuous, and conscious learning. Besides the divergent factors associated with the various C3 dimensions, practicing agile business strategies requires firms to empower consumers, employees, and brands for improving business efficiency.

Firms adapting to agile practices need to examine thoroughly the social perspectives considering voice-of-customers to develop value-driven strategies as exhibited in Fig. 1.1. Agile approaches in business are widely supported by the wisdom of crowd and social media influencers, which build crowd capital and mitigate agility in business. Consequently, the above factors are also useful in social marketing of products and services. Agile business advocates demand-led decisions to be based on the PNS factors and not necessarily based on the internal efficiency of the firm, which indicated supply-led decisions. Reverse accountability explains the role of voice-of-customers and its association in making corporate decisions, which contributes significantly to the agile business processes including frugal innovation and process innovation. Technology transfers from the end people's technology and the prototypes developed by the start-ups to firms with business potential, or vice versa. However, firms operating with agile business models must evaluate the following linear propositions to take appropriate decisions:

- Cost, time, and risk (CTR) factors
- Cost, benefit, and performance (CBP) indicators
- Minimum viable segment (MVS) to strengthen performance of agile practices, and

- Massive open strategies with accountability, innovation, and control (MOSAIC) to nurture agile business strategies at the grassroots.

Crowd-based business modeling with an opportunity-focused approach is the most appropriate approach to develop demand-led marketing strategies. Agile marketing needs social proximity to explore and exploit opportunities. Most challenging perspective in practicing agile businesses is to develop meta-capabilities in the organization to design, develop, and deliver right strategies converging people, performance, and profit. The meta-capabilities include managing challenge-based decisions by pooling knowledge, best practices (models), and their diffusion by screening meticulously the socio-psychological attributes of crowd, consumers, and collaborators (C3-Domain). As agile business approach embeds people's engagement, the successful firms focusing on developing flexible marketing strategies tend to co-create (ideation and process innovation) and coevolve along with the C3-Domain. Such convergence is required to develop adaptive reasoning on people's perceptions through Participatory Market Appraisal (PMA), Rapid Market Appraisal, and proximity analysis on socio-economic and socio-psychological factors. These exercises help firms in reaching out to targets on the C3-Domain to systematically pursue design thinking process and develop a people-oriented corporate behavior.

Agile Marketing is broadly a work management methodology within the Scrum framework that requires teams to adapt to the collaborative work environment with focus on 5T-elements comprising task, target, time, thrust, and trust. Agile marketing practices function with self-organizing skills for teams to carry out cross-functional activities in a repetitive pattern with continuous feedback. These activities are driven by temporal marketing planning (short-, medium-, - and long-term planning). Implementation of agile marketing strategies varies by task, territory, and target for specific products and services. The organizational context, in which the 5T-elements are managed, determines the marketing management approach based on an array of practices over the traditional marketing. Commonly, agile marketing practices encourage team culture on common objectives centered around the customers' needs. In the agile marketing process, teams periodically evaluate the efficiency of the process and eliminate redundancy to align and optimize marketing operations accordingly. Accordingly, companies practicing agile marketing strategies can achieve higher customer engagement and value,

and an increased ability to adapt to market uncertainties; and change management stimulates market demand (Gera et al., 2019). Previous studies argue that the response of the firms to co-creation and customer-driven opportunities depends on the intensity of competition and the degree of cannibalizing the market share by the competitive firms. Consequently, agile marketing strategies need to focus on quickly responding to the customer-centric innovation and competitive action. Marketing agility is thus focused on the changing customers' needs and expectations, and flexibly coordinating marketing objectives by employing resources appropriately. Broadly, it is the ability of a firm to develop marketing strategies tactically at short notice and to adapt to changing market conditions to sustain the market competition effectively (Hagen et al., 2019).

Inclusive business approach overrides the conventional wisdom of leader-centric management practices and is driven by integrative thinking. Proximity approach has many constructive challenges driven by the collective intelligence to produce more adaptive-reasoning patterns with inter-disciplinary dialogue. The new model for business education argues that inclusive business plays a vital role in integrating people in business processes by breaking the managerial stigma of *tough mindedness* (competitive and profit oriented) to *agile mindedness* to ensure value-centric business management (Hacklin et al., 2018). Consequently, firms can retain the loyalty and support of ecosystem partners and stakeholders to ensure their continued performance in the marketplace. Continuous learning and exploring ways to catch-up with changes in the industry drive firms to stay agile with the dynamic business ecosystems. Industrial marketing firms today have moved from relationship-management goals to ecosystems-orchestration process.

The involvement of stakeholders and customers drives collaborative ideation and co-creation process in new product development, while their engagement highly influences the promotion of products. The user-generated contents, collective intelligence, creativity, and the role of referrals and gatekeepers widely support the advertising and communication strategies in the inclusive businesses. Farmers play a significant role in agribusiness in determining the minimum support price in the food grain procurement process in the developing countries. The inclusivity in pricing in the agribusiness sector is also supported by the public policies in these countries. Inclusivity in distribution and community marketing has been experimented by the Hindustan Unilever Limited (HUL) in India and other developing countries through the empowerment of rural men

and women in marketing the products of HUL within rural neighborhoods. The Mary Kay Cosmetics, a women-centric American company, is also coevolving its business by engaging women in marketing its products to improve household income and quality of life through inclusivity in business. These strategies evidence inclusivity in distribution of products within the community and at the bottom-of-the-pyramid. The first mover advantage (pace) is backed by the experience sharing of stakeholders and key business partners on social and digital media channels, while reverse accountability of stakeholders ensures performance of the company embedding the objective of profit with purpose. In addition, the psychodynamics (consumer-to-consumer business approach) helps in generating pull effect in the market by augmenting the demand for the products of the company. The pull effect helps the company to lower the costs of marketing, stay customer centric, and increase profit over time.

Most studies on agility focus on co-created and coevolved supply chains and production systems focusing on the agile marketing approach. Agile marketing represents a lean and flexible marketing management approach based on an array of customer-centric practices aimed at developing compliant and acquiescent marketing approaches. Notably, agile marketing encourages a firm's inclusive teams (inducting customers and stakeholders) to work together on common objectives centered on the problems, needs, and desired solutions of customers and stakeholders. Periodical update on the customer needs, preferences, and opinions on various marketing touch points (marketing-mix elements and value perspectives) help companies optimize their agile marketing operations. Accordingly, effective customer engagement, sustainable value, and higher market demand can be achieved by the firms (Xu et al., 2018). Most companies use tactical approaches to explore opportunities by conducting rapid market appraisal (RMA) and participatory market appraisal (PMA). The RMA and PMA analysis helps companies in making value-based decisions instead of usual data-driven decisions. Agile marketing decisions are also benefitted by crowd behavior and collective intelligence. Such crowd and stakeholder engagement in agile marketing helps companies to launch effective agile campaigns based on the user-generated contents and collective intelligence. Socialization of businesses encourages people from different segments, socio-cultural backgrounds, and ethnicity to co-create innovative business ideas. The socialization process of business helps firms grow agile and customer centric (Fayard et al., 2021). The contemporary trend of collective intelligence meets the challenge of satisfying the

growing need for creativity and innovation through brainstorming, especially in product designing and prospective product ergonomics contexts such as space saver products, small automobiles, and multi-utility products. The wisdom of crowd helps designers and ergonomists to come up with products through crowd-consensus to make appropriate decisions. Promoting creativity through brainstorming is becoming more challenging for firms with increasing knowledge on technology, market competition, and disruptive business trends. Therefore, creativity needs to be fostered through the combined efforts of society and business firms to produce an agile creative workforce to tackle complex tasks (Miller & Dumford, 2014).

The key elements of the design thinking methodology include exploring and applying user-generated contents, carrying our early and frequent interaction with customers, developing agile process design with low cost and hierarchy, and a learning-by-doing approach. The crowd-designing process involves not only sharing ideas, but also building prototypes and creating mock-ups of any kind at the quickest possible time to launch in the market. Design thinking initiatives have been floated through the social media frequently by the start-up companies, and such initiatives rarely proceed according to a prescribed business model. Such crowd initiatives are focused on agile and frugal innovation concepts, which are initially targeted to a niche market. Crowd-based innovation is initially an unfiltered process with hidden conflicts and complications on design processes and structures. The implementation of agile marketing approaches is managed in a project environment with effective monitoring and periodical evaluations. Agile marketing is largely team based and can be designed, developed, and implemented with the technology applications and interactions with the customers and stakeholders. Agility principles suggest removing all work silos and hierarchies and setting flexible collaboration across a team along with the stakeholders. One of the major challenges in managing agile marketing projects is controlling the scope creep with a flexible marketing philosophy. The core areas in agile marketing include finance and human resource management. Some key indicators such as cost, time, risk, investment, and profit constitute the financial matrix, which helps in managing value-based moves such as customer touch points and Go-to-Market strategy.

Marketing agility allows the firm to identify and understand latent needs and motivates managers to adapt a marketing program at the grassroots in each geodemographic arrangement. The market-sensing

elements of agility stimulate firms to identify opportunities and threats in a given business situation and redesign existing marketing programs to suit market needs by taking into confidence the stakeholders and key partners. Accordingly, marketing programs can be developed to enhance flexibility and speed of marketing operations. It is also necessary for the firms to build motivated and responsive corporate teams to engage stakeholders and key business partners in implementing agile marketing programs. To derive high business performance and growth in a competitive market ecosystem, agile marketing practices have proved to be successful for many firms (Khan, 2020). Agile marketing capability of a firm aligns with turbulent market environments to simultaneously influence performance against competitors. It is a proactive, responsive, and flexible way to manage marketing programs with agility. In addition, agility involves both proactively creating changes and rapidly sensing and responding to the available and hidden opportunities and threats. Nonetheless, agility is a domain-specific concept and firms may largely rely on customer-based processes to manage products and services in a competitive marketplace (Zhou et al., 2020). The crowd-based business modeling (CBBM) is associated with open innovation and encourages crowdsourcing in developing the business within the social and niche platforms. Crowd-based businesses are oriented toward transforming ideas into industrial economic and business frameworks. Consequently, companies develop agile business models by setting short-term goals, customer-centric objectives, and collective perceptions complementing the strategic profiteering goals. While screening crowdsourced information and developing proposals for crowdfunding, firms also conduct extensive research to understand consumer behavior, competitive leverage, moderate values, and implementing CBBM in the niche markets and beyond (Bolton, 2004) .

BUSINESS INNOVATION AND TECHNOLOGY

The business model needs a social thinking and agile development approach to outreach the stakeholders and build social value. Some of the essential attributes of technology management practices hold the underlying logic of social benefits and explore how shifts in consumption behavior affect the social sustainability (Birkinshaw, 2014). Technology-led innovations and business models can be successful provided they are user oriented. Agile use of technology, however, can erode customer care.

Firms must listen empathetically to the requirements of consumers to cater technology to the consumers, managers, and front-line employees. However, impulsive innovations targeted primarily at lowering the costs and increasing the use values have made many companies impervious to their customers. Such situations drive estrangement of employees from customers, and firms face difficulty in diffusing, launching, and serving the technology to the consumer segments. There are following innovation-led business models that help in driving the eco-innovations to the society (Sawhney & Prandelli, 2000):

- *Community creation model*, in managing new businesses across the diverse market segments, is a governance mechanism for managing innovation that lies between the hierarchy-based (closed) mechanism and the market-based (open) systems for new product management and driving butterfly effect.
- *Community-centric model* shifts the focus of innovation and drives the change process beyond the boundaries of the firm, to a community of individuals and firms that collaborate to create joint intellectual property. Such strategies involve community in spanning the change instituted by the company, setting ground rules for participation, and developing sustainable consumer behavior with differentiation.
- *Community of creation* model allows innovation-led changes to initially pass through a complex environment by striking a balance between order and chaos in the market.

Several innovative companies have shown intricate relations between businesses and consumers they serve. Indeed, technology can enrich consumers provided firms uphold their commitment, involve empathetically with consumers, understand the ways in which current technology is valued by consumers, and co-promote the new technology and products through social networks and informal ways to help consumers in developing sustainable storyboards and inculcate trust on the firm and technology service providers (Gorry & Westbrook, 2011). The innovation-driven companies should also overcome the challenges associated with asymmetric product demand and the changing consumer preferences. In short, innovation in a company needs to underpin any change faster than the competitors. Boosting innovation-led business

performance largely depends on how quickly the company can move to competitive production that focuses on innovation and technology-driven products. Most companies are continuously engaged in bringing consumer innovations to the market diffusing new insights among the market players to create quick impacts of competitive differentiations among the consumers. Gaining access to and deploying these innovations easily and cost-effectively in the market drive the success of companies today. The new technology trends in the twenty-first century affect the innovation process of consumer-centric and business-to-business-oriented companies.

Consumer perceptions are often agile and need to be endorsed by peers, friends, and family to support decision-making and to put them into practice over the long term. Such cognitive process creates consumption attitude among consumers. Perceptions linked to emotions are commonly impulsive and temporary, which do not make a dent on cognitive process continuity and help in decision-making. The perceptions should be measurable. Consumers generally measure their perceived values in reference to the desired satisfaction in terms of value for money derived through the convergence of quality and price. The higher perceived value of consumers not only justifies the quality of the perceptual process among consumers, but also determines the social leadership by way of how many follow a right perception of a consumer as referral.

Challenge-based research suggests transforming the existing businesses to profitable ventures through co-creation and coevolution. The research output stimulates firms to design and implement agile business models (Rajagopal, 2019). The challenge-based research supports innovations for social development ranging from sustainable farming to cleaner and affordable energy to the people across geodemographic segments (Laurett et al., 2021). Collaborative research between universities, firms, and customer in biotechnology sector is contributing to improved food production, while technology-led mobile learning tends to improve the reading skills and enhance rationale in solving mathematical theorems and riddles. In addition, telemedicine practices are reducing the incidence of maternal and neonatal mortality in indigenous communities in developing economies. The collaborating research has also addressed the challenges associated with potable rainwater harvesting and sustainable housing in these countries. The success of inclusive businesses in the context of innovation, technology, and new product

development motivates the people-led companies to adapt to agile business modeling and drive co-creation and coevolution initiatives. The contemporary philosophy of development economics focuses on social and entrepreneurial production, employment, and income to equalize the gap between centralized and decentralized manufacturing and marketing systems. Sustainable entrepreneurship is, therefore, moved with the triple bottom-line by recognition, evaluation, and exploitation of opportunities by stakeholders and entrepreneurs who create future products and services and deliver economic, social, and ecological gains (Patzelt et al., 2021; Patzelt & Shepherd, 2011).

Technology plays a major role in the business ecosystem today, which has evolved from an internally focused factor to customer-facing attributes, leading to agile business development. The bilateral factors in the business ecosystem include government, business partners (manufacturing, logistics, and marketing), financial institutions, and information technology providers. The contemporary marketing philosophy is founded on a polyhedron framework that has a triangular prismatic effect with five faces, six edges, and nine vertices. The philosophical thoughts on modern business can be stretched wide from the geometric structure to the functional propositions in the marketplace, which entails broadly the market, society, and customer values. Driving disruptive innovation in large companies requires firms to be ambidextrous to compete in mature markets where efficiency, control, and incremental improvement are essential to exploit the available market potential. Disruptive strategies help companies simultaneously compete with new technologies in emerging markets which need agile business strategies, salesforce autonomy, and understanding shifts in consumer behavior (O'Reilly et al., 2013; O'Reilly and Tushman, 2013). There are various dimensions of business agility that affect the performance of the firms. Agility in businesses includes workplace culture, decision-making, operations, technology, innovation, and customer behavior at the bottom-line comprising people, profit, and sustainability. Advances in digital technologies have increased the possibilities of developing agile business models by outsourcing business activities to crowd and social domains. Such strategy supports business agility and the customer-centric management processes that need to be designed and implemented in need-based planning (Worley et al., 2016).

AGILITY, INCLUSIVITY, AND DIVERSITY

Agility in organization offers flexibility in learning, analyzing problems, and decision-making among employees through experience sharing. In addition, the liberal workplace environment motivates open innovation and co-creation. The people-oriented leadership in agile organizations motivates hybrid work culture (a combination of online and offline work system), offers skill development embedding continuous learning to adapt to the best practices of industry, and encapsulates the holistic organizational philosophy of knowing (learning), doing (practicing), and being (self-actualization). The community workplace, organizational ambience, and employee engagements deteriorate with the decline in the performance of the firms, which leads to failure over time. The loyalty of employees is significantly affected in the organization as these firms tend to fail. Firms must develop a viability systems approach with effective leadership during turbulent situations (Elezi et al., 2013). The agility in businesses includes workplace culture, decision-making, operations, technology, innovation, and customer behavior at the bottom-line comprising people, profit, and sustainability. Understanding people is connected to their personality, social values, and ethnicity. Advances in digital technologies have increased the possibilities of developing agile business models by outsourcing business activities to crowds comprising contributors. Using the collective intelligence of a crowd opens a new range of knowledge outreach and power of collective reasoning and decision-making with agility and conformity (Rajagopal, 2022).

The community workplaces can be facilitated by a mentor for specific work portfolios and encouraging employees and stakeholders to undertake activities collectively or by constituting specialty teams. This process facilitates workplace-based learning tools that increase the capabilities and competencies of the employees and provide formative feedback and opportunities to discuss experiences with peers. Ideally, the work portfolios in an organization demonstrate learned and best practice, employee achievements, continuous learning, and developing plans. An inclusive workplace starts at the top of the organization and is followed across the work portfolios throughout the company. Managers have the responsibility to foster inclusivity in corporate culture. Employee teams need to be trained in collective work culture and inclusive behavior to stay along the diversity and inclusion initiatives of the companies. It is necessary for a

healthy organization to create a workplace where every employee accepts the inclusive business culture.

The inclusivity approach in business largely promotes team-based work culture and transformational leadership. The social dynamics demand firms to develop businesses by reorienting their philosophy toward design-to-society and design-to-value and develop strategic partnership and corporate alliance with the local bodies to coevolve business. An inclusive business framework with integration of business canvas elements allows designing, describing, categorizing, and analyzing the strategic perspectives of inclusive business model irrespective of hierarchical decision-making, value chain attributes, and proprietary rules and leverages, of the size of the company. Research on the inclusiveness in business model with focus on bottom-of-the-pyramid indicates that the inclusivity helps companies to take generic decisions in the context of problems, needs, and expected solutions. The business models with inclusiveness encompass the following elements (Morris et al., 2005):

- Customized or standardized value proposition
- Balancing the internal and external factors in manufacturing and marketing.
- Developing business models in the context of industrial marketing (business-to-business), consumer marketing (business-to consumer), network marketing (customer-to-customer through social media channels), and hybrid marketing (online-to-offline channel convergence).
- Competitive marketing strategy in the context of quality deployment, marketing cost, innovation leadership, and customer relationship.
- Managing economic factors including key partners, key resources, pricing, and revenue streams.

Companies following design-to-society and design-to-value philosophy in business largely adhere to the inclusivity practices in managing business by connecting with the employees and stakeholders. Such corporate behavior leads to employee engagement and stakeholder engagement, which strengthens the corporate management practices of inclusiveness in business (Kennedy & Link, 2019). Inclusivity in business has been planned in a novel way by an Indian hotel company Lemon Tree, which

employs large numbers of people with disabilities and other socially marginalized groups including orphans, divorcees, widows, and members of the transgender community. The company has adopted such charitable endeavors, this unusual human-resources strategy (inclusion program) has evolved, and now, it is an integral part of the business model and a source of competitive advantage (Wernick & Upadhyay, 2021). Inclusive business in developing countries is growing increasingly profitable by operating on digital platforms, which has encouraged firms to co-create mainstream innovations. These companies are based on the collective intelligence and social conscious learning that has significantly pushed the inclusive venturing capabilities. Such firms are being leveraged to explore inclusive business strategically and invest more systematically within the ecosystem business models. Inclusive businesses are maturing in the farm- and non-farm sector businesses with the growing support of public policies, and supply chain and payments infrastructure. These firms as emerging companies purpose-built to serve customer-centric business design by engaging people at the bottom-of-the-pyramid.

The concept of inclusivity in businesses rose into prominence by the end of the twentieth century, as community workspaces and sharing of experience offered deep and meaningful relationships between customers and employees with the goal of collective psychodynamics at work. It allowed firms to not only understand the customer insights, but also realize the power of co-creation and coevolution of business in the competitive marketplace. The inclusiveness in businesses has also supported gender equity at workplaces as women employees have been empowered socially and economically, which has built social synergy in business organizations (Livingston & Opie, 2019). The inclusivity has three principal domains that include corporate focus on social and economic development through business, encouraging transformational leadership in the organization, and improving the stakeholder value. Most companies are engaged in holistic social development by involving people to design and implement strategies on poverty alleviation, housing development, and improvement in the conditions of public health and public education. In addition, stakeholder involvement in business also contributes to the economic leverage through skill development, enhancing extension services, and improving the work efficiency of key partners. Transformational leadership in business encourages design thinking in the organization through empowerment and collective decisions by adopting a grassroots approach to social and economic

development. Such leadership drive stimulates stakeholder engagement and knowledge development. Collective intelligence helps in knowledge management through experience sharing and co-creation to improve the quality of life of both internal and external stakeholders.

The combination of shared economy and social innovation has a great potential to deliver the corporate social responsibility (CSR), as it shares the common goal of the triple bottom-line by way of involving people (inclusivity), reducing environmental impacts, focusing on the principles of reusing (sustainability), generating profit with purpose, and working closely with the business philosophy of recycling and sharing. The shared economy and inclusive business supported by crowd behavior and collective intelligence help in co-creating and coevolving corporate social responsibility. Such a business ecosystem founded on stakeholders, community leaders, public policy support, and corporate involvement drives business opportunity and community assets to align with delivering economic interests, corporate commitments, and stakeholder values. The growing popularity of inclusive business models has been admired for encouraging stakeholder engagement in business planning, implementation, monitoring, and evaluation. The concept of inclusivity in business promotes liberal businesses across developing economies. However, differences exist in social governance of businesses and public policies, which affect the processes for making public policy decisions, delivering values to the stakeholders, and generating profit with purpose (Keim & Hillman, 2008).

REFERENCES

- Birkinshaw, J. (2014). Beware of the next big thing. *Harvard Business Review*, 92(5), 50–57.
- Biswas, D. (2019). Sensory aspects of retailing: Theoretical and practical implications. *Journal of Retailing*, 95(4), 111–115.
- Burgmann, J., & Prahalad, C. K. (2007). Co-creating business's new social compact. *Harvard Business Review*, 85(2), 80–90.
- Bolton, M. (2004). Customer-centric business processing. *International Journal of Productivity and Performance Management*, 53(1), 44–51.
- Chen, R., Ravichandar, R., & Proctor, D. (2016). Managing the transition to the new agile business and product development model: Lessons from Cisco Systems. *Business Horizons*, 59(6), 635–644.
- Elezi, F., Resch, D., Tommelein, I. D., & Lindemann, U. (2013). Improving organizational design and diagnosis by supporting viable system model

- application with structural complexity management. In E. Scheurmann, M. Maurer, D. Schmidt, & U. Lindemann (Eds.), *Reducing risk in innovation* (pp. 113–140). William Andrew Publishing.
- Fayard, A. L., Weeks, J., & Khan, M. (2021). *Designing the hybrid office*. Harvard Business School Publication.
- Fourne, S. P. L., Jansen, J. J. P., & Mom, T. J. M. (2014). Strategic agility in MNEs: Managing tensions to capture opportunities across emerging and established markets. *California Management Review*, 56(3), 13–38.
- Gera, G., Gera, B., & Mishra, A. (2019). Role of agile marketing in the present era. *International Journal of Technical Research & Science*, 4(5), 40–44.
- Gorry, G. A., & Westbrook, R. A. (2011). Once more, with feeling: Empathy and technology in customer care. *Business Horizons*, 54(2), 125–134.
- Hacklin, F., Björkdahl, J., & Wallin, M. W. (2018). Strategies for business model innovation: How firms reel in migrating value. *Long Range Planning*, 51(1), 82–110.
- Hagen, B., Zucchella, A., & Ghauri, P. N. (2019). From fragile to agile: Marketing as a key driver of entrepreneurial internationalization. *International Marketing Review*, 36, 260–288.
- Keim, G. D., & Hillman, A. J. (2008). Political environments and business strategy: Implications for managers. *Business Horizons*, 51(1), 47–53.
- Kennedy, J. T., & Link, P. J. (2019). *Companies need to do more for employees and customers with disabilities*. Harvard Business School Press.
- Khan, H. (2020). Is marketing agility important for emerging market firms in advanced markets? *International Business Review*, 29(5), in press <https://doi.org/10.1016/j.ibusrev.2020.101733>.
- Lala, V., & Chakraborty, G. (2015). Impact of consumers' effort investments on buying decisions. *Journal of Consumer Marketing*, 32(2), 61–70.
- Llamas, V., Coudert, T., Geneste, L., Romero-Bejarano, J. C., & de Valroger, A. (2016). Proposition of an agile knowledge-based process model. *IFAC-Papers on-Line*, 49(12), 1092–1097.
- Laurett, R., Paço, A., & Mainardes, E. W. (2021). Sustainable development in agriculture and its antecedents, barriers, and consequences—An exploratory study. *Sustainable Production and Consumption*, 27, 298–311.
- Livingston, B. A., & Opie, T. (2019). *Even at "Inclusive" companies, women of color don't feel supported*. Harvard Business School Press.
- Miller, A., & Dumford, A. (2014). Creative cognitive processes in higher education. *Journal of Creative Behavior*, 50(4), 282–293.
- Morgan, R. E., & Page, K. (2008). Managing business transformation to deliver strategic agility. *Strategic Change*, 17, 155–168.
- Morris, M., Schindehutte, M., & Allen, J. (2005). The entrepreneur's business model: Toward a unified perspective. *Journal of Business Research*, 58, 726–735.

- Nath, U. K., Jagadev, A. K., & Pattnaik, P. K. (2021). Agile transformation for better business values using orchestration model. *Materials Today: Proceedings* (in press). <https://doi.org/10.1016/j.matpr.2021.02.177>
- O'Reilly, C. A., III., & Tushman, M. L. (2013). Organizational ambidexterity: Past, present, and future. *Academy of Management Perspectives*, 27(4), 324–338.
- O'Reilly, D., Larsen, G., & Kubacki, K. (2013). *Music, markets and consumption*. Goodfellow.
- Patzelt, H., Preller, R., & Breugst, N. (2021). Understanding the life cycles of entrepreneurial teams and their ventures: An agenda for future research. *Entrepreneurship Theory and Practice*, 45(5), 1119–1153.
- Patzelt, H., & Shepherd, D. A. (2011). Recognizing opportunities for sustainable development. *Entrepreneurship Theory and Practice*, 35(4), 631–652.
- Prpić, J., Shukla, P. P., Kietzmann, J. H., & McCarthy, I. P. (2015). How to work a crowd: Developing crowd capital through crowdsourcing. *Business Horizons*, 58(1), 77–85.
- Rajagopal. (2019). *Contemporary marketing strategy: Analyzing consumer behavior to drive managerial decision making*. Palgrave Macmillan.
- Rajagopal. (2022). *Agile marketing strategies: New approaches to engaging consumer behavior*. Palgrave Macmillan.
- Sawhney, M., & Prandelli, E. (2000). Communities of creation: Managing distributed innovation in turbulent markets. *California Management Review*, 42(4), 24–54.
- Teece, D., Peteraf, M., & Leih, S. (2016). Dynamic capabilities and organizational agility: Risk, uncertainty, and strategy in the innovation economy. *California Management Review*, 58(4), 13–35.
- Vakratsas, D., & Ambler, T. (1999). How advertising works: What do we really know? *Journal of Marketing*, 63(1), 26–43.
- Wernick, D. A. & Upadhyay, S. K. (2021). *Does the U.S. hospitality market offer fertile soil for Lemon Tree Hotels' inclusive business model?* Harvard Business School Press.
- Worley, C. G., Williams, T., & Lawler, E. (2016). Creating Management processes built for change. *MIT Sloan Management Review*, 58(1), 77–82.
- Xu, H., Guo, H., Zhang, J., & Dang, A. (2018). Facilitating dynamic marketing capabilities development for domestic and foreign firms in an emerging economy. *Journal of Business Research*, 86, 141–152.
- Zhou, J., Mavondo, F. T., & Saunders, S. G. (2020). The relationship between marketing agility and financial performance under different levels of market turbulence. *Industrial Marketing Management*, 83, 31–41.

PART II

Human Resources Management



Understanding Privacy Violation and Fairness Perception of Job Seekers Using Social Media

N. V. Subbarao, Bindu Chhabra, and Manit Mishra

INTRODUCTION

Social media has become a widely used tool for job search and recruitment, offering benefits such as increased accessibility and efficiency. However, the use of social media in job search and recruitment raises significant concerns about privacy and fairness. Social networking sites (SNWs) such as LinkedIn, Meta, Instagram, and Twitter have become popular job search mediums and have more than 1 billion active users

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residing on them. Datareportal (2022) global survey indicates that there are more than 4.5 billion people active on social media platforms, spending an average daily time of 2 hours and 27 mins, while using 7.50 social media platforms on average per month. More than 3 billion of these people are indicated to be using social media for job and career-related purposes. The widespread usage of social media involving online information exchange has raised alarming privacy and fairness concerns. As the CEO of the International Association of Privacy Professionals (IAPP), Trevor Hughes (2020) warns: “Your social media profile may be the most complete picture of you that exists. What you post can come back to haunt you.” Thus, with online information posing a particularly salient form of high risk, it is not surprising that individuals’ perceptions of meeting privacy expectations are closely tied to their perceptions of fairness and trust (Pew Research Center, 2014; Turow et al., 2015). Further, rapid advances in AI and its unintended consequences on displacement and privacy cannot be ignored. They threaten to shape ethics, safety, and alignment with human preferences to disrupt privacy quickly and easily. Thus, understanding privacy concerns in the fast-emerging digital world of social media, AI, and other technologies assumes even more prominence than before. Accordingly, privacy violation concerns and meeting privacy expectations in job search with social media is a topic that merits understanding and could benefit both employers and employees.

In job search context, information revelations and procedures around the treatment of information are seen to influence privacy concerns of job seekers (Donath, 2007; Subbarao et al., 2022b). Job seekers are often required to provide access to their social media profiles or accounts as part of the application process, thus granting potential employers access to a wide range of their personal information. This includes their posts, photos, connections, and even information that is not directly related to the job, such as the applicant’s political views or religious beliefs. Further, employers could also gather information about job candidates through social media without their knowledge or consent, potentially leading to discrimination based on factors such as age, race, and gender. Thus, privacy concerns involve studying the influence of perceived privacy violation (PV), procedural justice (PJ), and fairness perceptions (FP) that could influence job seekers’ intention to use social media toward their job and career outcomes.

Studies on privacy concern have shown that privacy-related judgments are formed as a combination of individual dispositions or attitudes around

the type of information, the context of use, contextual privacy factors, and uses of that information (Malhotra et al., 2004; Martin, 2018; Nissenbaum, 2018). Implying thus that privacy norms and expectations of information flow within a context should govern how information could be treated. Consequently, Nissenbaum (2018) stated privacy issues to be those involving unwarranted access to private information and to not necessarily entail security breaches. However, in job search contexts, privacy-related concerns appear to be about privacy violation due to both data breaches and the exploitation of personal information (Mcfarland & Ployhart, 2015; Subbarao et al., 2022b, 2022c). Pew Trust (2014) study found that 80% of social media users are worried about businesses and advertisers accessing and using their conversations, posts, blogs, videos, images, etc. Personal data about individuals becoming publicly available in unprecedented ways has prompted new measures on privacy. As a result, privacy first outlooks have gained prominence in many communities and organizations. While these concerns have led to calls for stricter regulations and greater scrutiny of companies that handle personal data, individuals' concern around their privacy has, however, only increased (Martin, 2018). This is attributed largely to the information revelations caused by surge in communications and real-time exchange of information through which diverse interactions are happening—on both job-related and non-job-related aspects.

For job seekers using social media, there are many privacy issues that merit serious consideration. First, the information posted in public user profiles can lead to such risks as identity theft, sexual exploitation, online stalking, commitment to current employer, and cyber harassment (Gross & Acquisti, 2005). Second, the posting of personal and private information in SNW sites exposes a user to public scrutiny, possibly creating permanent records that can affect the user negatively in the future (Rosenblum, 2007; Subbarao et al., 2022c). Third, the viral feature of news feeds makes personal information far more accessible and visible, posing a disruption of individual privacy (Boyd, 2008). However, despite some anecdotal evidence (Boyd, 2008), the level of privacy concerns and their impact in job search with social media usage is largely unknown (Subbarao et al., 2022b). This study, an investigation into privacy concerns in the context of job search with social media, addresses that gap. A survey ($n = 545$) of actual job seekers with social media was used to collect data for answering three related research questions:

- RQ1 Are there significant privacy violation concerns for job seekers using social media?
- RQ2 What behaviors in job search demonstrate privacy violation concerns?
- RQ3 What is the impact of such privacy concerns on the job seekers adoption of social media in job search?

The study uses the theory of reasoned action (TRA) as the conceptual framework with the three antecedent constructs: PJ, PV, and FP. The three constructs identified from literature are thus examined in a hypothesized model to assess behavioral intention to use (IU) and actual use (AU) of social media. The findings from this research provide empirical evidence to both employees and employers and to all stakeholders involved in managing businesses in the context of privacy (i.e., SNW sites, recruiters, ethics officers, counselors, etc.). The remainder of this paper is organized as follows. The first section introduces related literature on privacy matters in job search and prior studies on privacy concern in social networking settings. The second section reports on the development of our research models and associated hypotheses. The third section presents the details of the survey study and discusses the findings of the data analysis. The conclusion section addresses the implications of this study for research and practice, points out the limitations, and highlights the directions for future research.

REVIEW OF LITERATURE—CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

The Theory of Reasoned Action (TRA)

The study uses the theory of reasoned action (TRA) as its theoretical framework. The TRA, proposed by Ajzen and Fishbein in 1975, assumes that humans use information in a rational and systematic way. The TRA comprises of three dimensions: behavioral intention, attitude toward the action, and subjective norms. The TRA postulates that a person's intention is determined by his/her attitude toward the action and the subjective norms (social influence). The TRA gets its name as action is typically reasoned beforehand and has successfully been used to predict and understand individual behavior (Ranjbarian et al., 2010). Thus, using TRA as a conceptual framework, a hypothesized model is

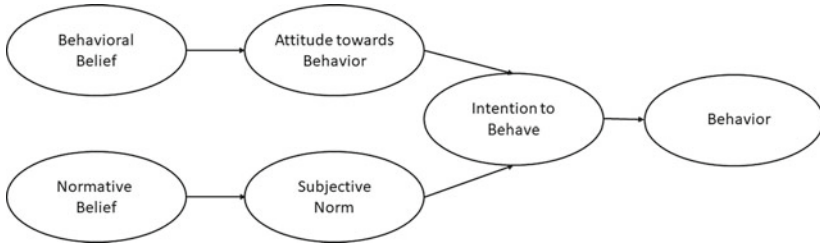


Fig. 2.1 Theory of Reasoned Action (TRA) model (Ajzen & Fishbein, 1975)

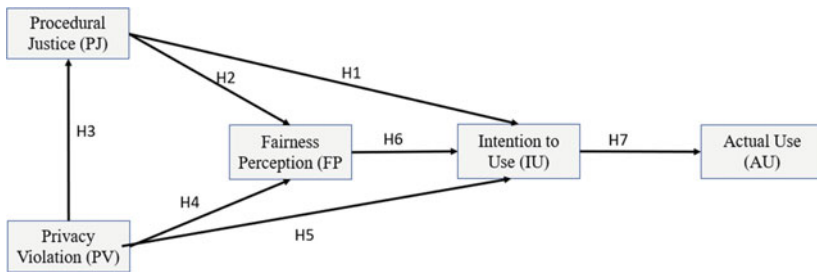


Fig. 2.2 Conceptual model and hypothesis formulation (Source Authors research)

proposed and studied to explain the relationship between attitude and behavior in job search with social media (Fig. 2.1).

Social Media Use and Social Networking Websites

SNW platforms can be used for a variety of purposes, including networking with other professionals, keeping in touch with friends and family, and sharing personal and professional updates for employment purposes (Boyd & Ellison, 2007). With the widespread adoption of SNWs, the concerns about privacy have spiked and have prompted advocacy for tighter regulations. Frequent incidents of data breaches have alarmed many users and forced them to rethink their relationships to social media and the security of their personal information. For example, the information that is observed while sourcing using social media (e.g., potentially offensive personal content on Meta or Twitter) may violate

laws separating employees' personal and work life. Employer risks could further include potential violations of equal employment opportunity policies or demographic groups getting different treatments given their differential access or usage of social media (Mcfarland & Ployhart, 2015). This has thus placed both individuals and companies under greater stress and scrutiny.

Platforms like LinkedIn, Meta (earlier Facebook), Instagram, and Twitter are some of the most widely used SNWs in the world with hundreds of millions of users on each. The information shared on these sites can be used to analyze consumer behavior and target employees or marketing campaigns, and the social connections on these platforms can be leveraged for forming groups, community building, or viral marketing. Augmenting this, concerns about privacy have arisen particularly with regard to the amount of personal information shared on these platforms and the ways in which it is used. Thus, as users have become increasingly aware of the ways in which their personal information is being shared and used, privacy concerns too have become dynamic and of changing nature. Concerns about the use of personal information for targeted advertising and the potential for this information to be accessed by third parties without the user's knowledge or consent are common and widespread. As a result, many social media users are becoming more cautious about the information they share online and are seeking out ways to better control their online privacy. This may include adjusting their privacy settings, using privacy-focused social media platforms, or limiting the amount of personal information they share online (Gallaughner & Ransbotham, 2010; Subbarao et al., 2022c). To study such privacy-related issues in SNWs, a clear understanding about the concepts of privacy and privacy concern is thus needed.

Concept of Privacy

The concept of privacy has been studied and debated for centuries across a range of fields, including philosophy, psychology, law, and management. There is no single, universally accepted definition of privacy, and different scholars have proposed different ways of understanding the concept. Some have argued that privacy refers to the right to be left alone (Brandeis & Warren, 1890), while others have described it as the protection of certain aspects of an individual's life from the judgment of others. Others have identified specific types of privacy, such as bodily privacy,

territorial privacy, privacy of communications, information privacy, and location privacy and setting in motion the need for fair practices (Karyda et al., 2009). Accordingly, the study of privacy has been extended to critical applications in business, including consumer behavior, marketing, e-commerce, and Internet/information technology use (Lanier & Saini, 2008; Phelps et al., 2000). This is of importance because businesses need to collect personal and behavioral information on individual consumers to better understand them. In the context of business, the study of privacy is particularly relevant due to the need for companies to collect personal and behavioral information on consumers to better understand them. This has led to a focus on balancing marketers' needs for information with consumers' right to privacy, and on understanding consumer willingness to share private information and the tradeoffs that occur in marketing transactions (Martin, 2018; Phelps et al., 2000).

Concept of Privacy Concern in Job Search

Privacy concern is the focus of this study. A privacy concern is a person's awareness and assessment of risks related to privacy violations (Solove, 2006). It is a sense of anxiety about personal privacy or a concern for controlling the acquisition and use of information about oneself. There are several factors that can affect privacy concerns, including information usage, awareness, sensitivity, familiarity with a firm or organization, and compensation. In the context of online social networking, there are three major categories of privacy concern that can affect users: notification, control, and security. People are more likely to be concerned about their privacy when information is used without their permission or knowledge, or when the intended use of the information is not clearly stated. Another important privacy concern is related to the secondary use of private information, when firms sell or provide customer information to others without disclosing who is receiving the information and how it will be used. In the field of information systems, there has been a lot of research on the impact of privacy concern on consumers' online purchase intention and behavior, and more recently, on the issue of privacy concern in the context of social networking websites. In the following, we review the prior work on privacy concern in the context of SNW.

Prior Work on Privacy Concern in Job Search with Social Media

Privacy concerns in job search mostly involve breaches to access confidential information of job seekers. Typical examples include: an employer or recruiter gaining unauthorized access to a candidate's information from other unintended social media sites or network members; or when users' personal data from their profiles is leaked outside the network when search engines are used to index them; or when conversations among users is searched, replicated, and altered and can be accessed by others without the knowledge of those in the conversation. Thus, job seekers fear loss of control over how others, employers, recruiters, or even their network members will use their data once it gets released or published. There exists little protection at present against copying any kind of personal data from profiles and using them for building personal profiles, or re-publishing the data elsewhere (Boyd, 2008). Further, the willful process violations also threaten to compromise a candidate's existing job status with his current employer or his prospects. The violation of confidentiality protocols is perceived unfavorably by job seekers, especially passive job seekers, with some even choosing to withdraw from the job search process when they perceive such violations to have occurred (Subbarao et al., 2022b, 2022c). Thus, process deviations and willful misuse of information are seen as causation factors for privacy violation and unfair practices to occur, which then likely determines the adoption and extent of use of social media in job search.

Research Model and Hypothesis Development

Perceived Procedural Justice (PJ)

PJ is the fairness of procedures as perceived by the job seeker for their job application on such social media sites where they have interacted for job or career purposes (Huy et al., 2020; Rauniar et al., 2014). It includes both technical aspects (such as confidentiality and authentication) and the user's overall sense of security and fairness. Previous studies have shown the importance of PJ in e-commerce and mobile commerce context, and few studies have applied it to SNWs context and hardly any in job search context. It is thus hypothesized that PJ will positively affect users' FP and their subsequent IU and AU. It is important to note that PJ should not be confused with privacy concern which is defined as the ability of an individual to manage and selectively reveal information about themselves.

Job search with SNWs has been criticized due to concerns about procedures and processes that allow willful breaches of job seekers data and so influences their FP and IU. The following hypotheses are thus proposed:

- H1 Perceived procedural justice (PJ) positively affects users' intention to use (IU) social media in job search
- H2 Perceived procedural justice (PJ) positively affects users' trust or fairness perception (FP).

Perceived Privacy Violation (PV)

PV is the extent to which a social media user feels protected from invasion of privacy and so feels secure about their job search, profile, and their other personal information on social media sites (Gross & Acquisti, 2005; Pan & Zinkhan, 2006; Rauniar et al., 2014; Snyder, 2010). The level of privacy protection offered thus influences job seekers trust in the FP and so toward IU for social media use in job search. Past studies on SNWs suggest that enhancing perceptions of website privacy protection via features such as privacy statements and seals may increase regard for the company and trust. Thus, features such as privacy statements and seals seem to have increased users' feelings toward processes, features, and fairness practices that promote security and trust in the site.

It is thus hypothesized that perceived PV, or the degree to which users believe their personal information is protected, will positively affect their trust or FP and usage intention (IU) for desired job outcomes. Additionally, it is proposed that the effect of PV on FP is mediated by PJ, or the ability to protect data against unauthorized access. Finally, it is suggested that perceived privacy may either positively or negatively affect PJ. Thus, the following hypotheses are proposed:

- H3 Perceived privacy violation (PV) negatively influences PJ in job search with social media.
- H4 Perceived privacy violation (PV) negatively influences FP in job search with social media.
- H5 Perceived privacy violation (PV) negatively influences IU social media for job search.

Perceived Fairness Practice (FP)

FP is about the influence fair treatment can have in willingness to engage in any process with trust (Dwyer et al., 2007). Fair treatment includes being treated with respect, empathy, and courtesy while being given relevant information (Van Esch & Black, 2019).

In SNW sites, trust has been used interchangeably with fairness practices and is perceived as an important factor in exchanging information and developing relationships. In normal, everyday, face-to-face interactions, trust and fairness are critical determinants for sharing information and developing new relationships (Coppola et al., 2004; Piccoli & Ives, 2003). In e-commerce context, research has found FP to be strongly related to information disclosure (Metzger, 2004). Shin (2010) shows a positive impact of trust derived from fair practices on consumer purchase intentions and reduce the effort to scrutinize authenticity of services when fairness perceptions are high.

TRA VARIABLES AND INTENTIONS TOWARD SOCIAL MEDIA USE IN JOB SEARCH

The TRA proposes that a person's behavior is determined by their intention to perform the behavior. In SNWs, trust or FP may be influenced by factors such as seal of trust, perceptions of privacy protection, perception of security, overall online privacy concerns, and intention to use the site (Metzger, 2004; Shin, 2010). Thus, extending this analogy to job search, the following hypothesis is proposed on FP and IU, and the subsequent cascading effect of IU on AU. Thus, we hypothesize:

- H6 FP positively affects job seekers intentions toward intentions to use (IU) social media in job search.
- H7 IU positively affects job seekers intentions toward actual use (AU) to use social media in job search.

RESEARCH METHODOLOGY

A representative sample of job seekers was chosen for the study. Both first-time job seekers (from any academic discipline) and experienced candidates (from any industry sector with a minimum of 1 year work

experience) were chosen. The data from the cross section of the population was collected via a structured questionnaire fielded online and shared on social media platforms. In all, 578 responses were obtained over a period of 4 months and 552 responses were accurately completed (response rate 95%). The sample consists of 35% first-time job seekers and 65% having work experience (with 56% employed and 9% unemployed and looking for job). 60% of the respondents' age was in the '20–25' and '25–30 years' range, while 25% indicate 'more than 40' years. The maximum number of respondents (36%) fell in the age range of 20–25 years. The gender ratio was 61% male and 39% female. 86% of the respondents indicated they had used social media at least once for job search and/or for career-related purposes.

The study uses covariance-based structural equation modeling (CB-SEM) to assess the measurement model followed by evaluation of structural relationships. Covariance-based SEM was chosen for analysis because the three antecedent constructs and the two endogenous constructs were measured using previously developed scales, thus requiring construct validation. Further, as the study emphasizes upon theory testing, CB-SEM could help better explain the model and the multiple relationships that could exist with their respective causalities (Hair et al., 2017). Analysis of Moment Structures (AMOS) version 21 was used for testing the causal relationships and examining the hypothesized research model. A two-stage model building approach was used. First, the measurement model was tested to assess validity and reliability of the constructs. Second, the structural model was examined using path estimates. The estimation of the measurement model and structural model was conducted using Maximum Likelihood Estimation (MLE). Also, a bootstrapping procedure with 1000 bootstrap samples at 95% bias-corrected confidence intervals was employed.

Research Instruments

The research instruments used in the study are borrowed from extant research. The social media behavior constructs of job seeking: procedural justice (PJ), privacy violation (PV), and fairness perception (FP) were measured using scales adopted from Alge's (2001), Colquitt (2001), Van Esch and Black (2019), and Rauniar et al. (2014), respectively. Similarly, the technology acceptance-related constructs of intention to use

(IU) and actual use (AU) were operationalized using the scales developed by Davis (1989, 1993). Accordingly, the final questionnaire with 21 items was designed. To prevent common method bias, negatively worded items were included. Following the data collection, box plot analysis was conducted to examine outliers, and based on it, 35 cases were eliminated. Next reliability testing of constructs and their respective items was done to check acceptance via Cronbach's alpha (α) values. Control variables included gender, age, industry type, employment status, years of work experience, whether used social media for job or career related, and number of social media accounts.

RESULTS AND DISCUSSION

Respondent Characteristics

Now, we describe the results of a survey on the use of social media for job search and career-related purposes. 545 respondents indicated that they used social media for these purposes, and after removing outliers, the final sample size was 517. The sample includes both first-time job seekers and those with work experience, with 65% of respondents having work experience. The age range of most respondents (58%) was between 20 and 30 years old, and the gender breakdown was 61% male and 38% female. The most used social media platform was WhatsApp (95%), followed by Facebook (76%), Instagram (73%), LinkedIn (65%), and Twitter (17%). Almost 80% of respondents visited social media sites at least 5 times a day over the past year. The characteristics of the respondents are summarized in Table 2.1.

Descriptive Analysis

The results of the descriptive statistics (Table 2.2) demonstrate the average scores and standard deviations for the exogenous and endogenous variables in the modified TRA model. The study covers five variables: perceived procedural justice (PJ) with 5 items, perceived privacy violation (PV) with 4 items, fairness perception (FP) with 4 items, intention to use (IU) with 4 items, and actual use (AU) with 4 items. These variables were tested for normality based on mean, standard deviation, skewness, and kurtosis using a 5-point scale (ranging from 1 "strongly disagree" to 5 "strongly agree"). The mean data results of the responding job seekers

Table 2.1 Demographic characteristics of respondents ($n = 517$)

<i>Respondent characteristics</i>	<i>Frequency</i>	<i>Percent (%)</i>
Gender		
– Male	315	61
– Female	199	38
– Prefer not to state	3	1
Age (years)		
– 20–25	180	35
– 26–30	121	23
– 30–35	57	11
– 36–40	33	7
– More than 40	126	24
Job search status		
<i>Active job seeker (AJS)</i>	<u>199</u>	<u>38</u>
– Very actively searching for job	101	20
– Somewhat actively searching for job	98	19
<i>Passive job seeker (PJS)</i>	<u>288</u>	<u>56</u>
– Not actively searching (just checking with friends and social networks)	70	14
– Not searching but interested to know more what better job roles and offers exist for me	113	22
– Not searching but willing to explore discreetly	37	7
– Not interested in changing jobs for now, but open to better offers	68	13
<i>Not interested in changing jobs</i>	<u>33</u>	<u>6</u>
– Not interested in changing job at all and so not interested in any new job	33	6
– Other	0	–
Work experience (years)		
– 0–1	173	33
– 1–3	71	14
– 3–5	51	10
– 5–10	50	10
– 10–15	36	7
– 15–20	47	8
– 20–25	40	9
– More than 25	49	9

Source Authors findings

Table 2.2 Results of correlation coefficients between the constructs

<i>Constructs</i>	<i>PJ</i>	<i>PV</i>	<i>FP</i>	<i>IU</i>	<i>AU</i>
Procedural Justice (PJ)	1				
Privacy Violation (PV)	0.701**	1			
Fairness Practice (FP)	0.719**	0.779**	1		
Intention to Use (IU)	0.719**	0.778**	0.980**	1	
Actual Use (AU)	0.415**	0.285**	0.319**	0.320**	1
Mean	3.66	3.73	3.59	3.72	2.68
Std Dev	0.67	0.73	0.69	0.73	0.92
Skewness	-0.322	-0.597	-0.409	-0.494	0.234
Kurtosis	0.548	0.069	0.157	0.247	-0.624
Adjusted R^2	0.22	0.20	0.19	0.17	-
AVE	0.574	0.552	0.594	0.664	0.493

** $p < 0.01$, $n = 517$

Satisfactory AVE values show Convergent Validity is met

Discriminant validity criteria met: AVE range values (0.493–0.664) > R^2 values range (0.17–0.22)

Source Authors findings

indicate higher disposition of social media use in job search for: PJ (3.66, SD = 0.67), PV (3.73, SD = 0.73), FP (3.59, SD = 0.69), and IU (3.72, SD = 0.73), than actual use (AU) (2.68, SD = 0.92). Additionally, skewness and kurtosis were analyzed. The skewness scores for the five variables ranged from -0.597 to 0.234, indicating no skewness or asymmetrical distribution. Kurtosis scores were within the range of 0.548 to -0.624 and indicated a lack of peaks or flat distributions (observed values were lower than +1 and higher than -1, Hair et al., 2006). Since the data distribution for PJ, PV, FP, IU, and AU is normal based on the absence of skewness and kurtosis, it meets the requirements for using CB-SEM.

Measurement Model Assessment

The Pearson correlation coefficient was used to determine the relationship between the constructs. The results in Table 2.2 show significant correlations between the five constructs, indicating that they are useful in path analysis to examine direct and indirect effects and make causal interpretations through the identification or elimination of potential mediators. The convergent validity of the scales was evaluated through composite reliability (CR), average variance extracted (AVE), and standardized factor loading of the measurement items. According to Hair et al. (2006),

for convergent validity, the model should meet the criteria of: standardized factor loadings and composite reliability greater than 0.70, and AVE greater than or equal to 0.5 (with AU at 0.493). Table 2.3 summarizes the results of Confirmatory Factor Analysis (CFA) with factor loadings, Cronbach's alpha, and CR for all constructs.

Thus, in the Confirmatory Factor Analysis (CFA), the item-wise standardized factor loadings for all items were found to be greater than 0.50 (with significant t -values ranging from 6.09 to 22.70, $p < 0.001$). Additionally, the composite reliability (CR) for all constructs is above 0.70 and the average variance extracted (AVE) ranges between 0.493 and 0.663. According to Fornell and Larcker (1981), even when the AVE is less than 0.50 (up to 0.40 is considered acceptable) and the CR is higher than 0.60, the convergent validity of the construct is still considered adequate. Hence, it can be concluded that the five constructs in the proposed model exhibit good convergent validity (Hair et al., 2006). Moreover, the satisfactory AVE values also indicate the achievement of discriminant validity of the constructs. Table 2.2 shows that the AVE scores of all constructs (0.49–0.67) are higher than the square of the correlations (Adjusted R^2 (R²): 0.17–0.22) among the constructs, which confirms that each construct has discriminant validity (Hair et al., 2006). Thus, with both composite reliability and discriminant validity criteria being met, the construct validity of the model is established.

Structural Model Assessment and Hypotheses Testing

Now, we estimate the fit of the measurement model using path estimates. The parameters were estimated using the maximum-likelihood estimation (MLE) procedure and bootstrapping with 1000 samples at 95% bias-corrected confidence intervals. The goodness-of-fit was then assessed using the chi square statistic (CMIN/df), with the following indicators and cut-off values for good fit: the chi square statistic (CMIN (χ^2)/df) should be less than 3, the comparative fit index (CFI) should be greater than or equal to 0.90, the Tucker Lewis Index (TLI) should be greater than or equal to 0.90, the root mean square error of approximation (RMSEA) should be less than or equal to 0.08, and the standardized root mean square residual (SRMR) should be less than or equal to 0.08 (Hu & Bentler, 1999). The results of the model fit showed that the five-factor structural model had a good fit to the data, as indicated by the following fit indices: CMIN (χ^2)/df of 3.52 ($\chi^2 = 818.78$; $df = 233$, p

Table 2.3 Results of CFA and reliability test for variables ($n = 517$)

<i>Construct</i>	<i>Scale items</i>	<i>Factor loading</i>	<i>Cronbach's alpha (α)*</i>	<i>CR**</i>
Procedural Justice (PJ)	<i>I think companies using social media for job search:</i>		0.826	0.804
	PJ1 Follow fair procedures	0.746		
	PJ2 Do not allow personal biases	0.732		
	PJ3 Treat candidates with respect and courtesy	0.747		
	PJ4 Find the right candidates	0.722		
	PJ5 Can be trusted with my information	0.791		
Privacy Violation (PV)	<i>I feel when using social media for job search:</i>		0.823	0.817
	PV1 Monitoring my accounts is unethical	0.785		
	PV2 Is worrying if my personal account information is use	0.779		
	PV3 I can trust my information will be kept confidential	0.768		
	PV4 It is safe to apply for jobs using social media	0.791		
Fairness Perception (FP)	<i>I think companies using social media to search:</i>		0.846	0.753
	FP1 Will use social media fairly	0.809		
	FP2 Will screen using complete and accurate info only	0.819		

(continued)

Table 2.3 (continued)

<i>Construct</i>	<i>Scale items</i>	<i>Factor loading</i>	<i>Cronbach's alpha (α)*</i>	<i>CR**</i>
Intention to Use (IU)	FP3 Will allow me to share my views on social media	0.709	0.882	0.882
	FP4 Will not use social media screening objectively (-) <i>I intend to use social media for:</i>	0.719		
	IU1 For searching and for applying for jobs	0.724		
	IU2 By taking the support of social media apps & tools	0.794		
	IU3 As it allows me to communicate better	0.874		
	IU4 As it allows me to brand myself better	0.834		
	Actual Use (AU)	<i>How often per week do you?</i>		
AU1 Visit social media sites for job-related reasons?	0.789			
AU2 Post on your personal social media accounts	0.547			
AU3 <i>How many job postings have you?</i> Seen in the last 1 month on social media sites	0.646			
AU4 Applied for in the last 1 month on social mediasocial sites	0.711			

*Cronbach's alpha (α) criteria met (CA > 0.70)

** Composite reliability criteria met (CR > 0.50)

Source Authors findings

Table 2.4 Model assessment via goodness-of-fit evaluation

<i>Model fit index</i>	<i>Criteria</i>		<i>Value</i>	<i>References</i>
	<i>Good fit</i>	<i>Acceptance</i>		
Root mean square error of approximation (RMSEA)	<0.06	0.06–0.08	0.062***	Hair et al. (1998)
Standardized RMR (SRMR)	<0.08	0.05–0.08	0.061***	Hair et al. (1998)
Comparative Fit Index (CFI)	>=0.95	0.90–0.95	0.911**	Hair et al. (1998)
Tucker Lewis Index (TLI)	>=0.95	0.90–0.95	0.902**	Byrne (2010) and Hu and Bentler (1999)
CMIN (χ^2)/DF	<3.0	3.0–5.0	3.52**	Hair et al. (1998)

Source Authors findings

< 0.001), CFI = 0.911, TLI = 0.902, RMSEA = 0.062, and SRMR = 0.061 (as shown in Table 2.4).

The results of the path analysis show that PJ and FP have a positive and statistically significant effect on IU, while PV has a negative and statistically significant effect ($p < 0.001$) (Fig. 2.3). This supports hypotheses H1 and H2, which state that PJ positively influences IU and FP, respectively. The findings also suggest that PJ's influence on IU ($\beta = 0.23$, $t = 8.17$; $p < 0.001$) and FP ($\beta = 0.21$, $t = 7.85$; $p < 0.001$) is mediated by PV. Regarding PV, the results indicate that it negatively affects PJ ($\beta = -0.11$, $t = 5.07$; $p < 0.001$), FP ($\beta = -0.19$, $t = 7.22$; $p < 0.001$), and IU ($\beta = -0.67$, $t = 13.15$; $p < 0.001$), which supports hypotheses H3, H4, and H5, respectively. Additionally, FP is found to have a positive effect on IU ($\beta = 0.45$, $t = 10.18$; $p < 0.001$), supporting hypothesis H6. The results suggest that the effect of PV on IU is the highest, which means that candidates might withdraw from the job search process when PV occurs. The finding that FP significantly mediates the impact of PJ and PV on IU ($\beta = 0.47$, $t = 12.37$; $p < 0.001$) is a significant result of this study and highlights FP as a surrogate for trust, in line with previous studies (References). Finally, the results show that IU has a positive and significant impact on the AU of social media toward job search ($\beta = 0.35$, $t = 8.21$; $p < 0.001$), which supports hypothesis H7.

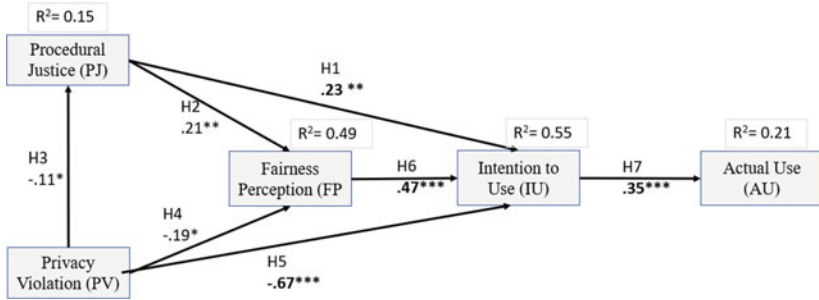


Fig. 2.3 Structural model with standardized path coefficients (*Source* Authors research)

Comparison of the Privacy Concerns by Type of Job Seeker (Independent Samples t-Test)

Since the hypothesized model showed significant results, the study further explored the variation in privacy concerns among different types of job seekers, by comparing the perceptions of Active Job Seekers (AJS) and Passive Job Seekers (PJS). Out of the 517 survey respondents, 199 (38%) were AJS and 288 (56%) were PJS. An independent samples t-test was performed to determine the differences in privacy concerns between the two groups. The results showed that PJS had higher privacy concerns with higher mean average scores for PJ (3.88; t : 0.018_s), PV (3.98; t : 0.013_s), and FP (3.79; t : 0.002_s), which in turn led to lower IU (3.63; t : 0.013_s) and AU (2.35; t : 0.013_s) as compared to AJS group (Table 2.5). Consequently, this points to significant behavioral distinctions between the two groups regarding privacy concerns. This finding highlights a compelling avenue for future investigations, specifically considering job seeker type as a moderating variable.

Discussion

Privacy is an important concern for social media users, as it refers to an individual's ability to control the terms by which their personal information is acquired and used. This study investigates the factors contributing to job seekers' privacy concerns and perceptions of fairness when using social media in job search. It focuses on the effects of perceived justice (PJ) and perceived privacy violations (PV) on fairness perceptions (FP),

Table 2.5 Differences in means test results

<i>Variable</i>	<i>Group</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>Difference in means</i>	<i>Significance test (t-test)*</i>
Procedural Justice (PJ)	AJS	196	3.49	0.65	0.39	0.018**
	PJS	288	3.88	0.71		
Privacy Violation (PV)	AJS	196	3.61	0.68	0.37	0.013**
	PJS	288	3.98	0.77		
Fairness Perception (FP)	AJS	196	3.52	0.74	0.27	0.002**
	PJS	288	3.79	0.72		
Intention to Use (IU)	AJS	196	3.91	0.73	0.28	0.014**
	PJS	288	3.63	0.78		
Actual Use (AU)	AJS	196	3.28	0.86	0.93	0.005**
	PJS	288	2.35	0.79		

*Independent samples *t*-test (95% confidence interval); $p < 0.05$ **

Source Authors findings

which then impact intended usage (IU) and actual usage (AU). The study finds that PJ has a direct and positive effect on FP and IU, with an even stronger indirect effect through FP. On the other hand, PV has a direct and negative impact on PJ, FP, and IU, suggesting that privacy violations could discourage job seekers from continuing their job search. The mediation effect of FP in the relationship between PJ, PV, and IU is a new finding in job search studies. The study concludes that the three antecedent constructs—PJ, PV, and FP—are important in understanding job seekers' privacy concerns when using social media for job search purposes. The study findings resonate with the work of Martin (2018), and Van Esch and Black (2019), who studied factors that affect online privacy and thus engagement. Additionally, the study extends the literature by showing that the theory of reasoned action (TRA) is valuable in explaining the privacy concerns in job search with social media.

The study suggests that job applicants are likely to be deterred from applying to jobs, roles, or workplaces if they perceive privacy violations during the job search process. The aspect that PV produces a direct and negative effect on PJ, FP, and IU indicates job seekers are likely to even withdraw from the job search process when privacy violations occur. We thus see PV as a critical determinant in the model, influenced by various factors:

Oversharing on social media: Excessive sharing of personal information on social media can lead to privacy violations and negatively impact a job search. Job seekers should be mindful of what they post and avoid sharing sensitive or inappropriate content (Nissenbaum, 2018). Potential employers may be able to access several of these profiles without consent and use them as grounds for biased judgments or for even rejecting candidates. Job seekers thus need to avoid sharing sensitive or inappropriate information that could negatively impact their job search.

Lack of privacy settings: If job candidates have not set their social media profiles to private, anyone, including potential employers, may be able to see their posts and activity (Rosenblum, 2007). Thus, job seekers should make sure to review and adjust their privacy settings to control who can see their information.

Content posting: What job seekers post on social media platforms can affect how they are perceived by potential employers. Employers may screen for unprofessional content, such as profanity, discriminatory language, or inappropriate photos, that could harm a candidate's chances for a job. Candidates should review their profiles and remove any content that may not be suitable for a professional context.

Cyberstalking: Sometimes employers are likely to gather additional information about job candidates by looking at their social media profiles or searching for their names online. This can be a form of cyberstalking and can be a violation of privacy (Martin, 2018).

Data mining: Social media companies often collect and sell data about users' online activity, including their job search activity. This can potentially compromise the privacy of candidates (Huy et al., 2020).

Fairness practices: In addition to privacy concerns, job seekers could also face issues of fairness in the hiring process. For example, some employers may use algorithms to screen job applicants based on their social media profiles, potentially leading to discrimination against certain groups. For instance, an algorithm that uses an applicant's race or gender as a predictor of job performance could perpetuate systemic biases and result in unfair hiring decisions. Similarly, the use of automated systems to review social media profiles and activity may introduce bias and undermine the fairness of the recruitment process. As a result, certain candidates tend to be unfairly favored or disadvantaged based on their social media presence or the presence of their connections.

In conclusion, the study findings suggest job seekers need to be cautious about the information they share on social media and consider

the privacy settings on their accounts. Employers, on the other hand, should be transparent about their use of social media in the recruitment process and ensure that their practices are fair and unbiased.

MANAGERIAL IMPLICATIONS

This study can influence the development of policies and best practices for the use of social media in the hiring process, with the goal of protecting the rights of job seekers and promoting fairness in the workplace. Accordingly, it offers several implications to managers: Firstly, managers should provide clear guidelines for the appropriate use of social media in the hiring process. This includes information on what is considered acceptable behavior when searching for potential candidates and what information is considered private. Secondly, managers must educate employees on privacy settings and how to secure their personal information on social media. Thirdly, managers should limit the use of social media as a screening tool and instead focus on skills and qualifications. Fourthly, it is important to respect the privacy of job seekers and to only access information that is relevant to the job requirements. Finally, it is crucial for managers to have a clear privacy policy in place and to be transparent about the data they collect, how it is used, and who it is shared with. By taking these steps, managers can ensure that they respect the privacy of job seekers while still utilizing the benefits of social media in the job search process.

LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

The topic of privacy concerns and fairness perceptions in social media recruitment is a crucial and complex issue. This study examined the effects of PJ, PV, and FP on intention to use (IU) social media in job search. The study findings suggest that FP plays a significant role in the job search process and that it strongly mediates the influence of PJ and PV on IU. While the study had a large sample size of 517 participants, there are some limitations to its generalizability. The limitations can be traced to (i) lack of standardized methods and metrics for measuring privacy and its impact on job search outcomes, (ii) limited empirical evidence on the impact of privacy-enhancing technologies on job search outcomes, and (iii) limited understanding of the role of privacy in different stages of

the job search process, such as resume screening, online networking, and in-person interviews.

RECOMMENDATIONS FOR FUTURE RESEARCH

Future research on privacy in job search with social media could focus on: (i) examining privacy concerns based on demographic factors such as industry, age, gender, and work experience; (ii) assessing the moderating effects of factors such as gender and job seeker type on privacy violations and related concerns; (iii) investigating the impact of different types of justice through custom frameworks, with an emphasis on ethical outcomes; (iv) studying the role of social network sites as external stakeholders in privacy concerns; (v) examining the impact of privacy policies and practices of employers and job search websites on job seekers' privacy and outcomes; (vi) conducting empirical studies to examine the impact of privacy-enhancing technologies on job search outcomes, such as employment rates and earnings; and (vii) using qualitative techniques to uncover emergent themes and address potential respondent biases.

REFERENCES

- Alge, B. J. (2001). Effects of computer surveillance on perceptions of privacy and procedural justice. *Journal of Applied Psychology, 86*(4), 797.
- Ajzen, I., & Fishbein, M. (1975). A Bayesian analysis of attribution processes. *Psychological Bulletin, 82*(2), 261.
- Boyd, D. (2008). Facebook's privacy trainwreck: Exposure, invasion, and social convergence. *Convergence, 14*(1), 13–20.
- Boyd, D. M., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication, 13*(1), 210–230.
- Brandeis, L., & Warren, S. (1890). The right to privacy. *Harvard Law Review, 4*(5), 193–220.
- Byrne, B. M. (2010). Structural equation modeling with AMOS: Basic concepts, applications, and programming (multivariate applications series). *New York: Taylor & Francis Group, 396*(1), 7384.
- Colquitt, J. A. (2001). On the dimensionality of organizational justice: A construct validation of a measure. *Journal of Applied Psychology, 86*(3), 386.
- Coppola, N. W., Hiltz, S. R., & Rotter, N. G. (2004). Building trust in virtual teams. *IEEE Transactions on Professional Communication, 47*(2), 95–104.

- DataReportal. (2022). *Digital 2022: Global Overview Report*. <https://datareportal.com/reports/digital-2022-global-overview-report>
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 319–340.
- Davis, F. D. (1993). User acceptance of information technology: System characteristics, user perceptions and behavioral impacts. *International Journal of Man-Machine Studies*, 38(3), 475–487.
- Donath, J. (2007). Signals in social supernets. *Journal of Computer-Mediated Communication*, 13(1), 231–251.
- Dwyer, C., Hiltz, S., & Passerini, K. (2007). Trust and privacy concern within social networking sites: A comparison of Facebook and MySpace. In *AMCIS 2007 Proceedings*, 339.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50.
- Gallagher, J., & Ransbotham, S. (2010). Social media and customer dialog management at Starbucks. *MIS Quarterly Executive*, 9(4).
- Gross, R., & Acquisti, A. (2005, November). Information revelation and privacy in online social networks. In *Proceedings of the 2005 ACM workshop on Privacy in the Electronic Society* (pp. 71–80).
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate data analysis* (Vol. 5, No. 3, pp. 207–219).
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6th ed.). Pearson Prentice Hall.
- Hair, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: Updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, 1(2), 107–123.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55.
- Hughes, T. J. (2020). *MER Conference 2020: KEYNOTE, Three Apples—The History and Future of Privacy*. <https://youtu.be/ww04gBjPZ-g>
- Huy, P. T., Vu, N. H., Hoang, H. T., & Nguyen, H. T. H. (2020). Procedural justice in selection from the lens of psychological contract theory. *Organizacija*, 53(4), 272–286.
- Karyda, M., Gritzalis, S., Park, J. H., & Kokolakis, S. (2009). Privacy and fair information practices in ubiquitous environments: Research challenges and future directions. *Internet Research*, 19(2), 194–208.
- Lanier, C. D., & Saini, A. (2008). Understanding consumer privacy: A review and future directions. *Academy of Marketing Science Review*, 12(2), 1–45.

- Malhotra, N. K., Kim, S. S., & Agarwal, J. (2004). Internet users' information privacy concerns (IUIPC): The construct, the scale, and a causal model. *Information Systems Research, 15*(4), 336–355.
- Martin, K. (2018). The penalty for privacy violations: How privacy violations impact trust online. *Journal of Business Research, 82*, 103–116.
- McFarland, L. A., & Ployhart, R. E. (2015). Social media: A contextual framework to guide research and practice. *Journal of Applied Psychology, 100*(6), 1653.
- Metzger, M. J. (2004). Privacy, trust, and disclosure: Exploring barriers to electronic commerce. *Journal of Computer-Mediated Communication, 9*(4), JCMC942.
- Nissenbaum, H. (2018). Respecting context to protect privacy: Why meaning matters. *Science and Engineering Ethics, 24*(3), 831–852.
- Pan, Y., & Zinkhan, G. M. (2006). Exploring the impact of online privacy disclosures on consumer trust. *Journal of Retailing, 82*(4), 331–338.
- Pew Research Center. (2014). *Public perceptions of privacy and security in the post Snowden era*. http://www.pewinternet.org/files/2014/11/PI_PublicPerceptionsofPrivacy_111214.pdf.
- Phelps, J., Nowak, G., & Ferrell, E. (2000). Privacy concerns and consumer willingness to provide personal information. *Journal of Public Policy & Marketing, 19*(1), 27–41.
- Piccoli, G., & Ives, B. (2003). Trust and the unintended effects of behavior control in virtual teams. *MIS Quarterly, 36*5–395.
- Ranjbarian, B., Fathi, S., & Kamali, A. (2010). The factors affecting on consumers' repurchase intention toward an automobile brand: An application of reasoned action theory. *European Journal of Social Sciences, 16*(3), 352–362.
- Rauniar, R., Rawski, G., Yang, J., & Johnson, B. (2014). Technology acceptance model (TAM) and social media usage: An empirical study on Facebook. *Journal of Enterprise Information Management*.
- Rosenblum, D. (2007). What anyone can know: The privacy risks of social networking sites. *IEEE Security & Privacy, 5*(3), 40–49.
- Shin, D. H. (2010). The effects of trust, security and privacy in social networking: A security-based approach to understand the pattern of adoption. *Interacting with Computers, 22*(5), 428–438.
- Snyder, J. L. (2010). E-mail privacy in the workplace: A boundary regulation perspective. *The Journal of Business Communication (1973), 47*(3), 266–294.
- Solove, D. J. (2006). A taxonomy of privacy. *University of Pennsylvania Law Review, 477*–564.
- Subbarao, N. V., Chhabra, B., & Mishra, M. (2022a). Social media usage behavior in job search: Implications for corporate image and employer

- branding. *Managing Disruptions in Business: Causes, Conflicts, and Control*, 51–79.
- Subbarao, N. V., Chhabra, B., & Mishra, M. (2022b). A multigroup analysis of active and passive job seekers using social media. *Global Business Review*, 09721509221124167.
- Subbarao, N. V., Chhabra, B., & Mishra, M. (2022c). Antecedents and consequences of social media usage behavior in job search: A qualitative study toward a conceptual framework. *Inclusive businesses in developing economies: Converging people, profit, and corporate citizenship* (pp. 215–241). Springer International Publishing.
- Turow, J., Hennessy, M., & Draper, N. (2015). *The tradeoff fallacy: How marketers are misrepresenting American consumers and opening them up to exploitation*. https://www.asc.upenn.edu/sites/default/files/TradeoffFallacy_1.pdf
- Van Esch, P., & Black, J. S. (2019). Factors that influence new generation candidates to engage with and complete digital, AI-enabled recruiting. *Business Horizons*, 62(6), 729–739.



Tone, Readability, and Firm Performance: A Study of Chairman's Letter Across India and China

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INTRODUCTION

Annual reports of listed companies available in the public domain are a vital source of accounting and performance-related information. The significance is evident from the fact that an average investor devotes around 15 minutes to browse through the annual report prior to making investment decisions (David, 2001). Over the last few decades, annual reports as a source of insight have gained considerable traction as is

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evident from their increasing length and complexity (Li, 2008). Simultaneously, the narrative sections within annual reports have also evolved. A narrative is ‘a representation of a particular situation or process in such a way as to reflect or conform to an overarching set of aims or values’ (Oxford, 1989). Narratives that center around corporate functioning and performance are broadly known as accounting narratives. Accounting narratives in annual reports comprise of statutory disclosures such as Director’s report, business responsibility report, Management Discussion & Analysis (MD&A) report, and corporate governance report; as well as voluntary disclosures such as Chairman’s letter and business overview. Studies demonstrate that these narrative sections constitute 57% of the annual reports of UK corporates (Arthur Andersen, 2000) and 52% of Indian corporates (Bhuyan & Baid, 2020). The Chairman’s letter, an important informative voluntary, non-statutory accounting narrative document, is a treasure trove of insights. In this document, the Chairman addresses the shareholders about the causal connect between current year’s financial performance, planned actions, and expected future outcomes (Clatworthy & Jones, 2003; Sedor, 2002). It does not have a fixed format or size and appears by various names such as Chairman’s Letter, From the Desk of Chairman, President’s Message, or Address to Shareholders. Along with future financial highlights and Chief Executive’s review, etc., the Chairman’s letter is a voluntary forward-looking section that augments the credibility of annual report (Athanasakou & Hussainey, 2014). As the letter conveys discretionary views on various aspects significant to the company and its stakeholders (Patelli & Pedrini, 2014), it is widely read by investment analysts and institutional investors (Clatworthy & Jones, 2003).

Unfortunately, despite its growing importance and significant presence in the narratives section, the Chairman’s letter is an underappreciated constituent of annual report (Craig & Amernic, 2011). The phenomenal

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amount of information available in Chairman's letter can be extracted using the technique of narrative reporting (Duriau et al., 2007), and yet, it has not received due attention from scholars in finance and accounting domain. This is reflected in the limited number of studies that have examined the voluntary narrative of Chairman's letter. Whatever studies have been undertaken have primarily focused on companies based out of American and European regions, with a few studies examining Chinese region (Abrahamson & Amir, 1996; Craig & Amernic, 2011; Schleicher & Walker, 2010). However, studies examining accounting narratives in annual reports of companies from India are almost non-existent. Moreover, limited attempts have been made by researchers to conduct a comparative assessment of voluntary accounting disclosures of India and China, two of the biggest emerging economies. This is surprising given the fact that researchers have used content analysis in accounting research to examine the annual reports of Indian and Chinese companies separately (Radhakrishnan, 2014; Tucker & Zhang, 2016). In Indian context, Bhuyan and Baid (2020) studied tone and readability of Chairman's letters of top performing and least performing companies and found that both these aspects are significantly associated with firm performance. Similarly, in Chinese context, Zhou et al. (2018) upon examining the relationship of truthfulness and optimism of tone with stock crash risk found that it is contingent upon truthfulness of the tone. However, no work has focused on comparative study of Chairman's letter between India and China; impact of tone and readability of Chairman's letter on firm performance across these two countries; and a comparative assessment of this impact between the two countries.

Taking cognizance of the gaps in extant research discussed above, this study fulfills following objectives: (1) we compare the tone and readability of accounting narratives in publicly listed companies across the two emerging economies of India and China; (2) we study the association between tone and readability with firm's current and future performance; and (3) we compare the strength of association that tone and readability have with firm's current and future financial performance across the two emerging economies of India and China. The study extends the horizons of knowledge through two unique contributions. First, earlier studies have measured tone, readability, and its association with current and future firm performance using country-specific data, such as for USA (Henry, 2008) or India (Bhuyan & Baid, 2020). This study expands the discourse and facilitates generalization by undertaking a

profound comparative assessment across two emerging economies—India and China. Second, earlier studies have measured tone, readability, and performance as single-item measure (Li, 2008; Loughran & McDonald, 2014; Luo et al., 2018). This study proposes tone, readability, and performance as a latent construct reflected in multiple items. Multi-item measurement of construct contributes toward robust reliability and validity, and thereby, facilitates credible advancement of theory in a domain. Researchers have strongly advocated the superiority of multi-item over single-item measures (Churchill, 1979; Mishra & Banerjee, 2019). This paper comprises of seven sections. Section two gives the background of the study; section three reviews extant literature; and research hypotheses are formulated in section four. Section five presents research design and methodology; and section six focuses on analysis, findings, and implications. The last section offers conclusion, discusses limitations, and proposes avenues for future research.

BACKGROUND OF THE STUDY

India and China share some common features among themselves such as large population and eco-political reforms. At the same time, they differ on some dimensions such as language, media regulations, and political composition. From early 1950s, both countries have undergone development at a rapid pace in terms of poverty eradication, infrastructure development, industrialization, etc. The Gross Domestic Product (GDP) of China and India was almost same in 1980 at USD 191.15 billion and 183.84 billion, respectively. China started liberating its market in 1980 unlike India which began its economic reforms in 1991. Currently, China is ahead of India in terms of size of economy and growth. As per International Monetary Fund's (IMF) economic outlook report (IMF, 2019), China's GDP at nominal rate stands at USD 13.84 trillion in 2018 and USD 14.40 trillion in 2019. In comparison, India's GDP at nominal rate was USD 2.72 trillion and USD 2.87 trillion in 2018 and 2019, respectively. While China's GDP grew by 5.8%, India's GDP grew by 7.97% on YoY basis from 2018 to 2019. In 2019, China and India contributed almost 27% to the world's GDP in terms of purchasing power parity.

Based on GDP growth rate, India and China are the leading emerging economies in the world (IMF, 2019). Investors around the world are investing in these countries in the form of FDI and FII. Corporates of both countries are going global. With companies operating across

borders, a number of MNCs have gone up in these two countries. With the growing culture of MNCs, the reporting standards are likely to be harmonized and standardized. The regulatory bodies of both India and China make it mandatory for companies to produce timely and adequate information that will influence investors' decisions. Both countries' corporates provide narrative accounting disclosures such as Chairman's letter, Director's report, MD&A, and Corporate Governance report, in their annual reports. In view of these characteristics, it is an interesting proposition to explore the Chairman's letter of corporates from these countries using narrative reporting.

LITERATURE REVIEW

Narratives such as commentary, expert opinion, customers' feedback, and newspaper article are a key source of insight. Various accounting narratives are studied in literature such as earnings press releases, initial public offerings, prospectus, restatement announcements, media news, analyst reports, and annual/10-Ks reports (Beattie, 2014). The need for narrative accounting disclosures was first felt during the accounting scandals in late 1990s and early 2000s. With changing perspective of corporates toward society and the environment, governments have also implemented policies regarding narrative accounting disclosures (Qian & Zhu, 2019). In extant research, the narrative accounting disclosures have been studied as content analysis (Bryan, 1997; Davis et al., 2012; Smith & Taffler, 2000), tone analysis (Henry, 2008; Loughran & McDonald, 2011; Tetlock, 2007), forward-looking perspective (Athanasakou & Hussainey, 2014), risk disclosures (Kravet & Muslu, 2013), and readability (Li, 2008; Loughran & McDonald, 2014). This paper studies tone and readability of Chairman's letter as these significantly influence understanding of companies' performance by current and prospective investors.

Tone Measurement

Tone measurement is defined as 'the effect or feeling of a communication' (Henry, 2008). During the last decade, the quantification of narrative disclosures in form of tone of the accounting and financial reports has gained traction. Tone measurement is possible with the help of 'bag-of-words' approach or by sentence approach. Previous studies

have made dictionaries using the ‘bag-of-words’ approach to quantify the narrative tone (Loughran & McDonald, 2015). The dictionary comprises of positive and negative words to measure tone. There are both general dictionary and financial domain-specific dictionary. Davis and Tama-Sweet (2012) used the general domain DICTION dictionary to compare the tone of earnings announcement and the tone of MD&A. A comparative assessment reveals that domain-specific dictionaries outperform the general domain dictionaries (Henry & Leone, 2014; Loughran & McDonald, 2015). Loughran and McDonald (2011) found that domain-specific measurement dictionaries are more robust to 10-K filings over general measurement dictionaries. Allee and Deangelis (2015) used the Loughran and McDonald (LM) dictionary to quantify the earnings conference calls and found that tone is associated with future disaggregated and current aggregated performance.

Henry and Leone (2014) advocate use of domain-specific dictionary developed by Henry (2008) for accounting and financial narratives. Henry and Leone (2016) also support this recommendation and assert that the dictionary developed by Henry (2008) is appropriate for small sample sizes used in capital market data analysis and analysis of accounting and financial narratives. This dictionary has 105 positive words and 85 negative words. The tone is primarily calculated as difference of positive and negative word counts in a document. This study uses dictionary developed by Henry (2008) for measuring tone.

Readability Analysis

Readability refers to the ease with which an investor or reader can read, understand, and process the written text (Bonsall IV et al., 2017). Increase in the textual portion in annual reports has led to prominence of the readability analysis (Li, 2008). Investors require transparent and authentic communication of financial information which makes trusted and strong relationship with the companies. Companies avoid jargons and publish textual disclosures which could be understood by a larger audience (Jones & Shoemaker, 1994). The usage of non-accounting-related disclosures makes a document much harder to understand and monitor (Schleicher & Walker, 2010). The easy readability attracts a greater number of analysts to the companies over the years (Aymen et al., 2018). Information asymmetry and agency cost between investors and the company is reduced with easy readability (Aymen et al., 2018). In

accounting narratives, earlier studies have used file size (Loughran & McDonald, 2014), length of sentences (Loughran & McDonald, 2014), and log of total words in a document (Luo et al., 2018) as measure of readability. Recent studies have used syllable linked measures such as the Flesch Index, Bog Index, and Gunning-Fog/ Fog Index (Bonsall IV et al., 2017). The Fog Index has been widely used in the accounting and finance studies (Li, 2008; Miller, 2010). Lo et al. (2017) assessed the readability of 10-K reports using Fog Index. Fog Index score conveys the level of qualification required to read the annual report and is used in this study. Another measure of readability, complexity, measured as part of Flesch Index is also used in this study.

Financial Performance Measures

Chairman's letter has been the subject of analysis in many accounting narratives studies. Smith and Taffler (2000) found that Chairman's letter primarily focusses on the current and expected accounting performance measures. Similarly, Conaway and Wardrope (2010) found that Chairman's letter predominantly focusses on financial reporting. Beynon et al. (2004) used the Chairman's letter to predict the Return on Equity (ROE) and Return on Sales (ROS). Hamann et al. (2013) argue in favor of firm performance as a multi-dimensional construct. In this study, we have measured performance using multi-items relating to accounting performance of the company.

Caglio et al. (2020) used factor analysis for different textual dimensions and concluded that readability dimension is different from the sentiment dimensions. Tailab and Burak (2021) used the DICTION wordlist factor scores to predict the market risk, market performance, and profitability. Using same logic, this study measures the tone, readability, and firm performance as latent variables.

HYPOTHESES DEVELOPMENT

The accounting narratives in annual reports provide descriptions about companies' performance from insiders' perspective. Corollary can be drawn to a captain of a team talking about its performance after the match is over which gives insights from the perspective of player. Chairman's letter predominantly narrates about company's current and potential future performance (Abrahamson & Amir, 1996). These narratives help

the stakeholders to understand financial statements better and make more informed decisions. The stakeholders' faith depends on the level of truthfulness in the narrative. Therefore, the study of association between accounting narrative and firm performance is extremely important.

Current Performance and Tone

Chairman's letter is written after completion of financial year to explain company's performance and is presented as part of annual report to shareholders at annual general meeting. Performance of company influences the choice of words used in narrative. Previous studies have reported that current year profitability has a positive association with tone. Athanasakou and Hussainey (2014) reported that Chairman's letter along with other related narratives are positively associated with firm's accounting performance. Bhuyan and Baid (2020) found positive correlation between current year ROA, ROE, and Total Shareholders Return with tone of Chairman's letter. Davis et al. (2015) found that tone of earnings press release is influenced significantly by actual and expected quarterly ROA. Schleicher and Walker (2010) found current year ROE and other accounting performance measures influence tone of annual report of the same period. Li et al. (2019) reported a positive association between ROA and tone of the annual report for both pledged and non-pledged firms. Based on above studies, we propose that profitability positively influences tone of Chairman's letter.

H1: There is a positive relationship between current year's firm profitability and tone of Chairman's Letter in annual report.

Current Performance and Readability

Earlier studies have reported that company's performance influences choice of words, length of sentences and paragraphs, file size, etc., of its narrative disclosures. More profitable companies use small sentences with simpler words which makes understanding of annual report easier for readers (Eugene Baker & Kare, 1992). Companies with higher profitability have lower score on measures like Fog Index and Complexity. Lower score on Fog Index and Complexity indicates easy readability. Ajina et al. (2016) found that ROA of a firm inversely influences the

Fog Index of annual report. Smith and Taffler (1992) found that the readability of Chairman's letter and accounting performance measures are negatively associated. Bhuyan and Baid (2020) found that current year ROE and ROA are negatively associated with the Fog Index of Chairman's letter. This study explores the association of readability with performance measures. Hence, the following research hypothesis.

- H2: There is a negative relationship between current year's firm profitability and readability of Chairman's Letter in annual report.

Tone and Future Performance

Many studies have reported impact of company's announcement tone on market performance indicators. Boudoukh et al. (2013) argue that tone of any news published online influences the stock price of the company accordingly. The tone of earnings press releases positively affects cumulative abnormal return around earnings announcements day (Henry, 2008; Henry & Leone, 2016). Price et al. (2012) found that the tone of the conference call significantly positively affects the short run (3-day window) and long run (60 days window). Annual report tone, along with profitability measures, accurately forecast market crash (Zhou et al., 2018). In an event study, Loughran and McDonald (2011) found that presence of negative words in the 10-K report narrative negatively affects the four-day return.

The words used in Chairman's letter and firm's future profitability are significantly associated (Patelli & Pedrini, 2014; Smith & Taffler, 2000). Studies have also shown that tone of accounting narrative predicts future firm profitability measures such as EPS and ROA (Allee & DeAngelis, 2015). Davis et al. (2012) found that the tone of earning's conference calls predicts future ROA. Chairman's letter shares the Chairman's views on expected future firm performance. Tone gives an indication about results expected by the company in subsequent year. Abrahamson and Amir (1996) found that percentage of negative words in Chairman's letter has an inverse relationship with future accounting performance measures. Based on above arguments, this study formulates the following hypothesis.

- H3: Tone of Chairman's Letter in annual report has a positive association with subsequent year's profitability of the firm.

Readability and Performance

Studies have shown that readability and firm's future market performance are significantly associated. Firms producing highly complex 10-K reports have lower market-adjusted return and abnormal trading volume (Miller, 2010). Stocks of Companies with high Fog Index score based on 10-K documents report high volatility and vice versa (Loughran & McDonald, 2014). Earlier studies have also reported that complex narratives are indicative of poor earnings management practices (Bonsall IV et al., 2017) and difficult performance targets for future years (Lo et al., 2017). Based on above arguments, this study posits that entities which expect high future profitability will represent Chairman's letter in easily understandable narratives with better readability. So, the hypothesis is drawn as:

- H4: Readability of Chairman's Letter in annual report has a negative association with subsequent year's profitability of the firm.

Association of Tone and Readability with Firm Performance Across India and China

There are few studies which have compared accounting narratives styles across countries. Yen et al. (2017) conducted a comparative study of Chinese to US investors' reactions to the accounting narratives. Conaway and Wardrope (2010) made a comparative content analysis of CEO's letter between US and Latin American companies. Previous sections of this study have reported numerous studies establishing association of tone and readability with current and future firm performance. However, there are no comparative studies between India and China examining association between accounting narratives and firm performance. With the growing importance of accounting narratives, there is a need to study if these countries depict similar or different relationship between narratives and performance. Normally, cross countries' studies exhibit differences due to social and cultural differences. However, these differences are

minimal or not found in case of financial markets and companies as they are more influenced by international practices. As both the countries are prime destinations for global corporates and investors, harmonization of accounting practices is quite important. With similar accounting practices, it is expected that there will be no significant difference in association of tone and readability with profitability measures across India and China.

- H5: There is no significant difference in association of tone and readability of Chairman's Letter in annual report with current and future profitability between Indian and Chinese companies.

METHODOLOGY

Sample Selection

Companies listed on India's National Stock Exchange (NSE) Nifty 50 and China's Shanghai Stock Exchange (SSE) SSE 50 were taken for the study. Annual report of Nifty 50 companies for the year ending March 31, 2018, and SSE 50 companies as on December 31, 2017, was taken for analysis. The annual report in PDF format was obtained from the Bloomberg database and companies' website and Chairman's letter was extracted to text format. As Chairman's letter is a voluntary disclosure, three companies each from India and China which did not furnish the Chairman's letter in annual report were excluded. Also, in case of Chinese companies, English version was not available for twelve companies as they primarily report in Mandarin. Therefore, the final sample constituted of 47 Indian and 35 Chinese corporates. Conaway and Wardrope (2010) took top 30 US firms and 26 Latin American firms for thematic study the Chairman's letter. Similarly, Laskin (2018) studied top 30 and least 29 firm's MD&A to investigate the narrative strategies of top and least performing companies. Our sample size is in line with these studies.

Variables Definition

Tone: This study uses tone dictionary developed by Henry (2008) for tone measurement. This dictionary has 105 positive words and 85 negative words. The tone of a document is measured as the difference between

the positive and the negative word counts. Documents with higher positive words than negative words are considered to have optimistic tone while the reverse is termed as pessimistic tone (Loughran & McDonald, 2015). The existing literature advocates two approaches for measuring the tone (Henry, 2008; Loughran & McDonald, 2011). The formulas for two measures (Tone1 and Tone2) are as follows:

$$\text{Tone1} = \frac{(\text{Positive word counts} - \text{Negative word counts})}{(\text{Positive word counts} + \text{Negative word counts})}$$

$$\text{Tone2} = \frac{(\text{Positive word counts} - \text{Negative word counts})}{(\text{Total words in the document})}$$

Earlier studies have used either of these measures. In this study, we use both measures of tone and conceptualize tone as a reflective construct.

Readability: Previous studies have measured readability in numerous ways (Loughran & McDonald, 2014; Miller, 2010). The two most prominent ways are Fog Index and Complexity (part of Flesh Index).

$$\text{Fog Index} = 0.4 * (\text{words per sentence} + \text{percent of complex words})$$

$$\text{Complexity} = \frac{\text{Total number of characters}}{\text{Total number of words in the document}}$$

In case of both measures, a higher score depicts more difficulty in reading the document. Previous research has used either or both of them as separate variables (Luo et al., 2018). This study combines them to form a reflective construct with two items.

Financial Performance Measures

Profitability was captured by taking Return on Assets (ROA), Return on Equity (ROE), and Return per Employee (RPE) as a construct having reflective indicators. This is based on (Hamann et al., 2013) conceptualization of performance as a multi-item construct.

Techniques for Analysis

Profitability items had missing values. Little MCAR test was used to analyze missing data (Baid & Rao, 2017). There values were missing completely at random, so missing value replacement was done using

regression method. Outliers were winsorized at 5% significance level as data size was very small (Baid & Rao, 2017). With the winsorized data, the construct formulation was completed. Composite Reliability was used as a measure of reliability. Average variance extracted (AVE) was used as measure for convergent validity. Cross loadings, Fornell-Larcker Criterion (FLC), and Heterotrait-Monotrait (HTMT) ratio were used for discriminant validity (Baid & Rao, 2017; Hair et al., 2019). PLS-SEM was used to calculate regression measures and conduct multi-group analysis. It is the recommended technique, especially for small sample size, and does not make any assumption about data pattern (Hair et al., 2019; Tailab & Burak, 2021).

ANALYSIS, RESULTS, DISCUSSION, AND IMPLICATIONS

The tone depicts the mood of the narratives. A positive score of tone is termed as optimistic mood and a negative score reflects pessimistic mood. Overall, companies across the two countries reported more positive words (54) than negative words (9) reflecting an optimistic tone. Indian companies report a mean value of 0.742 for Tone1 which was slightly higher than score of 0.713 for Chinese companies (similar results were for Tone2). This is in line with previous studies which have reported up to 90% usage of positive words (Clatworthy & Jones, 2003; Henry, 2008; Smith & Taffler, 2000). A document text having a Fog Index score above 18 is considered unreadable and score below 10 is universally easy to read. In accounting domain, a score between 12 and 14 is ideal for audience (Li, 2008). Mean score for both countries reflects difficult readability with score between 14 and 18. Indian companies report lower score (15.72) as compared to Chinese (17.79) making it readable with less efforts as compared to Chinese companies' Chairman's letter. Similar results are seen for complexity with India having mean value of 5.34 as compared to 5.72 for China.

Validity and Reliability Analysis

This study measures tone, readability, and firm performance as constructs with multiple items. The CR values of all constructs were above 0.7 and the AVE values were above 0.5 establishing reliability and convergent validity (Baid, 2017). Loadings of each item on construct were above 0.75 and each item loading on its construct was more than its loading on

other constructs establishing discriminant validity (Table 3.1). As cross loading is considered as weak measure of discriminant validity, FLC and HTMT ratio were checked for discriminant validity (Hair et al., 2019).

In case of FLC, all diagonal values are more than off diagonal values (Table 3.2), and in case of HTMT, all diagonal values are below off diagonal values (Table 3.2) establishing discriminant validity. The proposed dimensions, i.e., tone, readability, and firm performance, are multi-item construct and different from each other (Caglio et al., 2020; Tailab & Burak, 2021). With the dimensions identified, the study moved for further analysis.

Table 3.1 Construct reliability and validity

<i>Latent variable</i>	<i>Variables</i>	<i>Factor loadings</i>	<i>AVE</i>	<i>CR</i>
Profitability _t	ROA _t	0.849	0.679	0.864
	ROE _t	0.806		
	RPE _t	0.817		
Profitability _{t+1}	ROA _{t+1}	0.871	0.663	0.854
	ROE _{t+1}	0.826		
	RPE _{t+1}	0.740		
Readability	Fog index	0.806	0.782	0.877
	Complexity	0.956		
Tone	Tone1	0.761	0.638	0.778
	Tone2	0.835		

Source Computed by Authors

Table 3.2 Discriminant validity

<i>Fornell-Larcker Criterion</i>	<i>Profitability_t</i>	<i>Readability</i>	<i>Tone</i>
<i>FLC</i>			
Profitability _t	0.824		
Readability	-0.339	0.884	
Tone	0.339	-0.074	0.799
<i>HTMT ratio</i>			
Profitability _t			
Readability	0.391		
Tone	0.485	0.220	

Source Computed by Authors

Descriptive Analysis

Same 54 positive words out of total 105 words from tone dictionary appeared in narratives of both countries. But average occurrence of positive words per document was 47.32 in Indian context while 45.43 for Chinese companies. In case of negative words, both countries reported same 9 negative words. In Indian context, average occurrence of negative words was 5.17 while in Chinese context average occurrence was higher at 7.33. So, absolute value of tone for Indian companies was 42.15 while for Chinese companies was 38.10. *Based on independent samples t-test of the factor scores of the tone, there is significant difference in tone (p -value = 0.014) between India and China.* Based on average factor score, tone of Indian companies (0.22) is more optimistic than tone of Chinese companies (-0.34). This difference may be explained by Indian companies reporting significantly higher profitability as compared to Chinese companies (t -statistic = 5.792, p -value = 0.000). Greater profit is translating into a more positive tone for Indian companies vis-à-vis their Chinese counterparts.

Content analysis helps to understand the theme and concepts of underlying narrative with the help of keywords and/or co-occurrence of these words (Conaway & Wardrope, 2010; Duriau et al., 2007; Mishra, 2022). Content analysis was used to calculate the frequency of words related to tone to further understand the difference in tone. Chi-square test was conducted for occurrence or non-occurrence of 63 words (54 positive and 9 negative words) in Indian and Chinese documents. It revealed that occurrence of seven positive words—‘growing’, ‘grown’, ‘grew’, ‘achievements’, ‘rising’, ‘strengthened’, and ‘best’—and two negative words ‘risk’ and ‘risk’ was significantly different across two countries. It may be inferred that Chinese companies had less current and future growth as compared to Indian companies, as usage of growth-related words was found in a lesser number of documents while the two negative words ‘risk’ and ‘risks’ occurred in a greater number of documents. Additionally, the frequency of both these words was more in Chinese as compared to Indian companies’ Chairman’s letter. The greater occurrence of negative words in Chinese context could also be due to more global exposure resulting in higher perceived risk.

The mean factor scores of readability construct also varied significantly across Indian and Chinese Chairman’s letter (p -value = 0.000). Six

Indian companies reported scores in the range of 12–14 which is considered as ideal. Around 64% (30 letters) of Indian corporates were difficult to read with a Fog Index score between 14 and 18. In case of Chinese companies, it stood at 43% (15 letters). There were 8 Indian companies in unreadable category with score above 18 while this number stood at 19 for Chinese companies. Similarly, complexity level of Chinese companies was higher as compared to Indian companies indicating higher difficulty level. Chinese letters had a mean value of 5.72 with maximum of 6.02 and minimum of 5.43 characters per word. In case of India, mean value was 5.34 with a maximum of 5.68 and a minimum of 4.76. This may be because China's initial reporting language is Mandarin. English version is basically prepared for global reporting so characters per word are more. On the contrary, in India, even as the primary reporting language is English, a large part of the population is still non-English speaking, and therefore, a simpler language is used. Also, as per literature, companies with higher profitability have easy readability which may explain difference among readability across two countries as profitability of Indian companies is higher compared to China.

Results and Discussion

PLS-SEM was used to test hypotheses H1 to H5. The current year's profitability is positively associated with tone of Chairman's letter ($\beta = 0.339$, t -statistic value = 3.433). The adjusted R -square was 10.4% (Table 3.3). Hence, H1 is accepted. This implies current year's performance influences tone of Chairman's letter. The higher the profitability of the company, the more optimistic tone is used by the Chairman/CEO to communicate with various stakeholders. Schleicher and Walker (2010, $\beta = 0.190$), Athanasakou and Hussainey (2014, $\beta = 0.162$), Davis et al., (2015, $\beta = 0.0291$), Henry and Leone (2016, $\beta = 0.128$), and Li et al. (2019, $\beta = 0.465$) have also reported a significant positive association between firm performance and tone. Our beta value is higher than other studies except (Li et al., 2019) where narratives were classified based on leverage of companies.

The current period's profitability is inversely associated with readability of Chairman's letter ($\beta = -0.339$, t -statistic = 4.578) with the adjusted R -square value of 10.38% (Table 3.3). Thus, H2 is accepted. This implies that higher the company's profitability, lesser the Fog Index

Table 3.3 Results of data analysis

<i>Measures/hypotheses</i>	<i>H1</i>	<i>H2</i>	<i>H3</i>	<i>H4</i>
	DV			
IVs	Tone	Readability	Profitability _{<i>t</i>+1}	Profitability _{<i>t</i>+1}
Profitability _{<i>t</i>}	0.339 (3.433)	-0.339 (4.578)	-	-
Readability	-	-	-0.381 (4.740)	-
Tone	-	-	-	0.243 (2.049)
<i>R</i> square	0.115	0.115	0.218	
Adjusted <i>R</i> square	0.104	0.104	0.198	
Hypothesis validation	Accepted	Accepted	Accepted	Accepted

Source Computed by Authors

and Complexity scores making it more convenient to read and understand the narrative. Our findings are in line with earlier studies. Previous studies have also found a negative association between profitability and Fog Index. Ajina et al., (2016, $\beta = -0.328$) and Lo et al., (2017, $\beta = -0.375$) reported significant negative association with similar beta values.

The tone of current year's Chairman's letter ($\beta = 0.243$, *t*-statistic = 2.049) (Table 3.3) has a positive association with next year's profitability, and hence, hypothesis H3 is accepted. This implies that tone of CEO's narrative is a harbinger of subsequent year's profitability. As top management has some idea of expected profitability in near future, they communicate the same to stakeholders in their letter. A more positive tone is indicative of better profitability next year and vice versa. This reduces information asymmetry leading to better prices for company's shares. This finding is also in line with earlier studies. Henry (2008, $\beta = 0.047$); Davis et al. (2012, $\beta = 0.002$); Price et al. (2012, $\beta = 0.004$); Patelli and Pedrini (2014, $\beta = 0.0467$); and Henry and Leone (2016 $\beta = 0.002$) reported significant positive association with very low beta values. These studies have taken market measures of performance and have other independent and control variables. On the contrary, our study has explored the relationship with profitability based on accounting measures showing higher beta value of 0.243. Also, the tone and profitability are measured as multi-item constructs.

Readability as hypothesized was found to have a negative association with subsequent year's profitability ($\beta = -0.381$, t -statistic = 4.740) as given in Table 3.3, and thereby, providing support for hypothesis H4. This implies that readability of narrative provides an indication toward company's subsequent year's profitability. Lower the readability score, higher the expected profitability of the company and vice versa. Earlier studies support our results. Price et al. (2012, $\beta = -0.370$) and Ayman et al. (2018, $\beta = -0.136$) also found that subsequent year's performance measures were negatively affected by readability score. This study reported a comparatively higher beta value of -0.381 .

Tone and readability collectively explained 19.83% of succeeding year's profitability (Table 3.3). A post hoc analysis was also conducted with profitability as control variable. It was found that the model with tone and readability, and having profitability as control variable, was significant and better explained succeeding year's performance as compared to the model with control variable only. Extant research has considered both tone and readability measures in their analysis along with other variables (Henry, 2008; Patelli & Pedrini, 2014; Price et al., 2012). Henry (2008) and Price et al (2012) have reported adjusted R -square value of 11.8% and 2.9%, respectively. They took market measure of performance based on cumulative abnormal return. Patelli and Pedrini (2014) used future ROA as measure of performance and reported R -square of 16.7%. Our study has reported R -square of 19.83% and thereby, supporting our conceptualization of measuring variables as constructs.

Lastly, analysis of companies of both countries was conducted to compare the hypothesized relations between India and China. PLS-SEM is widely used to estimate cause and effect relationship among multivariate data but is also used for comparison of models across two setups (Henseler et al., 2016). Henseler et al. (2016) advocated measurement invariance assessment (MICOM) analysis which is a three-step process for invariance assessment and is a pre-requisite condition for MGA. The three elements are configural invariance, compositional invariance, and equality of composite mean values and variances which were performed using MICOM (Henseler et al., 2016).

As the indicators are same, data was coded similarly. The algorithm settings are also same across the two groups, and therefore, the first condition of configural invariance is satisfied (Henseler et al., 2016). Further, permutation function in PLS-SEM was applied for compositional invariance and equality of composite mean values and variances. Composite

Table 3.4 Results of PLS-MGA

<i>Measures</i>	<i>Total effects (difference)</i>	<i>p-value</i>
Profitability _t – Readability	–0.533	0.223
Profitability _t – Tone	–1.402	0.068
Readability – Profitability _{t+1}	–0.437	0.204
Tone – Profitability _{t+1}	–0.887	0.057
Hypothesis Validation (H5)	Accepted	

Source Computed by Authors

invariance scores have to be similar across setups for conducting MGA (Henseler et al., 2016). This condition stands fulfilled since all p-values are non-significant at 1% and 3 of them are non-significant at 5% level of significance (Henseler et al., 2016). Further, full measurement invariance was analyzed and found in-significant. MGA can be applied even if first two conditions are met (Henseler et al., 2016). It was found that there was no significant difference between association among tone, readability, and profitability among the two countries. Hence, hypothesis H5 was accepted. Difference of all path coefficient was non-significant as shown in Table 3.4. This implies that relationship among these variables hold same across countries. This is important as companies are registered on multiple exchanges across globe and so the relationship should not have any geographical influence.

Managerial Implications

In terms of future economic prospects, India and China are two important emerging powerhouses. Both countries share common features in terms of financial reporting practices. Accounting narrative as a medium to communicate economic performance of the companies has gained momentum over last decade. This study focuses on the Chairman’s letter in annual reports of companies from India and China. Two important aspects of tone and readability are used for quantification of narratives. Tone talks about feelings whereas readability reflects understandability. Tone and readability are measured using multiple items and differ significantly between India and China. Findings suggest that India has more optimistic tone and better readability score as compared to China. The

association among variables remains similar across the countries. Both, tone and readability, are influenced by current year's profitability and signal subsequent year's profitability. This implies that narratives give an indication of current and future performance. This makes narratives meaningful for readers and helps to develop trusts in these documents.

The findings of this study have implications for various stakeholders. Accounting narratives should communicate with the stakeholders to enhance understanding of company's affairs and build trust among the stakeholders. Tone should clearly reflect current and expected future performance helping stakeholders to take decisions. This study found significant relationship between tone and profitability of a company. Readability of the accounting narratives should be easy so that current and prospective stakeholders are encouraged to read and easily understand narratives. This study found that readability of accounting narratives remains difficult for general audience. However, it was found that readability is significantly associated with profitability of a company. With companies going global, relationship between tone, readability, and performance hold true irrespective of geographies. There should not be much difference in tone and readability of accounting narratives across countries. Difference in tone and readability across countries should be indicative of firm performance. This study found no significant difference in tone and readability of accounting narratives across Indian and Chinese companies. However, authors suggest that regulators in both India and China should recommend further simplification of language used in presentation of accounting narratives. Only then the objective of financial reporting with respect to disclosure is achieved.

CONCLUSION, LIMITATIONS, AND SCOPE FOR FUTURE WORK

Mostly, the managers write the accounting narratives in an optimistic tone. In line with the prospect theory, the management induces the investors to think about the results positively relative to reference points (Henry, 2008). The performance of current year positively affects the tone and inversely affects the readability of the accounting narrative of the firm. Current period's accounting narrative (tone) positively affects the future firm performance and readability affects negatively. The relationship of tone and readability across India and China remains similar.

Even as utmost care has been taken while planning and conducting the study, it still has a few limitations. First, the study is based on one-year cross-sectional data obtained from relatively small sample. A larger sample spanning across years may give a more robust result. Second, this study uses dictionary approach for tone measurement using the dictionary developed in US context (Henry, 2008). As no context-specific dictionary is available, future studies may develop and use dictionary suitable for Asian or/ and emerging economies. Bhuyan and Baid (2020) and Zhou et al. (2018) advocate in favor of a standardized financial disclosure word list for Indian and Chinese corporates, respectively. Third, future studies may test the constructs' validity and reliability and, if required, add more reflective items. Fourth, model may also be strengthened by adding more control and independent variables. Fifth, moderating effect of tone and readability may also be explored. Even with these limitations, results are robust and suggest that profitability influences tone and readability. Also, tone and readability signal future profits. These findings are of importance to readers of financial narratives.

REFERENCES

- Abrahamson, E., & Amir, E. (1996). The information content of the president's letter to shareholders. *Journal of Business Finance & Accounting*, 23(8), 1157–1182.
- Ajina, A., Laouiti, M., & Msolli, B. (2016). Guiding through the Fog: Does annual report readability reveal earnings management? *Research in International Business and Finance*, 38, 509–516.
- Allee, K. D., Anderson, L. S., & Crawley, M. J. (2020). *The impact of linguistic distance and financial reporting readability on foreign holdings of U.S. stocks* (SSRN Scholarly Paper ID 3254396). Social Science Research Network.
- Allee, K. D., & Deangelis, M. D. (2015). The structure of voluntary disclosure narratives: Evidence from tone dispersion. *Journal of Accounting Research*, 53(2), 241–274.
- Arthur Andersen. (2000). *Spice up the story: A survey of narrative reporting in annual reports*. Arthur Andersen.
- Athanasakou, V., & Hussainey, K. (2014). The perceived credibility of forward-looking performance disclosures. *Accounting and Business Research*, 44(3), 227–259.
- Aymen, A., Sourour, B. S., & Badreddine, M. (2018). The effect of annual report readability on financial analysts' behavior. *Journal of Economics Finance and Accounting*, 5(1), 26–37.

- Baid, D. (2017). A study of management control systems (MCS) and school performance. *Metamorphosis*, 16(2), 92–106.
- Baid, D., & Rao, S. V. D. N. (2017). Management controls of teachers—Scale development and validation. *Global Business Review*, 18(3), 719–733.
- Beattie, V. (2014). Accounting narratives and the narrative turn in accounting research: Issues, theory, methodology, methods and a research framework. *The British Accounting Review*, 46(2), 111–134.
- Beynon, M. J., Clatworthy, M. A., & Jones, M. J. (2004). The prediction of profitability using accounting narratives: A variable-precision rough set approach. *Intelligent Systems in Accounting, Finance and Management*, 12(4), 227–242.
- Bhuyan, A. K., & Baid, D. (2020). Chairman’s letter: Does it communicate something? *Indian Journal of Finance*, 14(1), 29.
- Bonsall IV, S. B., Leone, A. J., Miller, B. P., & Rennekamp, K. (2017). A plain English measure of financial reporting readability. *Journal of Accounting and Economics*, 63(2), 329–357.
- Boudoukh, J., Feldman, R., Kogan, S., & Richardson, M. (2013). *Which news moves stock prices? A textual analysis* (No. w18725; p. w18725). National Bureau of Economic Research.
- Bryan, S. H. (1997). Incremental information content of required disclosures contained in management discussion and analysis. *The Accounting Review*, 72(2), 285–301. JSTOR.
- Caglio, A., Melloni, G., & Perego, P. (2020). Informational content and assurance of textual disclosures: Evidence on integrated reporting. *European Accounting Review*, 29(1), 55–83.
- Churchill, G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, 16(1), 64–73.
- Chen, J. V., & Li, F. (2015). Discussion of “textual analysis and international financial reporting: Large sample evidence.” *Journal of Accounting and Economics*, 60, 181–186.
- Clatworthy, M., & Jones, M. J. (2003). Financial reporting of good news and bad news: Evidence from accounting narratives. *Accounting and Business Research*, 33(3), 171–185.
- Conaway, R. N., & Wardrope, W. J. (2010). Do their words really matter? Thematic analysis of U.S. and Latin American CEO Letters. *The Journal of Business Communication* (1973), 47(2), 141–168.
- Craig, R., & Amernic, J. (2011). Detecting linguistic traces of destructive narcissism at-a-distance in a CEO’s letter to shareholders. *Journal of Business Ethics*, 101(4), 563–575.
- David, C. (2001). Mythmaking in annual reports. *Journal of Business and Technical Communication*, 15(2), 195–222.

- Davis, A. K., Ge, W., Matsumoto, D., & Zhang, J. L. (2015). The effect of manager-specific optimism on the tone of earnings conference calls. *Review of Accounting Studies*, 20(2), 639–673.
- Davis, A. K., Piger, J. M., & Sedor, L. M. (2012). Beyond the numbers: Measuring the information content of earnings press release language*. *Contemporary Accounting Research*, 29(3), 845–868.
- Davis, A. K., & Tama-Sweet, I. (2012). Managers' use of language across alternative disclosure outlets: Earnings press releases versus MD&A*. *Contemporary Accounting Research*, 29(3), 804–837.
- Duriau, V. J., Reger, R. K., & Pfarrer, M. D. (2007). A content analysis of the content analysis literature in organization studies: Research themes, data sources, and methodological refinements. *Organizational Research Methods*, 10(1), 5–34.
- Eugene Baker, H., & Kare, D. D. (1992). Relationship between annual report readability and corporate financial performance. *Management Research News*, 15(1), 1–4.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24.
- Hamann, P. M., Schiemann, F., Bellora, L., & Guenther, T. W. (2013). Exploring the dimensions of organizational performance: A construct validity study. *Organizational Research Methods*, 16(1), 67–87.
- Hart, R. P. (2001). *Diction (software) in the international encyclopedia of communication research methods*.
- Henry, E. (2008). Are investors influenced by how earnings press releases are written? *The Journal of Business Communication* (1973), 45(4), 363–407.
- Henry, E., & Leone, A. J. (2014). Measuring the tone of accounting and financial narrative. In *Communication and language analysis in the corporate world* (pp. 36–47). IGI Global.
- Henry, E., & Leone, A. J. (2016). Measuring qualitative information in capital markets research: Comparison of alternative methodologies to measure disclosure tone. *The Accounting Review*, 91(1), 153–178.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2016). Testing measurement invariance of composites using partial least squares. *International Marketing Review*, 33(3), 405–431.
- International Monetary Fund. (2019). *World economic outlook: Global manufacturing downturn, rising trade barriers*. International Monetary Fund.
- Jenset, G. (2008). *Basic statistics for corpus linguistics*.
- Jones, M. J., & Shoemaker, P. A. (1994). Accounting narratives: A review of empirical studies of content and readability. *Journal of Accounting Literature*, 13, 142–184.

- Jones, M., & Smith, M. (2014). Traditional and alternative methods of measuring the understandability of accounting narratives. *Accounting, Auditing & Accountability Journal*, 27(1), 183–208.
- Kravet, T., & Muslu, V. (2013). Textual risk disclosures and investors' risk perceptions. *Review of Accounting Studies*, 18(4), 1088–1122.
- Laskin, A. V. (2018). The narrative strategies of winners and losers: Analyzing annual reports of publicly traded corporations. *International Journal of Business Communication*, 55(3), 338–356.
- Lehavy, R., Li, F., & Merkley, K. (2011). The effect of annual report readability on analyst following and the properties of their earnings forecasts. *The Accounting Review*, 86(3), 1087–1115.
- Li, F. (2008). Annual report readability, current earnings, and earnings persistence. *Economic Consequences of Alternative Accounting Standards and Regulation*, 45(2), 221–247.
- Li, X., Liu, J., & Wang, K. (2019). Pledgee competition, strategic disclosure, and future crash risk. *China Journal of Accounting Research*, 12(3), 271–291.
- Lo, K., Ramos, F., & Rogo, R. (2017). Earnings management and annual report readability. *Journal of Accounting and Economics*, 63(1), 1–25.
- Loughran, T., & McDonald, B. (2011). When is a liability not a liability? Textual analysis, dictionaries, and 10-Ks. *The Journal of Finance*, 66(1), 35–65.
- Loughran, T., & McDonald, B. (2014). Measuring readability in financial disclosures. *The Journal of Finance*, 69(4), 1643–1671.
- Loughran, T., & McDonald, B. (2015). The use of word lists in textual analysis. *Journal of Behavioral Finance*, 16(1), 1–11.
- Luo, J., Li, X., & Chen, H. (2018). Annual report readability and corporate agency costs. *China Journal of Accounting Research*, 11(3), 187–212.
- Miller, B. P. (2010). The effects of reporting complexity on small and large investor trading. *The Accounting Review*, 85(6), 2107–2143.
- Mishra, M. (2022). Customer experience: Extracting topics from tweets. *International Journal of Market Research*, 64(3), 334–353.
- Mishra, M., & Banerjee, M. (2019). Non-coercive influence: Scale development and validation based on resource and relational paradigms. *Journal of Purchasing and Supply Management*, 25(3), 100498.
- Oxford Rebecca, L. (1989). “Use of language learning strategies: A synthesis of studies with implications for strategy training,” *System*, 17(2), 235–247. [https://doi.org/10.1016/0346-251X\(89\)90036-5](https://doi.org/10.1016/0346-251X(89)90036-5).
- Patelli, L., & Pedrini, M. (2014). Is the optimism in CEO's Letters to shareholders sincere? Impression management versus communicative action during the economic crisis. *Journal of Business Ethics*, 124(1), 19–34.
- Penrose, J. M. (2008). Annual report graphic use: A review of the literature. *The Journal of Business Communication* (1973), 45(2), 158–180.

- Price, S. M., Doran, J. S., Peterson, D. R., & Bliss, B. A. (2012). Earnings conference calls and stock returns: The incremental informativeness of textual tone. *Journal of Banking & Finance*, 36(4), 992–1011.
- Qian, A., & Zhu, D. (2019). Financial report similarity and the likelihood of administrative punishment: Based on the empirical evidence of textual analysis. *China Journal of Accounting Studies*, 7(2), 147–169.
- Radhakrishnan, S. (2014). The China puzzle: Opportunities for accounting research. *China Journal of Accounting Research*, 7(1), 1–8.
- Rutherford, B. A. (2003). Obfuscation, textual complexity and the role of regulated narrative accounting disclosure in corporate governance. *Journal of Management and Governance*, 7(2), 187–210.
- Schleicher, T., & Walker, M. (2010). Bias in the tone of forward-looking narratives. *Accounting and Business Research*, 40(4), 371–390.
- Sedor, L. M. (2002). An explanation for unintentional optimism in analysts' earnings forecasts. *The Accounting Review*, 77(4), 731–753.
- Smith, M., & Taffler, R. (1992). The chairman's statement and corporate financial performance. *Accounting & Finance*, 32(2), 75–90.
- Smith, M., & Taffler, R. J. (2000). The chairman's statement—A content analysis of discretionary narrative disclosures. *Accounting, Auditing & Accountability Journal*, 13(5), 624–647.
- Tailab, M. M., & Burak, M. J. (2021). Examining the effect of linguistic style in an MD&A on stock market reaction. *International Journal of Business Communication*, 58(3), 430–458.
- Tetlock, P. C. (2007). Giving content to investor sentiment: The role of media in the stock market. *The Journal of Finance*, 62(3), 1139–1168.
- Tucker, J. W., & Zhang, X. (2016). Corporate disclosure and research opportunities in China. *China Journal of Accounting Studies*, 4(1), 1–14.
- Yen, A. C., Riley, T. J., & Liao, P. (2017). Chinese vs US investors' reactions to accounting narratives: An experiment. *Asian Review of Accounting*, 25(4), 526–548.
- Zhou, B., Zhang, C., & Zeng, Q. (2018). Does the rhetoric always hide bad intention: Annual report's tone and stock crash risk. *China Journal of Accounting Studies*, 6(2), 178–205.



Employee Experience in the Post-Pandemic Era: Strategizing a Robust Return to Office (RTO) Plan in an Indian IT Firm

Mamta Mohapatra and Aashna Duggal

INTRODUCTION

The way employees internalize, perceive, and understand their connection with the business and the context that surrounds those interactions is labeled as employee experience. Here, majorly procedural employee experience was catered to which encompasses how the work is structured and the laying out of systems and processes that employees must follow to fulfill their roles and responsibilities. The basic premise of this kind of experience is to optimize employee engagement in daily business dealings. Procedural employee experience has a bearing on the textural (physical, technological, and cultural) and emotional dimensions, which is reflected

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in this project as well. In many ways, employee experience performs just as pertinent a role in determining a company's legacy as any intentional measures take to shape the culture of the company.

As companies plan a strategy to bring employees back to physical workspaces after working from the comfort of their homes, the transition is being referred to as the Return to Office (RTO) phase. Organizations need to take transformative action and smoothen the execution in order that the situation is handled properly and there is no value leakage. This phase poses a slew of challenges as they navigate new ways of working, the daunting task of keeping employees engaged, and attracting and retaining their social capital. The past few years have been a period of profound ambiguity and learning, and successful companies need to learn to optimize flexibility in the new normal. No matter where a business is in its growing stage, or how eager people are to get back to work, forming a strategy to return to the workplace is a massive task. Companies need to ensure the transition is efficient and smooth by posing questions, outlining objectives, and taking measures to alleviate fears of employees (Kurter, 2022).

THE STUDY

Having carved a niche for itself as a leading internet service company in India, the present company boasts of a strong brand portfolio in recruitment, matrimony, real estate, and education. There has been a drastic shift toward online activity in the recent past, along with an increased acceptance of the company's products which has allowed it to capture larger shares of the classified market. It has positioned itself as one of the very few profitable pure play internet companies in the country and has been growing tremendously. With sustained execution and a spirit of enterprise, it has also portrayed immense resilience in the face of adversity in the past few years.

This research is centered on elevating employee experience in Return to Office (RTO) phase and thereby framing guidelines for hybrid and remote working. With a drastic increase in workforce levels pre-pandemic and post-pandemic, companies are required to establish clear guidelines to streamline procedures and processes across the organization. An endeavor has been made to study the practices of multinational companies as well as startups, then gauge the pulse of the employees in the company, and finally draft guidelines for smooth functioning. Various aspects such as

the mode of operation, number of employees coming to office, relocation policy, and measures to smoothen the transition to name a few were studied. Deriving insights from primary and secondary research, and roping in relevant stakeholders, a guidelines document was drafted for the company and implementable recommendations to enhance the in-office experience were given. In the ebb and flow of the pandemic, it becomes imperative to ensure transparency and standardization to minimize any ambiguities that may arise in daily business dealings.

In an ongoing endeavor to ease out the herculean task of change management, the study was undertaken to analyze the current scenario relating to working arrangements in organizations through secondary research. Post-analysis of industrial research, a sentiment analysis within the company was carried out and consultations were done with leaders of various departments to understand the dynamics in their space. The final deliverable was drafted in coherence with all the functional and business levels, keeping employee centricity in mind. Considering the unprecedented times, the Return to Office (RTO) project will have organization-wide implications for the business. The policies and procedures will have an impact on every associate working in the company and thereby hold major significance.

LITERATURE REVIEW

Creating a nurturing employee experience as a primary consideration when developing strategies has numerous positive effects on business outcomes. When strategic leadership complements the shifting HR approach, it sets the tone for a positive employee experience that sustains a multi-generational workforce and provides competitive advantage (Itam & Ghosh, 2022). While viewing employee experience from a modern workplace perspective, the findings of a study undertaken to reframe the traditional approach of human resource management to suit a modern workplace perspective suggest that an organization must have a deeper understanding of each individual and work with them to co-design experiences that express compassion and care. It must embrace holistic design thinking, address the intangible aspects of organizational life and use technologies to make them tangible, and acknowledge that the entire process is equally vital as the outcome (Plaskoff, 2017).

The Covid-19 pandemic brought in a changing visage of employee experience, accelerating the need for creating a conducive environment

for both virtual and on-ground employees. Companies will be able to strengthen the endless loop of experiences that flow from employees to customers, and back to the employees if they focus deeply on employee safety and well-being, deepen connections with employees, and rethink how they define success. They will also be better prepared for the “new normal” that will result from these tumultuous times (Sethi & Marti, 2020, August 19). In the forthcoming months, there will be opportunities to gradually return to co-located work, which presents an opportunity to experiment with hybrid work processes. Managers and leaders should critically explore how a hybrid workplace might be more productive by strategically designing return to office, focusing first on the responsibilities that are best completed in person, and, in the process, evaluating the efficacy of both remote and co-located work (Kane et al., 2021).

OBJECTIVES

IT companies need to leverage the best of in-person and virtual interactions to foster innovation, collaboration, culture assimilation, and engagement through the hybrid mode of functioning. The study was undertaken to reassess, retrofit, and reimagine the workplace in the backdrop of the pandemic and align it with the reformed ways of working. The focus was on identifying the content of the guidelines, the manner, and mode of communication, along with the rationale behind the policy so it balances the business requirements as well as employees’ needs. There will be certain roles suited to a remote working arrangement and they will be following slightly different guidelines. This research focuses on the following objectives:

Streamlining processes in hybrid and remote working—The transition back to the office introduces the challenge of welcoming fresh recruits and re-orienting existing employees. Such efforts will ensure standardization across the organization and give clarity on how the company expects its employees to function. Companies are adopting a hybrid mode for the foreseeable future, along with certain long-term remote roles, and setting expectations for both cohorts of employees is of paramount importance (Hughes, 2022).

Enhance the in-office experience for employees—Companies can re-evaluate the employee experience during the return period to respect individual variances in personal lives, competencies, and capacities, as well as to adapt to highly dynamic conditions. They should consider the

moments that matter to the employees to invite them to return to physical workplaces. Here, communication and context become the key, for they should be made aware of the reason behind urging them to be in the office. In the constantly shifting landscape, the perspectives and needs of the employees should be at the center stage of an informed business strategy.

METHODOLOGY

The research was conducted in 4 stages, namely external benchmarking, interviews/surveys, consultation with stakeholders, and drafting the recommendations.

External Benchmarking

To get a better sense of what the pioneers in the industry are doing, and what actions are leading to successful RTO outcomes, an exercise in external benchmarking was carried out. Data from about 18 multinational organizations such as Microsoft, Amazon, Adobe, Infosys, and American Express and startups like OYO, Freecharge, Razorpay, and MakeMyTrip were collected through primary and secondary sources to assess the strategy of both MNCs and startups. This proved to be an insightful exercise as the rationale and thinking varied between the two cohorts. The aforementioned data majorly covered aspects such as: mode of operation; rationale behind the said policy; measures to smoothen the transition in the RTO phase; number of employees coming to office; policy arrangement; and exceptions for certain roles.

Internal Surveys/interviews

To gauge the sentiment of the employees regarding their experience while working from home vis-à-vis returning to office, a questionnaire was circulated, and interviews were conducted to gauge the challenges they faced during the transition and their perception of the return to office phase. As the company had been following the hybrid mode for the last 2–3 months, employees were settling in with the know-how of the new ways of functioning. To delve deeper into the challenges they had faced, their perception about the mode of functioning and ease of accessibility, and how they coped with the situation was also studied. The

sample comprised of three cohorts—employees, managers, and managers of managers as their experiences would have varied across the hierarchy. These inputs were gathered and analyzed, and the guidelines were created keeping in mind all these insights.

Internal Data Collection and Analysis

Internal analysis of the firm was performed to firstly gauge the sentiments of employees regarding the mode of operations and difficulties faced and secondly, to identify and cluster the reasons behind employees opting/requesting for a postponed return to office/permanent work from home.

Sampling

Interviews of a sample of employees working with different departments who recently joined back or were to join back soon were collected and analyzed. 60% of the workforce interviewed was of employee level, 30% of the workforce interviewed was of manager level, and 10% of the workforce interviewed was of a manager of the manager's level. Convenient sampling method was followed for the interview purpose.

Objectives and Attributes

Table 4.1 summarizes the objective of the analysis and the aspects analyzed.

Consultation with Stakeholders

As the objective was to develop guidelines and provide guidance to leaders and associates on how to consistently handle workplace situations that may arise during the RTO phase, enlisting viewpoints of leaders from different departments was central to framing the guidelines. Due to the paucity of time, all leaders could not be consulted, but leaders from the Human Resources Department, various Human Resources Business Partners (HRBPs), and Tech leaders from different divisions gave their inputs on what could constitute the contents of the document, as well as provide the rationale behind the same.

Drafting the Recommendations

After gathering and analyzing insights from outside as well as within the company, guidelines for hybrid and long-term remote working were

Table 4.1 Objectives and attributes

<i>Objectives</i>	
1	Perception of workforce about hybrid working
2	People who already have relocated, their experience
3	Difficulties in transitioning to their location like accommodation, travel, etc
4	Experience in the office like entry, parking, meals
5	Safety perception
6	Work from home—flexible hours, equipment
7	Feedback on work-related tasks
8	Function-based intricacies
<i>Attributes</i>	
1a	Productivity
1b	Flexibility
2a	Travel
2b	Transportation of household goods
2c	Accommodation
2d	Time provided to relocate
4a	Touch point like access cards/employee ID cards
4b	Office amenities
5a	Covid-19-related guidelines
6a	Flexible hours/timings
6b	Setup required
6c	Pain points
7a	Regular meetings and reviews
8a	Permanent WFH role

drafted. The recommendations were drafted for managers and the content constituted of broad guidelines, working guidelines, data security guidelines, scenarios where work from home can be granted, and workplace guidelines. Also, for long-term remote working, the process of giving approvals and what will be the responsibilities of managers regarding such remote functions was clearly outlined.

FINDINGS

Analysis of data revealed that 22% of the companies analyzed followed the permanent work from home or work from office regime whereas 78% of the companies analyzed followed a hybrid mode of work with most of them directing employees to work from office for 2 to 3 days in a week (Tables 4.2 and 4.3).

Table 4.2 Mode of operations—Hybrid

<i>Company name</i>	<i>Mode of operations</i>	<i>Number of days in office</i>	<i>Policy arrangement</i>
Microsoft	Hybrid	50% of the time in office	Somewhat mandatory
Amazon	Hybrid	2–3 days in office	Flexible
Adobe	Hybrid	2–3 days in office	Flexible
Google	Hybrid	3 days in office	Flexible
Infosys	Hybrid	2 days in office	Flexible
Wipro	Hybrid	3 days in office	Flexible
Intel	Hybrid	2 days in office	Flexible
Flipkart	Hybrid	2 days in office	Flexible
Mastercard	Hybrid	3 days in office	Flexible
Oyo	Hybrid	Leadership 3 days, others 2 days	Flexible
Razorpay	Hybrid	3 + days in office	Flexible
PayTm (For Tech)	Hybrid	2 days in office	Flexible
Innovacer	Hybrid	3 days in office	Flexible
MakeMyTrip	Hybrid	3 days in office	Flexible

Table 4.3 Mode of operations—WFH

<i>Company name</i>	<i>Mode of operations</i>	<i>Number of days in office</i>	<i>Policy arrangement</i>
American Express	WFH	2–3 days in office	Flexible
EY	WFH + Hybrid	3 days in office	Flexible
Freecharge	WFH + Hybrid	3 days hybrid	Mandatory for some functions
Zomato	WFH	N/A	Flexible

Thematic analysis of responses indicates that the following words/phrases were repeated the most as rationale behind choosing the hybrid mode of working: collaboration, flexibility, no one-size-fits-all, best of both worlds, and work-life balance. It thus seems from the analysis that the hybrid mode of work is preferred due to its flexible and easy nature for the employees, which aids them in having a better work-life balance.

Role/department-Based Exceptions for WFH/Hybrid

It was found that many companies offered permanent work from home to a few roles/departments due to the nature of the roles, less interaction required, transactional nature of work, etc.

To cite a few examples, the following departments in the organizations studied were offered the permanent work from home mode:

- Amazon: WS datacenters, physical stores, IT and support and those designing, developing, and testing new devices
- Microsoft: Hardware, data centers, in-person training
- Amex: On-site security, technology concierge, roles in operations.

The IT role in many other companies was made permanent work from home because of the very nature of work.

Flexibility Levels of the Company Policy

As most companies were focusing on reopening their offices and getting back to business as usual, about 89% of the companies studied made it flexible for the employees to follow the policy of hybrid working, i.e., they will have to come to the office for the stated number of days mandatorily. However, only 11% of the companies kept it mandatory for now. A huge push for office reopening can be gauged through this analysis, but the employee requirements still occupy the center stage (Tables 4.2 and 4.3).

The Number of Employees Coming to Office

For many companies, only a fraction of employees has started coming to office regularly for work. Companies like Microsoft, Google, Airtel labs, MakeMyTrip, and American Express have more than 50% of their workforce working from the office, either fully or via hybrid means.

Special Measures Are Taken to Smoothen the Transition

The transition to WFH impacted the productivity levels for many companies, and the transition back to hybrid or WFO would also impact work. To minimize such impact, some companies have undertaken special

measures to smoothen the transition for their employees/workforce such as:

- The option to work remotely for up to four weeks a year to promote flexibility is being given by Amazon.
- Google is focusing on biophilic designs to improve mood and performance.
- EY has developed pre-ordering meals and hot desking through My Luna Day Application.

Overall industry analysis suggests that a hybrid mode of work, with 2–3 days in the office, was preferred due to its flexible and employee-friendly nature. Varied special measures can also be taken to make this transition as smooth as possible. The following analysis was done post the data collection and the main insights were:

- 90% of the sample felt that collaboration was impacted during work from home and therefore WFO/hybrid is preferred.
- 50% of the sample felt that there prevails an obstruction in the delegation and execution of tasks while working remotely.
- 70% of the sample felt an increase in productivity while working from home.
- 70% of the sample felt that finding a desk on peak days is a major task while WFO.
- 60% of the sample have faced or know people who have faced relocation issues.
- 70% of the sample have faced issues with touch points such as access cards and id cards, while WFO.

Overall, it could be said that the preferred mode of operations of the workforce was hybrid. Cluster Classification: The following clusters were found while analyzing the data collected by the HR department regarding the reasons behind employees opting/requesting for a postponed return to office/permanent work from home (Table 4.4).

Table 4.4 Cluster classification

<i>Reason</i>	<i>%</i>
Family medical emergency	20.31
Family event	15.63
Family issue	9.38
Relocation issues	9.38
Medical emergency	7.81
Permanent WFH	7.81
Festivity	4.69
Getting married	4.69
Having a baby	3.13
Family event	3.13
Maternity leave extension	1.56
Role demands	1.56
Vague reason/no documented reason	10.94

DISCUSSION

Hybrid Model

A hybrid model provides flexibility while preserving the ethos of human interaction in office. The aim to promote better social relationships across teams, and ultimately between employees and employer, is the driving force behind many businesses' efforts to lure people back to office (Elhassan, 2022). Companies need to establish an inclusive environment where there is a harmony between in-person interactions and remote communication (Gratton, 2021). For the organization under study, a hybrid working model with 2–3 days of working from office was best suited based on primary and secondary research.

A standardized leave policy may be applicable to all the employees, along with clearly defined systems and processes in case of Covid-19-related and non-Covid-19-related compliances. This will ensure that the managers are following a standardized process when it comes to granting leaves, and there is no ambiguity in the transition. In Covid-19-related cases, the manager needs to understand the context, experience, and needs of the employees and create an atmosphere of compassion while making sure that the execution of work does not get delayed. They should be encouraged to ensure regular check-ins to get a better sense of how the employee is coping with the predicament.

To enhance flexibility and collaboration and to utilize the office space optimally, a shared desking system can be followed. Employees should be encouraged to be seated at their designated desks on the days they are supposed to be in the office, and on other days, they may be required to shift to a different workstation in case their seat is occupied. For the fruitful execution of the shared desking system, it is advisable that employees keep minimal personal belongings on their desk and keep it clean and tidy.

Permanent Remote Working Arrangements

Companies should consider long-term remote working to be a viable, flexible work option when both the employee and the job are suited to such an arrangement. This arrangement may be suited better to certain roles for optimum productivity and not to others. In such cases, however, companies need to make sure that the sense of belongingness to the organization is retained, and the remote employees develop holistically on the professional front. The decision to approve permanent remote work should be role-based and not individual or team-based. Such roles should be conducive to a remote working arrangement in terms of productivity and efficiency and should have measurable outcomes. The role should require minimum collaboration and cross-functional dependence and should be reviewed to ensure that outcomes are being met while working remotely. While working remotely, care should be taken to ensure that employees remain accessible and productive during working hours (DiPietro, 2022). In case the employee is expected to come on-site for work-related tasks, he/she should be informed well in advance. The employee is expected to provide timely responses and is advised to utilize collaboration tools like Microsoft Teams for messaging and video conferencing to stay connected with other members of the team.

Managers are advised to offer timely feedback, training, instructions, and guidance as needed and schedule regular individual and team meetings, while adopting mutually agreed-upon methods for measuring work performance (Racz, 2021). They should thereby ensure that there is inclusivity and fairness for remote roles and the employees have ongoing access to career development opportunities. Need fulfillment has been emphasized as a key factor in employee motivation and behavior for decades based on theoretical foundations (Emmett et al., 2020). When it comes to employee experience management, businesses should endeavor

to meet the most pressing, obvious requirements of the whole workforce while considering the specific needs of various groups and people. Apart from the procedural employee experience, companies can leverage this opportunity to re-orient textural and emotional experience as well. Companies have started to realize the importance of setting themselves apart from the herd by being creative in their own way. Whether it is providing paid vacations, customizing rewards, involving nature in infrastructure etc., they are advocating a culture that promotes flexibility and keeps their social capital engaged. Hence, they can leverage this opportunity of revamping the employee experience to be ahead of the competition.

IMPLICATIONS

Agility in human resource management is a mechanism of operating and structuring the HR department that promotes responsiveness and adaptability of operations and structures, enabling flexibility in adjusting the workforce to paradigm shifts and dynamism in the industry. In the face of an unprecedented event such as the pandemic, businesses were compelled to shift daily business dealings to a virtual environment and reimagine the entire functionality of physical workspaces. Adapting to such changes becomes imperative and business executives should be conscious of the need to deliver an employee experience that is synonymous with the company's customer experience. Creating a robust RTO strategy by delivering a conducive employee experience will lead to enhanced productivity, efficiency, and effectiveness, ultimately having a positive impact on the bottom line as well as the retention rates in the organization.

In the context of this study, elevating employee experience in the post-pandemic era will have industry-wide implications as companies would need to transition from the traditional singular lens approach to a more holistic, multi-dimensional view of how employees perceive their connections with the employer. Companies are dealing with an exodus of workers who are overwhelmed and overworked, wondering what work all about is, and re-thinking their options. Establishing standard guidelines about RTO across the organization provides an immaculate structure and helps minimize any ambiguity that may arise in this process of change management. By addressing these needs and sentiments carefully at such a crucial stage, organizations may provide optimal employee experiences (Meister, 2020). Conscientious businesses must go through an internal

process backed by agile methods to determine how they would prioritize productivity and purpose while allowing for flexibility, establishing trust, and offering a place and a space for psychological safety. This change enables an organization to give priority to its employees by learning how they perceive their employee journeys, responding to those perceptions, and then providing targeted interventions that concentrate on defining moments that add value. This implies that businesses can become more motivating, cooperative, and dedicated to developing meaningful experiences in such a turbulent scenario.

CONCLUSION

Employers all around the world are experimenting with getting workers back to the office, but the leadership needs to be agile to make sure that the workplaces are secure and productive. Given the continually changing environment, employee experience that is hinged on perspectives and requirements that differ between and even within different arenas of working arrangement will be more intricate and dynamic. Whether employees are working in an office, or working from home, creating and sustaining a shared purpose that integrates individual goals with business outcomes becomes important. Businesses that chart a route centered on the employee experience will have a significant impact on the present, as well as the future. Companies need to use this opportunity to break free from the complacency of the past by getting rid of old practices and procedures. A well-thought-out return to the office can take advantage of this opportunity to rethink their position, provide the workforce with better experience, and boost collaboration and productivity. Transformational thinking based on facts will be necessary to accomplish such goals and provide an elevated experience in the office.

APPENDIX

The questionnaire used to collect data from the sample is as follows:

Experience with remote working

Q1 Did you face any difficulty when working remotely with respect to collaboration?

Q2 Was innovation and creativity hampered, although execution was being done?

Q3 What are your views with respect to the office culture and meetings taking a hit during remote working?

(continued)

(continued)

Q4 Did you have a dedicated work setup and internet access while working from home or did you face any issues?

Q5 Were the role expectations clearly defined, or was there a lack of communication in that regard?

Q6 With respect to IT or Support assistance, did you face any issues?

Q7 Was your work being reviewed regularly, and did you feel there was an actual development in terms of career opportunities?

Transition

Q1 How was the entire experience of transition to hybrid model, any drastic changes you would want to highlight?

Q2 What were some of the concerns regarding accommodation, commute, transfer of goods in this whole transition?

Q3 Was sufficient time provided pertaining to relocating back to the office?

Q4 (For first time joiners) - Were you able to access the assets, shuttle facility, and other office amenities easily when you first came to office?

Hybrid working

Q1 Do you feel the current hybrid model of 2 days a week works for you, what is your opinion if the company extends it to 3 or 4 days a week in the future?

Q2 Are virtual and on-ground meetings cumbersome, pertaining to juggling between online and offline mode?

Q3 What are some of the negatives of hybrid working?

Permanently remote

Your opinion on certain roles that can be permanent work from home

REFERENCES

- DiPietro, A. (2022, September 7). *The ultimate hybrid and remote work policy template*. iOFFICE. Retrieved November 4, 2022, from <https://www.iofficecorp.com/blog/remote-work-policy-template>
- Elhassan, M. (2022, April 18). *How to create a hybrid work policy*. The Digital Workplace. Retrieved November 4, 2022, from <https://thedigitalworkplace.com/articles/hybrid-work-policy/>
- Emmett, J., Schrah, G., Schrimper, M., & Wood, A. (2020, June 29). *COVID-19 and the employee experience*. McKinsey. www.mckinsey.com. <https://www.mckinsey.com/business-functions/people-and-organizational-performance/our-insights/covid-19-and-the-employee-experience-how-leaders-can-seize-the-moment>
- Gratton, L. (2021, May 1). How to do hybrid right. *Harvard Business Review*. <https://hbr.org/2021/05/how-to-do-hybrid-right>

- Hughes, S. (2022, February 10). *Managing a smooth transition to hybrid working*. UNLEASH. Retrieved November 4, 2022, from <https://www.unleash.ai/future-of-work/managing-a-smooth-transition-to-hybrid-working/>
- Itam, U., & Ghosh, N. (2020). *Employee experience management: A new paradigm shift in HR thinking: Urmila Itam, Nitu Ghosh: Journal articles*. IRMA. Retrieved November 4, 2022, from <https://www.irma-international.org/article/employee-experience-management/249143/>
- Kane, G. C., Nanda, R., Phillips, A., & Copulsky, J. (2021, February 10). *Redesigning the post-pandemic workplace*. MIT Sloan Management Review. Retrieved November 4, 2022, from <https://sloanreview.mit.edu/article/redesigning-the-post-pandemic-workplace/>
- Kurter, H. L. (2022). Create a long-term remote work strategy with these 5 powerful tips. *Forbes*. Retrieved July 7, 2022, from <https://www.forbes.com/sites/heidilynnekurter/2021/09/24/create-a-long-term-remote-work-strategy-with-these-5-powerful-tips/?sh=70a7c04118b2>
- Meister, J. (2020). employee experience is more important than ever during the Covid-19 pandemic. *Forbes*. Retrieved July 7, 2022, from <https://www.forbes.com/sites/jeannemeister/2020/06/08/employee-experience-is-more-important-than-ever-during-the-covid-19-pandemic/?sh=4a06caa034bc>
- Plaskoff, J. (2017, June 12). *Employee experience: The new human resource management approach*. Strategic HR Review. Retrieved November 4, 2022, from <https://www.emerald.com/insight/content/doi/10.1108/SHR-12-2016-0108/full/html?fullSc=1>
- Racz, K. (2021, September 9). *How to create a remote, flexible, or hybrid work policy [free templates]*. Owl Labs Blog. Retrieved November 4, 2022, from <https://resources.owlabs.com/blog/remote-work-policy>
- Sethi, B., & Marti, J.-F. (2020, July 10). Redefining employee experience: How to create a “New normal”. *strategy+business*. Retrieved November 4, 2022, from <https://www.strategy-business.com/blog/Redefining-employee-experience-How-to-create-a-new-normal>
- www.ETHRWorld.com. (n.d.). Return to office: How to make the transition smooth and enjoyable—ETHRWorld. ETHRWorld.com. Retrieved July 7, 2022, from <https://hr.economictimes.indiatimes.com/news/workplace-4-0/return-to-office-how-to-make-the-transition-smooth-and-enjoyable/82131558>



Is Shift in Work Culture Due to Covid-19 Reducing Stress? A Study of Indian Working Professionals

Sourabh Sharma and Megha Sharma

INTRODUCTION

Covid-19 has shivered the whole world with its huge dreadful impact on a country's economy and individual well-being. In India, the outbreak of this virus has created a panicking situation and increased the stress level of the citizens. Stress may disturb one's efficiency, work performance, emotional health, and physical well-being and can also hamper the mental health (Mughal et al., 1996). Evidence shows that many people infected with this novel virus have no symptoms initially but eventually it comes out and then the same asymptomatic people might still carry the transmittable dangerous virus that can keep the pandemic spread from

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person to person (Tupper & Colijn, 2020). To avoid this situation, it is important to create social distancing. Social distancing is a way of maintaining a physical distance from other people and avoiding direct contact with people or objects in public places during the outbreak of a contagious disease. To keep this in mind, the organizations both private and public are trying to create the best work culture by changing their HR practices. In this regard, the first step is effective communication in the organization by all possible channels through which they can share the latest information about Covid-19. Effective communication will help the employees to deal with the situation and will educate them to avoid the threat created by this virus. At the same time, it will also break the myth which is rumored around and provide ready-to-refer instructional guide for their employees which will help them to deal with this situation to stay healthy and infection free. The pandemic situation of Covid-19 has forced organizations to think the new ways to keep their employees healthy and productive while in separation (Andre & Robert, 2020). Implementing flexible work environment and allowing employees to work from home a 'New Normal' is also a way to prevent the wide spread of this virus from human to human. If an organization is result oriented and employees are committed, then work from home or from the office will not make much difference. In this way, the organization may also prevent the suspected employees from turning up for the work and prevent their colleagues from possible threats.

Organizations always have a responsibility to care for their employees (Biswas & Suar, 2016; Bodie, 2016; Gensby et al., 2019). This pandemic has forced the organizations to change their HR practices worldwide which has also changed the coping competence of employees with stress. Organizations should frame employees' motivation strategy to reduce anxiety at workplace and the employees may be trained to deal with the outbreak of Covid-19. Public education on coping strategies and stress management may also be helpful in this regard (Kar et al., 2021). The world is fighting against this deadly virus. The dread of this pandemic is creating a threat to life which further creates anxiety and stress. To deal with this epidemic, organizations are compelled to change the work culture to protect the well-being of their employees. It is important to state that there are several scales which are developed to analyze the HR practices (Ali & Tara, 2015) and to examine the stress (Brown et al., 1997) in an organization. But pandemic-specific scales on change

in work culture through HR practices and stress assessment are not available. This piece of research is an attempt to develop and validate two scales ‘change in work culture’ and ‘stress’ during Covid-19. These scales are created with an aim to find the impact of change in work culture on stress among Indian working professionals. The comparative study between public and private working professionals will not be explored.

LITERATURE REVIEW

HRM plays a vital role in managing any critical situation in an organization. It provides operational capabilities and strategic alliance to improve the performance of an organization and to respond to the crisis (Hillyard, 2000; Wang et al., 2009). To maintain the business continuity in an organization during Covid-19, it was required to understand the change and accordingly redesign the HR processes for sustainability of an organization (Carnevale & Hatak, 2020). It was challenging for HR practitioners to adopt the sudden change in the work environment where there was a complete shift from physical to digital workplace (Whiting, 2020). Covid-19 has traumatized the world and worsened the situation in the organizations. It came with the hinderance like lockdown, shutdown, social distancing, and quarantine (Ripamonti et al., 2020). It became difficult for an individual to adapt to these changing scenarios. People were not in the mental state to concentrate and enjoy their work (Smith & Robinson, 2020). Here, HRM plays a deciding role in helping employees to overcome difficulties and create opportunities for new ways to learn (Carnevale & Hatak, 2020).

It was required to keep the workforce engaged, motivated, and productive. By understanding the changing need, HR practitioners redesigned, reframed, and reshaped the work, workplace, and workforce (Collings et al., 2021). It is a need of an hour to go for work automation and workforce modularization where technological advancement enables the interaction between employee, employer, and customer (Sheppard, 2020). HR processes may incorporate more gamification, virtual and augmented reality for corporate learning (Gigauri, 2020). In an organization, team agility is the key to success where employees perform their work in teams (Cumming et al., 2020), but during Covid-19 due to new work culture employees were forced to work remotely which impacted on their performance badly (van der Lippe & Lippényi, 2020). The new normal, where employees are working from home, is also encroaching on

their personal life which is disturbing the work-life balance and further leads to stress (Giurge & Bohns, 2020). It has been found in recent studies that due to social distancing and isolation an individual is experiencing many psychological problems like frustration, helplessness, anxiety, panic attack, and a high level of stress (Brooks et al., 2020). Covid-19 is increasingly hampering the mental health of the citizens in India. It was also found that the students and healthcare professionals are experiencing more stress and depression as compared to other professionals. This anxiety and depressions are further leading to the mental illness. During Covid-19, it is important to identify these people and organize the counseling sessions with experts (Rehman et al., 2021).

In organizations, it is observed that job stress generally results from a difference between employee perception and organizational work culture. In other words, job stress normally increases when the employee faces difficulty adjusting to the existing and changing work culture of an organization (Edwards & Cooper, 1990). Job stress can be defined as a reaction of an employee which may disturb the normal equilibrium between the work culture of an organization, knowledge, and the capability of an individual (Ukandu & Ukpere, 2012). Previous studies reveal that job stress has negative effects on employee physical and mental health which further hamper the performance of an organization (Leka et al., 2003; Mansoor et al., 2011). The job stress of employees created by Covid-19 is required to be managed by changing the work culture of an organization.

HR personnel's job is not only limited to talent acquisition, once employees are hired, it is important to engage, motivate, and retain them by adopting innovative ways. For retention, it is important to take care of employees' physical and mental health (Chanana & Sangeetha, 2020; De Leon, 2020) and support them by creating a reliable management strategy (Abbasi et al., 2018; Roggeveen et al., 2020; Ziapour et al., 2017). Covid-19 pandemic has created a kind of uncertainty which requires cognitive transformation where HR practitioners need to think and act differently and behave accordingly to manage human resources in an organization (Risley, 2020; Yoosefi et al., 2021). Various stress management techniques such as relaxation exercises, breathing, and music at workplace are being implemented in the organizations to cope up with job stress during Covid-19 pandemic (Wong et al., 2020). Stress reappraisal is also one of the important self-applied methods of stress management. To cope with stress, self-belief plays a vital role. Self-belief is

a way to eliminate distress and increase positivity in oneself (Crum et al., 2013; Jamieson et al., 2016; Keech et al., 2020; Liu et al., 2017). Being a very recent phenomenon, scales to examine change in work culture (HR practices) and stress during Covid-19 are not developed yet. Some of the earlier scales related to change in HR practices (Ali & Tara, 2015) and stress (Brown et al., 1997) are available and used to reframe the new scales in reference to Covid-19 pandemic.

RESEARCH HYPOTHESIS

The relationship between HR practices and stress has been supported by several studies (Fan et al., 2014; Huang et al., 2016). HRM adds value to the human resource in the form of self-determination, self-confidence, positivity, and mindfulness (Agarwal & Farndale, 2017), which eventually helps to manage the stress of employees (Korff et al., 2017). It has been found that HR transformation also helps organizations to reduce the stress of their employees (Kooij et al., 2013; Luthans et al., 2010). The prime concern of HR practitioners is to ensure good mental health and reduction in cognitive stress of their employees by changing the HR practices related to health and safety in an organization (Opatha, 2020). Here, the aim of this study is to see whether the change in work culture has a different impact among the stress of public and private working professionals.

H1. There is a significant association between ‘change in work culture’ and ‘thought process stress’ of working professionals.

H2. There is a significant difference for the impact of ‘change in work culture.’

H1 (a): There is a significant relationship between ‘change in work culture’ and ‘thought process stress’ in both private and public working professionals.

H1 (b): There is a significant relationship between ‘change in work culture’ and ‘thought process stress’ in private working professionals.

H1 (c): There is a significant relationship between ‘change in work culture’ and ‘thought process stress’ in public working professionals.

To reduce stress at workplace, it is important to create an emotional bonding among peers, provide quality time, avoiding conflict at workplace, creating leisure time to refresh both mind and body, organizing various fun activities for employees to participate, and flexible work hours (Prasad et al., 2016).

It is one of the important functions of HRM to identify the symptoms of stress and to create a positive and secure environment for reducing the anxiety and apprehension of the employees. Stress prevention techniques at the workplace should also be devised for the health and safety of their employees (Tran et al., 2020).

H2 (a): There is a significant relationship between ‘change in work culture’ and ‘generalized stress’ in both private and public working professionals.

H2 (b): There is a significant relationship between ‘change in work culture’ and ‘generalized stress’ in private working professionals.

H2 (c): There is a significant relationship between ‘change in work culture’ and ‘generalized stress’ in public working professionals.

OBJECTIVES OF THE STUDY

1. To identify the factors, influence the change in work culture (HR Practices) of the organizations during the outbreak of Covid-19 (scale development).
2. To explore the factors leading stress during the spread of Covid-19 (scale development).
3. To investigate the construct validity and reliability of identified scales.
4. To analyze the impact of change in work culture on stress in private and public working professionals due to the outbreak of Covid-19.

RESEARCH DESIGN

Exploratory research design is used to explore the factors of change in work culture (HR practices) and stress and to discover the relationship among them during the epidemic of Covid-19.

Data and Methodology

To achieve the first and second objective, two self-designed questionnaires were developed by identifying the items influencing the change in work culture of an organization and by exploring the factors leading to stress during the spread of Covid-19. The first questionnaire of Change in work culture comprises of 18 items influencing an organization to deal with the outbreak of Covid-19. Whereas the second questionnaire on stress assessment comprises of 16 items which are leading to stress during the Covid-19 pandemic.

Sampling Technique

Convenience sampling technique is used. Two separate questionnaires comprising the 18 items scale of ‘change in work culture’ and 16 items scale of ‘stress’ during Covid-19 were circulated among private and public working professionals in India using the Google form. In reply, the completely filled-up questionnaires were received from 435 respondents, segregated into 297 private and 138 public working professionals.

DATA ANALYSIS AND FINDING

Objective 3: To investigate the construct validity and reliability of the self-developed scales.

To achieve this objective, exploratory factor analysis and Cronbach’s alpha test of reliability are used. Exploratory factor analysis is used to check the validity of the construct. According to S. Sharma and R. Behl (2020), ‘High loading on same factor and no substantial cross-loading confirms convergent and discriminant validity respectively’. To check and verify the suitability of dataset for factor analysis, Kaiser–Meyer–Olkin (KMO) and Bartlett’s test are implemented on the scale. Table 5.1 shows the KMO value for the 18 items scale of change in work culture during Covid-19. Here, the KMO value is more than 0.5 and Bartlett’s test significance level is 0.000. These values show the significance and therefore justify the implementation of Factor Analysis.

The principal component method with varimax rotation was applied to identify the factors for the Eigen values greater than 1.0. Table 5.2 depicts the result of exploratory factor analysis for the scale developed for the change in work culture. Exploratory factor analysis combined the 18

Table 5.1 KMO and Bartlett's test

Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy		0.932
Bartlett's test of sphericity	Approx. Chi-square	5474.998
	Df	153
	Sig.	0.000

items into three factors, i.e., intrinsic change in the work culture, extrinsic change in the work culture, and strategic change in the work culture. Together these three factors explain 65.342 percent of variance. Further, Cronbach's alpha test is used to check the reliability of the scale. Table 5.2 also shows the results of reliability analysis.

The first factor 'Intrinsic change in the work culture' combines six items and covers the maximum 52.947 percent of the total variance with the Eigen value of 9.530. The second factor 'extrinsic change in the work culture' combines seven items and covers 6.756 percent of the total variance with the Eigen value of 1.216. The third factor 'strategic change in the work culture' comprises of five items and covers 5.640 percent of the total variance. This factor has an Eigen value of 1.015. The Cronbach's alpha values of all three factors are 0.900, 0.894, and 0.801, respectively, which shows the high level of reliability of all three factors of this scale. The overall variance is 65.342.

Table 5.3 shows the KMO value for the 16 items scale of stress during Covid-19. Here, the KMO value is more than 0.5 and Bartlett's test significance level is 0.000. These values show the significance and therefore justify the implementation of Factor Analysis.

The principal component method with varimax rotation was applied to identify the factors for the Eigen values greater than 1.0 (Field, 2005). Table 5.4 depicts the result of exploratory factor analysis. Here, it combines the 16 items into three factors i.e., thought process stress, generalized stress, and Avoidance Approach Related Stress. Together these three factors explain 62.42 percent of variance. Further, Cronbach's alpha test is used to check reliability of the scale. Table 5.4 also shows the results of reliability analysis.

Three factors of stress have been derived from exploratory factor analysis. The first factor that is 'thought process stress' is all about fearful anticipation, racing thoughts, and mental disturbance. The second factor 'generalized stress' is related to excessive worry about various factors such

Table 5.2 A summary of factor analysis and reliability test for the ‘change in work culture’ during Covid-19 scale

<i>Factor 1</i>		<i>Factor 2</i>		<i>Factor 3</i>	
<i>Intrinsic change in work culture (ICWC)</i>		<i>Extrinsic change in work culture (ECWC)</i>		<i>Strategic change in work culture (SCWC)</i>	
<i>Items</i>	<i>Loading</i>	<i>Items</i>	<i>Loading</i>	<i>Items</i>	<i>Loading</i>
My organization provides cleaning and hygiene schedules and provides proper health and welfare benefits (ICWC1)	0.770	My organization has changed the HR practices to achieve organizational and societal objectives to deal with coronavirus (ECWC1)	0.756	My organization has planned of cross training by predicting high absenteeism (SCWC1)	0.715
Work from home due to coronavirus leads to green management, paperless work, and less use of transportation (ICWC2)	0.738	My organization has reframed official tours and traveling policies (ECWC2)	0.735	My organization is framing employee motivation strategies to remove anxiety at workplace (SCWC2)	0.691
My organization offers the flexi working hours and work from home during the outbreak coronavirus (ICWC3)	0.712	My organization encourages online transactions instead of cash dealing (ECWC3)	0.720	My organization trains employees to deal with the outbreak of coronavirus (SCWC3)	0.631
My organization gives more emphasis on communication by virtual meetings and video conferencing (ICWC4)	0.659	My organization follows the compliance of government notification associated with coronavirus (ECWC4)	0.663	My organization has established a small medical set up / isolated center to check fever and related symptom of coronavirus (SCWC4)	0.576

(continued)

Table 5.2 (continued)

<i>Factor 1</i>		<i>Factor 2</i>		<i>Factor 3</i>	
<i>Intrinsic change in work culture (ICWC)</i>		<i>Extrinsic change in work culture (ECWC)</i>		<i>Strategic change in work culture (SCWC)</i>	
<i>Items</i>	<i>Loading</i>	<i>Items</i>	<i>Loading</i>	<i>Items</i>	<i>Loading</i>
My organization develops trust in employees for productive work during this situation (ICWC5)	0.562	My organization gives permission to employees to stay home to take care for a sick family member (ECWC5)	0.602	My organization is creating contingency plans in case of worst-case scenario related to this situation (SCWC5)	0.512
My organization is increasing satisfaction of all stakeholders by creating awareness to prevent coronavirus (ICWC6)	0.533	My organization has reframed the leave policies to deal with the outbreak (ECWC6)	0.547		
		My organization is planning for strengthening the technological environment (ECWC7)	0.541		

<i>Factor 1</i>	<i>Factor 2</i>	<i>Factor 3</i>
<i>Intrinsic change in work culture (ICWC)</i>	<i>Extrinsic change in work culture (ECWC)</i>	<i>Strategic change in work culture (SCWC)</i>
<i>Items</i>	<i>Items</i>	<i>Items</i>
Eigen value: 9.530	Eigen value: 1.216	Eigen value: 1.015
Percentage of variance	Percentage of variance	Percentage of variance
52.947	6.756	5.640
Cronbach's alpha	Cronbach's alpha	Cronbach's alpha
0.900	0.894	0.801
Total variance: 65.342		

Table 5.3 KMO and Bartlett's test

Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy		0.927
Bartlett's Test of sphericity	Approx. Chi-square	3906.905
	Df	120
	Sig.	0.000

as anxious thoughts, trembling, and feeling twitchy. The third factor, which is 'Avoidance Approach Related Stress,' is trying to avoid stressors rather than dealing with them.

'Thought process stress' combines eight items and covers the maximum 47.304 percent of the total variance with Eigen value of 7.569. The Cronbach's alpha value is 0.921 which shows the high level of reliability. 'Generalized stress' combines six items and covers 8.892 percent of the total variance with Eigen value of 1.423. The Cronbach's alpha value for second factor is 0.839 which again shows significant reliability. 'Avoidance Approach Related Stress' comprises of only two items and covers 6.519 percent of the total variance. This factor has an Eigen value of 1.043. Cronbach's alpha value for this factor is just 0.428 which is far below the accepted value and so it is advised to discard the whole factor along with both the items of this factor. The overall variance was 62.715. After deleting the third factor, the variance will be 56.196.

Objective 4: To analyze the impact of change in work culture on stress in private and public working professionals due to the outbreak of Covid-19.

Multiple Linear Regression method is applied to achieve this objective. As per the result of validity test (exploratory factor analysis), three factors were identified for independent variable 'change in work culture'. These three independent factors are 'intrinsic change in the work culture', 'extrinsic change in the work culture', and 'strategic change in the work culture'. All three independent variables also show a very high reliability score in the reliability test (Cronbach's alpha). Similarly, three factors were identified after the validity of dependent variable 'Stress', i.e., 'thought process stress', 'generalized stress', and 'Avoidance Approach Related Stress'. After reliability test (Cronbach's alpha), the last factor which is 'Avoidance Approach Related Stress' has been rejected due to low reliability score. So, after removing this factor, the dependent variable 'stress' is left with two factors. Based on the objective defined above,

Table 5.4 A summary of factor analysis and reliability test for 'stress' during Covid-19 scale

<i>Factor 1</i>		<i>Factor 2</i>		<i>Factor 3</i>	
<i>Thought Process Stress (TPS)</i>		<i>Generalized Stress (GS)</i>		<i>Avoidance Approach Related Stress (AARS)</i>	
<i>Items</i>	<i>Loading</i>	<i>Items</i>	<i>Loading</i>	<i>Items</i>	<i>Loading</i>
I face trouble in organizing my thoughts especially during the outbreak of coronavirus (TPS1)	0.917	I am detached from social activities and surroundings because of coronavirus (GS1)	0.736	I try not to think about coronavirus (AARS1)	0.714
I am so restless that it was hard to sit still (TPS2)	0.822	I am worried about terrible things that will happen if I am not careful (GS2)	0.671	I never engaged in or went out of my way to avoid situations that remind me of it (AARS2)	0.556
Disturbing thoughts and images are coming in my mind (TPS3)	0.819	I am worried about the medical procedures related to coronavirus (GS3)	0.666		
I easily get annoyed or irritate during the outbreak of coronavirus (TPS4)	0.775	I constantly on guard, watchful, or easily frightened from the situation (GS4)	0.658		
I feel worried about the continuity of my salary and allowances (TPS5)	0.774	I feel nervous, anxious about coronavirus (GS5)	0.645		
I had nightmares about the coronavirus (TPS6)	0.765	I feel afraid as if something unpleasant might happen (GS6)	0.497		

(continued)

Table 5.4 (continued)

<i>Factor 1</i>		<i>Factor 2</i>		<i>Factor 3</i>	
<i>Thought Process Stress (TPS)</i>		<i>Generalized Stress (GS)</i>		<i>Avoidance Approach Related Stress (AARS)</i>	
<i>Items</i>	<i>Loading</i>	<i>Items</i>	<i>Loading</i>	<i>Items</i>	<i>Loading</i>
I think that my immune system is weak and I am more prone to coronavirus (TPS7)	0.744				
I am not able to stop or control worrying about coronavirus (TPS8)	0.466				
Eigen value		Eigen value		Eigen value	
7.569		1.423		1.043	
Percentage of variance		Percentage of variance		Percentage of variance	
47.304		8.892		6.519	
Cronbach's alpha		Cronbach's alpha		Cronbach's alpha	
0.921		0.839		0.428	
Total variance: 62.715					

two regression models are framed. Each model will have three regression equations.

Model 1—Impact of Change in Work Culture on thought process stress
In this model, three separate regression equations are established.

- Eq. 1: Impact of all three factors (Internal, External, and Strategic) of independent variable ‘change in work culture’ on the first factor (thought process stress) of dependent variable ‘stress’ in both private and public working professionals ($N = 435$).
- Eq. 2: Impact of all three factors (Internal, External, and Strategic) of independent variable ‘change in work culture’ on the first factor (thought process stress) of dependent variable ‘stress’ in private working professionals ($N = 297$).
- Eq. 3: Impact of all three factors (Internal, External, and Strategic) of independent variable ‘change in work culture’ on the first factor (thought process stress) of dependent variable ‘stress’ in public working professionals ($N = 138$).

As per Table 5.5, Eq. (1), F sig. value is < 0.05 which represents the significant relationship between independent variables and dependent variable for both private and public working professionals. So, hypothesis H1 (a) has been tested and accepted; that is, there is a significant relationship between ‘change in work culture’ and ‘Thought process stress’ in both private and public working professionals. Further, if we analyze the β value in coefficient table (Table 5.6), Eq. (1) i.e., impact of all three independent factors of ‘change in work culture’ on the first dependent factor ‘thought process stress’, there is a significant negative association among them, which means that any change in the work culture will reduce the thought process stress of both private and public working professionals.

In Table 5.5, Sig. value 0.000 of Eq. (2) shows the significant relationship between in work culture and thought process stress in private working professionals. So here hypothesis H1 (b) has been tested and accepted; that is, there is a significant relationship between ‘in work culture’ and ‘thought process stress’ in private working professionals. Further in Table 5.6, Eq. (2), if we analyze the association of each independent factor of change in work culture with dependent factor of thought process stress for private working professionals, we may see the negative coefficient values. This represents that each factor of ‘change

Table 5.5 Regression analysis for impact of change in work culture on thought process stress

<i>Equations</i>	<i>N</i>	<i>Multiple R</i>	<i>R-Square</i>	<i>Adjusted R-Square</i>	<i>Sig. of F</i>
1	435	0.642	0.412	0.408	0.000
2	297	0.723	0.523	0.518	0.000
3	138	0.618	0.382	0.368	0.001

Dependent variable: thought process stress

Table 5.6 Values for standard beta, *T* and Sig. of *T*

<i>Model 1</i>	<i>Standard β</i>	<i>T value</i>	<i>Sig. of T</i>
Equation 1			
Intrinsic change in the work culture (Internal)	-0.589	-5.133	0.000
Extrinsic change in the work culture (External)	-0.426	-4.21	0.021
Strategic change in the work culture (Strategic)	-0.563	-5.23	0.000
Equation 2			
Intrinsic change in the work culture (Internal)	-0.704	-6.127	0.000
Extrinsic change in the work culture (External)	-0.414	-3.34	0.000
Strategic change in the work culture (Strategic)	-0.329	-4.19	0.000
Equation 3			
Intrinsic change in the work culture (Internal)	-0.389	-4.133	0.000
Extrinsic change in the work culture (External)	-0.403	-3.34	0.000
Strategic change in the work culture (Strategic)	-0.642	-4.56	0.000

Dependent variable: thought process stress

in work culture' is going to reduce the thought process stress significantly. In Table 5.5, Sig. value 0.001 of Eq. (3) is <0.05 which represents the significant relationship between change in work culture and thought process stress in public working professionals. So here hypothesis H1 (c) has been tested and found true; that is, there is a significant relationship between 'change in work culture' and 'thought process stress' in public working professionals. The coefficient values of Table 5.6, Eq. (3), also shows the negative trend for all three factors of 'change in work culture' toward 'thought process stress'.

Although if we compare private and public working professional's coefficient data of Eqs. 2 and 3 in Table 5.6, we may say that as compared to public working professionals, private working professionals are benefited more in reducing the 'Thought process stress' when there is an

intrinsic change in the work culture. But at the same time, public working professionals benefit more when there is a strategic change in the work culture.

Model 2—Impact of Change in work culture on generalized stress

Same as model 1, in this model, again three separate regression equations are established.

- Eq. 1: Impact of all three factors (Internal, External, and Strategic) of independent variable ‘change in work culture’ on the second factor (generalized stress) of dependent variable ‘stress’ in both private and public working professionals ($N = 435$).
- Eq. 2: Impact of all three factors (Internal, External, and Strategic) of independent variable ‘change in work culture’ on the second factor (generalized stress) of dependent variable ‘stress’ in private working professionals ($N = 297$).
- Eq. 3: Impact of all three factors (Internal, External, and Strategic) of independent variable ‘change in work culture’ on the second factor (generalized stress) of dependent variable ‘stress’ in public working professionals ($N = 138$).

As per Table 5.7, Eq. (1), F sig. value is > 0.05 which represents that there is no significant relationship between all three independent factors of ‘change in work culture’ and the second dependent factor ‘generalized stress’ among both private and public working professionals. In this table, Eq. (2) and Eq. (3) also show that there is no significant relationship between change in work culture and generalized stress in private and public working professionals, respectively. Table 5.8 beta values also represent that there is no association between change in work culture and generalized stress. Hence, for model 2, hypotheses H2 (a), H2 (b), and H2 (c) are tested and rejected; that is, there is no relationship between ‘change in work culture’ and ‘generalized stress’.

RESULT AND FINDINGS

As derived from the above data, change in work culture reduces thought process stress but not the generalized stress. Three factors of change in work culture (Independent Variable) are identified which are intrinsic change, extrinsic change, and strategic change. Similarly, two factors of

Table 5.7 Regression analysis for impact of change in work culture on generalized stress

<i>Equations</i>	<i>N</i>	<i>Multiple R</i>	<i>R-Square</i>	<i>Adjusted R-Square</i>	<i>Sig. of F</i>
1	435	0.130	0.017	0.010	0.169
2	297	0.121	0.015	0.005	0.227
3	138	0.180	0.032	0.011	0.209

Dependent variable: generalized stress

Table 5.8 Values for standard beta, *T*, and Significance of *T* values

<i>Model 2</i>	<i>Standard β</i>	<i>T Value</i>	<i>Sig. of T</i>
Equation 1			
Intrinsic change in the work culture (Internal)	0.020	0.353	0.724
Extrinsic change in the work culture (External)	-0.074	-1.275	0.203
Strategic change in the work culture (Strategic)	0.102	1.797	0.073
Equation 2			
Intrinsic change in the work culture (Internal)	0.050	0.864	0.388
Extrinsic change in the work culture (External)	-0.053	-0.916	0.360
Strategic change in the work culture (Strategic)	0.096	1.663	0.097
Equation 3			
Intrinsic change in the work culture (Internal)	0.027	0.315	0.753
Extrinsic change in the work culture (External)	-0.061	-0.769	0.443
Strategic change in the work culture (Strategic)	-0.142	-1.877	0.063

Dependent variable: generalized stress

stress (Dependent Variable) are identified which are thought process stress and generalized stress. In this research, the relationship of three independent factors of change in work culture with each dependent factor of stress for private and public working professionals has been analyzed. In the first model, the relationship of three independent factors of change in work culture with the first dependent factor, i.e., thought process stress, has been examined. In Eq. (1), this relationship was evaluated for both private and public working professionals, whereas in Eq. (2) and Eq. (3) the relationship was checked for private and public working professionals separately.

The result of Eq. (1) depicts that any initiative toward the change in work culture reduces the stress level (thought process stress) of both private and public working professionals. The result of Eq. (2) and Eq. (3)

shows the comparative analysis between private and public working professionals. Internal and external change in work culture reduces the thought process stress more in private working professionals whereas strategic change in work culture reduces thought process stress more of public working professionals. Internal changes like changes in the norms of cleaning, hygiene, green management, work from home, virtual communication, etc., are implemented immediately in the private organizations to respond to pandemic. New normal which is the shift from physical to digital has been successfully implemented in the private organizations, which at one end is not hampering the organizational goals and at other end is also ensuring the safety of their employees. External changes like change in travel polices, online transactions, compliance of government regulations, strengthening the technologies, etc., are also prominently implemented in the private organizations which again are very useful in controlling the thought process stress. But the strategic changes like cross training to control absenteeism, motivational strategies, small medical setup, contingency planning, and compensation are reducing the stress level of public working professionals, as they are not required to be worried about their job and salaries.

In the second model, the association of three independent factors of change in work culture with the second dependent factor, i.e., generalized stress, has been analyzed. It is found that there is no relationship between change in work culture and generalized stress. During this pandemic time of Covid-19, both private and public working professionals are detached from social activities, worried about terrible things and medical procedures, nervous, anxious, and afraid about unpleasant things. All these are part of generalized stress and have no association with any change in work culture in an organization. The pandemic has created a sense of insecurity, ambiguity, and threat to the life of their own and loved ones, and this traumatizing situation cannot be controlled by any change in the work culture in an organization.

CONCLUSION

This research is an attempt to identify the impact of change in work culture on stress of both private and public working professionals during Covid-19. So, two scales are developed and tested for validity and reliability. The first scale of change in work culture is divided into three factors which are intrinsic change in the work culture, extrinsic change

in the work culture, and strategic change in the work culture. Intrinsic change in the work culture included the items which are more internal to the organization like hygiene, green management, flexi working hours, virtual meetings, and organizational commitments. The second factor, i.e., extrinsic change in work culture, is more external like achieving societal objectives, government compliances, reframing the outbound policies, strengthening the technological environment, etc. The third factor is related to strategy like cross training/job rotations, motivational strategies, strategies to deal with the contingency and proactive planning for health and welfare for working professionals.

The second scale of stress was divided into three factors, but due to the reliability issue one factor was removed and the scale was confined into two factors. The first factor is 'thought process stress' which includes items like organizing the thoughts, restlessness, disturbing thoughts, annoying behavior, nightmares, health, and salary-related worries. The second factor of this scale is 'generalized stress' and includes the items like detachment from social life, worries about medical procedure, anxiousness, nervousness, and uncertainty about the future. As both the scales have validated and tested for the reliability in Indian context, so the same is used to establish the relationship between change in work culture and stress among working professionals in an organization during the outbreak of this pandemic. Organizations have understood the seriousness of the present situation and took important decisions instantly about the welfare of their employees. Change in work culture is one such decision which was taken by both private and public organizations. From the result of this research, it was found that change in internal, external, and strategic work culture reduced the thought process stress of private and public working professionals, but no relationship was found between change in work culture and generalized stress. So generalized stress may remain constant in the employees of both private and public organizations even after a change in the work culture.

THEORETICAL AND PRACTICAL IMPLICATIONS

This research paper gives an insight to develop the scales and establish a relationship between both the scales which is very crucial in this pandemic situation. The first scale, i.e., 'change in work culture', can be used to identify the parameters which are influencing the change in

the HR practices and their execution in an organization during Covid-19. The management can effectively use these parameters to create a better work environment. The second scale of 'stress' may be used to find out the stress level of the employees in private and public organizations during the outbreak of coronavirus. It will help the organizations to take the precautionary measures which are required to manage the stress level of their employees. Organizations may accordingly emphasize the different motivational strategies for their employees to overcome from the stress like, organizing the virtual wellness and fitness programs, educating employees about healthy eating habits, celebration of important days, retreat activities, and flexible working hours. Organizations may also organize counseling sessions about stress management techniques to deal with the situation (Greeshma et al., 2018). Public organizations should strengthen their technology and provide proper training to their employees for establishing virtual communication networks to connect with all the stakeholders. Public organizations should also implement the 'New Normal' work culture to reduce stress and improve productivity. Private organizations should ensure the financial security of their employees by providing the right compensation during this tough time.

LIMITATIONS AND FUTURE RESEARCH

This research has few limitations and scope for future research. The sample size of public organizations is less as compared to private organizations, which may create imbalance in the authentication of the outcome. Convenience sampling method was used which is not the best sampling technique of data collection.

This study included the respondents only from one nation, i.e., India. In future research, many other demographic factors may be taken into consideration for comparisons like place, gender, marital status, etc. Other psychological factors like emotional intelligence and self-efficacy may also be associated in future research to cultivate physical and mental well-being of working professionals.

REFERENCES

- Abbasi, P., Ziapour, A., & Kianipour, N. (2018). Correlation of the components of student's lifestyles and their health promotion. *Journal of Clinical & Diagnostic Research*, 12(6), LC01–LC04.
- Agarwal, P., & Farndale, E. (2017). High-performance work systems and creativity implementation: The role of psychological capital and psychological safety. *Human Resource Management Journal*, 27(3), 440–458.
- Ali, B., & Tara, D. (2015). Organizational culture and scale development: Methodological challenges and future directions. *Nang Yan Business Journal*, 3(1), 55–66.
- Andre, S. A., & Robert, A. C. (2020). Self-compassion as an antidote to social distancing at work. *Business Management Dynamics*, 9(11), 01–05.
- Biswas, M. K., & Suar, D. (2016). Antecedents and consequences of employer branding. *Journal of Business Ethics*, 136, 57–72.
- Bodie, M. T. (2016). Employment as fiduciary relationship. *Georgetown Law Journal*, 105, 819.
- Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *The Lancet*, 395(10227), 912–920.
- Brown, T. A., Chorpita, B. F., Korotitscw, W., & Barlow, D. H. (1997). Psychometric properties of the depression anxiety stress scales (DASS) in clinical samples. *Behaviour Research and Therapy*, 35(1), 79–89.
- Carnevale, J. B., & Hatak, I. (2020). Employee adjustment and well-being in the era of COVID-19: Implications for human resource management. *Journal of Business Research*, 116, 183–187.
- Chanana, N., & Sangeetha. (2020). Employee engagement practices during COVID-19 lockdown. *Journal of Public Affairs*, 21(4), e2508.
- Collings, D. G., McMackin, J., Nyberg, A. J., & Wright, P. M. (2021). Strategic human resource management and COVID-19: Emerging challenges and research opportunities. *Journal of Management Studies*, 58(5), 1378–1382.
- Crum, A. J., Salovey, P., & Achor, S. (2013). Rethinking stress: The role of mindsets in determining the stress response. *Journal of Personality and Social Psychology*, 104, 716–733.
- Cumming, D., Filatotchev, I., Reinecke, J., & Wood, G. (2020). New investor categories, agility and HRM: The case of Sovereign Wealth Funds. *Human Resource Management Review*, 30(1), 100694.
- De Leon, V. (2020). *Human resource management during the Covid-19 pandemic* (Doctoral dissertation). California State University, Northridge.
- Edwards, J. R., & Cooper, C. L. (1990). The person-environment fit approach to stress: Recurring problems and some suggested solutions. *Journal of Organizational Behavior*, 11(4), 293–307.

- Fan, D., Cui, L., Zhang, M. M., Zhu, C. J., Härtel, C. E., & Nyland, C. (2014). Influence of high performance work systems on employee subjective well-being and job burnout: Empirical evidence from the Chinese healthcare sector. *The International Journal of Human Resource Management*, 25(7), 931–950.
- Field, A. (2005). *Discovering statistics using SPSS*. Sage.
- Gensby, U., Limborg, H. J., Mahood, Q., & Ståhl, C. (2019). Employer strategies for preventing mental health related work disability: A scoping review. *Nordic Journal of Working Life Studies*, 9(1), 57–101.
- Gigauri, I. (2020). Influence of Covid-19 crisis on human resource management and companies' response: The expert study. *International Journal of Management Science and Business Administration*, 6(6), 15–24.
- Giurge, L. M., & Bohns, V. K. (2020). 3 tips to avoid WFH burnout. *Harvard Business Review*.
- Greeshma, B., Priya, G. I., Aswathy, B., & Janani, S. (2018). Stress management in the workplace-challenges faced by HR. *Journal of Business and Management*, 20(4), 33–36.
- Hillyard, M. J. (2000). *Public crisis management: How and why organizations work together to solve society's most threatening problems*. iUniverse.
- Huang, L. C., Ahlstrom, D., Lee, A. Y. P., Chen, S. Y., & Hsieh, M. J. (2016). High performance work systems, employee well-being, and job involvement: An empirical study. *Personnel Review*, 45(2), 296–314.
- Jamieson, J. P., Peters, B. J., Greenwood, E. J., & Altose, A. J. (2016). Reappraising stress arousal improves performance and reduces evaluation anxiety in classroom exam situations. *Social Psychological and Personality Science*, 7, 579–587.
- Kar, N., Kar, B., & Kar, S. (2021). Stress and coping during COVID-19 pandemic: Result of an online survey. *Psychiatry Research*, 295, 113598.
- Keech, J. J., Cole, K. L., Hagger, M. S., & Hamilton, K. (2020). The association between stress mindset and physical and psychological wellbeing: Testing a stress beliefs model in police officers. *Psychology & Health*, 35(11), 1306–1325.
- Kooij, D. T., Guest, D. E., Clinton, M., Knight, T., Jansen, P. G., & Dijkers, J. S. (2013). How the impact of HR practices on employee well-being and performance changes with age. *Human Resource Management Journal*, 23(1), 18–35.
- Korff, J., Biemann, T., & Voelpel, S. C. (2017). Human resource management systems and work attitudes: The mediating role of future time perspective. *Journal of Organizational Behavior*, 38(1), 45–67.
- Leka, S., Griffiths, A., Cox, T., & World Health Organization. (2003). *Work organisation and stress: systematic problem approaches for employers, managers and trade union representatives*. World Health Organization.

- Liu, J. J., Vickers, K., Reed, M., & Hadad, M. (2017). Re-conceptualizing stress: Shifting views on the consequences of stress and its effects on stress reactivity. *PLoS ONE*, *12*(3), e0173188.
- Luthans, F., Avey, J. B., Avolio, B. J., & Peterson, S. J. (2010). The development and resulting performance impact of positive psychological capital. *Human Resource Development Quarterly*, *21*(1), 41–67.
- Mansoor, M., Fida, S., Nasir, S., & Ahmad, Z. (2011). The impact of job stress on employee job satisfaction: A study on telecommunication sector of Pakistan. *Journal of Business Studies Quarterly*, *2*(3), 50–56.
- Mughal, S., Walsh, J., & Wilding, J. (1996). Stress and work performance: The role of trait anxiety. *Personality and Individual Differences*, *20*(6), 685–691.
- Opatha, H. H. D. N. P. (2020). The coronavirus and the employees: A study from the point of human resource management. *Sri Lankan Journal of Human Resource Management*, *10*(1), 37–49.
- Prasad, K. D. V., Vaidya, R., & Kumar, V. (2016). Study on the causes of stress among the employees in IT sector and its effect on the employee performance at the workplace with special reference to International Agricultural Research Institute, Hyderabad: A comparative analysis. *International Journal of Management*, *7*(4), 76–98.
- Rehman, U., Shah Nawaz, M. G., Khan, N. H., Kharshiing, K. D., Khursheed, M., Gupta, K., et al. (2021). Depression, anxiety and stress among Indians in times of Covid-19 lockdown. *Community Mental Health Journal*, *57*(1), 42–48.
- Ripamonti, S. C., Galuppo, L., Provasoli, G., & Benozzo, A. (2020). Unmasking reflexivity in HR managers during the COVID-19 lockdown in Italy. *Frontiers in Psychology*, *11*, 3270.
- Risley, C. (2020). Maintaining performance and employee engagement during the COVID-19 pandemic. *Journal of Library Administration*, *60*(6), 653–659.
- Roggeveen, S., Chen, S. W., Chu, R. H., Ma, Z., & Qiao, P. (2020). The adaptation of post COVID-19 in IHRM to mitigate changes in employee welfare affecting cross-cultural employment. *IETI Transactions on Economics and Management*, *1*(1), 1–18.
- Sharma, S., & Behl, R. (2020). Strategic alignment of information technology in public and private organizations in India: A comparative study. *Global Business Review*, *24*(2), 335–352. <https://doi.org/10.1177/0972150919893839>
- Sheppard, B. (2020). *A guide to thriving in the post-COVID-19 workplace*. Retrieved July, 30, 2020. <https://www.weforum.org/agenda/2020/05/workers-thrive-covid-19-skills/>
- Smith, M., & Robinson, L. (2020). *Coronavirus anxiety: Coping with stress, fear, and worry*. Retrieved on August, 4, 2020. <https://www.helpguide.org/articles/anxiety/coronavirus-anxiety.htm>

- Tran, C. T., Tran, H. T., Nguyen, H. T., Mach, D. N., Phan, H. S., & Mujtaba, B. G. (2020). Stress management in the modern workplace and the role of human resource professionals. *Business Ethics and Leadership*, 4(2), 26–40.
- Tupper, P., & Colijn, C. (2020). COVID-19's unfortunate events in schools: Mitigating classroom clusters in the context of variable transmission. *medRxiv*.
- Ukandu, N. E., & Ukpere, W. I. (2012). Dysfunctional psychological aspects of working in a fast-food industry. *African Journal of Business Management*, 6(7), 2634–2643.
- van der Lippe, T., & Lippényi, Z. (2020). Co-workers working from home and individual and team performance. *New Technology, Work and Employment*, 35(1), 60–79.
- Wang, J., Hutchins, H. M., & Garavan, T. N. (2009). Exploring the strategic role of human resource development in organizational crisis management. *Human Resource Development Review*, 8(1), 22–53.
- Whiting, A. (2020). Building a strong succession plan during the pandemic. *Leadership Excellence*, 26–28.
- Wong, E., Ho, K. F., Wong, S. Y., Cheung, A. W., & Yeoh, E. (2020). Workplace safety and coronavirus disease (COVID-19) pandemic: Survey of employees. *Bull World Health Organ*. E-pub: 20 March.
- World Health Organization. (2020). <http://www.who.int>
- Yoosefi Lebni, J., Abbas, J., Moradi, F., Salahshoor, M. R., Chaboksavar, F., Irandoost, S. F., et al. (2021). How the COVID-19 pandemic effected economic, social, political, and cultural factors: A lesson from Iran. *International Journal of Social Psychiatry*, 67(3), 298–300.
- Ziapour, A., Khatony, A., Jafari, F., & Kianipour, N. (2017). Prediction of the dimensions of the spiritual well-being of students at Kermanshah University of Medical Sciences, Iran: The roles of demographic variables. *Journal of Clinical and Diagnostic Research: JCDR*, 11(7), VC05.



Influence of Gender and Role Stress on Hardiness: An Empirical Study

Pallabi Mund and Manit Mishra

INTRODUCTION

Stress has been described by Lazarus and Folkman (1984, p. 19) as “a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being.” They further state that an individual’s perception of a particular situation later determines both stress reactions and coping efforts. Thus, in a certain situational approach, they define coping as “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (1984, p. 141).

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Over the years, there has been an established link between stressful life events and onset of illnesses (Dohrenwend & Dohrenwend, 1974; Gentry & Kobasa, 1984; Rabkin & Struening, 1976). Holmes and Rahe (1967) suggest that “life events” necessitate readjustment and are, therefore, stressful. The underlying causes of such cognitive and behavioral appraisals of stressful life events are called stressors. Thus, in general, stressors are events that threaten loss of resources, or difficulties in regaining them (Hobfoll, 1989). Further elaboration on the above discussion can be obtained by drawing an excerpt from the work of Luria and Torjman (2009, p. 686) who use conservation of resources (COR) theory to suggest that “stress occurs in three conditions: When individuals are threatened with loss of resources, actually lose resources, or fail to regain resources after resource investment (Hobfoll, 1989; Hobfoll & Freedy, 1993). Primary principles of the COR model are that individuals are intrinsically motivated to obtain and maintain valued resources (Hobfoll & Freedy, 1993), and that, in the face of adversity, people mobilize all their remaining resources to cope with the challenges confronting them, which suggests that individuals who have more coping resources will be less stressed when facing stressful events than those with fewer resources” (Cowen, 1991; Hobfoll, 2002; Seligman & Csikszentmihalyi, 2000).

Since the 1960s and 1970s, focus on the role of moderating variables has been included as an area of empirical study in the ever-growing body of research on stress-illness relationship (Holmes & Masuda, 1974; Rahe & Arthur, 1978; Wyler et al., 1968). This led to the emergence of a multifaceted individual-environment interaction with different factors influencing not only the probability of a person becoming ill from stress but also pathogenesis, behavior, and treatment outcomes (Cobb, 1976; Sarason & Johnson, 1979; Rabkin & Struening, 1976; Rahe & Arthur, 1978). A small, though significant correlations found with larger samples also indicated that many individuals do not fall ill even after undergoing stressful life events (Rabkin & Struening, 1976). This brought in a paradigm shift toward the role of moderating variables which predict physical and psychological outcomes on stress-illness studies. Several resources have been identified to be acting as moderating factors in stress-illness relationship such as coping resources and coping styles (Lazarus & Folkman, 1984). Luria and Torjman (2009) also suggest that physical, cognitive, and social resources moderate stress levels in individuals.

A plethora of research studies have also identified the significance of personality as a resource in coping with stress (De Jong & Emmelkamp, 2000; Friedman & Rosenman, 1974; Sher, 2005). Personality resources may not work to alleviate the stressor by itself, rather lessen the perceived stress caused by the stressors. While a good number of research was done on physiological and psychological effects of stress on individuals, there were a few researchers who were more focused on exploring the stress-resilient personality which aids stressed out individuals in healthy coping. It was Kobasa's (1979) "Hardiness" and Antonovsky's (1979) "the salutogenic model" which steered the focus of research away from illnesses and pathology to "resistance resources." Since then, hardiness has been studied majorly as a stress reducing construct. With the advent of liberalization, advanced technology, industrialization, and globalization, the nature of work has undergone a radical change. The work and non-work demands from an individual from various role senders, both at work and at home, have increased the level of role stress among professionals. The twenty-first century has often been described as the "age of stress" and stress has been named as the "health epidemic of the twenty-first century" by World Health Organization (Fink, 2017). Therefore, it is all the more pertinent to study the role of hardiness in managing an individual's role stress arising out of various work and non-work-related demands. Moreover, since its inception, hardiness has mostly been studied on male subjects (Kobasa, 1979; Kobasa et al., 1981, 1982b). Very often results obtained from such studies have been generalized for females without investigating the differential effects of gender on stress-hardiness relationship. Hence, taking into consideration corporate professionals, our study fulfills the following objectives: (1) investigate the effect of gender on role stress and hardiness; and (2) assess the influence of role stressors—SRD, IRD, RB, and PIn on hardiness (Fig. 6.1).

THEORETICAL ROOTS OF HARDINESS

Based on the existential theory of psychology (Kierkegaard, 1954; Maddi, 1970), hardiness has often been described by existential philosophers and existential psychologists as a personality disposition depicting existential courage (Maddi, 2004). In a world full of stress and constant state of flux, hardy individuals are believed to have better resistant and coping strategies in dealing with life's challenges and adversities than the non-hardy individuals. Kobasa (1979, p. 1) opines that "high stress/low illness

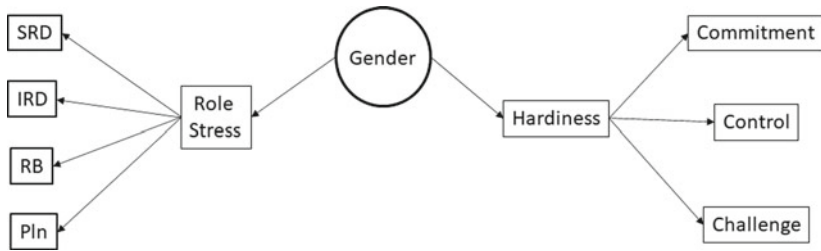


Fig. 6.1 Conceptual framework of the proposed model (*Source* Authors)

executives show, by comparison with high stress/high illness executives, more hardiness, that is, have a stronger commitment to self, an attitude of vigorousness toward the environment, a sense of meaningfulness, and an internal locus of control.” This implies hardiness as a construct and consists of three mutually related dispositions—commitment, control, and challenge which act together to help buffer the debilitating effects of life stresses and thereby help in increasing transformational coping and decreasing regressive coping when the person is confronted with adverse life events.

Commitment in hardiness reflects a sense of meaningfulness and purpose about self, family, work, interpersonal relations, and social institutions. Control represents the belief that one can possibly manipulate or counteract adverse circumstances and life’s events with one’s own ability and experiences. The dimension of challenge consists of the idea that change, in the form of life events, is a positive phenomenon with the potential of personal growth for the individual (Kobasa, 1979, 1982). Maddi (2004, 2006) views hardiness as a combination of three types of attitudes: commitment, control, and challenge, rather than a personality disposition which facilitates resiliency under stress. He opines “the three attitudes of hardiness constitute the courage and motivation to face and transform stressors, rather than to deny or to catastrophise, and to avoid or strike out against them, and are especially essential in our changing, turbulent times” (2006, p. 306). Acknowledging the importance of the three core dimensions of Kobasa’s concept of hardiness, Bartone et al. (2006) consider hardiness as something more global than mere attitudes.

HYPOTHESIS FORMULATION

Influence of Gender on Hardy Coping and Role Stress

The concept of gender is important in that it is part of physiological, psychological, and sociocultural categorization of human behavior (Lang, 1984). Men and women were considered to have different societal roles to play till the last two decades. The identity-defining role and central life interest for men was work and for women, it was nurturing the family. A shift in the thought process and gender-role changes has made more women come out of their age-old societal norms and work while simultaneously taking care of their families. While playing multiple roles, especially, in work and family life, women find it harder to strike a balance, hence resulting in more stress. This is also evident from various studies wherein women scored significantly higher than men in chronic role stress and minor daily stressors and rated their life events as more negative and less controllable than men (Matud, 2004; Patwardhan et al., 2014). However, the result in extant research is contradictory. Some of the studies have produced evidence that hardiness exerts weaker effects among females than among males (Holahan & Moos, 1985; Schmeid & Lawler, 1986; Wiebe, 1991). In contrast, other studies have supported the finding that females have a significantly higher hardiness when compared to males (Bartone & Priest, 2001; Claypoole, 1987). Few other scholars have found mixed results when they tried to integrate the female gender as a specific variable in their study (Fair, 1993; Foster & Dion, 2003). The present study, therefore, investigates the effect of gender on hardiness and role stress of corporate professionals.

H1: Gender influences hardiness and role stress perception among corporate professionals.

Relationship Between Role Stress and Hardiness

Extant research done on hardiness indicates toward its positive relationship with various organizational role stresses that any professional would come across (Burke, 1993; Azeem, 2013; Vijayshree & Mund, 2011). Stressors among executives reveal that role erosion (RE), personal inadequacy (PIn), resource inadequacy (RIn), and role stagnation (RS) as dominant contributors of role stress (Sinha & Sinha, 2018). A similar

study on a sample of lower and middle level executives from different functional areas of an oil company found maximum role stress in marketing executives in comparison to finance, production, and personnel executives (Kumar, 1989).

Pareek (2002) identified a role stress typically significant to the Indian context called “role boundedness.” In support of this, Golpelwar (2016) found that Indian women professionals suffer from “role boundedness,” because of wanting “to be everything for everybody.” Our culture inculcates such huge expectations from various role senders interacting with them in both, work as well as home environment. The clash between the normatively prescribed roles for women and those demanded by the modern work environment has resulted in role conflicts of various kinds among all working women. This is one of the first studies to assess the relationship between general role stress (Pareek, 2002) such as self-role distance (SRD), inter-role distance (IRD), role boundedness (RB), and personal inadequacy (PIn), and hardiness among Indian corporate professionals. We, therefore, propose the following hypothesis.

H2: Role stress positively influences hardiness.

METHODOLOGY

Sample

A composite self-administered questionnaire comprising of two different scales related to Pareek’s (2002) general role stress (GRS) and modified version of Bartone’s (1995) dispositional resilience scale-15 (DRS-15) was mailed to 320 Indian corporate professionals working in banking and information technology (IT) sectors. A reminder email was sent a fortnight later. Responses were received from 251 respondents of which 17 were discarded because of incomplete nature, resulting in a final sample size of 234 corporate professionals leading to an acceptable response rate of 73%. The sample included 120 male and 114 female professionals.

The opening items of the online questionnaire sought socio-demographic profile of the respondents followed by items from GRS and DRS-15 scales. The GRS scale gives a general index of an individual’s role stress, focusing on one’s role space stress (Pareek, 2002). The main stresses in this category are self-role distance (SRD), inter-role

distance (IRD), role boundedness (RB), and personal inadequacy (Pin). The respondent rates the twelve items of GRS on a 5-point Likert Scale (1: “never or scarcely feel this way” to 5: “frequently or always feel this way”). An 18-item modified version of Bartone’s (1995) DRS-15 scale was used to measure hardiness. This hardiness measure provides a general index of total hardiness scores as well as scores for each of its three components of commitment, control, and challenge. The respondent rates the items on a 5-point Likert scale (1: “not at all true” to 5: “completely true”). A reliability test run on the sample for the 18-item modified hardiness scale resulted in a Cronbach’s alpha coefficient of 0.907 reflecting a high level of internal consistency reliability.

Methods

The study uses ANOVA, and stepwise regression analysis to achieve its objectives. ANOVA helped in comparing job stress and hardiness between female and male corporate professionals. We followed it up with stepwise multiple regression analysis to assess the influence of dimensions of job stress on hardiness or corporate professionals.

FINDINGS

The study investigates if there is difference in hardiness and role stress based on gender. Table 6.1 shows the output of ANOVA for various role stresses of professionals in relation to gender. Earlier research has proved that working women experience a greater variety of role stresses than working men and are more responsive to stressors than men (McDonough & Walters, 2001). Our result shows no significant difference in case of SRD, IRD, and PIN in relation to gender. However, there is a significant relationship between RB and gender. This implies that female professionals are more stressed out than males due to role boundedness. The socialized values of being duty bound toward every additional role that an individual must perform in the Indian culture contribute to high levels of role boundedness (Eckensberger, 2006). Role boundedness is seen more in females in Indian culture because they are bound by the expectations arising out of various roles that they play as a daughter-in-law, a mother, a wife as well as a working woman. While fulfilling these expectations from various role senders, they keep sacrificing their own

Table 6.1 Role stress and gender

<i>GRS</i>	<i>Gender</i>	<i>Mean</i>	<i>SD</i>	F	<i>Sig</i>
SRD	Male	2.53	0.85	0.288	0.592
	Female	2.59	0.86		
IRD	Male	2.20	0.89	0.002	0.968
	Female	2.20	0.95		
RB	Male	2.42	0.86	32.37	0.000
	Female	3.09	0.91		
Pin	Male	2.35	1.01	0.023	0.879
	Female	2.33	0.95		

interests, likings, and values. Women also tend to be more emotionally involved than men in social and family networks (Turner et al., 1995).

Table 6.2 depicts the output of ANOVA for hardiness and its dimensions in relation to gender. The mean of total hardiness score is greater than 3 for both males and females which suggest that the participants of this study were, on an average, relatively high on hardiness. The mean for females is higher for overall hardiness as well as all its facets in comparison to their male counterparts. There is a significant relationship between gender and hardiness for the dimensions of commitment and control as well as for overall hardiness. However, no significant variance was found for challenge in relation to gender. The findings suggest that gender influences hardiness and hardiness is observed more in women professionals than in men. Gender variation in hardy coping might be due to the gender differences in appraising a particular stressor as stressful (Sanford, 1991) or differences in coping styles (Leiter et al., 1994) where the coping style of males is primarily problem-focused and for females, it is mostly emotion focused (Cash & Gardner, 2011).

The output for stepwise multiple regression analysis of role stressors SRD, IRD, RB, and Pin on hardiness is shown in Table 6.3. The output suggests that a small but statistically significant variance in hardiness is explained by role stress. Among the role stressor dimensions, only role boundedness (RB) has a statistically significant impact on hardiness ($\beta = 0.153$, p -value = 0.002). The finding suggests that facing stressful situations also helps individuals develop greater hardiness. This assertion is in alignment with the general hardiness theory which explains that with an increase in stress, there is an increase in the hardiness of individuals.

Table 6.2 Hardiness and gender

<i>Dimensions of hardiness</i>	<i>Gender</i>	<i>Mean</i>	<i>SD</i>	F	<i>Sig</i>
Commitment	Male	3.55	0.69	49.37	0.000
	Female	4.19	0.71		
Control	Male	2.87	1.06	33.49	0.000
	Female	3.64	0.95		
Challenge	Male	3.64	0.82	0.052	0.820
	Female	3.66	0.85		
Total hardiness	Male	3.51	0.70	79.9	0.000
	Female	4.23	0.51		

Table 6.3 Regression model summary

<i>Model</i>	R	<i>R-Square</i>	<i>Adjusted R-Square</i>	<i>Std. error of the estimate</i>	F	<i>Sig</i>
1	0.203	0.041	0.037	0.70	10.01	0.002

DISCUSSION AND CONCLUSION

The first objective of this study was to assess if role stress and hardiness differ in terms of gender of corporate professionals. The mean hardiness score is high for both male and female respondents suggesting a relatively higher degree of hardiness in all professionals. Furthermore, the mean of overall hardiness for female professionals was higher in comparison to male professionals. The result suggests a significant relationship of gender with commitment and control dimensions of hardiness, as well as for overall hardiness. Additionally, we also found a significant difference in role stress due to role boundedness between male and female corporate professionals. The pertinent point to note is that female corporate professionals experience greater role bounded stress. This is due to the expectations that working women must cater from members in their family as well as colleagues at work. The findings partially show support for hypothesis 1. Women corporate professionals experience greater role bounded stress and are also harder as compared to their male counterparts. The finding is in alignment with earlier studies done on more generic samples (Bartone & Priest, 2001; Hystad, 2012; Mund, 2017).

The study also assessed the influence of stressors on hardiness of Indian corporate professionals. Stepwise multiple regression analysis output suggests that role stress due to role boundedness significantly influences hardiness of corporate professionals. This finding could be due to cultural roots. In collectivist and high power-distance Indian culture, both men and women, experience greater role boundedness because they feel highly obligated to fulfill the expectations of significant role senders. Our culture inculcates these traditional norms in individuals which compels them to experience conflict between living as an individual and as a role occupant to the extent that they even sacrifice their own interests, preferences, values, and comforts. However, the significant relationship between RB and hardiness also suggests that hardiness acts as a buffering system or a protective factor in shielding from the ill effects of stress. These findings support prior literature related to stress-hardiness relationship and confirm that highly stressed individuals are high in hardiness too (Kobasa, 1979, 1982; Kobasa et al., 1982a, 1982b). Thus, our second hypothesis (H2) also finds partial support through the findings.

Taking a spatiotemporal objective for analysis, the present study inspired by Kobasa's theory of hardiness has possibly extended the horizons of knowledge related to hardiness, particularly in the context of Indian corporate professionals. As stress is a major concern in today's competitive, fast paced corporate world, it is all the more necessary to manage stress. The findings from this research can be beneficial to future researchers who would take up studies dealing with role stress and hardiness as major variables of concern. Such studies on the implication of hardiness and gender variance in hardy coping can be helpful in stress management in a big way for companies and practitioners.

Stress management is critical because unmanaged stress can be detrimental to the mental and physical wellbeing of the professionals as well as their organizations. High stress leads to high rates of absenteeism, low work motivation, low productivity, and low job satisfaction in working professionals, which can drastically affect the overall performance of the organization. It goes without saying that stress hardy people will have an edge over those who do not have this personality trait/attitude or have not developed the hardier side of their personality. The good news is, hardiness can be trained and through proper hardy training, an individual can learn how to effectively influence the events surrounding her, and respond to challenges (rather than react), leading a more flexible, happy, and fruitful life.

REFERENCES

- Antonovsky, A. (1979). *Health, stress and coping*. Jossey-Bass.
- Azeem, S. M. (2013). Influence of organizational role stress and personality hardiness on teachers' burnout. *International Journal of Academic Research in Business and Social Sciences*, 3(7), 608.
- Bartone, P. (1995, July). *A short hardiness scale*. Paper presented at the Annual Convention of the American Psychological Society, New York.
- Bartone, P. T., & Priest, R. F. (2001). *Sex differences in hardiness and health among West Point cadets*. Paper Presented at the 13th Annual Convention of the American Psychological Society, Toronto. www.hardiness-resilience.com
- Bartone, P. T., Johnsen, B. H., Eid, J., Laberg, J. C., Thayer, J., & Sommerfeldt-Pettersen, J. (2006). *International adaptation of a brief human resiliency (hardiness) scale*. Presented at the Association of Military Surgeons of the U.S (AMSUS) Annual Meeting, San Antonio, Texas, 7 November 2006. https://www.researchgate.net/publication/228509154_International_adaptation_of_a_brief_human_resiliency_hardiness_scale/link/02bfe5141d35b1c609000000/download
- Burke, R. J. (1993). Organizational-level interventions to reduce occupational stressors. *Work & Stress: An International Journal of Work, Health & Organisations*, 7(1), 77–87. <https://doi.org/10.1080/02678379308257051>
- Cash, M. L., & Gardner, D. (2011). Cognitive hardiness, appraisal and coping: Comparing two transactional models. *Journal of Managerial Psychology*, 26(8), 646–664. <https://doi.org/10.1108/026839411111181752>
- Claypoole, K. H. J. (1987). *The impact of stressful life events on illness rates and immune functioning as moderated by Type A behavior, hardiness, loneliness, nutrition, and exercise* (Dissertation). Submitted to the Department of Psychology and The Graduate School of the University of Wyoming for the Degree of Doctor of Philosophy, UMI, Ann Arbor, USA. Retrieved from ProQuest Digital Dissertations.
- Cobb, S. (1976). Social support as moderator of life stress. *Psychosomatic Medicine*, 38, 300–314
- Cowen, E. L. (1991). In pursuit of wellness. *American Psychologist*, 46, 404–408.
- De Jong, G. M., & Emmelkamp, P. M. (2000). Implementing a stress management training: Comparative trainer effectiveness. *Journal of Occupational Health Psychology*, 5(2), 309–320.
- Dohrenwend, B. S., & Dohrenwend, B. P. (Eds.). (1974). *Stressful life events: Their nature and effects*. Wiley.
- Eckensberger, L. H. (2006). The mutual relevance of indigenous psychology and morality. In U. Kim, K.-S. Yang & K.-K. Hwang (Eds.), *Indigenous and Cultural Psychology: Understanding People in Context* (pp. 225–245). Springer.

- Fair, J. D. (1993). *Personality hardiness: A gender-sensitive study of women and stress* (Dissertation). Indiana University of Pennsylvania, UMI, Ann Arbor, USA. Retrieved from ProQuest Digital Dissertations.
- Fink, G. (2017). Stress: Concepts, definition and history. Florey Institute of Neuroscience and Mental Health (University of Melbourne, Melbourne, VIC, Australia). Online *Reference Module in Neuroscience and Biobehavioural Psychology*. Elsevier. <https://doi.org/10.1016/b978-0-12-809324-5.02208-2>
- Foster, M. D., & Dion, K. L. (2003). Dispositional hardiness and women's well-being relating to gender discrimination: The role of minimization. *Psychology of Women Quarterly*, 27, 197–208.
- Friedman, M., & Rosenman, R. (1974). *Type A behaviour and your heart*. Knopf.
- Gentry, W. D., & Kobasa, S. C. (1984). Social and psychological resources mediating stress-illness relationships in humans. In W. D. Gentry (Ed.), *Handbook of behavioural medicine* (pp. 87–116). Guilford Press.
- Gopelwar, M. K. (2016). *Global call center employees in India: Work and life between globalization and tradition*. Internationale Wirtschafts Partner, Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-658-11867-9_2
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44, 513–515.
- Hobfoll, S. E., & Freedy, J. (1993). Conservation of resources: A general stress theory applied to burnout. In W. B. Schaufeli, C. Maslach, & T. Mark (Eds.), *Professional burnout: Recent developments in theory and research* (pp. 115–129). Taylor & Francis.
- Hobfoll, S. E. (2002). Social and psychological resources and adaptation. *Review of General Psychology*, 6, 307–324.
- Holahan, C. J., & Moos, R. H. (1985). Life stress and health: Personality, coping, and family support in stress resistance. *Journal of Personality and Social Psychology*, 49(3), 739–747.
- Holmes, T. H., & Rahe, R. H. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research*, 11(2), 213–218. [https://doi.org/10.1016/0022-3999\(67\)90010-4](https://doi.org/10.1016/0022-3999(67)90010-4)
- Holmes, T. H., & Masuda, M. (1974). Life change and illness susceptibility. In B. S. Dohrenwend & B. P. Dohrenwend (Eds.), *Stressful life events: Their nature and effects*. Wiley. <https://doi.org/10.1037/1061-4087.51.2.95>
- Hystad, S. W. (2012). Exploring gender equivalence and bias in a measure of psychological hardiness. *International Journal of Psychological Studies*, 4(4), 69–79.
- Kierkegaard, S. (1954). *The sickness unto death*. Doubleday.
- Kobasa, S. C. (1979). Stressful life events, personality, and health: An inquiry into hardiness. *Journal of Personality and Social Psychology*, 37, 1–11.

- Kobasa, S. C. (1982). The hardy personality: Toward a social psychology of stress and health. In G. Sanders & J. Suls (Eds.), *Social psychology of health and illness* (pp. 3–32). Erlbaum.
- Kobasa, S. C., Maddi, S. R., & Kahn, S. (1982a). Hardiness and health - A prospective study. *Journal of Personality and Social Psychology*, 42, 168–177. <https://doi.org/10.1037/0022-3514.42.1.168>
- Kobasa, S. C., Maddi, S. R., & Puccetti, M. C. (1982b). Personality and exercise as buffers in the stress-illness relationship. *Journal of Behavioral Medicine*, 5, 391–404.
- Kobasa, S. C., Maddi, S. R., & Courington, S. (1981). Personality and constitution as mediators in the stress-illness relationship. *Journal of Health and Social Behaviour*, 22(4), 368–378.
- Kumar, S. (1989). A study of role stress, role satisfaction and role efficacy among Indian commercial pilots. *Udyog Pragati*, 14(3), 70–75.
- Lang, J. (1984). Notes toward a psychology of the feminine self. In P. Stepansky & A. Goldberg (Eds.), *Kohut's legacy: Contributions to self-psychology* (pp. 51–69). The Analytic Press.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal and coping*. Springer.
- Leiter, M. P., Clark, D., & Dump, J. (1994). Distinct models of burnout and commitment among men and women in the military. *Journal of Applied Behavioral Science*, 30(1), 63–82.
- Luria, G., & Torjman, A. (2009). Resources and coping with stressful events. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 30(6), 685–707.
- Maddi, S. R. (1970). The search for meaning. In M. Page (Ed.), *Nebraska Symposium on Motivation* (pp. 137–186). University of Nebraska Press.
- Maddi, S. R. (2004). Hardiness: An operationalization of existential courage. *Journal of Humanistic Psychology*, 44(3), 279–298.
- Maddi, S. R. (2006). Hardiness: The courage to be resilient. In J. C. Thomas & D. L. Segal (Eds.), M. Hersen & J. C. Thomas (Editors-in-Chief), *Comprehensive handbook of personality and psychopathology—Personality and everyday functioning* (Vol. 1, pp. 306–321). Wiley.
- Matud, M. P. (2004). Gender differences in stress and coping styles. *Personality and Individual Differences*, 37, 1401–1415.
- McDonough, P., & Walters, W. (2001). Gender and health: Reassessing patterns and explanations. *Social Science & Medicine*, 52, 547–559.
- Mund, P. (2017). Are women harder? A Study on Indian corporate professionals. *Paripex: Indian Journal of Research*, 6(4), 530–531.
- Pareek, U. (2002). *Training instruments in HRD and OD* (2nd ed.). Tata McGraw Hill Publishing.

- Patwardhan, V., Mayya, D. S., & Joshi, D. H. G. (2014). Organizational role stress among managers in the Indian hospitality industry. *International Journal of Business and Management Invention*, 3(9), 13–19.
- Rabkin, J. G., & Struening, E. L. (1976). Life events, stress, and illness. *Science*, 194, 1013–1020. <https://doi.org/10.1126/science.790570>
- Rahe, R. H., & Arthur, R. J. (1978). Life change and illness studies: Past history and future directions. *Journal of Human Stress*, 4, 3–15.
- Sanford, B. T. (1991). *The effects of hardiness and gender on psychophysiological reactivity to two types of stressors* (Dissertation). Texas A&M University, UMI, Ann Arbor, USA. Retrieved from ProQuest Digital Dissertations.
- Sarason, I. G., & Johnson, J. H. (1979). Life stress, organizational stress, and job satisfaction. *Psychological Reports*, 44(1), 75–79. <https://doi.org/10.2466/pr0.1979.44.1.75>
- Schmeid, L. A., & Lawler, K. A. (1986). Hardiness, type A behavior, and the stress illness reaction in working women. *Journal of Personality and Social Psychology*, 51, 1218–1223.
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology. *American Psychologist*, 55, 5–14.
- Sinha, D., & Sinha, S. (2018). Organizational role stress of employees in the banking sector. *Social Science Asia*, 4(1), 42–52.
- Sher, L. (2005). Type D personality: The heart, stress, and cortisol. *The Quarterly Journal of Medicine*, 98, 323–329. <https://doi.org/10.1093/qjmed/hci064>
- Turner, R. J., Wheaton, B., & Lloyd, D. A. (1995). The epidemiology of social stress. *American Sociological Review*, 60, 194–205.
- Vijayshree, L., & Mund, P. (2011). Role stress and coping: A case in ITES company. *Mustang Journal of Business and Ethics*, 2, 107–120.
- Wiebe, D. J. (1991). Hardiness and stress moderation: A test of proposed mechanisms. *Journal of Personality and Social Psychology*, 60(1), 89.
- Wyler, A. B., Masuda, M., & Holmes, T. H. (1968). Seriousness of illness of rating scale. *Journal of Psychosomatic Research*, 11, 363–374.

PART III

Marketing



Honing Local Enterprises and Industrial Alliances with the Success of Entrepreneurs: Mediating the Role of Technology Adoption and Market Competition

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INTRODUCTION

The Micro, Small, and Medium Enterprises (MSME) sector has emerged as a highly vibrant and dynamic sector of the Indian economy over the last five decades. It contributes significantly in the economic and social development of the country by fostering entrepreneurship and generating large employment opportunities at comparatively lower capital cost, next only to agriculture. MSMEs are complementary to large industries as ancillary units and this sector contributes significantly in the inclusive industrial development of the country. The growth of MSMEs has been directly associated with the growth and development of many developed and developing countries globally, including the United States of America (USA), China, India, South Korea, Malaysia, Taiwan, and Thailand among a host of other OECD countries whose MSME contribution to employment ranges from 60 to 70% and over 50% of GDP (Organization for Economic Co-operation and Development (OECD), 2017). The MSMEs are widening their domain across sectors of the economy, producing diverse range of products and services to meet the demands of domestic as well as global markets. Entrepreneurial activities driven by active involvement of micro, small and medium scale enterprises (MSMEs) remain the surest economic vehicle for attaining rapid socio-economic development in emerging markets (EMs) and fulfilling the ideas of world's Sustainable Development Goal One (Dzogbenuku & Keelson, 2019). It has been established that through strategic alliance, SMEs can achieve and maintain an economic of scale and innovative independence (Lin & Chen, 2007).

Thus, in recent times, India has witnessed a rapid growth in numbers of new business and first-generation entrepreneurs, especially women entrepreneurs. However, the limited market access, namely capital access, brand promotions solutions, marketing support, logistics and sales support, and information and communication technology (ICT) support stall the zeal to take the enterprise to the next level (Nabanita De et al., 2018). The "Digital India" revolution also provides a great opportunity to promote MSMEs participation in the Information, Communication, and Telecommunication (ICT) sector, in line with the government's vision. It is equally important that the MSME segment develops in all areas of agriculture, manufacturing, and services sectors because each of these sectors will continue to be very relevant to the overall GDP growth as well as employment generation (Nabanita De et al., 2018).

Role of MSMEs in Indian Economy

Through business innovations, the Micro, Small & Medium Enterprises (MSMEs) have made a substantial contribution to the growth of entrepreneurial ventures. The MSMEs are widening their domain across sectors of the economy, producing diverse range of products and services to meet demands of domestic as well as global markets. Small and Medium Enterprises (MSME) in India play an important role by providing large employment opportunities at a lower capital cost than large industries, as well as by industrializing rural and backward areas, reducing regional imbalances, and ensuring a more equitable distribution of national income and wealth.

Technology Centers

There are eight Technology Centers for product specific support to MSMEs in the respective sectors by rendering technical services to develop and upgrade technologies, processes, and products apart from training in the specific product groups such as Forging and Foundry, Electronics, Electrical Measuring Instruments, Fragrance and Flavor, Glass, Footwear and Sport Goods. Some TCs apart from extending design, development and manufacturing support to MSMEs for complex tools, parts, and components have also supported the strategic sectors such as Defense, Aerospace, etc. of the country toward their R&D requirements.

Program for Cluster Development (MSE-CDP)

The Cluster Development approach has been adopted by the Ministry of Micro, Small, and Medium Enterprises (MSME), Government of India (GoI), as a key strategy for boosting the productivity and competitiveness as well as capacity building of Micro and Small Enterprises (MSEs) and their collectives in the nation. A cluster is a collection of businesses with a shared physical infrastructure that can be connected by facilities that help them address their shared challenges and are situated in an identifiable and, to the best of their ability, contiguous area or along a value chain that transcends a specific geographic area and produces the same or similar goods or services. The State Government has developed detailed plans at each step. In a specific industry or value chain, industrial alliances bring

together a wide spectrum of partners, including public and commercial players as well as civil society.

Challenges of MSME

In rising economies like India, micro-small- and medium-sized businesses (MSMEs) constitute the backbone of economic expansion and equitable development. Their contribution to the growth of emerging markets can be observed, in the creation of jobs, the use of local resources, and capital savings. With a foundation of 0.85 million MSME businesses, Karnataka State is one of India's burgeoning industrial hotspots. The government's revenue base has greatly risen as a result of the operations of these businesses, transforming the region into an emerging market economy. More than 0.85 million Micro, Small, and Medium-Sized Enterprises (MSMEs) are in Karnataka, which also employs over 0.55 million people. About INR 4 million has been invested in Karnataka during the past five years, and the state currently ranks fifth in the nation for industrial growth. MSMEs promote entrepreneurship and create a significant amount of employment possibilities, which contribute significantly to economic growth. MSMEs serve large companies as suppliers of input goods and services, aiding in the development of the industrial sector. There are numerous regulations, initiatives, incentives, and concessions in place to support MSMEs. Due to the lockout and stalled exports brought on two years ago by the outbreak of the contagious virus Covid-19, the state's industries are currently suffering losses.

About Rs. 4 lakh crore has been invested in Karnataka during the past five years i.e., 2017, and the state currently ranks fifth in the nation for industrial growth. MSMEs play a significant part in the state's economic development. After agriculture, the MSME sector employs the second-highest number of people and contributes around 40% of the nation's GDP. With a progressive view of evolving demands, the state has been concentrating on economic and industrial development over the years. The problems of today's globalization period will be to build and flourish in a competitive market through the use of entrepreneurial skills, credit, technology adoption, high-quality manufacturing, and market competitiveness. Due to the lockdown and sluggish exports brought on two years ago by the outbreak of the contagious virus Covid-19, the state's industries are currently suffering losses. Some industries are no longer around. The state and federal governments have offered some aid in the

interim. However, it will take some time for these industries to recover their prior stature. Industry alliances are a new stage in the formation and development of industrial clusters and are a cooperative mode based on a contract or restraint to enhance the capacity of manufacturing resources to be shared with other industries.

REVIEW OF LITERATURE

Local Enterprise (MSME)

In the current scenario for the upliftment of the economy, the sector became the drive engine of the economy (Singh, 2021). These MSMEs help in reducing the unbalanced income distribution among the people through the way of providing employment opportunities and industrialization of these areas. The increase in number of MSMEs over the years is helping now to decrease the problem of poverty and unemployment (Kumar, 2017). The Indian MSMEs lack up-to-date information and are often unaware about the latest technologies present in the global market. The main challenge for many Small and Medium Enterprises (SMEs) is to cultivate right skills and management practices for establishing and integrating knowledge (OECD, 2013). MSMEs provide a huge platform to build sound business ventures. Entrepreneurship plays a crucial role in the growth and development of the economic system of society. MSME reached a level on the optimum utilization of available domestic resources and produce quality products and services. The sector contributes much to the industrial growth of the country and also it reached a level on the optimum utilization of available domestic resources and produces quality products and services. The sector contributes much to the industrial growth of the country (Bhat et al., 2020).

Industrial Alliance

An Industrial Alliance denotes a voluntary relationship between two or more independent organizations, which is intended to achieve both their individual and mutual strategic objectives which provide companies with a mechanism for enhanced knowledge transfer leading to improved products (Z. Zhang et al., 2018). Industrial alliance is an important way to share knowledge and technology among enterprises (Gassmann et al., 2010). Each enterprise combines its own advantages and characteristics

to reasonably choose the alliance partners that are complementary and it is necessary to consider whether the alliance members have the same strategic goals and development direction (Chen, 2021; Seo et al., 2022). Alliances have been categorized as organizational, economical, strategic, and political which results into support to entering into market, risk sharing, exchange of knowledge and experience, synergy and competitiveness (Perkmann et al., 2011). Industrial alliances between SMEs and large organizations require systems and structures that facilitate collaboration (McConnell & Cross, 2019). The alliance decreases the cost and risk of technology innovation (Xie et al., 2014).

SME and Technology

Small businesses must be willing and able to apply the new technologies in their daily business activities (Bressler et al., 2011) because the use of Information and Communications Technology (ICT) plays an important role on the growth of small businesses (Head & Alford, 2015). This refers to helping enterprises radically improve their performance by improving economic and social value (Vrontis et al., 2022). SMEs are considered as a driving force of innovation and employment, and thus they are an important factor in fostering general economic performance. MSMEs in highly competitive industries have no choice but to follow their competitors in adopting information technology (Hiremath & Suvarna, 2022). There should be an increase in training programs by the industry associations to upgrade the skills of the workers on a daily basis with introduction of new technology. The education and training systems influence the level of entrepreneurial activity because education and training strategies and SME enterprise development strategies are still weak in developing countries (Lakpetch & Lorsuwannarat, 2012). Very few micro-enterprise entrepreneurs possess the technical skills or information systems necessary to streamline their business operations and help them compete and expand into new markets (Piva & Rossi-Lamastra, 2013) to become competitive; it has to adopt the best international practices and constantly upgrade its technology (OECD, 2013). This will facilitate for faster growth (Mosonik et al., 2021).

Industrial Alliance and Competitive Advantage

Industrial alliance is considered as an essential source of resource-sharing, learning, and thereby gaining competitive advantage in the competitive business world (Oh, 2019). The alliance can transfer the enterprises from technical self-sufficiency to technical cooperation to make up the gap by helping the enterprises and other ones, colleges and universities, even their competitors to organize the network of the alliance (Xie et al., 2014). Market alliances between organizations with excess capabilities and resources are more appropriate because of those promising capabilities and resources to obtain speedy entry in a new market and a successful transition from the present to the future in a fast cycle (Zhang et al., 2022). Alliances play a critical role in firm survival, providing the access to critical resources that allow gaining and maintaining competitive advantages in today's turbulent economic environment (Cobeña et. al., 2017). Competition is no more between individual firms but between alliance networks. Forming the alliance not only can avoid the disorderly competition in the industry but also can prevent other competitors to enter the industry by standardizing their technological achievements and making the technical barrier (Xie et al., 2014).

Industrial Alliance and Technology

Technological collaboration with partners and repeated interaction with new and existing partners improve new products' performance (SohPek-Hooi, 2003). The rapid diffusion of digital transformation is leading to new changes that frequently involve transformations of key business operations and processes. These changes also affect products, organizational structures, and management concepts and even extend beyond firms' borders (Matt et al., 2015). The establishment of a coordinated alliance management plays a role of communication and coordination, acts as the "lubricant" among alliance members, promotes the healthy and sustainable development of the alliance, improves the joint force and influence of the industrial alliance, and better promotes the technological innovation ability of the industrial alliance (Dewei, 2021).

MSME-Entrepreneurial Success

Entrepreneurial orientation has a significant effect on firm strategic capabilities; the firm strategic capabilities have a significant effect on MSME growth. Mosonik et al. (2021) Entrepreneurial leadership is seen as an important factor in the growth of a new enterprise and is viewed as a power that supports the drive toward development (Leitch et al., 2013). Marketing Capabilities allow the company to establish and implement new strategies to create the company's performances in terms of organizational goals, by responding to changing market conditions. High risk appetite among MSME owners/managers also encourages experimentation with new products, technologies, equipment, and markets which speeds up the acquisition, learning, and absorbing of the new resource capital including information and strategies and ultimately improves the enterprise's strategic capabilities. By taking risks, MSME owners/managers are also able to take full advantage of market opportunities which translates to strategic alliances and collaborations and hence improved firm strategies capabilities by the MSMEs (Mosonik et al., 2021).

Technology Adoption and Market Competition

Studies show that competitive pressure does not always result in early technological adoption. Competition only promotes technological adoption when products are sufficiently close replacements, as evaluated by either product substitutability or the nature of market rivalry. Intuitively, increased competition pressure results in reduced pre- and post-adoption profitability, which reduces adoption incentives. However, increased competition would also result in a stronger competitive advantage for the company that is the sole adopter for a while. The latter beneficial effect of competition becomes more pronounced when the items are close substitutes. It outweighs the detrimental impact and hastens the initial acceptance. The adoption incentives are often weakened by rising product substitutability and, subsequently, rising competitive pressure. Effect of competition becomes more pronounced when the items are close substitutes. It outweighs the detrimental impact and hastens the initial acceptance. The adoption incentives are often weakened by rising product substitutability and, subsequently, rising competitive pressure. The relationship between technology adoption and market competition

often measures the intensity of the former in terms of market concentration, not the extent of product substitutability or the manner of substitution.

The Mediating Role of Technology Adoption and Market Competition

According to (Anggadwita et al., 2021) findings, technology and innovation skills have a favorable and significant impact on MSMEs' ability to remain operational during the COVID-19 epidemic. Additionally, it has been demonstrated that innovation capability mediates the relationship between technological capability and business resilience. Wulandari and Koe (2021) study highlights the significance of the idea of business resilience as well as the development of MSMEs' technological and innovative capacities. The analysis undertaken led to the conclusion that in order to raise the performance of MSMEs, management characteristics must be strengthened through efforts to foster innovation, while having adequate management characteristics on their own won't do so.

Research Gap

Several studies have looked at the factors that influence Entrepreneurial Success in a relatively limited setting there are few studies that include all of the essential relationships that are discussed in this paper. A study of the existing literature reveals a gap in research on the mediating role of Technology and Market competition in Local Enterprise for Entrepreneurial Success; it evolves into a framework that is used in this study to investigate the link between Local Enterprise (MSME), Technology, and Market Competition and Entrepreneurial Success based on the existing literature.

The literature study reveals a connection between technological adoption and financial performance. Small and medium-sized businesses (SMEs) are often hailed as agents of change because big businesses are hesitant to adopt novel ideas; the purchase of new technologies is not just dependent on the firm's IT policy as well as the owner-managers' assessment of the accessibility of formal recognition. Most significantly, perception is personal and can be both real and made up; however, this eventually affects choices made about the capital budget. Additionally, given that technology, Research does not always establish a stronger financial position for businesses to be innovative and hence competitive. Creative businesses perform better (sales in the domestic and international

markets) than conventional businesses. The business could alternatively decide to focus on innovation by creating new products that are unique to the market. Whatever the approach, it must include budget for the adoption and use of the necessary technology. The present study is on a study, to evaluate the relationship between industry alliance and technology adoption and financial performance of the local SME's.

OBJECTIVES OF THE STUDY

The authors specifically aim to determine the impact of industry alliance of the local SME's along with the mediation of technology adoption and market competitiveness for the success of local SME performances. The report goes into more detail about the function of industry alliances, innovative activities, and the attitude of business owners and managers toward industry alliances and adapting to the technology. The portion after summarizes the pertinent studies that have already been done and gives a review of recent literature. The following section includes a description of our hypothesis, the methods we utilized to choose the research variables for our model, sample, and analysis.

THEORETICAL FRAMEWORK AND HYPOTHESES

To handle the issues of entrepreneurial failures, the government policy framework on funding or assisting small and medium firms is crucial (Heshmati, 2015). Finance is still a limited resource that businesses must devote to their most successful and productive activities. However, owner-managers must come up with plans to make their businesses and goods competitive; one strategy is innovation. The company has the choice to focus on innovation, imitation, or both. The business can also decide and plan how to carry out its innovation path, whether it focuses on a product, process, organizational structure, marketing, or different combinations of these. Nevertheless, there is enough research that looks at how innovation affects various aspects of an organization. Innovation enhances production efficiency among homogeneous enterprises in addition to boosting competitiveness (Morris, 2018). However, innovation-related operations might assist the company in surviving bad business conditions.

Innovation determines how long a company stays in a certain external market. Small business owners can still take advantage of government perks like tax benefits and financial assistance (Bronzini & Piselli, 2016;

Chen & Gupta, 2017). As part of the growth plan, businesses can rely on their innovative capabilities to diversify and flourish outside of their native markets (Martuscelli & Varela, 2018). The findings of (Bhat et al., 2021) indicated that organization size does not significantly influence the adoption of the Industrial Internet of Things (IIOT).

Jian et al. (2014) claim that various reasons for the formation of industry alliances determine the alliance's mode of selection, its method of learning, competition, and innovation. It also determines the influence factors, evaluation procedures, and approaches to improve alliance performance, ultimately influencing government policy. By examining a sizable sample of data from the industry alliance, the paper analyzes the relationship between technology intermediaries and industrial alliance innovation performance. Cooperative agreements can help small and medium-sized businesses become more competitive. This Akpan et al. (2022) exploratory conjoint analysis study looks at the role that partner, firm, and environmental motives play in the creation of two different forms of SME alliances.

Numerous studies have looked at the factors that influence sustained performance in very constrained contexts and from very narrow angles in industry alliances. Studies that include all the important relationships as proposed in the present study are rare. In studies that consider the impact of industry alliances, the market competitiveness due to industry alliances on local SMEs performance, there is a gap, according to an examination of the existing literature. It develops into a framework that is used in this study to investigate the connections between local enterprises, industry alliance, technology adoption, market competitiveness, and entrepreneur success based on the body of existing literature. Based on the literature review, the following hypothesis has been developed.

H₁: *Technology adoption by local enterprises positively influences the performance of local enterprises.*

H₂: *Local enterprises' adoption of technology has a positive influence on the market competitiveness of the local enterprises.*

H₃: *Industry alliances positively influence the technology adoption that impacts enterprise performance.*

H₄: *Industry alliances positively influence the market competitiveness that impacts the enterprise performance of MSME.*

H₅: Technology adoption does mediate the relationship between Industry alliances and firm performance.

H₆: Market competitiveness mediates the relationship between Industry alliances and enterprise performances.

RESEARCH METHODOLOGY

The study, which is rooted in a descriptive survey, aims to explore how five significant constructs—industry alliance, local enterprises, market competitiveness, technology adoption, and enterprise performance—interact with one another. For the study, a sampling frame of MSME was chosen that offered various levels, and manufacturing roles. Entrepreneurs, owners, managers, and senior managers were the study's target participants. To ensure that responders were fairly represented, participants were chosen using a stratified random selection procedure. 450 self-administered questionnaires were distributed among the respondents, and 390 valid questionnaires were among them. The researchers circulated the surveys in the MSMEs industry. The participants were made aware of the study's objectives and given the assurance that the results would remain confidential. The fact that participation was fully optional was also made clear to the participants. To remind them of the study, managers and experts were called or visited. The researcher mailed out a questionnaire to the MSMEs each participant to ensure an early and prompt answer.

SCALING TECHNIQUES AND MEASURES

The questionnaire used in this study was developed from the extensive literature and sent out to MSME participants. To quantify actual experience rather than projected experience, Jim Lewis (2018) adjusted the TAM items, and he compared several scaled versions. Between the four versions, he discovered no statistically significant changes in means, and they all predicted the same likelihood of use. Jim suggested using the more popular scale of agreement with 12-item questions on a seven-point Likert scale. For our study, we have converted the scale to five-point Likert scale to maintain uniformity across the questionnaire where 1 represents strongly disagree to 5 representing strongly agree the five factors measured include experience, intention to use, output quality, attitude, and perceived ease of use. The intensity of market competition

can be greatly aided by the ability to consistently assess, monitor, and compare the competitive intensity of a market. It can guide a wide variety of potential measures, such as the removal of obstacles, the imposition of limitations on business behavior or strategy, or the pursuit of other remedies to boost competition. The market competition dimension Sheetal (2012) was measured using a 16 items scale of five dimensions namely product positioning, promotion of product, market intelligence system, integrated marketing strategies, and pricing strategies measured on a five-point Likert scale. The enterprise performance of MSME is measured using an entrepreneur success scale using 9 items taken from Asuncion and Ortiz (2003).

DATA ANALYSIS

Data were examined using a variety of statistical methods, including descriptive statistics, Pearson's correlation, and Cronbach alpha, using SPSS version 24 for Windows. The model that establishes the study's inclusive relationship among the variables was then built using Smart PLS3. Multiple phases of evaluation were done on our data. The dimensions of each study variable's items are first established and discovered using descriptive statistics and correlation (Industry alliance, technology adoption, market competitiveness, and enterprise performance. Additionally, the underlying factors for each variable are examined using confirmatory factor analysis (CFA) using varimax rotation. Then, in order to improve the sample size ratio and estimate the parameters for the confirmatory factor analysis (CFA), parcels were made based on the factors recovered (Bentler & Chu, 1987). Item parcels have a variety of advantages, such as improved indicator distributional features and a decrease in the number of potential covariances across measurement error sources (West et al., 1995). Contrarily, item parceling should only be used to examine connections across latent constructs, which is what we did in our study (Little et al., 2002). We used the homogeneous item parceling approach recommended by (Coffman & MacCallum, 2005).

The mediating role of TA and MC between Local enterprises (LE), IA, and FP was examined in the proposed model using structural equation modeling (SEM). Because SEM allows for a simultaneous test of every variable in a hypothesized model, it can be used to assess how well the model matches the data (Byrne, 2010). Construct validity was assessed using discriminant validity, composite reliability, and convergent

validity. To test its presumptions, the study also applies (Anderson & Gerbing, 1988) two-step procedure. The suitability of the measurement model was determined in the first step, and the suitability of the structural model was determined in the second. The analysis was conducted using maximum likelihood (ML) estimate and SEM. In accordance with (Kline, 2005) recommendation, we presented chi-square test results with corresponding degrees of freedom and level of significance as well as RMSEA (Steiger, 1990) values ranging from 0.05 to 0.8 (Hair et al., 2010). There was also a ratio specified for the degrees of freedom's chi-square value (Marsh & Balla, 1994). Ratios of 2 to 1 or 3 to 1 are indicative of a strong fit between the hypothetical model and the sample data, while there is no hard and fast rule in this regard (Arbuckle, 2007). The fit of the postulated model to the data in comparison to the null or independent model must be 0.9 or greater in order to be included in the baseline comparisons.

The most widely used method for assessing the mediation hypothesis is Baron and Kenny's (1986) technique. It is used in both fundamental and applied psychology research (Preacher & Hayes, 2004). This method states that mediation is beneficial if:

- (1) Independent variables have a strong correlation with dependent variables.
- (2) Independent variables have a significant correlation with the mediating variable.
- (3) Mediating variables have a significant correlation with the dependent variable; and when mediators are taken into account, the correlation between independent and dependent variables is significantly reduced (partial mediation) or eliminated (full mediation). As advised by Preacher and Hayes, we also used bootstrap confidence intervals to assess the mediation hypotheses (2004).

RESULTS AND DISCUSSION

Table 7.1 includes the study variables' means, standard deviations, Cronbach's reliabilities, and Pearson correlation coefficients. All the values have very high internal reliability with coefficient ranging from 0.84 to 0.89. The correlation pattern matches the correlations that were predicted. IA thus has a favorable connection with the mediators (TA, MC) as well

Table 7.1 Descriptive statistics, Pearson correlation, Cronbach alpha

<i>Variables</i>	<i>Mean</i>	<i>SD</i>	<i>Cronbach Alpha (α)</i>	<i>LE</i>	<i>IA</i>	<i>FP</i>	<i>TA</i>	<i>MC</i>
Local Enterprises (LE)	2.91	0.911	0.730	1				
Industry Alliance (IA)	2.69	0.902	0.701	0.412**	1			
Firm Performance (FP)	3.01	0.963	0.703	0.423**	0.501**	1		
Technology Adoption (TA)	3.21	1.30	0.654	0.482**	0.502**	0.521**	1	
Market Competition (MC)	2.56	1.251	0.821	0.471**	0.512**	0.412**	0.511**	1

as the outcome variable (FP). Additionally, TA and MC were positively correlated with both independent and dependent factors.

TEST FOR MEASUREMENT MODEL

Confirmatory factor analysis was used to research the measurement model. All latent constructs were permitted to correlate, and there was only one path from each indicator to each latent construct in the model. According to the fit indices, the three-factor model fit the data well ($\chi^2 [51] = 124.608$, $p < 0.001$, $\chi^2/df = 2.122$; RMSEA = 0.072, NFI = 0.95, IFI = 0.93, TLI = 0.91, CFI = 0.921). All five of the study's variables were discovered to be distinct variables. As shown in Table 7.2, all the measurement items have statistically significant loadings. The composite dependability of each construct, which ranged between 0.80 and 0.89, guaranteed its one-dimensionality. The extracted average variance (AVE) of each component was higher than the matching inter-construct variance (Tables 7.3 and 7.4).

Table 7.2 Properties of measurement model

<i>Constructs</i>	<i>Parcel indicators</i>	<i>Standardized estimates</i>	<i>AVE</i>	<i>CR</i>	<i>p value</i>
Local Enterprises (LE)		0.771	0.778	0.812	0.000
Industry Alliance	Innovation	0.742	0.712	0.811	0.000
	Expertise	0.681			0.000
	Technology disruption	0.621			0.000
Firm Performance	Enterprise performance	0.685	0.778	0.703	0.000
	Employee performance	0.765			0.000
	Entrepreneur performance	0.563			0.000
Technology Adoption (Mediating Variable)	Experience	0.798	0.756	0.821	0.000
	Intension to use	0.823			0.000
	Output quality	0.765			0.000
	Attitude	0.712			0.000
	Perceived ease of use	0.781			0.000
Market Competitiveness (Mediating Variable)	Product positioning	0.802	0.765	0.801	0.000
	Promotion of product	0.812			0.000
	Market intelligence	0.758			0.000
	Marketing strategies	0.741			0.000
	Pricing strategies	0.755			0.000

Table 7.3 Properties of discriminant model

	<i>LE</i>	<i>IA</i>	<i>FP</i>	<i>TA</i>	<i>MC</i>
Local Enterprises (LE)	0.845				
Industry Alliance (IA)	0.813	0.703			
Firm Performance (FP)	0.719	0.701	0.789		
Technology Adoption (TA)	0.817	0.799	0.718	0.723	
Market Competitiveness	0.712	0.854	0.785	0.781	0.812

Table 7.4 Hypothesis testing

<i>Hypothesis</i>	<i>Relationship</i>	<i>Beta Coefficients</i>	<i>p value</i>	<i>Result</i>
H ₁	LE, TA, and FP	0.433	***	Accept
H ₂	LE, MC, and FP	0.312	***	Accept
H ₃	IA, TA, and FP	0.522	***	Accept
H ₄	IA, MC, and Ep	0.531	***	Accept
H ₅	TA as a mediation with IA and FP	0.653	***	Accept
H ₆	MC as a mediation with IA and FP	0.641	***	Accept

VALIDATION OF THE STRUCTURAL MODEL

The fit of the structural model that reflected the proposed mediation in the context of constructs emerging out of the hypotheses has been investigated and tested by the researcher. The predicted model fits the data well, according to all the model fit indexes ($2 [48] = 112.905$, $p < 0.001$; $2 / df = 2.422$; $RMSEA = 0.068$, $NFI = 0.92$, $IFI = 0.91$, $TLI = 0.921$, $CFI = 0.911$). IA factor was allowed to establish a direct connection on FP as well as the impact through the mediators, TA and MC, when we tested the model.

ANALYSIS OF MEDIATING EFFECT

As demonstrated in Table 7.5, all of the path estimates between the constructs are significant except between the local enterprises and market competitiveness on firm performance. Additionally, when we examine the direct and indirect effects of TA and FP in the mediated model (Table 7.5), we find that the direct effect (0.331), which is larger, is significant while the indirect effect (0.215), which is less, is significant. This supports the partial mediation model. When it comes to TA mediating function between IA and FP, it has confirmed the entirety of the mediation as we discovered direct effect (0.356), but indirect impact (0.411) is higher than direct effect with substantial, confirming the entirety of the mediation. The whole structural model with path coefficients for TA and MC mediating roles between IA and FP.

To evaluate the data's ability to overcome irregularity as well as the stability of the indirect effects, we conducted bootstrapping using 2000

Table 7.5 Mediating effect among constructs

<i>Relationship</i>	<i>Mediation</i>	<i>Total effects</i>	<i>Direct effect</i>	<i>Indirect effect</i>	<i>Test for mediation</i>	<i>p value</i>
TA, MC and FP	MC	0.576	0.331	0.215	Partial	***
	TA	0.768	0.356	0.411	Full Mediation	***

samples. No estimates of the 95% bias-corrected confidence intervals included zero, and the average bootstrap-based estimates for all path coefficients were near to values based on ML estimations (deviations in the range = 0.109 to 0.314, average = 0.194 in absolute value). It is clear from the foregoing talks that hypotheses (H₁, H₂, H₃, H₄, H₅ and H₆) are supported.

FINDINGS

This article outlines the precise ways that fundamental IA in MSME, that are in line with local enterprises can aid in the shift from conventional linear production techniques to a more technology adopted approach through industry alliance for better firm performance. All the values in the coefficient range of 0.81 to 0.89 have very high internal reliability. The correlation pattern matches the correlations that were predicted. The outcome variable and the mediators (TA, MC) have a positive connection with the IA and FP. The predicted model fits the data well, according to model fit indexes ($2 [48] = 112.905$, $p < 0.001$; $2 /df = 2.422$; $RMSEA = 0.068$, $NFI = 0.92$, $IFI = 0.91$, $TLI = 0.921$, $CFI = 0.911$). The first hypothesis aims to comprehend how TA in local enterprises affects the firm's performance. With a beta coefficient, it has been acknowledged. In reference to a beta coefficient of 0.433, it has been determined that the inclusion of IA in MSMEs has improved the performance of the local industries. The second hypothesis is rejected because MC does not have a mediating effect rather it is directly affecting the local enterprise performance, and its beta coefficient of 0.312 indicates that MC needs to be continuously monitored. The third hypothesis, which examines the relationship between TA, IA, and FP bridging functions of IA with FP, is regarded as true. The fourth hypothesis shows the relationship between the IA, MC, and FP and the hypothesis is accepted as the IA provides a

better competitiveness to the MSME in the market. The fifth and sixth hypothesis shows the effect of mediation of TA and MC between the IA and FP which have a partial and full mediation effect.

PRACTICAL IMPLICATIONS

Creating an industrial alliance might occasionally appear intimidating or like a difficult challenge. The rewards of a fully functional, engaged IA, all working to support a valued objective to expand a technological ecosystem, are well worth the stress, even if there are many aspects to take into account while building an effective group. Market leaders and visionaries in new and emerging technologies are aware of the benefits of developing and fostering market acceptance of technological solutions through alliances, trade groupings, and special interest groups. SMEs will need to continuously integrate the newest technology into their production processes as well as in their marketing and management functions in order to reduce costs, increase efficiency, and maintain consistency in the face of growing competition, globalization, and uncertainty brought on by the global economic downturn. A novel way to view industrial structure is through the research of industry alliance networks, which provide evidence of the establishment of key blocks within an industry. The manufacturing industry (MSME) makes major contributions to employment, output, and exports from the nation. According to estimates, the sector represents around 45% of the total value and 40% of the nation's overall exports and of the manufacturing output to enable this industry more active and substantial participant in the growth of the Indian economy.

CONCLUSIONS

Innovation allows SMEs to combine the advantages of smaller scale and greater flexibility with economies of scale and scope in larger markets—regional, national, and global. Relative to larger firms, SMEs can better respond to changing market conditions. New communication tools make it easier for small firms to reach foreign partners. As a result, SMEs are becoming more involved in industry alliances. Larger multinationals are partnering with smaller firms with technological advantages to economies on R&D, minimize the lead time for new products and serve emerging markets. And MSMEs provide a huge platform to build sound business enterprise. SMEs generally adopt technologies more slowly than

the average firm. This may be because of remaining internal barriers to SME adoption of e-commerce, including limited understanding of the complexity of electronic operations, inadequate skills, and high initial investment required to develop a viable e-commerce strategy. Promoting enterprise clusters can also enhance SME performance and competitiveness. Small firms working in clusters can attain the advantages of large firms while retaining the benefits of specialization and flexibility.

REFERENCES

- Akpan, I. J., Udoh, E. A. P., & Adebisi, B. (2022). Small business awareness and adoption of state-of-the-art technologies in emerging and developing markets, and lessons from the COVID-19 pandemic. *Journal of Small Business and Entrepreneurship*, 34(2). <https://doi.org/10.1080/08276331.2020.1820185>
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411.
- Anggadwita, G., Martini, E., Hendayani, R., & Kamil, M. R. (2021). *The role of technology and innovation capabilities in achieving business resilience of MSMEs during Covid-19: Empirical study*. 2021 9th International Conference on Information and Communication Technology, ICoICT 2021. <https://doi.org/10.1109/ICoICT52021.2021.9527464>
- Arbuckle, J. L. (2007). Amos 16.0 User's Guide. Amos Development, Spring House.
- Asuncion, M., & Ortiz, A. (2003). Questionnaire: National survey on SMEs situation in the Philippines. <https://doi.org/10.13140/RG.2.2.17020.95363>
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182. <https://doi.org/10.1037/0022-3514.51.6.1173>
- Bentler, P. M., & Chu, C. P. (1987). Practical issues in structural modelling. *Sociological Methods and Research*, 16, 78–117.
- Bhat, S. A., & Singh, S. (2020). *Industrial development in Uttar Pradesh: Problems and perspectives* (p. 247).
- Bhat, S., Gijo, E. v., Rego, A. M., & Bhat, V. S. (2021). Lean Six Sigma competitiveness for micro, small and medium enterprises (MSME): An action research in the Indian context. *TQM Journal*, 33(2). <https://doi.org/10.1108/TQM-04-2020-0079>
- Bronzini, R., & Piselli, P. (2016). The impact of R&D subsidies on firm innovation. *Research Policy*, 45(2), 442–457.

- Bressler, M. S., Bressler, L. A., & Bressler, M. E. (2011). A study of small business technology adoption and utilization. *Academy of Entrepreneurship Journal*, 17(2), 49–60.
- Byrne, H. M. (2010). Dissecting cancer through mathematics: From the cell to the animal model. *Nature Reviews Cancer*, 10(3), 221–230.
- Chen, C. J. (2021). *Introduction to scanning tunneling microscopy* (4rd ed.; Vol. 69). Oxford University Press.
- Chen, M.-C., & Gupta, S. (2017). The incentive effects of R&D tax credits: An empirical examination in an emerging economy. *Journal of Contemporary Accounting & Economics*, 13(1), 52–68.
- Coffman, D. L., & MacCallum, R. C. (2005). Using parcels to convert path analysis models into latent variable models. *Multivariate Behavioral Research*, 40(2), 235–259.
- Cobeña, M., Gallego, Á., & Casanueva, C. (2017). Heterogeneity, diversity and complementarity in alliance portfolios. *European Management Journal*, 35(4), 464–476.
- De, N., & Mondal, T. (2018, January). Nabanita De et al., International Journal of Research in Management, Economics and Commerce, ISSN 2250-057X, Impact Factor: 6.384, Volume 08, Issue 1, January 2018, Page 90–.
- Dewei, Z. (2021). Research on the impact of new energy automobile industry alliance development status on technological innovation. *E3S Web of Conferences*, 251, 01091. <https://doi.org/10.1051/e3sconf/202125101091>
- Dzobgenuku, R. K., & Keelson, S. A. (2019). Marketing and entrepreneurial success in emerging markets: The nexus. *Asia Pacific Journal of Innovation and Entrepreneurship*, 13(2), 168–187. <https://doi.org/10.1108/APJIE-12-2018-0072>
- Gassmann, O., Zeschky, M., Wolff, T., & Stahl, M. (2010). Crossing the industry-line: Breakthrough innovation through cross-industry alliances with “non-suppliers.” *Long Range Planning*, 43(5–6), 639–654. <https://doi.org/10.1016/J.LRP.2010.06.003>
- Hair, J., Black, W., Babin, B., & Anderson, R. (2010). *Multivariate data Analysis: A global Perspective*.
- Head, B. W., & Alford, J. (2015). Wicked problems: Implications for public policy and management. *Administration & Society*, 47(6), 711–739. <https://doi.org/10.1177/0095399713481601>
- Heshmati, A. (2015). The effect of credit guarantees on SMEs’ R&D investments in Korea. *Asian Journal of Technology Innovation*, 23(3), 407–421.
- Jian, Z., Shan, D., & Chun, H. (2014). Study on correlation mechanism of motivation, conduct and performance of industrial alliance from the perspective of technology intermediary. *Journal of Chemical and Pharmaceutical Research*, 6(5), 1597–1600.

- Kline, T. (2005). *Psychological testing: A practical approach to design and evaluation*. Sage.
- Kumar, V. (2017). *An analysis of growth of MSMEs in India and their contribution in employment and GDP of the country*. *International Journal of Interdisciplinary and Multidisciplinary Studies (IJIMS)*, 4(2), 187–191.
- Lakpetch, P., & Lorsuwanarat, T. (2012). Knowledge transfer effectiveness of university-industry alliances. *International Journal of Organizational Analysis*, 20(2), 128–186. <https://doi.org/10.1108/19348831211227819>
- Leitch, C. M., McMullan, C., & Harrison, R. T. (2013). The development of entrepreneurial leadership: The role of human, social and institutional capital. *British Journal of Management*, 24(3), 347–366.
- Lewis, J. R. (2018). Measuring perceived usability: The CSUQ, SUS, and UMUX. *International Journal of Human-Computer Interaction*, 34(12), 1148–1156. <https://doi.org/10.1080/10447318.2017.1418805>
- Lin, C. Y., & Chen, M. Y. (2007). Does innovation lead to performance? An empirical study of SMEs in Taiwan. *Management Research News*, 30, 115–132. <https://doi.org/10.1108/01409170710722955>
- Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling*, 9(2), 151–173.
- Marsh, H. W., & Balla, J. (1994). Goodness of fit in confirmatory factor analysis: The effects of sample size and model parsimony. *Quality and Quantity*, 28(2), 185–217.
- Martuscelli, A., & Varela, G. (2018). Survival is for the fittest: Export survival patterns in Georgia. *Economic Systems*, 42(3), 397–413.
- Matt, C., Hess, T., and Benlian, A. (2015). Digital transformation strategies. *Business & Information Systems Engineering*, 57, 339–343.
- McConnell, D. P., & Cross, S. E. (2019). Realizing the value of industry-university innovation alliances. *Research-Technology Management*, 62(2), 40–48.
- Morris, D. M. (2018). Innovation and productivity among heterogeneous firms. *Research Policy*, 47(10), 1918–1932.
- Mosonik, J. K., Maru, L. C., & Komen, J. (2021). Entrepreneurial orientation, MSME growth and the mediating role of firm strategic capabilities in the manufacturing sector in Nairobi county, Kenya. *International Journal of Scientific Research and Management*, 9(02), 07–29. <https://doi.org/10.18535/ijstrm/v9i02.eps01>
- Nimbagal, S. V., Panda, A., Chittaranjan, P., & Pasumarti, S. S. (2022). An empirical investigation of customer characteristics on retail format selection—A mediating role of store image. *Journal of Indian Business Research*, 15, 55–75.

- OECD. (2013). *Development co-operation report 2013: Ending poverty*. Organisation for Economic Co-operation and Development. https://www.oecdilibary.org/development/development-co-operation-report-2013_dcr-2013-en
- OECD. (2017). Development co-operation report 2017: Data for development. *OECD*. <https://doi.org/10.1787/dcr-2017-en>
- Oh, Y. (2019). Customer purchasing attitude towards inter/intra-industry alliance based on the technological level of industries. *Journal of Distribution Science*, 17(7), 77–86. <https://doi.org/10.15722/JDS.17.07.201907.77>
- Perkmann, M., Neely, A., & Walsh, K. (2011). How should firms evaluate success in university-industry alliances? A performance measurement system. *R and D Management*, 41(2), 202–216. <https://doi.org/10.1111/J.1467-9310.2011.00637.X>
- Piva, E., & Rossi-Lamastra, C. (2013). Systems of indicators to evaluate the performance of university-industry alliances: A review of the literature and directions for future research. *Measuring Business Excellence*, 17(3), 40–54. <https://doi.org/10.1108/MBE-01-2013-0004>
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers*, 36(4), 717–731.
- Seo, E., Song, J., & Jin, C. (2022). Heterogeneity of optimal balance between exploration and exploitation: The moderating roles of firm technological capability and industry alliance network position. *Industry and Innovation*. <https://doi.org/10.1080/13662716.2022.2036598>
- Sheetal. (2012). *Marketing strategies of small and medium enterprises: a sample survey*. https://www.researchgate.net/publication/261721534_Marketing_Strategies_of_Small_and_Medium_Enterprises_A_Sample_Survey
- Singh, A., (2021, July 10). MSMEs sector in India: Current status and prospect. *International Journal of Innovative Research in Engineering & Management (IJIREM)*. Available at SSRN: <https://ssrn.com/abstract=3912748> or <https://doi.org/10.2139/ssrn.3912748>
- SohPek-Hooi. (2003). The role of networking alliances in information acquisition and its implications for new product performance. *Journal of Business Venturing*, 18(6), 727–744.
- Steiger, J. H. (1990). Structural model evaluation and modification: An interval estimation approach. *Multivariate Behavioral Research*, 25(2), 173–180.
- Vrontis, D., Chaudhuri, R., & Chatterjee, S. (2022). Adoption of digital technologies by SMEs for sustainability and value creation: Moderating role of entrepreneurial orientation. *Sustainability*, 14(13), 7949. <https://doi.org/10.3390/su14137949>
- West, S. G., Finch, J. F., & Curran, P. J. (1995). Structural equation models with non normal variables: Problems and remedies. In R. H. Hoyle (Ed.),

Structural equation modeling: Concepts, issues, and applications (pp. 56–75). Sage.

- Wulandari, R., & Koe, W.-L. (2021). How to improve the performance of micro, small, and medium enterprises? *GATR Global Journal of Business Social Sciences Review*, 9(4). [https://doi.org/10.35609/gjbssr.2021.9.4\(4\)](https://doi.org/10.35609/gjbssr.2021.9.4(4))
- Xie, J., Zhou, H.-H., & Ruan, A.-Q. (2014). Research on the cooperation relationship of the members of the technology alliance based on tightness and pleasure degree. *2014 International Conference on Management Science and Management Innovation (MSMI 2014)*. Changsha, China. <https://doi.org/10.2991/msmi-14.2014.135>
- Zhang, Y., Yuan, C., & Zhang, S. (2022). Influences of university-industry alliance portfolio depth and breadth on growth of new technology-based firms: Evidence from China. *Industrial Marketing Management*, 102, 190–204. <https://doi.org/10.1016/J.INDMARMAN.2022.01.018>
- Zhang, Z., Zhang, Y., Lu, J., Xu, X., Gao, F., & Xiao, G. (2018). CMfgIA: A cloud manufacturing application mode for industry alliance. *International Journal of Advanced Manufacturing Technology*, 98(9–12), 2967–2985. <https://doi.org/10.1007/S00170-018-2476-X>



How Disruptive Technology Leads to New Product Development in Emerging Markets

Satyendra Singh and Fabrizio Di Muro

Disruptive technologies refer to radical innovative products and services that change consumer behavior and industry norms. In this context, the chapter explores how consumers are drawn to new products and how to help them accept new products that are slightly or radically different from the norm. Our central proposition is that disruptive technologies lead to new product development and that their features should be moderately incongruent with pre-existing product category schemas for the products to be successful. Using schema-based theories—to interpret or organize information—and qualitative methods, the purpose of the chapter is to discuss (1) the mediating role of *Innovation* between *Disruptive Technology* and *New Product Development* (NPD); (2) the moderating roles of *Digital Infrastructure*, *Financial Risks*, and *FDI* between *Disruptive Technology* and *Innovation*; and (3) moderating roles of *Perceived Risks*

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and *Arousal* between *Innovation* and *NPD*. In conclusion, we provide practical implications for managers regarding improving new product design. Finally, we give some pointers for future research.

INTRODUCTION

Globalization has revolutionized the global economy through technological disruption. This disruption has created global demand for knowledge, resources, capabilities, innovations, and new product developments for consumers and the technology industry (NRC, 2010). Disruptive technology refers to a radical innovation that changes the well-established behavior of consumers and the operations of industries (Danneels, 2004). For example, Netflix created an online subscription platform for people to stream unlimited movies, causing DVD rental stores to declare bankruptcy (Baskin, 2013). One of the key characteristics of disruptive technology is that it gives rise to economic growth. Artificial intelligence, ChatGPT, the Internet, social media, and privacy issues, among others, are recent successful examples of innovative disruptive technologies that impact consumers and industry.

However, if the innovative product is too different from the existing ones, it will likely fail. In 1993, Pepsi launched a new product called Crystal Pepsi, a clear cola that did not have the classic black coloring of a typical cola product. Crystal Pepsi's debut came with great fanfare—the product was launched with a Superbowl ad featuring Van Halen's hit song "Right Now" and the tagline "You've never seen taste like this." However, by 1995, Crystal Pepsi had been discontinued due to poor sales. The story of Crystal Pepsi is common in the world of new product innovation, as new products often fail. Many reasons have been given for the failure of new products. However, an often-overlooked reason is psychological: consumers view many new products—even those with only one atypical feature—as too radical and different to adopt.

The impact of disruptive technology varies across countries, as it depends on the digital infrastructure that enables the disruption. So, governments, particularly in emerging markets, have embraced innovations and invested in digital infrastructure to boost their economies through new product development. It was suggested that governments in Asia need to prioritize infrastructure development for Foreign Direct Investments (FDI) (Behname, 2012). Studies acknowledge that digital infrastructure development is important in attracting FDI and boosting

the economy (Asiedu, 2002; Loree & Guisinger, 1995). The advantages for emerging markets through the FDI are access to the latest technology, employment opportunities, and lower costs of production which ultimately create value for customers in terms of the availability of options for quality congruent products and services at a competitive price (Cohen, 2007). We use Mandler's (1982) theory to explain that a novel product is likely to be successful if it is moderately incongruent with pre-existing product category schemas.

Disruptive technology has usually been discussed in the context of advanced countries as they have an existing digital infrastructure. Therefore, we situate this chapter in the context of emerging markets. Recently, there has been a call for research to examine how disruptive technology affects product performance in emerging markets (Andrews et al., 2019). Usually, emerging markets have abundant land, population, and energy but need more information technology for disruptive technology to be effective and successful in new product development (Soni, 2020). If the Internet were made as accessible as to advanced nations, it would create \$2.2t in an additional GDP with 140m jobs (IFC, 2019).

The purpose of the conceptual chapter is to discuss (1) the mediating role of Innovation between Disruptive Technology and New Product Development (NPD); (2) the moderating roles of Digital Infrastructure, Financial Risks and FDI between Disruptive Technology and Innovation; and (3) moderating roles of Perceived Risks and Arousal between Innovation and NPD. In the next section, we present the conceptual framework and develop propositions, followed by a discussion, implications for managers, and directions for future research.

CONCEPTUAL FRAMEWORK AND THEORY

Figure 8.1 depicts the linkages among variables applicable to this study. The theorist Jean Piaget suggested that people use schemas—cognitive frameworks to interpret or organize information—to make sense of the world around them (Piaget, 1964). Consumers generally form product category schemas when making sense of existing products. For instance, a consumer may develop a schema for a soft drink. Consumers may learn that soft drinks are carbonated, cold, contain cola and preservatives, and have a slightly sweet taste (Meyers-Levy & Tybout, 1989). Building on

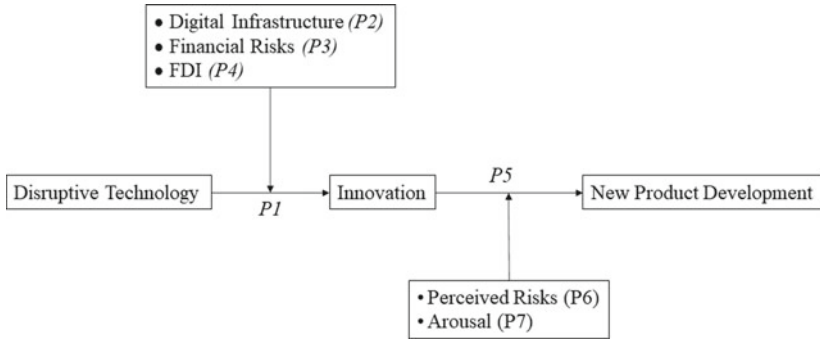


Fig. 8.1 The conceptual framework and theory (*Source* The authors)

Piaget's work, Mandler (1982) considered how consumers might psychologically react to novel products that may or may not fit existing product category schemas.

According to Mandler's (1982) theory, consumers could be faced with *schema congruity*—a novel product could be consistent or congruent with pre-existing product category schemas or with *schema incongruity*—a novel product could be inconsistent or incongruent with pre-existing product category schemas. When faced with schema congruity, Mandler (1982) proposed that consumers would react favorably, with mild positive affect, as consumers generally like products that are consistent with their expectations. However, since these objects are not particularly noteworthy, consumers will only consider them a little. Consumers' reactions depended on the level of incongruity between the product and pre-existing schemas when faced with schema incongruity. If the level of incongruity was moderate, consumers often experienced greater arousal levels due to the product's novelty and generally needed to increase their level of cognitive elaboration to try to resolve the incongruity. According to Mandler (1982), moderate incongruity could be resolved, often through assimilation, subtyping, or activating an alternative product schema. He considered moderate incongruities to be "interesting and positively valued" (Mandler, 1982, p. 22), as they led to more positive responses than those elicited by schema congruity. This is because resolving the incongruity was thought to generate positive affect for the consumer.

On the other hand, if incongruity was extreme, consumers typically engaged in significant levels of cognitive elaboration to make sense of the new product (Mandler, 1982). Consumers are generally unable to resolve extreme incongruities without developing a new product schema or making significant modifications to an existing product schema. As a result, extreme incongruities generally produce feelings of frustration, anxiety, or tension for consumers, meaning that consumers' evaluations of extreme incongruity produce more negative evaluations than moderate incongruity (Mandler, 1982). In summary, Mandler (1982) proposed a non-monotonic or inverted U relationship between schema congruity and product evaluations: consumers prefer products that are moderately incongruent more so than products that are congruent with their expectations or extremely incongruent with their expectations, as consumers derive positive affect from resolving the incongruity without significantly altering their schematic structures. In contrast, products that are congruent with expectations only generate mild positive feelings, while products that are incongruent with expectations generate significant negative affect as consumers are unable to resolve the incongruity without significantly altering existing product schemas or developing new product schemas and may experience anxiety, frustration, and helplessness. While the effects that Mandler (1982) describes have been previously observed in the psychology literature (Berlyne, 1963; Fiske & Maddi, 1961; Snyder & Fromkin, 1980; Venkatesan, 1973), Mandler's (1982) theorizing and conceptualization are generally considered the most complete and thus plays a key role in our conceptualization.

PRIOR RESEARCH

Early research in marketing examining schema congruity focused on examining boundary conditions of the effect and whether the schema congruity effect applied to brand extensions. Joan Meyers-Levy and Alice Tybout, in 1989, conducted one of the earliest pieces of research that examined schema congruity. The authors sought to test Mandler's (1982) hypothesis. Using the soft drink and fruit juice schemas, Meyers-Levy and Tybout (1989) supported Mandler's hypothesis (1982): consumers preferred moderately incongruent new products more than congruent or extremely congruent ones. Subsequent research in marketing focused on examining situations or contexts where the schema congruity effect may or may not hold. Stayman et al. (1992) examined the impact of tasting

the product on consumers' preference for moderate incongruity. The authors found that consumers preferred moderate incongruity when taste matched product expectations. However, when there was a mismatch between the product's taste and description, the preference for moderate incongruity disappeared.

Further, Meyers-Levy et al. (1994) examined whether Mandler's (1982) framework applied to brand name extensions. Consistent with Mandler's (1982) hypothesis, the authors found that consumers evaluated brand extensions more favorably when the brand name was moderately incongruent with the product as opposed to when the brand name was congruent or extremely incongruent with the product. The authors concluded that this was because consumers spent more time processing ads with moderately incongruent brand names and because they derived positive feelings from finding a meaningful relationship associated with the product's brand name. Additional research by Maoz and Tybout (2002) qualified this effect further. The authors found that involvement played a key role in consumers' greater preference for a moderately incongruent brand extension. In particular, the authors found that when task involvement was low, consumers preferred congruent brand extensions over moderately and extremely incongruent ones. When task involvement was high, consumers preferred moderately incongruent brand extensions only when the brand extension was undifferentiated.

PROPOSITION DEVELOPMENT

Disruptive Technology and Innovation

Studies examining the schema congruity effect have focused on establishing consumers' preference for moderate incongruity under various conditions. In contrast, less research has examined what can be done to help consumers accept products that feature extreme incongruity. These products are typically not well accepted by consumers. Research has reported that consumers are four times less likely to prefer a new product that is extremely incongruent with one that is only incrementally new (Alexander et al., 2008). Jhang et al. (2012) were one of the first to provide insight into the conditions under which consumers will have more favorable evaluations of extremely incongruent new products. The authors found that increased cognitive flexibility helped raise consumers' evaluations of extreme incongruity. In particular, putting consumers in a

positive mood, getting consumers to think about a future event (versus a past event), and asking consumers to consider multiple explanations for an ambiguous situation, resulted in consumers having equally favorable evaluations of both extremely incongruent products and moderately incongruent products. In general, promoting greater cognitive flexibility helps consumers better understand and make sense of extremely incongruent products, and this incongruity resolution leads to more favorable product evaluations. Further, understanding the benefits of extremely incongruent new products, as opposed to resolving the incongruity, was responsible for consumers' more favorable evaluations. Given the discussion, disruptive technologies can encourage the development of extreme products due to extreme innovations. We propose our first proposition:

P1. *Disruptive Technology leads to Innovation.*

Disruptive Technology, Digital Infrastructure, and FDI

Foreign Direct Investment is needed to create a digital infrastructure for disruptive technology to replicate and innovate (Estache, 2007; Richaud et al., 1999; Wheeler & Mody, 1992) and to have a relative comparative advantage (Wei, 2000). There are two kinds of infrastructure—physical (hard) and digital (soft). Physical infrastructure relates to the physical development of a nation's assets such as airports, seaports, bridges, railways, and towers. However, this study focuses on digital infrastructure, which refers to data centers, satellites, cables, and equipment (IFC, 2019). The digital infrastructure status of a country attracts FDI as it enables nations to do business quickly and efficiently and be innovative, making emerging markets more worthy of FDI.

Further, digital infrastructure makes connectivity affordable, transactions economical, and growth inclusive. Studies in the emerging market of China indicate that both physical and digital infrastructure positively impact FDI (Fung et al., 2005). In Pakistan, infrastructure availability, market size, and foreign exchange rates were positively related to FDI in the short and long term (Rahman & Bristy, 2015). Similar conclusions were drawn in advanced nations such as the USA (Kinoshita, 1998; Loree & Guisinger, 1995) and emerging markets in Asia (Kumar, 2001). Due to the advancement of disruptive technologies—artificial intelligence, ChatGPT, big data analytics, and cloud computing, among others—and

the fact that emerging markets need access to such technologies, we speculate that the digital infrastructure status of nations will moderate the nation's ability to attract FDI to import disruptive technologies to be innovative. We propose our second proposition:

P2. *Digital Infrastructure moderates the relationship between Disruptive Technology and Innovation.*

Disruptive Technology, Financial Risks, and Innovation

There are inherent risks associated with any investments regarding how technology will function in emerging markets. The location of imported technology for FDI is essential as a disruptive technology has the natural risk of being digitally obsolete in addition to the possibility of being unsuccessful due to the lack of infrastructure development such as software upgrades, employee training, and technology lifecycle, among others (Koutroumpis & Lafond, 2018). Further, issues relating to resources, costs, electricity, and Artificial Intelligence may also make implementing disruptive technology risky due to the possibility of job losses, rising unemployment, and cheaper labor costs (Andrews et al., 2019). So attracting FDI in emerging markets can be challenging even though disruptive technology could lead to innovative new products. Risks could be mitigated if investors evaluate the likelihood of success of disruptive technology, congruity of products, management quality, and strategy implementation (Love et al., 2020). In advanced nations, perceived risks for FDI are minimal to moderate due to the availability of resources, educated consumers, and the ability to upgrade digital infrastructure. These nations may also be reluctant to invest in emerging markets due to the unsustainability of the technologies. Thus, for innovative products, local technology may be even more practical, cost-effective, and less risky to meet customer needs in emerging markets than importing expensive, resource-intensive disruptive technologies from advanced nations. Therefore, we propose our third proposition:

P3. *Financial Risks moderate the relationship between Disruptive Technology and Innovation.*

Disruptive Technology, FDI, and Innovation

Disruptive technologies change the behavior and operations of industries. However, technologies need to be significantly more advanced, efficient, and cost-effective to become disruptive. Many emerging markets have common trends in terms of technological advancement with advanced nations. However, they need investments to create the digital infrastructure to implement the disruption and develop new innovative products (IFC, 2019). For example, World Bank and International Finance Corporation (IFC) invested in Africa to lay out 1,000-kilometer undersea cables to reduce the costs of serving 250m Africans. Investments in digital infrastructure have benefited emerging markets in developing new products such as online banking, online education, and e-government, among others, while generating prospects for employment opportunities, particularly for the young generations that are tech-savvy and have the potential to use disruptive technology fully. Further, the FDI could solve the problem relating to literacy, Internet unavailability, costs, and relevant digital content, among others (IFC, 2019). However, technical assistance and resources offered in Africa did not result in congruent products (Faghih, 2019). Given that Africa lacks modernization and suffers from technological advancements, there is a greater need for FDI to import disruptive technology and be innovative (Baricako & Kedir, 2020). So we propose our fourth proposition:

P4. *FDI moderates the relationship between Disruptive Technology and Innovation.*

Innovation and New Product Development

Innovations and new product developments are related. Noseworthy et al. (2018) built on Jhang et al. (2012)'s work by providing further understanding of the conditions under which consumers have more positive evaluations of extremely incongruent products. The authors noted that most extremely incongruent new products are not completely incongruent or novel. Instead, they typically alter one feature (i.e., color, ingredient, shape, etc.) among a set of well-established features. For example, black toilet paper—an extremely incongruent product (Jhang et al., 2012)—contains all of the same features as white toilet paper (a congruent product) except for one feature—its unusual color. Similarly, vitamin-enriched coffee is an extremely incongruent product (Jhang

et al., 2012) with the same features as regular coffee, except for an additional ingredient—vitamins. Given the makeup of many extremely incongruent products, feature-based associations (as opposed to category-based perspectives) can help consumers make sense of these products. Consumers can resolve an incongruent feature of a product by relying on enablers—other semantically linked features of the product. Across three studies, the authors find evidence of this phenomenon. For instance, the authors show that consumers have favorable evaluations of vitamin-enriched coffee—an extremely incongruent product solely due to the presence of vitamins—when it is colored green. This is despite consumers' poor evaluations of vitamin-enriched coffee on its own and green coffee on its own. Similarly, when featured in cardboard fiber casing, consumers have favorable evaluations of recyclable smartphones—an extremely incongruent product solely because they are recyclable. Once again, this was despite consumers' poor evaluations of recyclable smartphones on their own and cardboard fiber smartphones on their own. Furthermore, enablers could be conceptual, as the authors showed that consumers had more favorable evaluations of Crystal Pepsi—a product considered to be extremely incongruent due to its unusual color—when consumers were told that the cola was made from natural spring water. Therefore, innovations—whether in feature or category—can lead to new products. So we propose the following proposition:

P5. *Innovation leads to New Product Development.*

Innovation, Perceived Risk, and New Product Development

New products are inherently risky, as people need to have prior knowledge about the features of the products. In this context, Peracchio and Tybout (1996) examined the boundary condition of prior knowledge. The authors found that the schema congruity effect existed for consumers who did not have significant prior knowledge of a particular product category. These consumers noticed incongruities and spent a significant amount of time resolving them. As a result, these consumers preferred moderately incongruent new products over extremely incongruent ones. However, when consumers had significant prior knowledge, incongruities were easily resolved, and thus there was minimal positive affect generated from the resolution process for moderately incongruent new products. Therefore, consumers did not exhibit a greater preference

for moderate incongruity. Campbell and Goodstein (2001) examined whether the schema congruity effect still held when considering the perceived risk of a purchase. The authors found that the schema congruity effect prevailed when consumers felt that their product choice did not carry any risk. However, in situations where consumers felt that their product choice carried high risk (i.e., buying a bottle of wine to bring to your boss' house), the schema congruity effect did not hold, as consumers preferred congruent products to those that were moderately incongruent, apparently because consumers prefer typical products under conditions of high perceived risk. More recent research by Noseworthy and Trudel (2011) determined how a product's position influenced whether or not the schema congruity effect manifested itself. In particular, if a product was positioned based on functional attributes, then consumers preferred products with a moderately incongruent product form over those with a congruent product form. However, if a product was positioned based on experiential attributes, consumers preferred products with a congruent product form over those with a moderately incongruent product form. Given the discussion, our following proposition is:

P6. *Perceived Risks moderate the relationship between Innovation and New Product Development*

INNOVATION, AROUSAL, AND NEW PRODUCT DEVELOPMENT

Arousal plays an important role in new product development, evaluation, and performance. Even before Mandler's (1982) inverted U conceptualization of schema congruity, Berlyne (1960, 1974) had posited an inverted U relationship between arousal and emotional intensity. While Mandler (1982) attributed positive affect to the act of resolving the incongruity, Berlyne attributed positive affect to the object's collative, psychophysical, and ecological properties. A key tenet of Berlyne's (1960, 1966) theory was that a consumer's arousal state could interact with the arousal generated from an object's properties. Given the importance of a consumer's state of arousal prior to encountering a new product, it is surprising that research had never explored whether the schema congruity effect could be impacted by this factor until quite recently. As it turns out, Mandler's (1982) hypothesis was formed with the assumption that varying a consumer's level of arousal could influence product

congruity evaluations without impacting the resolution process. In his theory, Mandler (1982) argued that resolving moderate incongruity leads to an optimal physiological response that results in positive affect, while the inability to resolve extreme incongruity leads to an intense physiological response that results in negative affect. Research conducted by Noseworthy et al. (2014) tested Mandler's (1982) implicit assumption and found that consumers' level of arousal when viewing an incongruent product mixed with the arousal generated from making sense of an incongruent product influences product evaluations. Overall, a consumer's level of arousal can impact emotional intensity and subsequently influence product evaluations without impacting the resolution process. So, when consumers were in a low arousal state, they experienced decreased emotional intensity, regardless of whether the affect was positive or negative. Thus, in situations where consumers were able to resolve the incongruity, they experienced decreased positive affect from state-derived curiosity. When consumers were unable to resolve the incongruity, they experienced decreased negative affect from state-derived anxiety. As a result, consumers exhibited a greater preference for moderately incongruent products when they were relaxed as opposed to when they were excited.

In contrast, consumers exhibited a greater preference for extremely incongruent products when they were excited as opposed to when they were relaxed. However, when arousal levels were too high, they produced lower product evaluations for each level of incongruity, which meant that consumers had negative evaluations of moderately incongruent new products. These results had important implications for interpreting past work, as physiological arousal could explain seemingly disparate findings. For instance, the authors suggested that prior moderators such as perceived risk (Campbell & Goodstein, 2001) and experiential positioning (Noseworthy & Trudel, 2011) are highly arousing and that these authors' findings are consistent with the results produced by Noseworthy et al. (2014) under conditions of high arousal. On the other hand, moderators such as taste (Stayman et al., 1992) and prior knowledge (Peracchio & Tybout, 1996) generate low arousal. These authors' findings are consistent with Noseworthy et al.'s (2014) results in their low arousal conditions. So, our final proposition is:

P7. Arousal moderates the relationship between Innovation and New Product Development

DISCUSSION

The conceptual chapter's purpose is to discuss the mediating role of innovation between disruptive technology and new product development; the moderating roles of digital infrastructure, financial risks, and FDI between disruptive technology and innovation; and moderating roles of perceived risks and arousal between innovation and new product development. In this context, we developed seven propositions. Our central proposition is that disruptive technology leads to new product development and that for the products to be successful, their features should be moderately incongruent with pre-existing product category schemas. Overall, disruptive technologies can also increase efficiency, prosperity, and shared values and reduce poverty and resource wastage, as evidenced in many countries—China, Ghana, India, Iran, and Philippines—that have embarked on IT projects (Chakrabarti et al., 2016; Fekpe & Fiagbey, 2021; Mappala & Pasco, 2021; Salamzadeh, 2018). We also conclude that FDI is financially risky. The risk is more significant in emerging markets as it suffers from instability, such as political, economic, and social unrest. Usually, advanced nations investment in technology in emerging markets to create a surplus of products at a lower cost while earning a reasonable return on their investments (e.g., taking advantage of low labor or material costs) on a sustainable basis (Moran et al., 2005). However, in some cases, security risks may trump financial risks. It is essential to understand the true intent of investors in emerging markets, as it could be a political investment in technology. For example, Chinese technology-based FDI in Senegal was to influence parts of Africa. Although it was a win-win situation for both countries, it could be riskier for Senegal to receive such disruptive technology unless the risk is somehow mitigated using other political or financial tools (Casadella & Liu, 2019). Disruptive technologies are becoming more desirable as the world becomes more connected and wireless. Emerging markets can become an economic force if they embrace disruptive technology (Faghih, 2019).

The development of digital infrastructure is necessary to realize the full potential of disruptive technology and new product development. India has developed and incorporated the most extensive biometric ID system using the technology. It can be used to identify consumer preferences and develop congruent products. In the next section, we recommend the study's implications for managers.

Implications for Managers

New products often fail. However, the schema congruity literature has produced insights that can improve the probability of success of new products. To begin with, the schema congruity literature suggests that incremental innovations—those that result in a new product that is moderately incongruent—are more likely to succeed than radical innovations which result in a new product that is extremely incongruent with consumer expectations. This is because consumers can resolve the incongruity associated with moderately incongruent products, which produces positive affect but are unable to resolve the incongruity associated with extremely incongruent products. Noseworthy et al.'s (2014) finding that consumers had a greater preference for moderately incongruent products when they were relaxed than when they were excited has important implications for the launch of new products. While most products are launched with significant fanfare and excitement, the opposite should be done for moderately incongruent new products to ensure their success: product launches should emphasize relaxation, as this state produces more favorable product evaluations. Marketers can potentially exert a significant amount of control over a consumer's level of arousal during a product launch or in situations where the consumer encounters the new product. For example, marketers can tone down the excitement of a product launch. They could create advertisements that emphasize relaxation, and the store atmosphere where the product is sold could be designed in such a way to exude relaxation.

Although it is difficult for moderately incongruent new products to succeed in the market, the challenge of getting extremely incongruent new products to succeed is even greater. In this regard, a key insight comes from Noseworthy et al. (2014), who found that consumers preferred extremely incongruent new products under conditions of excitement. Thus, one relatively straightforward implication is to ensure that extremely incongruent new products are launched amidst great fanfare and excitement. Additional implications come from Jhang et al. (2012). They found positive affect, future frames, consideration of multiple alternatives, and providing a benefit rationale improved consumers' evaluation of extremely incongruent products. Thus, marketers should incorporate these elements into a new product launch that features an incongruent product. For instance, marketers could incorporate positive

emotional tones in promotional materials. Also, marketers could use pre-announcements for extremely incongruent new products, as this would incorporate the idea of a future frame.

Further, promotional materials should encourage consumers to consider multiple alternatives and perspectives of the product and how it might be used. Finally, marketers should provide consumers with an explanation that can help them resolve the incongruity. Noseworthy et al. (2018) confirm that a benefit rationale can increase consumer acceptance of an extremely incongruent product. When the authors told participants that Crystal Pepsi was made from natural spring water, participants thought that the product tasted better. Noseworthy et al. (2018)'s findings imply that seemingly minor design features can be particularly helpful in improving consumer evaluations of extremely incongruent new products. For instance, color can help consumers make sense of an extremely incongruent product: the authors observed that changing the color of coffee from black to green helped improve product evaluations for vitamin-enriched coffee. Furthermore, the physical material of the product can have the same effect: encasing a recyclable smartphone in cardboard fiber helped improve evaluations of this product. In addition, advertising claims or product information could help consumers resolve the incongruity and thus generate better product evaluations. In short, semantically linked product features and any claims or information provided in a promotional rollout could be critical for helping consumers accept an extremely incongruent new product.

Future Research Directions

We make two contributions to literature that can also be a basis for future research. From a theoretical viewpoint, we develop a comprehensive framework that determines the likely success of novel congruent products using schema theory. This framework can be tested empirically across markets and cultures to validate the propositions. Second, we combine two concepts—new product development (the production side) and its congruity with customers (the consumption side), which have been previously studied separately.

REFERENCES

- Alexander, D. L., Lynch, J. G., Jr., & Wang, Q. (2008). As time goes by: Do cold feet follow warm intentions really new versus incrementally new products? *Journal of Marketing Research*, 45(June), 308–319.
- Andrews, S., Ayers, S., & Bakovic, T. (2019). *Reinventing business through disruptive technologies: Sector trends and investment opportunities for firms in emerging markets* (pp. 47–51). International Finance Corporation.
- Asiedu, E. (2002). On the determinants of foreign direct investment to developing countries: Is Africa different? *World Development*, 30(1), 107–119.
- Baricako, J., & Kedir, A. M. (2020). Disruptive technology, foreign direct investment and private sector development policies in Africa. *Disruptive Technologies, Innovation and Development in Africa*, 227–253.
- Baskin, J. S. (2013, November 8). *The Internet didn't kill blockbuster, the company did it to itself*. <https://www.forbes.com/sites/jonathansalemba/skin/2013/11/08/the-internet-didnt-kill-blockbuster-the-company-did-it-to-itself/#1b2a3ea96488>
- Behname, M. (2012). Foreign direct investment and urban infrastructure: An evidence from Southern Asia. *Advances in Management & Applied Economics*, 2(4), 253–259.
- Berlyne, D. E. (1960). *Conflict, arousal and curiosity*. McGraw-Hill.
- Berlyne, D. E. (1963). Motivational problems raised by exploratory and epistemic behavior. In S. Koch (Ed.), *Psychology: A study of science* (Vol. 5, pp. 284–364). Ronald Press.
- Berlyne, D. E. (1966). Curiosity and exploration. *Science*, 153(July), 25–33.
- Berlyne, D. E. (1974). The new experimental aesthetics. In D. E. Berlyne (Ed.), *Studies in the new experimental aesthetics* (pp. 1–25). Wiley.
- Campbell, M. C., & Goodstein, R. C. (2001). The moderating effect of perceived risk on consumers' evaluations of product incongruity: Preference for the norm. *Journal of Consumer Research*, 28(December), 439–449.
- Casadella, V. & Liu Z. (2019) Chinese Foreign Direct Investment (FDI) and barriers to technology transfer in Sub-Saharan Africa: innovation capacity and knowledge absorption in Senegal. In Faghih N. (Ed), *Globalization and Development*. Contributions to Economics. Springer
- Chakrabarti, R., Subramanian, K., Meka, S., & Sudershan, K. (2016). *Infrastucture and FDI: Evidence from district-level data in India*. Seminar Paper, Indian School of Business, Hyderabad.
- Cohen, S. D. (2007). *Multinational corporations and foreign direct investment*. University Press.
- Danneels, E. (2004). Disruptive technology reconsidered: A critique and research agenda. *Journal of Product Innovation Management*, 21(4), 246–258.
- Estache, A. (2007). *Current debates on infrastructure policy* (Vol. 4410). World Bank Publications.

- Faghih, N. (2019). *Globalization and development: Economic and socio-cultural perspectives from emerging markets (Contributions to economics)*. Springer.
- Fiske, D. W., & Maddi, S. R. (1961). *Functions of varied experience*. Dorsey Press.
- Fekpe, E. S., & Fiagbey, M. E. (2021). Information technology deployment and supply chain performance: Evidence from emerging economy. *Journal of the Academy of Business and Emerging Markets*, 1(1), 19–32.
- Fung, C. K., Herrero, G. A., Iizakas, H., & Siu, A. (2005). Hard or soft? Institutional reforms and infrastructure spending as determinants of foreign direct investment in China. *Japanese Economic Review*, 56(4), 408–416.
- IFC (2019). International Finance Corporation. Reinventing business through disruptive technologies: Sector trends and investment opportunities for firms in emerging markets. *International Finance Corporation World Bank Group* (pp. 48–51).
- Jhang, J. H., Grant, S. J., & Campbell, M. C. (2012). Get it? Got it. Good! Enhancing new product acceptance by facilitating resolution of extreme incongruity. *Journal of Marketing Research*, 49(April), 247–259.
- Kinoshita, Y. (1998). *Micro-determinants of Japanese Foreign Direct Investment in Asia, Eastern Economic Association and Japan economic seminar*. Columbia University.
- Kumar, N. (2001). *Infrastructure availability, foreign direct investment inflows and their export-orientation: A cross-country exploration*. Research and Information System for Developing Countries.
- Koutroumpis, P., & Lafond, F. (2018). *Disruptive technologies and regional innovation policy*. Background paper for an OECD/EC Workshop on 22 November 2018 within the workshop series *Broadening innovation policy: New insights for regions and cities*, Paris.
- Loree, D. W., & Guisinger, S. E. (1995). Policy and non-policy determinants of equity foreign direct investment. *Journal of International Business Studies*, 26(2), 281–299.
- Love, E. D., Matthews, J., & Zhou, J. (2020). Is it just too good to be true? Unearthing the benefits of disruptive technology. *International Journal of Information Management*, 52, 102096.
- Mandler, G. (1982). The structure of value: Accounting for taste. In M. S. Clark & S. T. Fiske (Eds.), *Affect and cognition: The seventeenth annual carnegie symposium on cognition* (pp. 3–36). Erlbaum.
- Maoz, E., & Tybout, A. M. (2002). The moderating role of involvement and differentiation in the evaluation of brand extensions. *Journal of Consumer Psychology*, 12(2), 119–131.

- Mappala, P. J. T., & Pasco, M. (2021). The robotic process automation in accounting: Impacts of relative advantage, trialability and user-friendly innovation adoption attributes. *Journal of the Academy of Business and Emerging Markets*, 1(2), 51–62.
- Meyers-Levy, J., Louie, T. A., & Cullen, M. T. (1994). How does the congruity of brand names affect evaluations of brand name extensions? *Journal of Applied Psychology*, 79(February), 46–53.
- Meyers-Levy, J., & Tybout, A. M. (1989). Schema congruity as a basis for product evaluation. *Journal of Consumer Research*, 16(June), 39–54.
- Moran, T. H., Blomstrom, M., Graham, E. M., & Blomström, M. (2005). *Does foreign direct investment promote development?* Peterson Institute.
- NRC. (2010). National Research Council (U.S.). Committee on Forecasting Future Disruptive Technologies. *Persistent forecasting of disruptive technologies*. National Academies Press.
- Noseworthy, T. J., Di Muro, F., & Murray, K. B. (2014). The role of arousal in congruity-based evaluation. *Journal of Consumer Research*, 41(December), 1108–1126.
- Noseworthy, T. J., Murray, K. B., & Di Muro, F. (2018). When two wrongs make a right: Using conjunctive enablers to enhance evaluations for extremely incongruent new products. *Journal of Consumer Research*, 44(April), 1379–1396.
- Noseworthy, T. J., & Trudel, R. (2011). Looks interesting but what does it do? Evaluation of incongruent product form depends on positioning. *Journal of Marketing Research*, 48(December), 1008–1019.
- Peracchio, L. A., & Tybout, A. M. (1996). The moderating role of prior knowledge in schema-based product evaluation. *Journal of Consumer Research*, 23(December), 177–192.
- Piaget, J. (1964). Cognitive development in children: Piaget. *Journal of Research in Science Teaching*, 2, 176–186.
- Rahman, S. Z., & Bristy, J. F. (2015). Macroeconomic impact of foreign direct investment: A study on SAARC countries. *European Journal of Business and Management*, 7(34), 59–70.
- Richaud, C., Sekkat, K., & Varoudakis, A. (1999). *Infrastructure and growth spill-overs: A case for a regional infrastructure policy in Africa*. University of Brussels.
- Salamzadeh, A. (2018) Start-up boom in an emerging market: A niche market approach. In D. Khajehian, M. Friedrichsen, & W. Mödinger (Eds.), *Competitiveness in emerging markets. Contributions to management science*. Springer.
- Soni, A. (2020). Disruptive energy technologies and military capabilities. In *Disruptive and game changing technologies in modern warfare: Development, use, and proliferation* (pp. 115–134). Springer.

- Snyder, C. R., & Fromkin, H. L. (1980). *Uniqueness: The human pursuit of difference*. Plenum.
- Stayman, D. M., Alden, D. L., & Smith, K. H. (1992). Some effects of schematic processing on consumer expectations and disconfirmation judgments. *Journal of Consumer Research*, 19(September), 240–255.
- Venkatesan, M. (1973). Cognitive consistency and novelty seeking. In S. Ward & T. S. Robertson (Eds.), *Consumer behavior: Theoretical sources* (pp. 334–384). Prentice-Hall.
- Wei, S. J. (2000). How taxing is corruption on international investors? *Review of Economics and Statistics*, 82(1), 1–11.
- Wheeler, D., & Mody, A. (1992). International investment location decisions: The case of U.S. Firms. *Journal of International Economics*, 33(1–2), 57–76.



Gaming Without Rules: Role of Agility in Tourism Marketing

Ananya Rajagopal

THE AGILE FOUNDATION

Tourism marketing is a value-based business, which changes dynamically with the consumer experiences and crowd-led collective intelligence. The agile trends in business modeling in tourism marketing have shifted from supply-led perspectives to demand-driven customer-centric perspectives. Such change has been a global-local phenomenon, which converges the divergent global consumer attributes with local supplies and services related to tourism. The infusion of changing global needs on tourism focuses on sustainability, bio-economics, and cultural tourism with local ethnographic attributes that offer opportunities and challenges in competitive tourism marketplace. Firms engaged in streamlining local resources with changing consumer preferences face various organizational and operational challenges in developing a dynamic, agile tourism-business model.

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The convergence of various divergent factors needs systematic research to determine the core and peripheral elements associated with tourism business. Such agility in tourism business modeling requires to generate systems thinking through CART propositions comprising local-global concepts, applications, research, and business transformation. The system thinking in tourism business is a process of continuous learning through engagement, entrepreneurship, and developing emotional association of consumers. In this process, firms face various complexities in identifying and driving tourism-business units to experiment and adapt to the agile business culture by engineering multi-factor efficiency in encapsulating agile business practices (Chen et al., 2016).

Strategic agility in tourism business models helps firms to leverage digital technologies in using artificial intelligence to create and deliver value among consumers. Successful firms use digital technologies to establish and coordinate partnerships with local tourism service providers and social institutions to co-create and deliver value. The strategic agility in tourism is inter-related with three broad domains comprising customers, partners, and suppliers who are instrumental in operationalizing agile tourism-business models. One of the major challenges to the local tourism companies is to analyze appropriate marketing information, streamlining their delivery processes, and interact with their customers to initiate transition of conventional tourism-business models to agile operational paradigms and ensure customer engagement in this process (Ritter & Pedersen, 2020). Tourism today depends more on crowd value than individual preferences and accumulation of experiences to derive brand posture from individual tourists. The crowd value signifies to the tourism firms as a crowd capital, which embeds collective perceptions and emotions. Such assimilation of crowd emotions reflects in collective intelligence, which drives radical shifts in tourism marketing strategies over the conventional wisdom to gain competitive advantage (Prpić et al., 2015). Consequently, the agile communities encourage consumer engagement in heterogeneous tourism-business ecosystem to gain dynamic capabilities by converging global touristic perspectives with local tourism markets. Accordingly, strategic agility in tourism marketing requires a meta-capability to converge the divergent factors of marketing-mix involving customer and stakeholder values to develop a people-based tourism business. The meta-capabilities of tourism marketing firms need to heavily focus on socio-psychological needs knitted around wisdom-of-crowds concepts, social networks, and collaborative paradigms to

provide self-actualization and self-esteem to the customers. To develop meta-capabilities, tourism firms should be able to explore latent needs, understand preferences, interact on contemporary platforms, and exhibit competitive advantages at macro-level within the industry (Gouillart & Billings, 2013).

Agile business models in customer-centric products and services have emerged as the major transformation in assimilating market players, strategy, and end users for evolving the business through socialization. Agile business models have been used by consumer services firms within the industry as a bottom-up approach engaging the society with the industry. The tourism industry has implemented the agile business model as a splash to its broad corporate strategy pool, as exhibited in Fig. 9.1. Firms benefit from such agile business strategies by embedding the attributes of their premium launch (**First** mover advantage), developing flexible participatory model (**Agile** strategy), ensuring high acceptability and adaptability (**Convenience** to customers), and generating psychodynamics (**Emotions**). Consequently, the splash business strategy of agile marketing in tourism industry brings forward the FACE of a firm.

One of the social grounds for conceiving, developing, and implementing agile marketing strategies is a *commons* platform where stakeholders and users contribute their insights to develop agile strategies and implement them with reverse accountability. The *commons* strategy

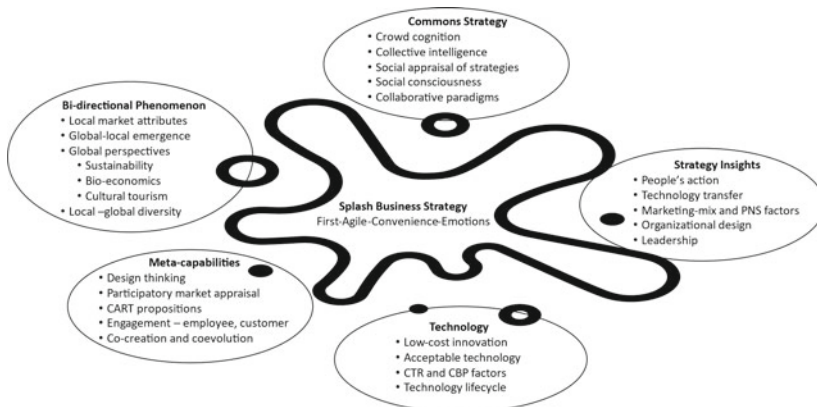


Fig. 9.1 The FACE of business agility (Source Author)

can be conceived by the firms by analyzing the crowd cognition on embedded PNS factors and diffused through collective intelligence. It is necessary for the firms, which intend to co-create commons strategy, to seek social appraisal of the salient features of strategy and trace a perceptual map on each touchpoint of co-created business approach (Gigauri, 2019). Developing agile strategies for *commons* need to be based on social consciousness and transparency to support every facet of agile strategies. In this way, collaborative paradigms embedding the FACE constituents can support agile marketing strategies on both public and business domains. The agile strategy insights need to chronologically analyze people's actions, reactions, and interactions on the strategy proposals. Accordingly, agile marketing strategies can be refined by the firms by integrating the innovation and technology features. Such strategies can be implemented through tangible and intangible platforms such as consumer forums and digital interface. In this process, the underlying challenge is to ensure appropriate transfer of technology to facilitate 4As comprising awareness, attributes, affordability, and adaptability towards using the technology-based online business applications. Firms must ensure that agile marketing strategies contain appropriate marketing-mix elements on a broader canvas depicting social appraisal on strategic touchpoints encompassing the perceptual map on PNS factors. In developing agile marketing strategies, firms must work with social leaders and analyze the critical points of leader-member exchange (Erdogan & Bauer, 2015).

Use of technology in agile marketing strategy is a contemporary practice, and global tourism firms invest significantly in integrating user-friendly technologies, which are easily adaptable as illustrated in Fig. 9.1. However, local tourism firms operating in niche tourism destinations explore low-cost innovations with acceptable technology that provides ease of use among customers and inculcates high perceived use value of technology-based applications. Innovation and technology are two distinctive attributes of agile marketing strategies, which need to be meticulously evaluated in the context of cost-time-risk and cost-benefit-performance metrics (Fudge, 2011). In addition to the above qualitative and quantitative parameters, firms implementing technology-led agile marketing strategies also need to analyze the technology lifecycle and its attributes in each stage of the lifecycle. The meta-capabilities in developing agile marketing strategies envelop social, business, and technology macro-factors. People's involvement in developing agile marketing

strategy contributes to meta-analysis of macro-factors in social and business domains. Among various meta-capabilities, agile marketing firms must develop collaborative design thinking from the following perspectives:

- **Discovering** socio-cultural and ethnic attributes of tourism destinations
- Encouraging collaborative **Designs** based on PNS factors.
- **Developing** agile strategies incorporating marketing-mix elements
- **Delivering** customer friendly products and services with appropriate business agility.

Firms must develop meta-capabilities in engaging consumers' and stakeholders to exercise participatory market appraisals to determine personal and social perceptions on various business perspectives. Mapping consumers' and stakeholders' perceptions on market appraisal participation will give lead to CART propositions, which enable firms to develop innovative **C**oncepts, **A**pplications, **R**esearch processes, and **T**ransformational tools. Developing effective meta-capabilities requires employees and customers engagements, which will support co-creation and coevolution of agile firms in the long run. Agile approaches are commonly bidirectional, which intertwine local and global markets on contemporary perspectives such as sustainability, bio-economics, cultural tourism, and local-global diversity.

The importance of strategic agility in tourism is greater in emerging and transitional destinations than in conventional markets due to higher availability of technology and hybrid resources to manage the competitive challenges. The tourism markets today are highly predictable and growing as collective institutions, which are contributed by the society, government, and private tourism companies. Such collaborative partnerships not only bridge the gaps between society and tourism industries, but also make the industry vulnerable to mergers and acquisitions among emerging and established firms. Consequently, strategic agility in tourism commonly relates to a firm's ability to consistently adapt to changes in normal and uncertain business environments. Strategic agility embeds various meta-capabilities such as long-term sensitivity, resource mobilization, and capital fluidity (Junni et al., 2015). Strategic agility requires tourism firms to develop new business models by defining

new 3T products- and services- taxonomy comprising technology, tangibility, and transformation. It is necessary to shift the business focus of tourism industry from intangibility (experience, emotions, and efficacy) to tangible consumption (ecological, entertainment, and adventure tourism) in view of changing the explorative consumer preferences. However, virtual tourism such as metaverse malls and voyage is emerging as a strong disruptor in tourism industry, which is going to part with the pre-determined market share of tangible firms (Doz & Kosonen, 2010).

As tourism firms grow tensile in competitive markets, they develop defense against consumer uncertainties, changing technology, and predictable risks. These firms develop competence to analyze collective intelligence and deploy customer engagement categorically to implement marketing-mix in association with customers, stakeholders, and market players to build collective value. In tourism companies, customer values are determined by the shared experiences to co-create new business opportunities to gain competitive advantage. The use of collective intelligence and customer engagement in co-creating business models are symbiotic in tourism industry today, which opens a new range of business opportunities for emerging firms while large firms encourage reverse innovations that have the potential for implementing customer-centric business models (Nuno et al., 2013). Reverse innovation in tourism industry can be observed in social traditions and ethnic products and services, which embed huge potential to trigger vogue in tourism marketing. Consequently, customers, stakeholders, communities, crowd, and ethnic drivers hold the power to respond to major shifts in tourism marketing through social and ethnic interventions (Christensen & Overdorf, 2000). The manifold growth of interactive tourism-business models led by hyper-sociability and social phenotype personality traits have provided new dimensions in implementing hybrid marketing strategies. The social networks portray geo-demographic consumers scape with varied tourism approaches over temporal and spatial geo-demographic range. The mapping of social phenotype effects provides neurobehavioral changes among consumers (Krey et al., 2021). Such behavioral changes help tourism marketing firms to redefine the boundaries of business model with prime sensory impulses comprising touch-feel-pick in tourism services by the customers.

This chapter discusses the role of agility in tourism marketing in the context of crowdsourcing, collective intelligence, and social interventions in business modeling to develop customer-centric strategies within the

broad framework of changing customer preferences. The discussion in this chapter contributes to a conceptual model by integrating divergent factors of marketing agility in the tourism industry. The linear and discrete path analysis of 3C factors comprises crowd, competition, and community as disruptive agents in crafting agile marketing strategies. The conceptual model of agile marketing is founded on the design thinking process, which embeds the 4Ds including discover, design, develop, and deliver by understanding the game changers play through psychodynamics, social media, and semantic analysis. This chapter also critically examines the intriguing factors of agile marketing by explaining the managers role on business canvas, governance, and hybrid modalities in tourism business.

CRAFTING MARKETING AGILITY

Marketing agility is a new generation strategy globally adapted by the manufacturing, marketing, and services firms, which significantly influences business performance (Kalaigianam et al., 2021). With the increasing market competition and hybrid routes to market, the strategy of marketing agility plays a stronger role for firms to override the market competition and market complexities. However, under low market complexities, adaptation to crowd-based marketing programs influences the business performance of firms. Marketing agility has emerged as a contemporary example of dynamic meta-capabilities for tourism firms to gain competitive advantage and exploit under explored markets to crowd-based insights (Battistella et al., 2017). The rising market complexities include digitization, low-cost advantages, price-quality perceptions, and employee engagement in delivering customer-centric services to ensure higher levels of satisfaction as compared to the closest competitors. In this process, market sensing and responsiveness to opportunities contribute to the meta-capabilities of firms, which requires flexibility in dealing with changing consumer preferences, social consciousness, and spread of competitive services. Therefore, marketing agility in tourism requires unique capabilities including market sensing, flexibility, speed, and responsiveness to reconfigure marketing tactics and develop ergonomic marketing strategies to manage identified business opportunities (Khan, 2020).

The dynamic market factors consistently sway the consumer behavior within the ecosystem of tourism industry. Besides co-creation (Kefang et al., 2022) of new tourism concepts based on crowd cognition

and social consciousness, the principal market drivers include innovation, technology, and communication, which broadly determine the marketing-mix. Crows-based business models in tourism industry are associated with group behavior and social innovations, which largely determined the consumer behavior to gain competitive advantage. Agile marketing strategies in tourism industry are benefitted by open innovation through collective intelligence and sharing of knowledge between stakeholders, collaborators, and consumers (Felin & Zenger, 2014). The agile marketing strategies in tourism can be compatible with the triple bottom-line consisting of people (crowd, consumers, and stakeholders), planet (sustainable and eco-tourism), and profit (meta-capabilities and performance of firms). The crowd-based business modeling, which includes the agile factors as drivers, largely addresses the problems, needs, and solutions (PNS) factors by putting the customer first. The convergence of agile business models with technology and open innovation (Iglesias-Sánchez et al., 2017) demonstrates a critical role to cater to the dynamic consumer behavior by integrating the peripheral ecosystem of marketing-mix, which includes awareness, adaptability, cost-to-customer, values and validity, and vogue (changing perceptions on tourism). In addition, the agile tourism-business model has a bidirectional dynamic between consumers and crowd, and vice versa. Social media, consumer networking, and interpersonal relations help in moderating psychosocial dynamism within the competitive tourism markets and consumer behavior. The individual and crowd behavior is instrumental in co-creating value, sharing experiences, developing experimental strategies, and performing tourism services contextual to the shifts of consumer behavior (Rajagopal, 2022b).

The meta-analysis of tourism services significantly affects the consumer behavior towards psychographic (changing consumer preferences), ethnic (social consciousness), sustainable (green tourism), materialistic (cost of services and social value for money), and hedonistic (self-actualization and self-esteem) determinants. The psychosociological attributes that affect touristic consumer behavior encompass gender, personality, crowd behavior, and social value and lifestyle, which tends to generate comparative cognition against existing and in future tourism services (latent demand) that affect the performance of tourism firms. In addition, touristic behavior of individuals including materialism, utilitarianism, and hedonism needs to be considered as determinants in developing agile tourism-business model. However, social adaptability of tourism

strategies appears to be the principle moderating factor that drives socio-psychological constructs for longitudinal and latitudinal tourism-business model (Buhalis et al., 2022). Several moderating and discrete elements in social and behavioral ecosystems influence changes to be considered in crowd-based tourism models. The marketing strategies emerging out of these models pass through the transitional stages affected by the changing preferences and functional values. Such transitions in tourism-business models are affected by the agility factor of individual and group behavior, marketing-mix, and social meta-analysis. These factors and emotional values transform consumption behaviors. Often the transition process in behavior is governed by experiential approaches within real-time framework that justifies the gradual or radical change in the behavior (Moon et al., 2021).

Agility in marketing stimulates both social and personal perceptions towards experimentation of new products and services, and mapping of values on experiences. Agile experiments in tourism industry are co-created with collective intelligence and ideas emerging from consumers to connect self-image congruence. Such experiments in competitive marketplace are susceptible to 4A factors including awareness (collective and perceived information), attributes (self-image congruence and acquired elements), affordability (cost of co-creation and experimentation), and adaptability (perceived use value and continuum of services). These factors significantly influence firms in developing agile marketing strategies by analyzing the cost-time-risk factors and their impact on consumerism, strategic benefits, and competitive performance of the firms. Consumer perceptions and value semantics are linked to emotions, which commonly drive impulses and make a dent on the continuity of agile process that helps in managerial decision-making. Consumer attitude is largely affected by the incidence of socialization and market trends besides individual perceptions and self-reference. Social media drives consumer perceptions, emotions, and cognitions on tourism brands and induces consumption patterns (Li et al., 2021). Most marketers have strategic goals to alter consumer perceptions through crowd cognition and collective intelligence through social media to gain long-term advantage in establishing agile marketing practices in tourism industry. Impulsive attitudes emerge out of consumer psychodynamics and peer pressure due to some obsessive attributes of the brands, products, or services like low prices and sales promotion offers. There is a strong relationship between stimulus and response in the cognitive process. Such

cognitive interrelationship can be explained as an approach to develop attitude and behavior that relies on the cognitive ability of consumers to deliver comprehensive knowledge on tourism service (Rajagopal, 2022a, 2022b).

Transformation of conventional tourism business models to agile business strategies needs to be endorsed by the socialization process and competitive market signaling. Tourism firms need to ensure trustworthiness in implementing agile marketing strategies and mediate relationships between individual consumers and community by illustrating the competitive advantages. Such an approach will help in shaping consumer attitudes towards a brand through multi-level functional strategy that integrates emotions, beliefs, trust, desire to experimentation, and change proneness to adapt to new consumption patterns. Several social media platforms like Facebook and Instagram induce verbal and visual impacts endorsed by collective intelligence on transforming consumer attitudes over the conventional wisdom and business practices. Social media communication empowers the influencers to generate social conversations, drive customer engagements with emotions, and transform consumer attitudes towards new trends (Rather et al., 2019). These factors influence community and help firms to develop socially conscious consumerism and coevolve with collective consumption attitudes. It has been experienced that YouTube influencers can give a brand much higher lift as compared to a celebrity endorsement or a socially collaborative event (Kumar et al., 2011). Agile marketing in tourism is largely driven by the sweeping technological change that has raised several social challenges by hiking the consumer expectations and social performance of tourism service providers. The use of artificial intelligence and providing consumer support to adapt to new technologies in tourism has become the revolutionary edge for many tourism companies, which have altered customer needs, accelerated market competition, and generated new opportunities for social value creation through tourism services. The agile practices have also transformed the services operations process, which requires more flexibility, interdependence, and accountability (top-down and bottom-up) for driving the growth of tourism firms today. To co-create, complement, and converge agile marketing practices with the conventional firms, organizations need to develop meta-capabilities and build next generation marketing functions. Their framework of agility can be used as transformation foundations across connecting industries, transportation, financial services, and retailing (Vila et al., 2020).

Developing agile marketing strategies and design thinking practices are symbiotically connected with tourism firms, which integrate co-creation, frugal innovation of services, marketing technology, and creation of consumer value. Design thinking in the context of agile marketing is gaining widespread attention, as marketing research organizations have documented the success stories about implementation of agile marketing practices through design thinking process. The global tourism firms choose to frame and resolve consumer problems in a broader PNS factor framework with specific focus on agile approaches. Design thinking also embeds critical thinking and systems thinking, which offers foundation for agile business modeling and developing meta-capabilities in organizations (Sándorová et al., 2020). The major challenge with agile marketing strategies is to ensure the revenue stream and profit continuum as the most valuable features in business canvas. Most firms create a short commercial for local tourism destinations and exhibit consumer perceptions and values associated with the tourism services to attract the consumers for earning reasonable returns for associating with the tourism campaigns and programs. Firms are required to observe and notice consumers and competitors' behavior and frame or reframe agile strategies by imagining and designing the unique services while developing agile marketing practices using design thinking process and meta-capabilities. Development of such agile marketing strategies engages employees to co-create strategies with stakeholders and experiment with consumers to generate active learning process, reinforce innovation, encourage active experimentation, and document concrete experiences (Beckman, 2020).

THE GAME CHANGERS

The industry 4.0 and advancement of Internet of Things have driven local enterprises significantly towards adapting to capital-intensive transformation by integrating consumer-centric innovation, affordable technology, and sustainable market ecosystems as the game changer agents. Growing knowledge through crowd-sourcing and collective intelligence has exhibited several customer-centric and competitive products and services design, which enable the local enterprises to leap on the next generation of entrepreneurship (Caner, 2021). Among various drivers of game changers, artificial intelligence and virtual reality have penetrated the local enterprises with the next generation lifecycle. Most entrepreneurial systems across farm, non-farm, and services sector are equipped with

machine learning as automation has become a social priority. The convergence of DESIRE elements comprising diffusion, entrepreneurship, social systems, innovation, relevance, and excellence with changing business models have widely supported the socio-economic growth through micro, small, and medium enterprises engaged in services like tourism.

The reconstructed face of tourism has been portrayed in the global market with artificial intelligence (AI) as a new space within the industry. With the rapid advancement in information and communication technology, AI in tourism has gone beyond robotics to attract customers. Multiple information and communication technologies (ICT) tools have been central to value creation among tourism products and services, which have enhanced tourists' experiences. AI has emerged as a part of DESIRE domain, which is now able to manage the data analysis and deliver managerial decisions to the tourism firms; however, the human element is not totally replaced with the machines in managing firms. AI as a part of ICTs is omnipresent in multi-stages touristic journey to support the ecstasy of customers in tourism and hospitality industry (Buhalis et al., 2019). Since the beginning of this century, social robots have played a pivotal role in serving the tourism industry to disseminate information and converse with customers. Broadly, Alexa and Siri are also accommodated as social robots with AI to interact with humans. Chat-GPT is the new AI revolution in the public domain to develop interactive relationships and mutual dependency to learn and widen the information silos. AI robots serve as co-workers and analysts for decision-making in large multi-brand and transnational leisure and tourism firms (Rajagopal, 2022a, 2022b). The AI is being actively used in public parks to regulate resource use and reinforce the basic civil laws in public places. Robot dog, a machine with AI and cameras manufactured by Boston Dynamics, has been used for surveillance and maintaining social distancing during the COVID-19 pandemic (2020–2022) in Singapore. AI supports tourism and hospitality industry with increasing use of robots, which help in creating trust, anticipation, and emotions among consumers. Happiness, arousal, and merriment have significantly contributed to human-machine cognitive polarity. Therefore, one major challenge is to anthropomorphize robots for tourism and hospitality industry (Jörling et al., 2019).

Innovation, technology, and the changing role of human elements in the tourism industry have inter-disciplinary convergence with the services efficiency and use of machine learning to improve customer satisfaction. The use of social robots in information dissemination in touristic centers,

and robots in restaurants to serve the customers can be the emerging examples of integrating innovation and technology in tourism marketing. Inter-disciplinary factors like digitization, cloud domains, big data, and Internet of Things have helped firms in attracting, acquiring, and assimilating a wide taxonomy of consumers. Consequently, automation in the tourism industry has integrated vertical and horizontal marketing strategy within a tourism sector and across geo-demographic segments respectively. The digital entrepreneurship (Morabito, 2022) and its market connectivity have benefitted tourism firms to achieve high market performance in developing countries by supporting co-creation of innovation and co-evolving the innovative tourism projects in partnership with local firms. The changing social systems driven by cultural intelligence have given the tourism industry various breakthrough business models such as eco-tourism, energy parks, and ethnic craft guilds. Community participation in entrepreneurial development has significantly driven the co-creation of low-cost innovative products with high ethnic value and intermediate technology. The network of local enterprises serves as a foundation for participatory innovation process, which connects to the large manufacturing and marketing companies striking a balance between socio-economic and business growth (Proikaki et al., 2018). Penetration of multinational enterprises in tourism markets increases the survival rate of local firms that use innovation with relevance and excellence to the market demand. These firms serve as ancillaries to multinational enterprises. Such entrepreneurial effect on tourism industry increases over time with the growing support of public policies on transfer of technology and technology-led growth. Consequently, local tourism firms can develop global partnership and improve the performance of tourism sector at local destinations with broader knowledge of PNS factors (Wu et al., 2019).

REFERENCES

- Battistella, C., De Toni, A. F., De Zan, G., & Pessot, E. (2017). Cultivating business model agility through focused capabilities: A multiple case study. *Journal of Business Research*, 73(2017), 65–82.
- Beckman, S. L. (2020). To frame or reframe: Where might design thinking research go next? *California Management Review*, 62(2), 144–162.
- Buhalis, D., Harwood, T., Bogicevic, V., Viglia, G., Beldona, S., & Hofacker, C. (2019). Technological disruptions in services: Lessons from tourism and hospitality. *Journal of Service Management*, 30(4), 484–506.

- Buhalis, D., O'Connor, P., & Leung, R. (2022). Smart hospitality: From smart cities and smart tourism towards agile business ecosystems in networked destinations Smart hospitality. *International Journal of Contemporary Hospitality Management*. <https://doi.org/10.1108/IJCHM-04-2022-0497>
- Caner, C. (2021). Sustainable tourism: Gen Z? *Journal of Multidisciplinary Academic Tourism*, 6, 107–115. <https://doi.org/10.31822/jomat.2021-6-2-107>
- Chen, R., Ravichandar, R., & Proctor, D. (2016). Managing the transition to the new agile business and product development model: Lessons from Cisco Systems. *Business Horizons*, 59(6), 635–644.
- Christensen, C. M., & Overdorf, M. (2000). Meeting the challenge of disruptive change. *Harvard Business Review*, 78(2), 65–76.
- Doz, Y. L., & Kosonen, M. (2010). Embedding strategic agility: A leadership agenda for accelerating business model renewal. *Long Range Planning*, 43(2–3), 370–382.
- Erdogan, B., & Bauer, T. (2015). Leader-member exchange theory. *International Encyclopedia of the Social & Behavioral Sciences*. <https://doi.org/10.1016/B978-0-08-097086-8.22010-2>
- Felin, T., & Zenger, T. R. (2014). Closed or open innovation? Problem solving and the governance choice. *Research Policy*, 43, 914–925.
- Fudge, M. (2011). Cost-Benefit analysis approach to measuring performance. *Public Administration Review*, 71(3), 487–489.
- Gigauri, I. (2019). Perceptual mapping as a marketing research tool for brand positioning. *International Journal of Economics and Management Studies*, 6, 73–79. <https://doi.org/10.14445/23939125/IJEMS-V6I4P110>
- Gouillart, F., & Billings, D. (2013). Community-powered problem solving. *Harvard Business Review*, 91(4), 70–77.
- Iglesias-Sánchez, P. P., Correia, M., & Jambrino, C. (2017). Challenges of open innovation in the tourism sector. *Tourism Planning and Development*, 14, 1–21.
- Junni, P., Sarala, R. M., Tarba, S. Y., & Weber, Y. (2015). The role of strategic agility in acquisitions. *British Journal of Management*, 26, 596–616.
- Jörling, M., Böhm, R., & Paluch, S. (2019). Service robots: Drivers perceived responsibility for service outcomes. *Journal of Service Research*, 22(4), 404–420.
- Kalaignanam, K., Tuli, K. R., Kushwaha, T., Lee, L., & Gal, D. (2021). Marketing agility: The concept, antecedents, and a research agenda. *Journal of Marketing*, 85(1), 35–58. <https://doi.org/10.1177/0022242920952760>
- Kefang, T., Jiangeng, Y., Hanjie, X., & Poju, C. (2022). A model of perceived co-creation value in tourism service setting: An application of structure equation modeling. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.808114>

- Khan, H. (2020). Is marketing agility important for emerging market firms in advanced markets? *International Business Review*, 29(5). <https://doi.org/10.1016/j.ibusrev.2020.101733>
- Krey, N., Dieck, T., Claudia, M., Wu, S., & Fountoulaki, P. (2021). Exploring the influence of touch points on tourist experiences at crisis impacted destinations. *Journal of Travel Research*, 62, 0047287521110536. <https://doi.org/10.1177/004728752111053657>
- Kumar, S. R., Guruvayurappan, N., & Banerjee, M. (2011). *Ethnic consumers consulting*. Harvard Business School Press.
- Li, L., Wang, Z., Li, Y., & Liao, A. (2021). Consumer innovativeness and organic food adoption: The mediation effects of consumer knowledge and attitudes. *Sustainable Production and Consumption*, 28, 1465–1474.
- Moon, D., Amasawa, E., & Hirao, M. (2021). Transition pathway of consumer perception toward a sharing economy: Analysis of consumption value for behavioral transition to laundromats. *Sustainable Production and Consumption*, 28, 1708–1723.
- Morabito, V. (2022). *Digital entrepreneurship management, systems and practice* (pp. 1–2). Cambridge University Press. <https://doi.org/10.1017/9781108979917.00>
- Nuno, L., Almeida, A., Anacleto, R., & Silva, N. (2013). Collective intelligence in toursplan: An online tourism social network with planning and recommendation services. *ACM International Conference Proceeding Series*, 42–48. <https://doi.org/10.1145/2494444.2494449>
- Proikaki, M., Nikolou, I., Jones, N., Malesios, C., Dimitrakopoulos, P. G., & Evangelinos, K. (2018). Community perceptions of local enterprises in environmentally degraded areas. *Journal of Behavioral and Experimental Economics*, 73, 116–124.
- Prpić, J., Shukla, P. P., Kietzmann, J. H., & McCarthy, I. P. (2015). How to work a crowd: Developing crowd capital through crowdsourcing. *Business Horizons*, 58(1), 77–85.
- Rajagopal. (2022a). *Agile marketing strategies—New approaches to engaging consumer behavior*. Springer.
- Rajagopal. (2022b). Technology revolution in the tourism and hospitality industry. *International Journal of Leisure and Tourism Marketing*, 7(4), 251–253.
- Rather, R. A., Hollebeck, L. D., & Islam, J. U. (2019). Tourism-based customer engagement: The construct, antecedents, and consequences. *The Service Industries Journal*, 39(7–8), 519–540. <https://doi.org/10.1080/02642069.2019.1570154>
- Ritter, T., & Pedersen, C. L. (2020). Digitization capability and the digitalization of business models in business-to-business firms: Past, present, and future. *Industrial Marketing Management*, 86, 180–190.

- Sándorová, Z., Repáňová, T., Palenčíková, Z., & Beták, N. (2020). Design thinking—A revolutionary new approach in tourism education? *Journal of Hospitality, Leisure, Sport & Tourism Education*, 26. <https://doi.org/10.1016/j.jhlste.2019.100238>
- Vila, O. R., Bharadwaj, S., Morgan, N. A., & Mitra, S. (2020). Is your marketing organization ready for what's next? *Harvard Business Review*, 98(12), 104–113.
- Wu, J., Lao, K. F., Wan, F., & Li, J. (2019). Competing with multinational enterprises' entry: Search strategy, environmental complexity, and survival of local firms. *International Business Review*, 28(4), 727–738.



The Impact of Media on Consumer Behavior: An Examination of the Role of Cinema, Newspaper, Theater, Internet, and Television

Mallika Tewari, Alok Upadhyay, and Ashish Pant

INTRODUCTION

Advertisements and sales promotions are critical tools for advertising managers in today's competitive industry. Advertising accounts for a substantial portion of the marketing expenditure. A rising number of companies are embracing digital media to promote their products and services. Various phases of consumer behavior, such as awareness, interest,

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conviction, purchase, and post-purchase, will be examined in the investigation. Consumer outlooks for data from several media, such as TV, newspaper, the Internet, publications, and the radio, are extremely diverse. The traits of several media, as well as their direct and long-term impact on consumers, differ (Doyle & Saunders, 1990). For instance, television allows HD visual-audio material, which is well suitable to product classifications that need physical presentation. The radio transmits audio material and is top suitable to businesses that concentrate on regional audiences (Petersen, 2018). Berkowitz et al. (2001) suggested that the influence of various media channels on consumers' memory altered over time. For instance, television commercials have a powerful influence on consumers' memories at first, but this disappears with time. A magazine, on the other side, has a modest but durable influence on customers' memories since consumers may read it at their leisure.

Transmission media, such as radio and television, are among the more famous in India due to their enormous exposure (Farooq & Latif, 2011; Fill, 2009). Newspapers have an essential part in India as a means of communication. This is due to the reality that it has an existence in almost every part of the country. India is the world's largest newspaper business, with around 330 million daily newspaper flows (Jayaraj, 2011). Marketers continue to pick traditional marketing mediums like print or television (Statista, 2016). In India, television commercials contributed 44.7% of advertising expenditure, while printed commercials contributed 29.8%. With a rate of increase of 15.5%, digital advertising expenditures were the 3rd highest (Sama, 2019). This is due to an increase in the number of Internet users later Reliance JIO's entrance into the Indian telecommunications sector. Its several stages of the business, the Internet is a most fascinating instrument than paper. Clients have greater command over their watching of material on the Internet than they have while reading newspapers and magazines (Iacobucci et al., 1998). The word "internet" in the investigation refers to digital platforms such as Instagram, Facebook, YouTube, Twitter, and emails, to mention a few (Mishra & Vashiath, 2017; Trivedi, 2017). Given the changing impacts of different media outlets, Opedu and Gbadebo (2017) determined that commercials on different media channels have a substantial part in impacting customer judgments. As a consequence, choosing the correct media platform for marketing is vital for the advertising of goods and services (Singh, 2012). In contrast to other information resources, advertisements are a generally recognized information resource between

consumers, thus media combine considerations are important for the advertiser (Shrivastava, 2014).

The study is significant because advertisers have found it difficult to prioritize the usage of numerous media platforms for advertising. The expense of marketing in every channel is pretty high these days, and any bad media plan may be extremely pricey. Consequently, marketing agencies must be knowledgeable about numerous media advertisements and their effect on consumer behavior. According to some consumer behavior concepts, there is a correlation between advertisements and numerous levels of consumer behavior. Based on Ranjbarian et al., television commercials impact focus, interest, and desire (2011). Radio advertising, as per Nysveen and Breivik (2005), has a weaker influence on changing consumers' views and behavior. Despite this, there have been limited investigations that have examined all five stages of consumer behavior. At every stage of the present research, the author wanted to see how various marketing media affected consumer behavior. In view of the current status of the advertisement industry, the inquiry is extremely relevant since it will give crucial knowledge on how to manage traditional and modern media.

LITERATURE REVIEW

Consumer Decision Process

Businesses will certainly confront obstacles in reaching their customers and leads, as well as the possibility that leads and customers could meet significant barriers in their judgment procedure. If they weren't, they'd be committed, dedicated, enthusiastic, and regular clients; however, that isn't the reality. Today, information availability and transparency have had a huge influence on decision-making; as a consequence, it's vital to investigate the barriers and misdirection spots that keep leads from turning customers or discourage repeat purchases from current consumers (according to Silverman et al., 2001).

In 1978, Engel, Kollat, and Blackwell (EKB) presented a detailed model of eventual consumer behavior that tries to encompass the important characteristics of individual consuming behavior. The model has interpreted customer behavior into 5 stages, as shown in Fig. 10.1 comprising problem detection, information search, alternative assessment, final selection, and post-purchase decisions. Sternthal and Craig (1982).



Fig. 10.1 The 5-stage decision-making model (Silverman, et al., 2001)

When a consumer notices a substantial distinction amid the proposed and actual state of things, it arouses and activates the selection procedure (Solomon et al., 2002), and when demand is created by external and internal provocations. The above statement explains *problem recognition*. Although when people affirm, recognize, and pay attention to existing goods, they do not make the last purchase decision right away; similarly, when leads have an exact curiosity in a good or facility, they strive to go across the levels outlined previously, taking any steps: recognizing potential alternatives, observing knowledge about selected alternatives, and finally making judgments which of these alternatives can most possibly be providing the highest output (Silverman et al., 2001). There are two sorts of *information sources* internally and externally. Internal search suggests that a person's previous knowledge and experience will lead to forthcoming behavior that consumers are probable to adopt (Solomon et al., 2002). Even if a consumer is observant of an advertising proposal, this does not assure that the proposal will be understood correctly; thus, in accumulation to the cumulative data, any messages or information that is usually examined and saved in the consumers' memory in kinds of exact sense would be used to analyze replacements. Rival products, in essence, present options for customers seeking the top result to their concerns or desires, even if they extend the same services and products.

They perform *alternative evaluation* whenever an alternative has been identified as the finest solution for the person's requirements after collecting suitable knowledge (Sternthal & Craig, 1982, 46). Consumers formulate standards for evaluating selection alternatives based on their intentions and objectives (Sternthal & Craig, 1982, 46), like which option is the easiest to use or organize, or what other consumers' observations, because there is a requirement to validate whether the information is true and that the product will perform as predicted (according to Silverman et al., 2001) (Fig. 10.2).

The stages of the *decision-making process* are not performed in a linear series, but instead in a circular series; that is, there are loops, such as

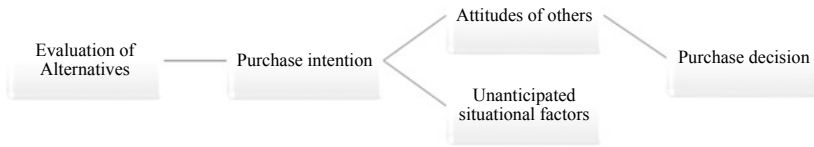


Fig. 10.2 Steps between the evaluation of alternatives and a purchase decision

among information seek and evaluation, when the consumer discovers new standards that were not initially thought (Bettman, 1979).

Following consumption, the client experiences varying degrees of delight or unhappiness and calculates the rationale of the substitute option (post-purchase behavior). This step can result in two consequences: satisfaction or disagreement. When a client is displeased with acquiring, the option is “diminished,” and the customer begins the cycle of researching, obtaining knowledge, and evaluating other purchasing options, which outcomes in fresh behavior (Sternthal & Craig, 1982). It’s the point at which the customer chooses whether to go beyond just using the thing to fully adapt to it; in other words, whether to use it again or repurchase it. The customer constantly has an alternative in terms of product urgency, use regularity, and new situations of new uses. When people feel confident in their ability to use a product on a consistent basis, they are more likely to suggest it to others (according to Silverman et al., 2001) (Table 10.1).

Bibliometric analysis is a meta-analytical evaluation approach that highlights a collection of bibliographical paperwork by statistically assessing their quotations and co-citations to show commonalities among items (Apriliyanti & Alon, 2017; Kim & McMillan, 2008; Martínez-López et al., 2018; Mishra et al., 2018). Investigators must submit their discoveries in scientific publications that they select from a list of comparable articles published in prior journals (Melewar et al., 2012; Fetscherin; Van Raan, 2019). It is feasible to identify the most notable contributions to a specific subject, locate the most essential articles and journals, and, most importantly, comprehend the growth of a lot using bibliometric analysis. In domains of social science such as administration (MacKenzie et al., 2008), innovation (Shafique, 2013), and commercialization (Hoffman & Holbrook, 1993; Shafique, 2013), bibliometric analyses are well-organized.

Table 10.1 Summary of the studies on the impact of media on consumer behavior

<i>Author</i>	<i>Dimensions of media</i>	<i>Related findings</i>
V. Bishnoi and R. Sharma (2009)	TV	Rural youths are more interested in TV commercials than their urban counterparts. The television commercial has increased their engagement in product evaluation and purchase; they tend to purchase things promoted on television, and it aids in the acquisition of new products, as well as group decision-making
Rajagopal (2011)	Radio	Physical, intellectual, and monetary characteristics all have a major impression on metropolitan consumers' purchase behavior at retail stores in response to radio commercials, according to the research. Supermarkets and departmental shops respond quickly to radio commercials that broadcast advertising materials on product sales. Advertisements that are more fun while delivering the information are more appealing to radio advertising audiences
F. H. Hu and G. Wei (2013)	Social Media	The many sorts of proximity plays have an influence on product and marketing knowledge on social media, which has an effect on the consumer purchase decision process

<i>Author</i>	<i>Dimensions of media</i>	<i>Related findings</i>
R. K. Mohideen and P. Saravanan (2016)	TV	Television commercials have a considerable influence and influence on consumers. Most advertising efficiently delivers its contents in only a few seconds, allowing the viewer to unwittingly catch the concept and internalize it, resulting in the purchase of the latest product promoted
D. Voramontri and L. Klieb (2019)	Social Media	Consumer satisfaction was enhanced by using social media throughout the first phases of information seeking and alternative assessment, but not so much during the buy selection step or the post-purchase evaluation

(continued)

Table 10.1 (continued)

<i>Author</i>	<i>Dimensions of media</i>	<i>Related findings</i>
R. Sama (2019)	TV, Newspaper, Radio, Magazines, Internet	Advertisements on television and the internet influence the phases of consumer behavior known as awareness, interest, and conviction. Magazines are more successful in affecting consumer behavior throughout the purchase and post-purchase periods. Radio advertisements, on the other side, had no effect on any of the phases of consumer behavior. Newspapers, on the other side, are the only media that has an impact on all phases of consumer behavior
C. Chopra et al. (2020)	Social Media	Customer happiness is inspired by social media usage throughout the phases of information gathering and alternative assessment, with pleasure growing as the consumer develops through the procedure in relation to an ultimate purchase selection and post-purchase assessment

Consequently, the present study covers this knowledge vacuum by conducting a bibliometric evaluation of media's influence on consumer behavior. Through the prism of diverse theoretical structures and conceptualization models, several researchers have sought to conceptualize value co-creation more broadly (Payne et al., 2008; Pera-Guardiola et al., 2016; Prahalad & Ramaswamy, 2004, 2014; Ramaswamy & Ozcan, 2018; Saha & Goyal, 2019; Töytäri & Rajala, 2015; Yi & Gong, 2013). Given the richness of the literature on value generation and its growing relevance as a policy channel for consumer interaction, an intense, systematic, and complete examination is necessary to acquire a holistic picture of the meaning (Jaakkola & Alexander, 2014). An investigation like this might reveal the intellectual architecture of value literary co-creation (Shiau & Dwivedi, 2013). As a result, the bibliometric study is required to provide an outline of the multifaceted dimensionality of value co-creation fourteen years after its rising popularity in 2004. To our understanding, the research by Galvagno and Dalli (2014) and Hansen (2020) is the only bibliometric assessment of co-created value that has been published to date on the co-creation of values. These 10.2 studies try to put value development in perspective by looking at past research in the field. These investigations are useful for both industry and academics in understanding how to conceptualize the “value co-creation” notion. However, given the current phenomenal rise in co-creation values as well as the limitations of techniques, the study is inadequate. Examine the most current developments in the field of co-creation. As a result, there is a gap in the literature and a need for a specific study that will lead to the further growth of the concept of value co-creation as well as a more organized and comprehensive explanation of its journey so far. Unlike prior investigations, the present one intends to fill this vacuum by conducting a comprehensive bibliometric survey. The investigation differs from the two prior studies in three ways: analytical rigor, a focus on resolving a challenging mixture of connected challenges, and any effort to describe the newest growing value co-creation patterns using a far broader variety of literature. Therefore, the objectives of the study are:

- To find out a bibliometric study of the (CB) framework, describing the name of publishers and years.
- To provide a bibliometric study of the (CB) framework, describing both social media and social media marketing knowledge sources.
- To provide a bibliometric study of the (CB) framework, describing the radar diagram of publishers.

METHOD

Bibliometrics is a combination of computational and mathematical approaches for evaluating textual evidence that academics may employ to study publication patterns in knowledge flow (McCain, 1996). Effect metrics, quotation, co-quoting, and bibliometric visualization are examples of such tactics. The quoted study presupposes that the investigator would refer to the publications that are most relevant to their investigation. Recognizing the utilization of media platforms was the first step in understanding the present influence of media on consumer behavior. The Web Science database was selected as a reliable source for quotation data retrieval (Chabowski et al., 2018; Leonidou et al., 2013; Samiee et al., 2015). Knowing customer behavior is among the most important objectives. This is necessary because, although the word “consumer behavior” is frequently used, it is interpreted in various contexts.

According to bibliometric research (Van Raan, 2019), investigators indicate their most significant scientific journals and fairly concentrate their attention on publications previously published in relevant journals (Chabowski et al., 2013). Quoting studies consider a quotation to be the fundamental study unit (Kim & McMillan, 2008); therefore, they go beyond just counting publications to include centers of impact and map relationships between articles in a certain scientific subject (Kim & McMillan, 2008). As a result, a meta-analysis of quotations demonstrates the value of literature for other investigators on relevant themes (Garfield, 1983). For the three study objectives described above, bibliometric citation analysis is a strong meta-analytic technique. The study’s goal is to explain the study motion of media’s influence on consumer behavior. Consumer behavior was investigated from two perspectives: first, from the advertiser’s perspective, and then from the consumer’s perspective.

CONSUMER

People today are exposed to a limitless number of advertisements daily. They do, though, wish for something innovative, exciting, and efficient in maintaining their interest. Customers will not recall uninteresting advertisements for exceptionally long. Therefore, the fun has been dubbed a crucial marketing tactic for boosting the effectiveness of advertising and prompting consumers to purchase something (Madden & Weinberger, 1982). The advertising budget also builds a positive influence of a brand

in the eyes of consumers. Advertising and identified quality have a favorable link, as per Aaker and Jacobson (1994). As a result, advertising expenditure is positively associated with supposed quality, which results in more buys from that brand, as customers choose to purchase from a well-recognized brand to avoid quality disappointments.

The Decision-Making Perspective

- The buying process, according to the decision-making perspective, is chronological, with the consumer first recognizing an issue and then shifting through a sequence of rational and logical stages to solve the issue; stages contain problem recognition, information search, alternative evaluation, purchase decision, and post-purchase behavior. The sensible, logical, and cognitive approach to customer decision-making and buying processes is emphasized in this viewpoint.

The Experiential Perspective

- According to the experiential viewpoint, not all purchases are logical and rational; in certain circumstances, a consumer motivates purchases wants for fun and imagination, hedonistic delights, feelings, and moods. Consumers are both “feelers” and “thinkers,” according to this viewpoint.

The Behavioral Influence Perspective

- According to this viewpoint, environmental circumstances encourage a customer to make purchases before acquiring opinions or attitudes about the goods.

ADVERTISER

Advertisement-produced familiarity with a brand is another main aspect that manipulates customer purchasing behavior. MacInnis and Park (1991) conducted consumer research to look at the influence of well-known songs on advertising and customer behavior. Consumers expressed happiness with items with known songs in their study, and a substantial association amid the degree of familiarity of the songs in the advertising

and their affability was established. Advertisement influences private living and the amount to which a person wishes to display herself or himself in a communally tolerable way, as shown by societal role and image. Advertisements stimulate image and lifestyle in addition to items and services. Commercials enlighten consumers about the modern way of life, images, and trends (Burns, 2003; Pollay & Mittal, 1993). Advertising enhances public messages and lifestyles by portraying the ideal consumer's position and promoting social action toward product acquisition.

The search yielded 117 papers and 6407 citations, which we used in our study from 2007 to 2022. In total, three fields from each record were searched by the WOS: (1) Author's name, (2) Journal Name in which the article was recorded, and (3) Total citations. As our emphasis is holistically focused on published journal articles establishing the information structure, we omitted Books, techniques, critiques, editor's annotations, and other indirect analysis elements of the report. By standard bibliometric procedure, when a search phrase appears in the title, author-supplied keywords, or abstract of an article, it was labeled (Clarivate Analytics 2017). Only documents that had been published in journals were usually chosen.

ANALYSIS AND RESULTS

This section includes the research findings using explained bibliometric analysis techniques. In the first part of the section, the WOS cumulative quotations will be presented in one year and then accompanied by the quotation results. Tests, respectively (Fig. 10.3).

Through the above VOS viewer graph image, we can see that there is an impact of social media and social media marketing on consumer behavior.

Through Fig. 10.4 and Table 10.2, we can conclude that total citations on the impact of media on consumer behavior were received by Springer-130457, Wiley-115608, Emerald-31941, Taylor and Francis-89430 whereas Elsevier got minimum trophies on the same topic, which were 25,022.

Through Fig. 10.5, we can easily understand the number of citations in publisher and year from 2007 to 2022 on the impact of media on consumer behavior combinedly.



Fig. 10.3 VOS viewer graph

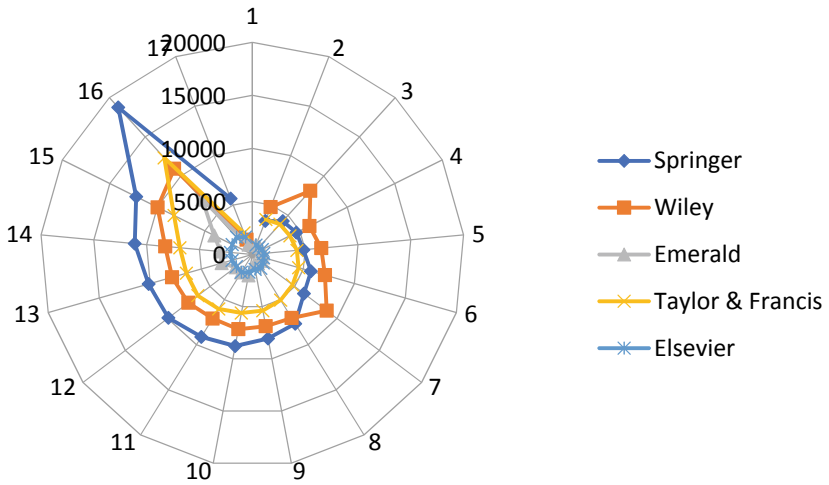


Fig. 10.4 Radar diagram shows publishers and their citation on the impact of media on consumer behavior

Table 10.2 Publisher wise citations on the impact of media on consumer behavior from 2007–2022

Year	Name of Publishers				
	Springer	Wiley	Emerald	Taylor & Francis	Elsevier
2007	3393	4798	963	3533	951
2008	4260	8118	978	3866	898
2009	4640	6021	1000	3957	1049
2010	4836	6526	1000	4220	1082
2011	5745	7125	1000	4534	1105
2012	6104	8784	1000	4746	1296
2013	7677	7040	1000	5061	1524
2014	8052	6880	1000	5385	1429
2015	8780	7165	2000	5606	1696
2016	9128	7104	2000	6029	1968
2017	9912	7549	2000	6431	1882
2018	10,165	7855	3000	6460	1994
2019	11,131	8244	3000	6853	2066
2020	12,228	9973	4000	8240	2114
2021	18,751	10,933	7000	12,330	2201
2022	5655	1493	1000	2179	1767
Total	130,457	115,608	31,941	89,430	25,022

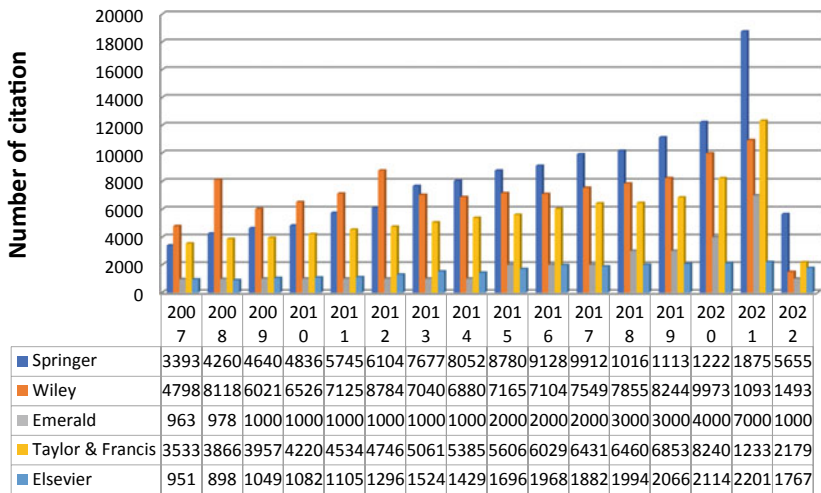


Fig. 10.5 Citations by publisher and year

CITATION OVERVIEW

General research data, the number of papers released every year, the most referenced documents, the most essential authors, the most essential journals, and the most important nations will all be revealed because of the investigation. The subsequent subsections start with a citation overview that highlights the domain's primary sources of conceptual inputs, which will deliver quantitative underpinnings for an analytical evaluation of the Consumer Behavior contemporary academic framework, as per the list of the leading 17 most broadly cited papers.

We're mostly engaged in the topics covered in these articles, and an examination of author citations provides a glimpse into the Consumer Behavior conceptual framework. Preliminary views into the possible consequences on the study area are provided through an author-based assessment. K. Y. Goh et al. (2013), a three-authored paper highlighting the effect of public inside from consumers (user-produced content) and marketers (marketer-produced content) on consumers' garment buying spendings, received 1371 citations as an outcome of this critical point in mind. A. Javornik (2016) drafted a research paper that focused on a research objective for examining the influence of media features on consumer behavior. A total of 390 citations were also released. Likewise, the study "Impact of social media on customer behavior" by D. Voramontri and L. Klieb (2019) garnered 106 citations. E. Bigne et al. (2018) published research in which they sought to quantify the effect of social media and offline influences on customer behavior. There were 60 citations for a study on the low-cost airline business. This author S. C. Chu and H. T. Chen (2019) investigated social media, an essential and rising advertising medium, and received 48 citations. R. Sama (2019) issued an article with 45 citations that centered on "Impact of media advertisements on consumer behavior." In their four co-authored publications, V. Ali Taha et al. (2021) emphasize "The usage of social media and its influence on buying behavior of Slovak vs Italian consumers during the COVID-19 epidemic." They were granted 27 citations. A cross-national investigation of consumer purchasing behavior: the influence of social media intensity and materialism, A. Thoumrungroje (2018) research paper. They were issued a total of 19 citations. For their article, "The Impact of Social Media on Consumers' Health Behavior Towards Choosing Herbal Cosmetics," K. Aldin (2020) obtained 9 citations. With 6 citations, B. Oumayma (2020) focuses on "Social media make me purchase it: the

influence of social media on consumer buying behavior.” In their six co-authored publications, E. Bansal et al. (2020) focus on “Covid-19: Social Media Impact on Agricultural Prices and Consumer Buying Behavior.” They were granted 5 citations. For their work on “The influence of information exchange in social media on customer behavior,” F. H. Huimin and G. Wei (2013) received three citations. For their article “Comparative assessments of social media on its implications on customer behavior in online marketplaces,” Y. H. Shin and S. G. Kim (2017) obtained three citations. E. A. Albinali and A. Hamdan (2020) concentrated on the application of A.I. in social media marketing as well as its influence on customer behavior: evidence from Bahrain, and it was referenced twice. L. Zailskaite-Jakste and I. Minelgaite (2021) obtained two citations for their article “Consumer engagement behavior viewpoint in social media: Mediating role and influence on brand equity.” For their article, T. Wu et al. (2020) received one citation, while L. Shouman (2020) received one citation for his emphasis on “The Use of Celebrity Endorsement in Social Media Advertising and its Impact on Online Consumers’ Behavior: The Lebanese Scenario.”

DISCUSSION

The Awareness, Interest, and Conviction phases of Consumer Behavior are all influenced by television advertisements. The findings are consistent with those of Ranjbarian et al. (2011), who examined the influence of TV commercials on Attention-Interest-Desire-Action (AIDA). Anjum et al. (2015), Hoque et al. (2013), and Sanayei et al. (2013) all found comparable results as per the study. If a marketer needs to recall customers on a common basis, TV set is the biggest platform. Hindustan Unilever (HUL), for instance, pays out plenty of money on Television commercials to achieve good brand memory. Radio advertisements, on the other side, agreed with Nysveen and Breivik’s (2005) outcomes on the impacts of media on marketing efficacy. This describes why radio has a lesser publicity cost than TV, newspapers, and the Internet. Promotions in newspapers have a considerable effect on the awareness, interest, conviction, purchase, and post-purchase behavior of consumers. Newspaper advertising also has an impact on consumer behavior at all levels owing to regular reading. These findings resembled Kakkad’s outcomes (2016). The results of the Newspapers Association of America (2014), which seemed to be at the effect of newspaper advertisements on pre-purchase and purchase

decisions, back up these conclusions. Shah and Nayak agree that newspaper advertisements have a major impact on purchase decisions (2015). Newspaper advertising is more effective in impacting purchase decisions, corresponding to most research. The survey also showed that newspaper advertising had a considerable impact on the purchase decision. The investigation reveals why newspapers are one of the highly trendy mediums among marketers, following only to TV. Likewise, adverts in magazines have a considerable impact on purchase and pre-purchase behavior. The results of Havlena (2009), who found that magazine ads impact all phases of the Purchase funnel, complement the study's viewpoint. Consumers' Awareness (AWR), Interest (INT), and Conviction (CON) phases are inspired by internet marketing. The debate is steady with the conclusions of Ahmed (2017), who discovered that internet marketing had a more influence on pre-purchase steps than on purchase and post-purchase steps. The findings of the research are somewhat in accordance with those of Tang and Chan (2017), who revealed that virtual media is employed more for improving awareness and has negligible influence on the purchase judgment (PURDEC).

CONCLUSION

At the commencement of the study, the author identified three research objectives, which have affected the study's development. The first goal is to conduct a bibliometric analysis of the (CB) mechanism, which includes the name of the publisher and the year. To do this, the author drew a graph of the Consumer Behavior structure using intellectual data from the bibliometric review, differentiating primary and peripheral information sources. Many discoveries in scholarly studies of consumer behavior have corroborated the findings. The second goal is to establish a bibliometric analysis of the (CB) paradigm, which will include descriptions of both social media and social media advertising information assets. The author employed a VOS viewer graph to attain the purpose, which depicts the effect of social media and social media marketing on CB. The third goal is to give a bibliometric examination of the (CB) framework, which describes the publisher radar diagram. This graph depicts the influence of media on customer behavior and the citations made by publishers. Ultimately, the data showed that advertisements on TV and the internet had an impact on the awareness, interest, and conviction phases of Consumer Behavior. Magazines have a better influence on the purchase as well as

post-purchase stages of Consumer Behavior. Radio advertisements, on the other side, had no effect on any of the steps of Consumer Behavior. Newspapers, on another side, are the only media that have an impact on all phases of Consumer Behavior.

REFERENCES

- Aaker, D. A., & Jacobson, R. (1994). Study shows brand-building pays off for stockholders. *Advertising Age*, 65(30), 18.
- Ahmed, A. Y. M. (2017). The impact of exposure to advertisement online on purchase decision empirical study of Saudi customers in Western Region. *International Journal of Academic Research in Business and Social Sciences*, 7(7), 366–386.
- Albinali, E. A., & Hamdan, A. (2020, November). The implementation of artificial intelligence in social media marketing and its impact on consumer behavior: evidence from Bahrain. In *International Conference on Business and Technology* (pp. 767–774). Springer.
- Aldin, K. (2020). The impact of social media on consumers' health behavior towards choosing herbal cosmetics. *Journal of Critical Reviews*, 7(9).
- Ali Taha, V., Pencarelli, T., Škerháková, V., Fedorko, R., & Košíková, M. (2021). The use of social media and its impact on shopping behavior of Slovak and Italian consumers during COVID-19 pandemic. *Sustainability*, 13(4), 1710.
- Anjum et al. (2015). Impact of television advertisement on consumer buying behavior: The moderating role of religiosity in the context of Pakistan. *International Interdisciplinary Journal of Scholarly Research (IIJSR)*, 1(3), ISSN 2412-303X.
- Apriliyanti, I. D., & Alon, I. (2017). Bibliometric analysis of absorptive capacity. *International Business Review*, 26(5), 896–907. <https://doi.org/10.1016/j.ibusrev.2017.02.007>
- Bansal, E., Chaturvedi, K. R., Saroha, K., Kaur, J., Mehra, P., Ahmad, F., & Vynnychenko, N. (2020). Covid-19: Social media impact on agricultural prices and consumer's buying behavior. *International Journal of Agricultural and Statistical Sciences*, 16(2), 953–957.
- Berkowitz, D., Allaway, A., & D'souza, G. (2001). The impact of differential lag effects on the allocation of advertising budgets across media. *Journal of Advertising Research*, 41(2), 27–27.
- Bettman, J. R. (1979). Memory factors in consumer choice: A review. *Journal of Marketing*, 43(2), 37–53.
- Bigne, E., Andreu, L., Hernandez, B., & Ruiz, C. (2018). The impact of social media and offline influences on consumer behavior. An analysis of the low-cost airline industry. *Current Issues in Tourism*, 21(9), 1014–1032.

- Bishnoi, V., & Sharma, R. (2009). Impact of TV advertising on buying behavior of rural and urban teenagers. *JK Journal of Management & Technology*, 1(1), 65–76.
- Burns, J. M. (2003). *Transforming leadership: A new pursuit of happiness*. Grove Press.
- Chabowski, B., Kecec, P., Morgan, N. A., Hult, G. T. M., Walkowiak, T., & Runnalls, B. (2018). An assessment of the exporting literature: Using theory and data to identify future research directions. *Journal of International Marketing*, 26(1), 118–143.
- Chabowski, B. R., Samiee, S., & Hult, G. T. M. (2013). A bibliometric analysis of the global branding literature and a research agenda. *Journal of International Business Studies*, 44(6), 622–634.
- Chopra, C., Gupta, S., & Manek, R. (2020). Impact of social media on consumer behavior. *International Journal of Creative Research Thoughts*, 8(6), 1943–1961.
- Chu, S. C., & Chen, H. T. (2019). Impact of consumers' corporate social responsibility-related activities in social media on brand attitude, electronic word-of-mouth intention, and purchase intention: A study of Chinese consumer behavior. *Journal of Consumer Behavior*, 18(6), 453–462.
- Doyle, P., & Saunders, J. (1990). Multiproduct advertising budgeting. *Marketing Science*, 9(2), 97–113.
- Farooq, W., & Latif, A. (2011). How urban children process advertising message: Special reference to television advertising in Pakistan. *African Journal of Business Management*, 5(10), 3962–3974.
- Fill, C. (2009). *Marketing communications: interactivity, communities, and content*. Pearson Education.
- Galvagno, M., & Dalli, D. (2014). Theory of value co-creation: A systematic literature review. *Managing Service Quality: An International Journal*, 24(6), 643–683.
- Garfield, E. (1983). *Citation indexing—its theory and application in science, technology, and humanities*. ISI Press.
- Goh, K. Y., Heng, C. S., & Lin, Z. (2013). Social media brand community and consumer behavior: Quantifying the relative impact of user-and marketer-generated content. *Information Systems Research*, 24(1), 88–107.
- <https://www.abacademies.org/articles/a-study-on-the-influences-of-advertise-ment-on-consumer-buying-behavior-7177.html>
- Hansen, A. V. (2020). Value co-creation in service marketing: A critical (re)view. *International Journal of Innovation Studies*, S2096248719300414. <https://doi.org/10.1016/j.ijis.2019.12.001>
- Hoque, M. A., Ahmed, S. K., & Fouji, M. H. (2013). Impact of TV advertisements on the 'response process' of the private service holders of Bangladesh. *Business and Economic Research*, 3(1), 427–441.

- Hu, F. H., & Wei, G. (2013). The impact of the knowledge sharing in social media on consumer behavior.
- Huimin, F. H., & Wei, G. (2013, December). The impact of the knowledge sharing in social media on consumer behavior. In *The Thirteen International Conference on Electronic Business*, Taipei.
- Iacobucci, D., Calder, B. J., & Bezjian-Avery, A. (1998). New media interactive advertising vs. Traditional advertising. *Journal of Advertising Research*, 38, 23–32.
- Jaakkola, E., & Alexander, M. (2014). The role of customer engagement behavior in value co-creation: A service system perspective. *Journal of Service Research*, 17(3), 247–261.
- Javornik, A. (2016). Augmented reality: Research agenda for studying the impact of its media characteristics on consumer behavior. *Journal of Retailing and Consumer Services*, 30, 252–261.
- Jayaraj, T. (2011). 55th annual report of Registrar of Newspaper for India (RNI).
- Kim, J., & McMillan, S. J. (2008). Evaluation of internet advertising research: A bibliometric analysis of citations from key sources. *Journal of Advertising*, 37(1), 99–112.
- Leonidou, C. N., Katsikeas, C. S., & Morgan, N. A. (2013). “Greening” the marketing mix: Do firms do it and does it pay off? *Journal of the Academy of Marketing Science*, 41, 151–170. <https://doi.org/10.1007/s11747-012-0317-2>
- MacInnis, D. J., & Park, C. W. (1991). The differential role of characteristics of music on high-and low-involvement consumers’ processing of ads. *Journal of Consumer Research*, 18(2), 161–173.
- Madden, T. J., & Weinberger, M. G. (1982). The effects of humor on attention in magazine advertising. *Journal of Advertising*, 11(3), 8–14.
- Martínez-López, F. J., Merigó, J. M., Valenzuela, L., & Nicolás, C. (2018). Fifty years of the European Journal of Marketing: A bibliometric analysis. *European Journal of Marketing*, 52. <https://doi.org/10.1108/EJM-11-2017-0853>
- McCain, K. W. (1996, September). Dictionary of bibliometrics. *Journal of the American Society for Information Science, Association for Information Science & Technology*, 47(9), 716–717.
- Melewar, T. C., Fetscherin, M., & Usunier, J. C. (2012). Corporate branding: An interdisciplinary literature review. *European Journal of Marketing*, 46(5), 733–753. <https://doi.org/10.1108/03090561211212494>
- Mishra, B. D., Gunasekaran, A., Papadopoulos, T., & Childe, S. (2018). Big Data and supply chain management: A review and bibliometric analysis. *Annals of Operations Research*. 270. <https://doi.org/10.1007/s10479-016-2236-y>
- Mishra, V., & Vashiath, A. (2017). Is advertising medium an important constraint in consumer purchase intention: The theoretical foundation. *Journal of General Management Research*, 4(1), 38–45.

- Mohideen, R. K., & Saravanan, P. (2016). A study on impact of television advertisement on purchase decisions of consumer durable goods in Tiruchirappalli district. *International Journal of Management*, 7(2), 484–488.
- Nysveen, H., & Breivik, E. (2005). The influence of media on advertising effectiveness a comparison of internet, posters, and radio. *International Journal of Market Research*, 47(4), 381–404.
- Opeodu, O. I., & Gbadebo, S. O. (2017). Factors influencing choice of oral hygiene products by dental patients in a Nigerian Teaching Hospital. *Annals of Ibadan Postgraduate Medicine*, 15(1), 51–56.
- Oumayma, B. (2020). Social media made me buy It: The impact of social media on consumer purchasing behavior and on the purchase decision-making process. In M. Ben Ahmed, A. Boudhir, D. Santos, M. El Aroussi, & I. Karas (Eds.), *Innovations in smart cities applications* (3rd edition). SCA 2019. Lecture Notes in Intelligent Transportation and Infrastructure. Springer. https://doi.org/10.1007/978-3-030-37629-1_18
- Payne, A. F., Storbacka, K., & Frow, P. (2008). Managing the co-creation of value. 36(1), 83–96. <https://doi.org/10.1007/s11747-007-0070-0>
- Pera-Guardiola, V., Contreras-Rodríguez, O., Batalla, I., Kosson, D., Menchón, J. M., Pifarré, J., ... Soriano-Mas, C. (2016). Brain structural correlates of emotion recognition in psychopaths. *PLOS ONE*, 11(5), e0149807. <https://doi.org/10.1371/journal.pone.0149807>
- Petersen, L. (2018). *Advantages and disadvantages of radio advertising*.
- Pollay, R. W., & Mittal, B. (1993). Here's the beef: Factors, determinants, and segments in consumer criticism of advertising. *Journal of Marketing*, 57(3), 99–114. <https://doi.org/10.2307/1251857>
- Prahalad, C. K., & Ramaswamy, V. (2004). Co-creation experiences: The next practice in value creation. 18(3), 5–14. <https://doi.org/10.1002/dir.20015>
- Rajagopal. (2011). Impact of radio advertisements on buying behavior of urban commuters. *International Journal of Retail & Distribution Management*, 39(7), 480–503.
- Ramaswamy, V., & Ozcan, K. (2018). What is co-creation? An interactional creation framework and its implications for value creation. *Journal of Business Research*, 84, 196–205. <https://doi.org/10.1016/j.jbusres.2017.11.027>
- Ranjbarian, B., Shaemi, A., & Jolodar, S. Y. E. (2011). Assessing the effectiveness of electric conservation advertisements in Isfahan channel television. *International Business Research*, 4(3), 194.
- Sama, R. (2019). Impact of media advertisements on consumer behavior. *Journal of Creative Communications*, 14(1), 54–68.
- Samiee, S., Chabowski, B. R., & Hult, G. T. M. (2015). International relationship marketing: Intellectual foundations and avenues for future research. *Journal of International Marketing*. 150626124657008. <https://doi.org/10.1509/jim.15.0027>

- Shafique, M. (2013, January). Thinking inside the box? Intellectual structure of the knowledge base of innovation research. *Strategic Management Journal*, 34(1), 62–93.
- Shah, B., & Nayak, K. (2015, February). Effectiveness of newspaper print ads. *Indian Journal of Applied Research*, 5(2), ISSN-2249-555X.
- Shiau, W. L., & Dwivedi, Y. K. (2013). Citation and co-citation analysis to identify core and emerging knowledge in electronic commerce research. *Scientometrics*, 94(3), 1317–1337.
- Shin, Y. H., & Kim, S. G. (2017). Comparative analyses of social media on its impacts on consumer behavior in on-line markets. *Journal of Distribution Science*, 15(10), 81–92.
- Shouman, L. (2020, June). The use of celebrity endorsement in social media advertising and its impact on online consumers' behavior: The Lebanese scenario. In *2020 The 4th International Conference on E-Commerce, E-Business and E-Government* (pp. 1–6).
- Shrivastava, A. (2014). Do advertisements work? A study on change in consumers' purchasing behavior due to advertisements. *Abhinav International Monthly Refereed Journal of Research in Management & Technology*, 3(5), 14–21.
- Silverman, B. G., Bachann, M., & Al-Akharas, K. (2001). Implications of buyer decision theory for design of e-commerce websites. *International Journal of Human-Computer Studies*. 55. 815–844. <https://doi.org/10.1006/ijhc.2001.0500>
- Singh, B. (2012). Impact of advertisement on the brand preference of aerated drinks. *Asia Pacific Journal of Marketing & Management Review*, 2(2), 147–160.
- Solomon, M., Bamossy, G., Askegaard, S., & Hogg, M. K. (2002). *Consumer Behavior: A European Perspective*. Prentice Hall.
- Statista. (2016). The advertising industry in India Statistics & Facts. Retrieved from <https://www.statista.com/topics/2116/advertising-industry-in-india/>
- Sternthal, B., & Craig, C. S. (1982). *Consumer behavior: An information processing perspective*. Prentice-Hall.
- Tang, M., & Chan, T. (2017). The impact of online advertising on generation Y's purchase decision in Malaysia. *International Journal of Humanities and Social Sciences*, 11(4), 973–981.
- Thoumrungroje, A. (2018). A cross-national study of consumer spending behavior: The impact of social media intensity and materialism. *Journal of International Consumer Marketing*, 30(4), 276–286.
- Töytäri, P., & Rajala, R. (2015). Value-based selling: An organizational capability perspective. *Industrial Marketing Management*, 45, 101–112. <https://doi.org/10.1016/j.indmarman.2015.02.009>

- Trivedi, J. (2017). The effect of viral marketing messages on consumer behavior. *Journal of Management Research*, 17(2), 09725814.
- van Raan, A. (2019). Measuring science: Basic principles and application of advanced bibliometrics. In W. Glänzel, H. F. Moed, U. Schmoch, & M. Thelwall (Eds.), *Springer handbook of science and technology indicators*. Springer Handbooks. Springer. https://doi.org/10.1007/978-3-030-02511-3_10
- Voramontri, D., & Klieb, L. (2019). Impact of social media on consumer behavior. *International Journal of Information and Decision Sciences*, 11(3), 209–233.
- Wu, T., He, Z., & Zhang, D. (2020). Impact of communicating with doctors via social media on consumers' E-health literacy and healthy behaviors in China. *INQUIRY: The Journal of Health Care Organization, Provision, and Financing*, 57, 0046958020971188.
- Yi, Y., & Gong, T. (2013). Customer value co-creation behavior: Scale development and validation. *Journal of Business Research*, 66(9), 1279–1284. <https://doi.org/10.1016/j.jbusres.2012.02.026>
- Zailskaitė-Jakstė, L., & Minelgaite, I. (2021). Consumer engagement behavior perspective in social media: Mediating role and impact on brand equity. *Journal of Eastern European and Central Asian Research (JEECAR)*, 8(2), 160–170.



Are Malls Catching on with Small Town-Adolescents: A Study on Shopping Moderators, Motivators, and Experience?

Sandeep Kumar Mohanty and Prakash Chandra Dash

INTRODUCTION

The purchasing habits and preference of Indian adolescents have changed significantly over the last decade. The inclusion of social media and availability of variety products for the adolescents have enhanced their consumption pattern which is based on different factors. So to meet the demand of the adolescent, malls in India have not only limited their presence in urban landscape but also they have penetrated the small towns. The sizable number of the adolescents is encouraging the mall developers and the other professional to bring something innovation to attract and retain them for the future perspectives.

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The rapid development and spike in the number of shopping malls in metropolitan cities have forced mall developers to explore opportunities in Tier II and Tier III cities. The smaller cities are alluring because of low rental and operating costs (KPMG, 2009). The consolidation phase in recent years has largely influenced retail business directly. Both consumer footfall and sales have diminished in bigger cities (Khare, 2011). This has opened business and investment opportunities for Tier II cities, mainly due to cheaper real estate cost, low entry costs, and availability of space in Tier II and III cities as compared to bigger cities (Dwivedi, 2010). More especially in the last decade, smaller cities have seen a change in consumption preferences (Dwivedi, 2010; KPMG, 2009). Ernst and Young express that over the years, a greater number of malls have mushroomed in smaller cities (55%) compared to the larger metropolitans (26%) cities (Sinha, 2010). The entry of shopping malls in the smaller cities of India guarantees to change the idea of shopping. The assortment of services and products, spatial ambiance, and amusement facilities focuses on the “shopper-tourist” (Robertson, 1995). Shopping malls have turned into a sort of contemporary shopping culture, where diverse shopping behavioral needs are addressed (Ahmed et al., 2007). Shopping now includes more than just stores and selling (Gottdiener, 1995), becoming a purchasing phenomenon and an alternative way of life itself.

While consumers from metropolitan cities have more shopping opportunities, it is the attitude and behavior of adolescent consumers from smaller cities that become vital determinants to the design of and mood in shopping malls. While there have been studies on the behavior of small-town consumers at shopping malls (Khare, 2011), relatively little research has been done on adolescent consumers mall experience with income playing moderator, indicating the manner in which adolescents focus on consumption spaces instead of the activity of shopping. Table 11.1 highlights some of the studies carried out on customer preferences and the attractiveness that malls hold for shoppers in India.

This paper analyzes the shopping experience of Indian adolescent consumer in malls in Tier II cities, with income as a moderator. It is an attempt to link the theoretical and academic study of customer experience and patronage in small towns with real customer experience and mall loyalty. The study aims to identify the factors that define shopping experience, and subsequently understand the relationship of these factors with mall shopping experience and its impact on mall loyalty where income is a moderator.

Table 11.1 Noted contribution on customer preferences and attractiveness of shopping malls

<i>Discussion</i>	<i>Author (Year)</i>
The mall attractiveness indicates the rise of mall shopping exposure and then it will turn into a better consumer experience	Tandon et al. (2016)
There are organizational factors that create a better consumer experience in shopping malls. These factors have a larger role in shaping consumer mental evaluation	Reddy and Reddy (2014)
Some of the factors like customer lifestyle, exposure to information, and acceptance of the retail environment (atmospheric) affect Customer Preferences in the mall management	Swamynathan et al. (2013)
Consumers in a mall evaluate the mall experience as a mixture of five factors. These factors are the mall ambiance, physical evidence, marketing strategy, accessibility, and safety and security issues	Singh and Sahay (2012)
There are nine factors which can influence the customers inside the mall and they are related to image, entertainment, convenience, ambiance, security, lifestyle, time-saving, and architecture	Banerjee (2012)
Consumers are affected by visual merchandising in malls placed in large cities	Mehta and Chugan (2013)
Consumers' Retail Experience is affected by functional values and emotional values provided by malls	Jain and Bagdare (2011)
Mall loyalty is a subjective issue and Mall management must focus on consumer diversity in this context. The more diverse the consumer demographics the more a consumer may find logical miscalculations in mall loyalty	Kuruville and Joshi (2010)
Six factors influence customer perceptions toward the mall and these are focus on value for money, customer delight, information security, credibility, store charisma, and product excellence	Devgan and Kaur (2010)
Mall must look for entertainment value, increase their employee's skills, and pricing strategies, store environment, and store ambiance to attract new customers	Srinivasan and Srivastava (2010)
Male and female consumers have different priorities in the mall shopping and they can't be taken lightly	Kuruville et al. (2009)
Five factors that affect mall consumer loyalty are related to the mall marketing mix including staff response and parking facilities	Venkateswarulu and Uniyal (2007)

Source Authors

THEORETICAL BACKGROUND AND HYPOTHESIS

There have been several studies on malls and mall loyalty. But they have been mostly outside India and largely in the West. Some researchers have stated that malls have transgressed beyond mere shopping places and are being multi-leisure complexes (Jones & Hillier, 2002). Owing to their architectural design, retailing, eating, and entertainment facilities, other scholars state that the malls have become tourist destinations (Ooi & Sim, 2007). Along with purchasing, the motive for visiting malls today includes social interaction, spending leisure time, seeking pleasure, convenience, and relaxation (Kumar & Karande, 2000; Michon et al., 2008). On the issue of mall selection, researchers have stated that today a consumer chooses a shopping format considering several factors such as product assortment, bargains, mall facilities, safety, promotions, and overall shopping experience. Malls combine these attributes under one roof, and the ambiance, design, and layout of the malls evoke varying degrees of emotional reactions from the consumers (Babin & Attaway, 2000). Researchers have identified a few factors which lead to the success of a mall such as the location of malls, store atmospherics (Babin & Attaway, 2000), size and services and facilities (Coye, 2004), etc. So, the major factors considered as a part of this study are discussed below.

Tenant Mix

Tenant mix reflects the kind of brands and outlets who have been leasing space in a mall. This gives a larger choice to adolescent shoppers to select their products and brands of choice. Having good and popular brands in a mall may also add to the status of the mall. Kirkup and Rafiq (1994) state that the tenant's occupancy, which implies the popularity of the brands and their arrangement within the mall, can possibly affect adolescent shopping interest. The composition as well as the number and type of retail and non-retail tenants (i.e., bars, eateries, entertainment facilities, etc.) represent the range of possibilities to satisfy the consumer's wants and needs, minimize the logistical efforts while shopping, as well as influence the shopping center's attractiveness (Teller & Reutterer, 2008). From here, we derive our first hypothesis:

H₁: Tenant mix has a positive effect on shopping experience.

Safety

Safety is the one of the important concerns of shoppers, especially more relevant in some Indian cities with higher crime rates. Safety in terms of vehicles left parked in the premises, or using elevators, escalators, and restrooms, are factors that might influence visitors at shopping malls. Safety has been highlighted by Frassetto et al. (2002) in their work on “Shopping-centre selection modelling: a segmentation approach.” Safety concerns also create an image in the minds of the prospects, as highlighted by Wee (1986). Safety becomes an important concern in India, as mall development is still in a nascent stage, and not all adolescents are equipped with the latest technology. Further, adolescents choose to visit malls that have some reputation, are known for its secure facilities, and are located in safe localities. In one of his research articles, Jackson et al. (2011) found “safety of mall” as one of the attributes that have an effect on gender and generational cohorts with regard to mall attributes and shopping value. Thus, effective mall management has the responsibility to provide a safe and secure environment, which also has considerable effect on the overall shopping experience. Thus, the second hypothesis can be stated:

H₂: Safety has a positive effect on shopping experience

Ambiance

As the purpose of shopping has transgressed beyond buying and indulges in recreation and enjoyment, the character and atmosphere of a place are of paramount importance. Chebat and Morrin (2007) concluded from their study that mall ambience, which comprises color schemes, lighting factors, in-store temperature, music, and scent, is a few of the factors that contribute to shopping behavior and purchase intention, consciously or sub-consciously. Mall managers have realized that mall ambience and attractiveness contribute majorly in attracting shoppers (Laroche et al., 2005), while playing a significant role in adolescent evaluations about available products. Mathwick et al. (2001) emphasize that the service aspects of a mall should be blended with the physical ambience in order to create an enjoyable experience for the shopper. Bradford and Desrochers (2009) found in their study that a fragrant environment

attracted consumers and an unpleasant ambiance turned away customers, without their even being aware of the presence of any smell. This forms the basis for the next hypothesis:

H₃: Ambiance has a positive effect on shopping experience.

Facilities

The facilities provided in a mall contribute to its success significantly. Tangible and intangible attributes, such as variety and number of stores, design, and parking facilities, among others, motivate consumers to shop in malls (Castaldo & Botti, 2001; Yan & Eckman, 2009). The presence of facilities within the center, such as customer service points, rest areas, crèche, and other services that complement the shopping process, provides for greater shopper convenience (Frasquet et al., 2002). Among the core services, offerings of a shopping center, free parking and long opening hours are notable, as they are both key aspects of modern day consumer shopping trends (Frasquet et al., 2002). With these factors in view, it is assumed that facilities provided within a mall have a significant effect on the selection of a shopping mall and thus the experience provided by it.

H₄: Facilities have a positive effect on shopping experience.

Promotion

Retailers generally take to the help of social media promotions at national or store levels to attract value-conscious adolescent shoppers. In one of her articles, Khare (2011) stressed the importance of promotional schemes and monetary benefits in motivating adolescent consumers with large families to visit malls. Kirkup and Rafiq (1999) stated that mall managers constantly engage in promotional activities to attract consumers to the stores, thereby contributing to profits and sales. Research states that promotional activities encourage mall visits and provide a competitive advantage (Folkes & Wheat, 1995; Parsons & Ballantine, 2004; Smith & Sinha, 2000). Promotional activities at malls combine both product and

service benefits (Castaldo & Premazzi, 2001), giving us reason to support the next hypothesis:

H₅: In-store promotion has a positive effect on shopping experience.

Shopping Experience and Mall Loyalty

A positive shopping experience results in significant patronizing of the shopping center. For example, satisfied and happy customers may spend more in a shopping trip than what they had actually planned to, as it is established that increased time spent in the retail environment results in higher spending (Wakefield & Baker, 1998). With time being a luxury for most, it is a crucial deciding factor for the shopping experience of an individual. It seems only natural that an enjoyable shopping experience would increase the spending potential as well as duration of time spent at a mall. In such a climate scenario, competing on the basis of time becomes all important (Richbell & Kite, 2007). The quality of the shopping experience is generally thought to have a positive effect on customers' behavioral intentions with enjoyment of shopping as a pleasurable experience associated with raised loyalty (Mano, 1999). Similarly, mall loyalty has gained significance with increase in competition. Drawing the customer to a mall by changing the habit of visiting a local store is significant as it has a direct effect on the mall's sales profitability with repeat patronage. Chebat et al. (2009) defined mall loyalty as "a shopper's attitudinal predisposition consisting of intentions to continually patronise the mall in terms of repeated shopping at the mall and willingness to recommend the mall." With the lease of a store being typically based on the percentage of sales, mall owners use the strategy of loyalty by increasing the sales made by their tenants (Lehew et al., 2002). Therefore, we suggest our next hypothesis:

H₆: Shopping experience has a positive effect on mall loyalty.

Moderating Effect of Income

Income can make a difference in mall selection and in developing a sense of loyalty. As a result, it has been a useful criterion for segmentation.

Differences in social class, owing to a difference in income, are of more significance in a country like India as the difference in income among various social classes is markedly large. This variation can result in differences in loyalty across social classes. Such studies can prove helpful to mall managers in improving their tenant mix by entertaining premium and not-so-premium brands. Brand owners can also adjust their prices accordingly. In a study about the effect of income on the evaluation process, Allard et al. (2009) found that income did have a significant effect on the mall evaluation process in Canada. Thus, we hypothesize:

H₇: Income moderates the relationship between shopping experience and mall loyalty.

METHODOLOGY

This study was conducted with the help of a research instrument that was developed after reviewing literature in the area of adolescent shopping behavior. Data was collected from select malls in Tier II cities in India, including Raipur, Bhubaneswar, and Hyderabad. Initial interviews were conducted to find items that adolescent shoppers felt to be important while selecting a mall. During discussions, adolescents consistently mentioned their purpose to visit shopping malls to include convenience, tenant mix, ambiance, promotion, amenities, safety, and overall experience. The questionnaire was then designed keeping these points in mind. The initial questionnaire was subjected to a pilot test among the faculty members, managers of certain retail organizations, and a few representative participants to check its suitability for Indian adolescent consumers. In total, the questionnaire was administered to thirty respondents. These respondents even helped in reframing a few of the items, rewording them, and changing the order of the questions that were asked. Finally, 33 of 39 items were maintained for the final questionnaire. These 33 items were measured on a five-point Likert-type scale, in which respondents were asked to indicate their level of agreement (1 = strongly disagree and 5 = strongly agree). The questionnaire also consisted of questions to solicit demographic information of the respondents, such as gender, age, education, income, and occupation (Fig. 11.1).

For the final phase, data collection was done in two stages. A thousand questionnaires were printed and distributed among the respondents.

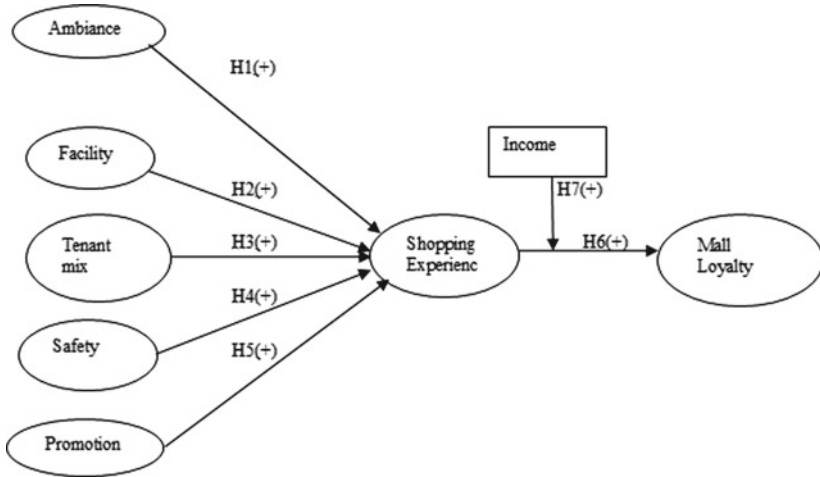


Fig. 11.1 Conceptual model (*Source* Authors)

These respondents were educated about the purpose of the study and were requested to participate. Most of these respondents were selected at random when they were relaxing either at some food joints or music stores within the mall. While some respondents lost interest after answering a few questions, a few others were preoccupied with managing their children, while still others quit mid-way because of some emergency situations. And despite these disruptions, 489 responses were collected. Of these, 88 were incomplete, and a few others seemed irresponsibly answered without reading the questions. Finally, 401 were found usable for testing the hypotheses of this study. The cities were chosen based on the convenience and the degree of mall penetration as well as the level of mall culture prevalent in them. Further, large malls in these cities were chosen to ensure similarity in size, tenant mix, and convenience.

DATA ANALYSIS

Data Handling

The data was initially coded and then tested for missing values, outliers, and normality. In certain cases, missing value problems were addressed. In some other cases, the missing values were handled by mean substitution

method (Hair et al., 2006). In, yet, other cases where a large amount of information was missing, the data was discarded. Outliers were checked graphically by the scatter diagram and frequency distribution, as well as by calculating the Mahalanobis distance. However, with this data, there was no significant drop in the Mahalanobis d-squared output, suggesting that there were no outliers. Finally, a normality check was conducted with the help of Mardia's coefficients (Mardia, 1970). The recommended score of -2.0 to $+2.0$ was achieved.

Sample Profile

Respondents from major cities from all four zones in India formed the sample, resulting in a good mix of various cultures. The sample comprised a larger percentage of respondents above the age of 20 (55.75%), with most being males (-62.09%). 63.4% of people were in the low income category; 33.84% of people were married. 57.6% of people were graduates and 42.4% were either graduates or better qualified.

FACTOR ANALYSIS, RELIABILITY, AND VALIDITY

While reducing the large number of items to the most relevant and meaningful ones, tests for reliability and validity were conducted along with factor analysis. KMO and Bartlett's test of sphericity were adopted to find the appropriateness of factor analysis. The KMO value was 0.823, which is more than the critical value of 0.6. Bartlett's test was also significant at 0.001. Exploratory factor analysis with Varimax rotation based on an Eigen value of 1 was done for data reduction. The result was seven factors that explained 67% of the variance in the study: ambiance (seven items), facility (five items), tenant mix (five items), safety (five items), promotion (three items), experience (three items), and loyalty (five items). The items are listed in Table II along with corresponding factor loadings.

In order to check the reliability among the items within the construct, Cronbach's alpha was measured as listed in Table II. The coefficient alpha ranged from 0.695 (*promotion*) to 0.923 (*experience*). All the factors had a reliability value of above 0.7, except for *promotion* with an overall reliability of 0.695. But this value was very close to the recommended value of 0.7 as suggested by Kline et al. (2000), and therefore it was accepted. We also assessed composite reliability (CR) and average variance extraction (AVE) for each construct. The value for CR and AVE were more

than the minimum requirement of 0.6 and 0.5. The composite reliability ranged from 0.709 (*promotion*) to 0.927 (*experience*) and AVE ranged from 0.812 (*experience*) to 0.504 (*promotion*) (Refer Table 11.2).

The loadings were high and significant, providing strong supporting for convergent validity (Bagozzi & Yi, 1988). Discriminant validity was checked by calculating the AVE and comparing with the squared correlation between the constructs (Fornell & Larcker, 1981). The AVE values exceeded the squared correlation values among the constructs, thus satisfying the tests of discriminant validity, as illustrated in Table 11.3.

MODEL FITNESS

The conceptual model of this study shows multiple dependence-interdependence relationships. While this could have been addressed by multiple regression analysis, structural equation modeling was used instead. In order to check the measurement and structural model, AMOS 22 software was used for the analysis. For the measurement model, each latent construct was identified and the measured indicator variables were assigned to the latent constructs. According to our CFA results, our measurement model suggested a good fit to the data ($\chi^2/df = 1.617$, RMR = 0.039, GFI = 0.897, CFI = 0.958, IFI = 0.959, TLI = 0.954, RMSEA = 0.039), as displayed in Table IV. Next, we checked the fitness of the structural model or the proposed theoretical model to the data ($\chi^2/df = 1.256$, RMR = 0.042, GFI = 0.898, CFI = 0.976, IFI = 0.976, TLI = 0.973, RMSEA = 0.021). A comparison of the fit between the theoretical and measurement models showed no significant differences, thereby providing support for the nomological validity of the theoretical model (Table 11.4).

RESULTS AND DISCUSSION

The path analysis was aided by AMOS 22, and the structural model was validated. All seven hypotheses were tested, with emphasis on the moderating effect of income on shopping experience and mall loyalty (H7). The first hypothesis (H1) was found significant, with the conclusion that tenant mix significantly and positively affected shopping experience. Teller and Reutterer (2008) had also noted that varieties of retail and non-retail tenants and physical atmosphere are the most crucial factors in influencing overall mall attractiveness and satisfaction. In one of their studies, Jackson

Table 11.2 Construct items and factor loading

<i>Construct</i>	<i>Items</i>	<i>Factor loadings</i>	<i>Cronbach's alpha</i>	<i>CR</i>	<i>AVE</i>
Tenant mix	Choice of brand	0.867	0.893	0.894	0.628
	Store choice	0.831			
	Product variety	0.826			
	Product brand	0.801			
	Anchor stores	0.795			
Safety	Lift	0.897	0.894	0.894	0.632
	Escalator	0.867			
	Safe within mall	0.833			
	Restroom	0.829			
	Fire protection	0.740			
Ambiance	Decoration	0.830	0.861	0.862	0.514
	Color scheme	0.781			
	Well controlled	0.772			
	Air condition				
	Layout	0.711			
	Interior design	0.701			
	Music	0.698			
	Exterior design	0.656			
Facility	Washroom	0.856	0.895	0.897	0.637
	Easy navigation	0.849			
	Food court	0.829			
	Hygiene				
	Circulation movement	0.809			
Promotion	Sign board	0.806	0.695	0.709	0.504
	Regular promotion	0.827			
	Promotional schemes	0.822			
Experience	Free gift	0.706	0.923	0.927	0.812
	Enjoyment	0.979			
Loyalty	Overall experience	0.885	0.829	0.840	0.527
	Pleasure	0.880			
	Loyal	0.993			
	Purchase	0.754			
	Prefer	0.740			
	Recommend	0.727			
	Frequency	0.697			

AVE = average variance extracted, CR = composite reliability, Cronbach's alpha indicates inter-item reliability within constructs

Table 11.3 Construct correlation and discriminant validity

	<i>Experience</i>	<i>Ambiance</i>	<i>Facility</i>	<i>Tenant mix</i>	<i>Safety</i>	<i>Loyalty</i>	<i>Promotion</i>
Experience	0.901						
Ambiance	0.056	0.690					
Facility	0.039	0.060	0.798				
Tenant mix	0.112	-0.090	0.299	0.793			
Safety	0.090	0.095	0.129	0.017	0.795		
Loyalty	0.038	-0.071	0.028	0.098	0.027	0.726	
Promotion	0.010	0.050	0.091	0.041	0.028	0.049	0.675

Table 11.4 Model fit statistics

<i>Fit indices</i>	χ^2/df	<i>P</i>	<i>RMR</i>	<i>GFI</i>	<i>CFI</i>	<i>IFI</i>	<i>TLI</i>	<i>RMSEA</i>
Measurement model	1.617	0.000	0.039	0.897	0.958	0.959	0.954	0.039
Structural model	1.256	0.000	0.042	0.898	0.976	0.976	0.973	0.021

Source Authors

et al. (2011) suggested that safety was one of the factors related to mall attractiveness. In this paper, safety was considered a construct and hypothesized to have a positive effect on the shopping experience. With theft and petty crime rampant in several parts of India, it was considered that visitors would feel safer with adequate protection in and around the mall they visit. The hypothesis was found to be significant. Michon et al. (2005) observed that retail atmospheric interactions and cofactors can play tricks on managers trying to boost mall and store perceptions. Similarly Babin and Attaway (2000) stated that consumers do process atmospheric characteristics holistically more than piecemeal. In another study, Hedhli et al. (2013) stated that mall atmospherics positively affect shopping wellbeing. The third hypothesis proposed in this paper was also found significant, with mall ambience exhibiting a positive effect on shopping experience. The fourth hypothesis about facilities in a mall positively affecting the overall shopping experience was found to hold true, and consistent with the findings of Wong et al. (2001). Hypothesis (H5) was rejected during the analysis of findings in this study as promotions in a mall did not

Table 11.5 Path analysis results

Hypothesis	Constructs and Relationship		Estimate	C.R	P	Hypothesis	
H1	Tenant mix	→	Experience	0.468	7.510	0.012	Accept
H2	Safety	→	Experience	0.364	6.212	0.023	Accept
H3	Ambiance	→	Experience	0.416	7.184	0.018	Accept
H4	Facility	→	Experience	0.268	3.491	0.036	Accept
H5	Promotion	→	Experience	0.091	1.024	0.692	Reject
H6	Experience	→	Loyalty	0.366	6.286	0.021	Accept

*CR-Critical ratio, $p < 0.05$, estimates are the regression weights

seem to show promise in positively enhancing shopping experience. It is believed that in-store promotions that are basically meant to attract value-seeking customers are not always appropriate. Manzur et al. (2011) suggested that value consciousness has a stronger effect on national brand promotions than in-store brands, and that the value-for-money orientation adopted by retailers in marketing its store brands cannot be optimal. Instead, a focus on quality could be a better strategy for increasing value (Dimara & Skuras, 2005; Erdem et al., 2004). The sixth hypothesis was to study the effect of shopping experience on mall loyalty, with the assumption that a positive or negative shopping experience affects mall loyalty accordingly. This is consistent with the study of Wakefield and Baker (1998), where they found that shopping experience positively affected the staying intention of the visitors. Table 11.5 lists the results of all the hypotheses.

Moderating Effect of Income

The SEM analysis by Zhao and Tamer Cavusgil (2006), a technique used to evaluate the moderating effect, was adopted in this research. Following Zhao and Cavusgil's technique, a two-group model has been because it helps to determine if income moderates the correlation between shopping experience and mall loyalty. The sample was split into two groups based on their income: high earning (0) and low earning (1). A two-group AMOS model was used next in order to determine whether or not there was any significant difference in the structural parameters between

Table 11.6 Moderating effect of income

Relationship	Moderator	Hypothesis	Coefficient	Chi-Square difference	Significance Level
Shopping Experience ↓ Mall Loyalty	High Income	H7	0.76	18.66	Significant
	Low Income		0.58		

Overall Model Fit Indices; Chi-square/DF: 0.889; GFI: 0.978; RMR: 0.040; RMSEA: 0.00
Source Authors

high and low income groups. In the first part of the analysis, the parameter from shopping experience to mall loyalty was constrained. In the second part, the parameter was kept free without constraint. The difference in χ^2 values between the two models determined whether income had a moderating effect on the relationship between shopping experience and mall loyalty. The χ^2 differences being significant for the relationship that income shared with shopping experience and mall loyalty, it was clear that income significantly moderated the shopping experience—mall loyalty relationship (Table 11.6).

THEORETICAL IMPLICATIONS

Studies on shopping experience and mall loyalty are gaining importance in small towns with mall penetration being at an all-time high and tough competition rampant in the unorganized sector. Therefore, factors that would drive an adolescent to a mall with loyalty are of higher importance. In this study, it was assumed that factors such as tenant mix, safety, ambiance, facilities, and promotions would have a positive effect on the shopping experience, in turn leading to mall loyalty. However, this study found that all constructs positively benefitted the overall shopping experience, save for promotions. But we found that, except promotion all the other constructs positively affected shopping experience. This finding holds significance in that it clarifies the different roles that in-store and external promotions play vis-à-vis the customer. It is interesting to note that the extent to which the factors affect shopping experience varies

significantly. For instance, tenant mix (0.468) affects shopping experience the most, followed by ambiance (0.416), safety (0.364) and facilities (0.268). Shopping experience clearly influenced loyalty (0.366), with such influence being stronger among the higher income category than the lower income.

MANAGERIAL IMPLICATIONS

This study revealed that adolescent consumers in small towns are greatly influenced by the tenant mix and ambiance of the mall. With this in mind, mall managers can work to improve both these factors by increasing the number of brands and offering higher choices to customers. Malls should improve their decor, layout, music, and lighting to make their interiors and ambiance more inviting. Managers should work toward better safety to provide a more secure environment to their adolescent consumers within their malls. Facilities within the malls should be enhanced with quality food courts and clean restrooms with standard hygiene maintained. As in-store promotions in malls did not find significance in this study with regard to improved shopping experience, managers can be advised to focus their strengths and efforts on offering quality products rather than attracting customers with price reductions and bargain deals.

LIMITATIONS AND FURTHER RESEARCH DIRECTIONS

This study is limited in terms of geography and demography, as it was conducted only in a few small cities of India. However, being carried out in Tier 2 and Tier 3 cities with a large population base, with good penetration of organized retail, there is scope for more. Future research should include those malls that have a supermarket also within them, as the time people spend in the supermarket in a mall, the loyalty, as well as the total spend will all be more. Small, yet significant, aspects such as the location and opening hours of the malls have not been considered for the study; these are not only determining factors for mall selection, but also impact shopping experience and loyalty. The impact of mall loyalty on the financial and non-financial performance of the mall, as well as that of moderating variables such as gender, religion, etc., need to be checked when undertaking a similar study in future. However, this study is a beginning and can be expanded to other cities in future.

REFERENCES

- Ahmed, Z. U., Ghingold, M., & Dahari, Z. (2007). Malaysian shopping behaviour: An exploratory study. *Asia Pacific Journal of Marketing and Logistics*, 19(4), 331–348.
- Allard, T., Babin, B. J., & Chebat, J. C. (2009). When income matters: Customers evaluation of shopping malls' hedonic and utilitarian orientations. *Journal of Retailing and Consumer Services*, 16(1), 40–49.
- Babin, B. J., & Attaway, J. S. (2000). Atmospheric affect as a tool for creating value and gaining share of customer. *Journal of Business Research*, 49(2), 91–99.
- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the academy of marketing science*, 16, 74–94.
- Banerjee, N. (2012). A study on the attractiveness dimensions of shopping malls—an Indian perspective. *International Journal of Business and Social Science*, 3(2).
- Bradford, K. D., & Desrochers, D. M. (2009). The use of scents to influence consumers: The sense of using scents to make cents. *Journal of Business Ethics*, 90(S2), 141–153.
- Castaldo, S., & Botti, C. (2001). Lo shopping esperienziale. *Retailing & Innovazione*, Egea, 185–213.
- Castaldo, S., & Premazzi, K. (2001). Le strategie di posizionamento. In S. Castaldo (Ed.), *Retailing and Innovazione* (pp. 39–87). Egea.
- Chebat, J. C., Hedhli, K. E., & Sirgy, M. J. (2009). How does shopper-based mall equity generate mall loyalty? A conceptual model and empirical evidence. *Journal of Retailing and Consumer Services*, 16, 50–60.
- Chebat, J. C., & Morrin, M. (2007). Colors and cultures: Exploring the effects of mall décor on consumer perceptions. *Journal of Business Research*, 60(3), 189–196.
- Coye, R. W. (2004). Managing customer expectations in the service encounter. *International Journal of Service Industry Management*, 15(1), 54–71.
- Devgan, D., & Kaur, M. (2010). Shopping malls in India: Factors affecting Indian customers' perceptions. *South Asian Journal of Management*, 17(2).
- Dimara, E., & Skuras, D. (2005). Consumer demand for informative labelling of quality food and drink products: A European Union case study. *Journal of Consumer Marketing*, 22(2), 90–100.
- Dwivedi, P. R. (2010). Saturation of malls in metros: Prospects in tier II and III cities. *India Retailing*. Sunday, December 18, 2017. Accessed July 18, 2017. <https://www.indiaretailing.com/pramod-ranjan-dwivedi-prospects-tier.asp>
- El Hedhli, K., Chebat, J. C., & Sirgy, M. J. (2013). Shopping well-being at the mall: Construct, antecedents, and consequences. *Journal of Business Research*, 66(7), 856–863.

- Erdem, T., Zhao, Y., & Valenzuela, A. (2004). Performance of store brands: A cross-country analysis of consumer store-brand preferences, perceptions, and risk. *Journal of Marketing Research*, 41(1), 86–100.
- Folkes, V., & Wheat, R. D. (1995). Consumers' price perceptions of promoted products. *Journal of Retailing*, 71(3), 317–328.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18, 39–50.
- Frasquet, M., Valet, T., & Gil, I. (2002). Key factors in shopping center management: Evidences from Spain. *The International Review of Retail: Distribution and Consumer Research*, 12(4), 337–354.
- Gottdiener, M. (1995). *Postmodern semiotics: Material culture and the forms of Postmodern life*. Oxford.
- Hair, J. F., Tatham, R. L., Anderson, R. E., & Black, W. (2006). *Multivariate data analysis* (Vol. 6). Pearson Prentice Hall.
- Jackson, V., Stoel, L., & Brantley, A. (2011). Mall attributes and shopping value: Differences by gender and generational cohort. *Journal of Retailing and Consumer Services*, 18(1), 1–9.
- Jain, R., & Bagdare, S. (2011). Music and consumption experience: A review. *International Journal of Retail & Distribution Management*, 39(4), 289–302.
- Jones, P., & Hillier, D. (2002). Multi leisure complexes. *International Journal of Retail and Distribution Management*, 30(9), 425–430.
- Khare, A. (2011). Mall shopping behaviour of Indian small town consumers. *Journal of Retailing and Consumer Services*, 18, 110–118.
- Kirkup, M. H., & Rafiq, M. (1994). Managing tenant mix in new shopping centers. *International Journal of Retail and Distribution Management*, 22(6), 29–37.
- Kirkup, M. H., & Rafiq, M. (1999). Marketing shopping centres: Challenges in the UK context. *Journal of Marketing Practice: Applied Marketing Science*, 5(5), 119–133.
- Kline, T. J., Sulsky, L. M., & Rever-Moriyama, S. D. (2000). Common method variance and specification errors: A practical approach to detection. *The Journal of psychology*, 134(4), 401–421.
- KPMG. (2009, March). *Indian retail: Time to change lanes*. Retrieved on December 14, 2017 from http://www.in.kpmg.com/TL_Files/Pictures/Indian_Retail_Mar09.pdf
- Kumar, V., & Karande, K. (2000). The effect of retail store environment on retailer performance. *Journal of Business Research*, 49(2), 167–181.
- Kuruville, S. J., & Joshi, N. (2010). Influence of demographics, psychographics, shopping orientation, mall shopping attitude and purchase patterns on mall patronage in India. *Journal of Retailing and Consumer Services*, 17(4), 259–269.

- Kuruville, S. J., Joshi, N., & Shah, N. (2009). Do men and women really shop differently? An exploration of gender differences in mall shopping in India. *International Journal of Consumer Studies*, 33(6), 715–723.
- Laroche, M., Teng, L., Michon, R., & Chebat, J. C. (2005). Incorporating service quality into consumer mall shopping decision making: A comparison between English and French Canadian consumers. *Journal of Services Marketing*, 19(3), 157–163.
- Lehew, M. L. A., Burgess, B., & Wesley, S. (2002). Expanding the loyalty concept to include preference for a shopping mall. *International Review of Retail, Distribution and Consumer Research*, 12(3), 225–236.
- Mano, H. (1999). The influence of pre-existing negative effect on store purchase intentions. *Journal of Retailing*, 75(2), 149–172.
- Manzur, E., Olavarrieta, S., Hidalgo, P., Farías, P., & Uribe, R. (2011). Store brand and national brand promotion attitudes antecedents. *Journal of Business Research*, 64(3), 286–291.
- Mardia, K. V. (1970). Measures of multivariate skewness and kurtosis with applications. *Biometrika*, 57(3), 519–530.
- Mathwick, C., Malhotra, N., & Rigdon, E. (2001). Experiential value: Conceptualization, measurement and application in the catalogue and Internet shopping environment. *Journal of Retailing*, 77(1), 39–56.
- Mehta, D. N., & Chugan, P. K. (2013). The impact of visual merchandising on impulse buying behavior of consumer: A case from Central Mall of Ahmedabad India. *Universal Journal of Management*, 1(2), 76–78.
- Michon, R., Chebat, J. C., & Turley, L. W. (2005). Mall atmospherics: The interaction effects of the mall environment on shopping behavior. *Journal of business research*, 58(5), 576–583.
- Michon, R., Yu, H., Smith, D., & Chebat, J. C. (2008). The influence of mall environment on female fashion shoppers' value and behaviour. *Journal of Fashion Marketing and Management*, 12(4), 456–468.
- Ooi, J. T. L., & Sim, L. L. (2007). The magnetism of suburban shopping centers: Do size and cineplex matter? *Journal of Property Investment and Finance*, 25(2), 111–135.
- Parsons, A. G., & Ballantine, P. W. (2004). Market dominance, promotions, and shopping mall group performance. *International Journal of Retail & Distribution Management*, 32(10), 458–463.
- Reddy, A. H., & Reddy, S. R. (2014). Consumer perception towards retail industry: A study. *International Journal on Customer Relations*, 2(1), 40.
- Robertson, K. A. (1995). Down town redevelopment strategies in the United States. *Journal of the American Planning Association*, 61(4), 428.
- Richbell, S., & Kite, V. (2007). Night shoppers in the 'open 24 hours' supermarket: A profile. *International Journal of Retail and Distribution Management*, 35(1), 54–68.

- Sinha, R. (2010). *Small towns lead the league for marketers*. <http://www.mernews.com/article/small-towns-lead-the-league-for-marketers/15816847.shtml>
- Smith, M. F., & Sinha, I. (2000). The effect of price and extra product promotions on store preference. *International Journal of Retail and Distribution Management*, 28(2), 83–92.
- Srinivasan, S. R., & Srivastava, R. K. (2010). Creating the futuristic retail experience through experiential marketing: Is it possible? An exploratory study. *Journal of Retail & Leisure Property*, 9, 193–199.
- Swamynathan, R., Mansurali, A., & Chandrasekhar, U. (2013). Mall mania: A study of factors influencing consumers' preference towards shopping malls in Coimbatore city. *The IUP Journal of Marketing Management*, 12(4), 29–41.
- Tandon, A., Gupta, A., & Tripathi, V. (2016). Managing shopping experience through mall attractiveness dimensions: An experience of Indian metro cities. *Asia Pacific Journal of Marketing and Logistics*, 28(4), 634–649.
- Teller, C., & Reutterer, T. (2008). The evolving concept of retail attractiveness: What makes retail agglomeration format attractive when customers shop at them? *Journal of Retailing and Consumer Service*, 15(3), 127–143.
- Venkateswarulu, A., & Uniyal, D. P. (2007). Concept of a mall: Measuring attitude and perception of shoppers towards malls of Mumbai. *Indian Retail Review*, 1(1), 7–16.
- Wakefield, K. L., & Baker, J. (1998). Excitement at the mall: Determinants and effects on shopping response. *Journal of Retailing*, 74(4), 515–539.
- Wee, C. H. (1986). *Shopping area image: Its factor analytic structure and relationships with shopping trips and expenditure behavior*. ACR North American Advances.
- Wong, G., Yu, L., & Yuan, L. (2001). SCATTR: An instrument for measuring shopping centre attractiveness. *International Journal of Retail and Distribution Management*, 29(2), 76–86.
- Yan, R. N., & Eckman, M. (2009). Are lifestyle centers unique? Consumer's perceptions across locations. *International Journal of Retail and Distribution Management*, 37(1), 24–42.
- Zhao, Y., & Tamer Cavusgil, S. (2006). The effect of supplier's market orientation on manufacturer's trust. *Industrial Marketing Management*, 35(4), 405–414.



Factors Influencing Young Consumers Buying Behaviour Towards Green Products

Biranchi Narayan Swar

INTRODUCTION

The evolution of industrialization in the world has made life easy for humans, but with this fast-paced industrialization has also brought many problems with it. One of the environmental issues, which had started impacting every living being. Recently, these environmental issues are getting more and more discussed, and people have started noticing the negative impact. Consumers are getting increasingly conscious about the future and started to prefer products which are environmentally friendly. Because of these consumers' demand, companies have started creating their marketing strategies to appeal to these environment-conscious target customers. These marketing approaches are named green strategies (Ginsberg & Bloom, 2004). The old concept of profit only driven businesses is also rapidly changing, and companies are getting more sensible towards environmental issues. As a result, companies have started producing green

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products to offer their customers. So, in this context, understanding the green products buying behaviour of the consumer is utmost importance for today's marketers.

India is one of the fastest growing economies. The growth is driven by the dynamic and young population, around 65% of country's population is below 35 years (The Times of India, 2023). Furthermore, young buyers play a vital role in a family's buying decision, and they themselves purchase products regularly (Ashraf & Khan, 2016). A financially empowered youth helps increasing the demand as value-conscious consumer (Indian-habit-of-being-healthy, 2020). 'Environmentally friendly' is the new concept which is getting increasingly famous in companies and getting cohesive with the corporate culture. Moreover, if we consider the Greendex ranking, India is considered as most sustainable country among 18 major countries of the world (Greendex, 2019). Hence, it is highly interesting to understand the consumer behaviour of Indian consumer towards green products. In this context, the paper is an attempt to explore the factors affecting young Indian consumers (15–34 years, as per National Youth Policy, 2017) buying green products and thereby develop a model in Indian context.

THEORY AND REVIEW OF LITERATURE

There are many definitions of green purchase behaviour, and it is mentioned that, green buying behaviour is the buying of eco-friendly sustainable or favourable products, products those can be recycled and are suitable for environment. It also means avoiding harmful products (Mostafa, 2007). Joshi and Rahman (2015) had referred to consumer behaviour of green products as consumers' preparedness towards purchase of green products which further converts into purchase decision benefiting the environment. Thus, consumer behaviour is reliant on attitudinal factors as well as cognitive factors including consumer effectiveness, environmental knowledge and concern. The measure of attitude directly influences consumers green buying behaviour and purchase intention (Kumar & Polonsky, 2017; Paul et al., 2016).

Wang et al. (2020) conducted the survey with 248 questionnaires and showed that there is a significant and positive relationship between green purchase attitude and intention. Further, subjective and objective knowledge was shown to positively influence attitude and intention towards green consumption. Tan et al. (2019) identified the factors influencing

young consumers in Malaysia while purchasing green products. The analysis specified green product buying behaviour indicators as pricing and advertisements, ecological labelling and environmental consciousness. Mohammed Kirmani and Naved Khan (2018) identified the experiences of Indian customers for willingness to pay extra price towards buying green products. The study discovered that green product attitude has positive significant impact on willingness to pay premium. Moreover, environmental concern and socialism are important forecasters of green product attitude.

Lori Rothenberg and Delisia Matthews (2017) determined pricing as one of the important characteristics of consumers while buying eco-friendly clothing. The place of production and sustainability also influenced the buying decision (Bhutto et al., 2019). Various researches similar to Adan et al. (2017) highlighted that young consumers purchases green products based on their environmental friendly lifestyle (Sahni & Osahan, 2019), self-identity (Carfora et al., 2019), individuality feeling (Diddi et al., 2019), product recycling (Tan et al., 2019) and event participation to protect the environment (Kwan et al., 2019).

Other important factors like environmental benefits (Papista & Dimitriadis, 2019), economic savings (Wang et al., 2019), aesthetic appeal (Yu & Lee, 2019) affecting green consumers buying behaviour. Sogari et al. (2015) investigated using an experimental approach to know how sustainable labelling affects the customer attitude towards buying wine. It is found that environment and quality beliefs both affect the attitude towards sustainable labelling of wine. Similar investigation is done on sea food (Council, 2016) where consumer puts sustainability before price and brand.

Nedra et al. (2015) conducted a study to identify the factors affecting consumer purchasing behaviour for organic product. It is revealed that motivation towards environmental and health concerns, attitude and consumer perception impact their buying behaviour. Arpita Khare (2015) suggested that green purchase behaviour is affected by peer influence, buying history and self-identity. One of the major influencers of green purchase is customers' self-identification with eco-friendly characteristics (Mehta & Sharma, 2019).

The study conducted by Kumar and Ghodeswar (2015) to understand the factors affecting consumers' green product purchase decisions in India. They collected data from 403 working Indian respondents in Mumbai and revealed that supporting environmental protection, drive for environmental responsibility, green product experience, environmental friendliness of companies and social appeal are identified as important factors affecting green product purchase decisions.

Ramayah et al. (2013) concluded that green buying behaviour of the consumers influenced by perceived value, attitude towards recycling, awareness and actual gains perceived by the consumers. A survey done with Australian youth to understand green purchase behaviour and identified that, environmentally consciousness, hostile effect of climate change and changing climate paradigm affects the green purchase behaviour (Perera & Rathnasiri Hewege, 2013).

RESEARCH GAP

Indian consumers are increasingly attracted towards a high-quality life which involves nutritious food, good health facilities and comfortable living (Hubacek et al., 2007). On the other hand, it is grappled by severe environmental challenges like desertification, pollution, deforestation, etc. (Ray & Pugliese, 2011). Hence, it is important to conduct studies on environmental issues in the Indian context. Many studies had worked on identifying consumers' concern towards the environment and attributes of products on green consumers' buying behaviour (Magnusson et al., 2003). Though, studies are still unsure about the key motivators behind green product purchases. Some studies have described the motivating factors to buy green products in western context while other studies have recognized main motivating factors in general. After doing the extensive literature review, we identified that there are numerous physical and psychological factors which influences the green buying behaviour, but the past research have not considered all these in Indian youth context. Hence, it is a unique contribution to the existing body of knowledge by exploring the factors and developing a model on green products buying behaviour for young Indian consumers. The objectives of the study are as listed below:

1. To study the concept and relevancy of green products in the context of young Indian consumers.
2. To identify the factors affecting green products consumer buying behaviour.
3. To explore the factors and develop a model for young Indian consumers buying behaviour towards green products.

RESEARCH METHODOLOGY

The present study has been done by using both qualitative and quantitative research. The variables were identified by conducting the qualitative study and further analysis was done by using quantitative study. The variables were identified based on focus group discussions and extensive literature reviews. This helped us to develop the initial draft of the questionnaire and after discussing it with the subject experts we designed the final questionnaire with 14 variables. The questionnaire is divided into two parts, first part includes the questions related with demographic data while the second part includes survey questions which were asked to rate in a five-point scale (where 1 is rated as strongly disagree and 5 rated as strongly agree). To achieve the objectives, the researchers have approached 350 young consumers in India. We have followed convenience sampling to choose the respondents for the survey. They were basically students and working professionals in the age group between 15 to 35 years living in Indian cities Pune, Mumbai, Bangalore and Delhi. As most of the respondents are from a socially and economically advanced class of society and they are aware of sustainable living standards. The questionnaire is administered to this group by using Google form which was sent to the respondents on their email address. Out of 350 questionnaires, 311 questionnaires were found suitable for the final analysis, representing a response rate of 88. 85%. The data analysis has been done by using exploratory factor analysis with the principal component method.

VARIABLES IDENTIFICATION

The variables for green consumers' buying behaviour of Indian youth were identified through literature reviews and focus group discussions. From the literature, we identified 11 variables influencing Indian youth buying behaviour towards green products. The 11 variables identified were given below:

1. Performance of the products.
2. Saving money in the long run.
3. Healthy way of life.
4. To reduce environmental damages.
5. Known to be a responsible consumer.
6. To survive, humans must harmoniously coexist with nature.
7. Presence of environmental certification.
8. Peer pressure.
9. Value for money.
10. It makes me feel meaningful.
11. The presence of recyclable packaging.

To get more clarity on the variables, we have conducted in-depth interviews and were able to add a few more variables (as listed below).

12. Makes me think more about environmental protection.
13. Helps to preserve the environment for the next generation.
14. Friends suggest.

The final questionnaire was designed after consulting the subject experts. As per their opinion, we have modified the questionnaire to fit the current context. This process satisfied the face validity of the scale with 14 statements (Table 12.1).

FINDINGS

Analysis of Demographic Data

It is observed that 65% respondents were male and 35% were female. 56% respondents were in the age group of 21–25 years and 20% of the respondents were in the age group of 26–30 years. So, the data showed that most of the respondents were young. A large part of the sample (51%) was post-graduation and 58% of the respondents were students.

EXPLORATORY FACTOR ANALYSIS

The data has been analysed by using exploratory factor analysis (EFA) with a principal component method. As a very first step, we found the value of Kaiser-Meyer-Olkin (KMO) to know the appropriateness of the

Table 12.1 Identified variables

<i>Sl. No</i>	<i>Variables</i>	<i>Sources</i>
1	Performance of the product	Choi and Kim (2013) and Baktash and Talib (2019)
2	Saving in the long run	Babaoğul and Bener (2008) and Arroyo and Carrete (2019)
3	Healthy way of life	Cerjak et al. (2009)
4	To reduce environmental damage	Chen et al. (2012) and Tsarenko et al. (2013)
5	Known to be a responsible consumer	Schwartz (1992)
6	To survive, humans must harmoniously coexist with nature	Chekima and Chekima (2019)
7	Presence of environmental certification	Akenji and Bengtsson (2014)
8	Makes me think more about the environmental protection	FGD
9	Helps to preserve the environment for the next generation	FGD
10	Presence of recyclable packaging	Tseng and Hung (2013) and Palevich, 2012
11	Friends suggest	FGD
12	Peer pressure	Kao and Zhang (2015) and Jain (2019)
13	Value for money	Babaoğul and Bener (2008) and Visser et al. (2018)
14	To make me feel meaningful	Padel and Foster (2005) and Munjal (2019)

Source Authors

data for factor analysis. In our case, the value of KMO is more than 0.5, *i.e.*, 0.850 (Kaiser, 1974) as exhibited in Table 12.2. Hence, the data is appropriate for further analysis and the significant output allows us to proceed for further analysis.

The outcomes of the study with 14 variables were shown in Table 12.2. The exploratory factor analysis using principal component method has extracted 3 factors, with each having eigen values more than 1. Table 12.2 exhibits that Factor 1 with eigen value 5.457 and explained total variance as 27.889%. The percentage variance and eigen values explained for all the factors were shown in Table 12.2. The total variance accounted for all these 3 factors is 56.816%.

Table 12.2 Results of exploratory factor analysis

<i>Factor's name</i>	<i>Variables</i>	<i>Factor loadings</i>	<i>Eigen values</i>	<i>Percentage of variance explained</i>	<i>Factor's reliability</i>		
Environmental knowledge	V3: It provides a healthy way life	0.625	5.457	27.889	0.853		
	V4: It reduces environmental damage	0.678					
	V5: To become a responsible consumer	0.794					
	V6: To survive, humans must harmoniously coexist with nature	0.724					
	V8: It makes me think more about the protection of the environment	0.722					
	V9: It helps to preserve the environment	0.721					
	V10: The presence of recyclable packaging	0.574					
	V14: It makes me feel meaningful	0.569					
	Peer influence	V11: My friend's suggestion	0.839	2.415		15.266	0.763
		V12: Peer pressure	0.821				
V13: The presence of environmental certification		0.587					
Perceived value	V1: The performance of the products	0.798	1.219	13.662	0.705		
	V2: It helps me to save money in the long run	0.787					
	V7: It provides me value for money	0.557					

Notes KMO value = 0.850; $p = 0.000$; $df = 120$; Total variance explained = 56.816%

Source Author's own findings

Extracted factors from the analysis were shown in Table 12.2. The first factor comprises of variables such as, healthy way life; reduces environmental damages; as a responsible consumer; to survive, humans must harmoniously coexist with nature; makes me think more about the protection of the environment; helps to preserve the environment; presence

of recyclable packaging; and makes me feel meaningful. Therefore, this can be named as ‘environmental knowledge’. The second factor includes friend’s suggestion; peer pressure; and presence of environmental certification. Thus, this factor can be named as ‘peer influence’. And the third factor consists of the performance of the products; saves money in the long run; provides value for money. Thus, this can be named as ‘perceived value’.

VALIDITY TEST OF THE MODEL

The construct validity can be measured with the help of principal component method (Cavana et al., 2001). Before using principal component analysis, the data were gone through two different tests. The first test was the Bartlett test of sphericity. The outcome of this test showed that it was significant ($p = 0.000$; $df = 120$). And the second test related to the Kaiser-Meyer-Olkin (KMO) value. The value of KMO was 0.850 (acceptable value between 0.5 and 1.0) (Kaiser, 1974). Hence, both these tests showed that the principal component method was appropriate for this data set. The details of the analysis were shown in Table 12.2. The analysis exhibited that the eigen values for all factors extracted were more than 1.0. The total variance described by the three factors is 56.816%. The factor loading of each factor should be more than 0.50 to fulfil the criteria for convergent validity. Our results qualify the criteria and thus establish convergent validity. We can also easily discriminate variables from each other’s and put together under respective factors. This established the discriminant validity. These confirmed the validity of the proposed model. To establish the reliability test, we have calculated the Cronbach’s alpha values of each factor separately. The results were shown in Table 12.2. For all factors, the Cronbach’s alpha values were more than 0.7 as suggested by Cavana et al. (2001). There by alpha values, indicating the internal consistency among the factors, thus, confirmed the reliability of the model.

DISCUSSION

The aim of the research paper was to identify and explore the factors influencing green products buying behaviour of young Indian consumers. The outcomes of the study show that there were three factors such as environmental knowledge, peer influence and perceived value, which

influence green products buying behaviour of young Indian consumers. These factors comprise of fourteen variables. Marketers of green products should understand the importance of these variables and the factors which influence green products buying behaviour of young Indian consumers. To market green products, marketers should focus on creating awareness towards green products availability and its environmental benefits. Environmental knowledge can be created by 'educating customers about environmental issues', 'by explaining the advantageous of green products', 'effect of using green products to reduce environmental damages', 'creating awareness about the significance of balancing in the eco-system (humans must harmoniously co-exists with nature)', 'sharing knowledge about how to protect and preserve environment', 'implications of eco-friendly packaging', 'the role of a responsible consumer', etc. When marketers create such awareness among the consumers, this will increase 'environmental knowledge' among Indian young consumers. These findings are like the previous studies (Chen & Chai, 2010). The 'peer influence' extracted as the second important factor which influence green products buying behaviour of the young Indian consumers. These results were also consistent with the observation in earlier studies (Khare, 2015). The results of the study showed that, how peer groups or peer pressure influence green consumers buying behaviour. The study concluded that, apart from environmental knowledge, peer influence, the green products marketers or manufactures should also make their consumers know about various elements of 'consumer perceived value'. This may include changing the mind-set of the consumers by educating them how the use of green products leads to saving in the long run; how green products perform better than the generic products. These outcomes of the study were in line with the past research (Wu & Chen, 2014). This paper will guide the green marketers in understanding various determinants of shoppers' behaviour towards green products such as environmental knowledge, peer influence and perceived value.

CONCLUSIONS AND IMPLICATIONS

The outcomes of the research will provide insight to the green products producers or marketers, how they should formulate strategies to understand their young Indian consumers' behaviour in a better way. As a part of their marketing strategies, the companies should be able to

focus on creating awareness about the usefulness of eco-friendly products, the value or benefits associated with green products and their impact on the environment. The findings will help the marketers to formulate marketing strategies with respect to segmentation, targeting and positioning of their green products to meet the requirement of a specific target group, *i.e.*, young Indian consumers. The findings of the study will be useful for the companies to further understand the green products buying intentions of young Indian consumers. Marketing organizations can also modify their advertising strategies by linking green products with consumers' perceived value and other factors which influence green products buying behaviour of young Indian consumers. This research should help Indian green product marketing companies to strengthen their strategies in further understanding young Indian consumers buying behaviour. The findings of this research will enable the practitioners to understand which factors influence young consumers in their decision-making approaches with respect to green products, so that they can plan their strategies accordingly.

LIMITATIONS AND SCOPE FOR FURTHER STUDY

The results of this study validated, and a scale was developed in Indian context. However, few limitations were noticed, which will need to be addressed in future research on green consumer buying behaviour. Firstly, the research was conducted with a limited number of samples who reside mainly in cities and is well educated. Their education and residential status may impact the study as most of these users will be environmentally friendly and significantly influence the results. The larger consumer group who resides in small towns and villages are not included in the research which can be studied in future research. Secondly, further research can be extended to know consumers' green buying behaviour for various product categories. Future research also can be done to understand how the green products buying behaviour differs with respect to buyers' demographic profile like gender, occupation, income, education, etc. The study can also be extended to compare different countries and their consumers' green products buying intentions.

REFERENCES

- Adan, A., Ahmad, A., & Khan, M. N. (2017). Examining the role of consumer lifestyles on ecological behavior among young Indian consumers. *Young Consumers*, 18(4), 348–377.

- Akenji, L., & Bengtsson, M. (2014). Making sustainable consumption and production the core of sustainable development goals. *Sustainability*, 6(2), 513–529.
- Arroyo, P., & Carrete, L. (2019). Motivational drivers for the adoption of green energy: The case of purchasing photovoltaic systems. *Management Research Review*, 42(5), 542–567.
- Ashraf, M., & Khan, K. M. (2016). Adolescents' role in family decision making for services in India. *Young Consumers*, 17(4), 388–403.
- Babaoğul, M., & Bener, O. (2008). *Surdurulebilir Tüketim Davranışı ve Çevre Bilinci Olusturmada Bir Arac Olarak Tüketici Eğitimi*. www.sdergi.hacettepe.edu.tr. Accessed December 15, 2019.
- Baktash, L., & Talib, M. A. (2019). Green marketing strategies: Exploring intrinsic and extrinsic factors towards green customers' loyalty. *Calitatea*, 20(168), 127–134.
- Bhutto, M. Y., Zeng, F., Soomro, Y. A., & Khan, M. A. (2019). Young Chinese consumer decision making in buying green products: An application of theory of planned behavior with gender and price transparency. *Pakistan Journal of Commerce and Social Sciences*, 13(3), 599–619.
- Carfora, V., Cavallo, C., Caso, D., Del Giudice, T., De Devitiis, B., Viscecchia, R., & Cicia, G. (2019). Explaining consumer purchase behavior for organic milk: Including trust and green self-identity within the theory of planned behavior. *Food Quality and Preference*, 76, 1–9.
- Cavana, R., Delahaye, B., & Sekaran, U. (2001). *Applied business research: Qualitative and quantitative methods* (3rd ed.). Wiley.
- Cerjak, M., Mesić, Z., Kopic, M., Kovačić, D., & Markovina, J. (2009). What motivates consumers to buy organic food: Comparison of Croatia, Bosnia Herzegovina, and Slovenia. *Journal of Food Products Marketing*, 16(3), 278–292.
- Chekima, B., & Chekima, K. (2019). The impact of human values and knowledge on green products purchase intention. In *Exploring the dynamics of consumerism in developing nations* (pp. 266–283). IGI Global.
- Chen, T. B., & Chai, L. T. (2010). Attitude towards the environment and green products: consumers' perspective. *Management science and engineering*, 4(2), 27–39.
- Choi, E. J., & Kim, S. H. (2013). The study of the impact of perceived quality and value of social enterprises on customer satisfaction and repurchase intention. *International Journal of Smart Home*, 7, 239–252.
- Council, M. S. (2016). *Seafood consumers put sustainability before price and brand*. MSC.
- Diddi, S., Yan, R. N., Bloodhart, B., Bajtelsmit, V., & McShane, K. (2019). Exploring young adult consumers' sustainable clothing consumption

- intention-behavior gap: A behavioral reasoning theory perspective. *Sustainable Production and Consumption*, 18, 200–209.
- Ginsberg, J. M., & Bloom, P. N. (2004). Choosing the right green marketing strategy: Green marketing has not fulfilled its initial promise, but companies can take a more effective approach if they realize that a one-size-fits-all strategy does not exist. *MIT Sloan Management Review*, 46(1), 79.
- Hubacek, K., Guan, D., & Barua, A. (2007). Changing lifestyles and consumption patterns in developing countries: A scenario analysis for China and India. *Futures*, 39(9), 1084–1096.
- Indian Habit of Being Healthy. (2020, January 19). <https://redseer.com/reports/indian-habit-of-being-healthy/>
- Jain, S. (2019). Factors affecting sustainable luxury purchase behaviour: A conceptual framework. *Journal of International Consumer Marketing*, 31(2), 130–146.
- Joshi, Y., & Rahman, Z. (2015). Factors affecting green purchase behaviour and future research directions. *International Strategic Management Review*, 3(1–2), 128–143.
- Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika*, 39, 31–36.
- Kao, D., & Zhang, L. (2015). *Exploring the role of peer pressure in adolescent brand loyalty: A cross-cultural investigation*. <http://www.google.com.pk/url?sa=t&rcrct=j&q=&esrc=s&source=web&cd=2&ved=0CFUQ>. Accessed January 19, 2020.
- Khare, A. (2015). Antecedents to green buying behaviour: A study on consumers in an emerging economy. *Marketing Intelligence & Planning*, 33(3), 309–329.
- Kirmani, M. D., & Khan, M. N. (2018). Decoding willingness of Indian consumers to pay a premium on green products. *South Asian Journal of Business Studies*, 7(1), 73–90.
- Kumar, P., & Ghodeswar, B. M. (2015). Factors affecting consumers' green product purchase decisions. *Marketing Intelligence & Planning*, 33(3), 330–347.
- Kumar, P., & Polonsky, M. (2017). An analysis of the green consumer domain within sustainability research: 1975 to 2014. *Australasian Marketing Journal*, 25(2), 85–96.
- Kwan, M., Kong, A., & Liu, D. (2019). Interactive and inspiring environmental measures in club management. *MOJ Research Review*, 2(1), 24–28.
- Magnusson, M. K., Arvola, A., Hursti, U. K. K., Åberg, L., & Sjöden, P. O. (2003). Choice of organic foods is related to perceived consequences for human health and to environmentally friendly behaviour. *Appetite*, 40(2), 109–117.

- Mehta, A., & Sharma, S. (2019). A study of consumer behavior and visit intention towards green hotels. *International Journal of Hospitality & Tourism Systems*, 12(2), 27.
- Mostafa, M. M. (2007). A hierarchical analysis of the green consciousness of the Egyptian consumer. *Psychology & Marketing*, 24(5), 445–473.
- Munjal, S. (2019, April 27). *Scale validation of consumer purchase decision behaviour for green products challenges and issues for effective marketing management*. ISBN: 978-1-443-40005-5. SSRN: <https://ssrn.com/abstract=3379089> or <https://doi.org/10.2139/ssrn.3379089>
- Nedra, B. A., Sharma, S., & Dakhli, A. (2015). Perception and motivation to purchase organic products in Mediterranean countries: An empirical study in Tunisian context. *Journal of Research in Marketing and Entrepreneurship*, 17(1), 67–90.
- www.onyalife.com/greendex-ranks-18-countries-based-on-sustainability (December 19, 2019).
- Padel, S., & Foster, C. (2005). Exploring the gap between attitudes and behaviour. *British Food Journal*, 107(8), 606–625.
- Palevich, R. (2012). *The lean sustainable supply chain: How to create a green infrastructure with lean technologies*. Pearson Education.
- Papista, E., & Dimitriadis, S. (2019). Consumer–green brand relationships: Revisiting benefits, relationship quality and outcomes. *Journal of Product & Brand Management*, 28(2), 166–187.
- Paul, J., Modi, A., & Patel, J. (2016). Predicting green product consumption using theory of planned behavior and reasoned action. *Journal of Retailing and Consumer Services*, 29, 123–134.
- Perera, C. R. L., & Rathnasiri Hewege, C. (2013). Climate change risk perceptions and environmentally conscious behaviour among young environmentalists in Australia. *Young Consumers*, 14(2), 139–154.
- Ramayah, T., & Rahbar, E. (2013). Greening the environment through recycling: An empirical study. *Management of Environmental Quality: An International Journal*, 24(6), 782–801.
- Ray, J., & Pugliese, A. (2011). *Indians give environment slight edge over economy*. www.gallup.com/poll/147923/indians-give-environment-slight-edge-economy.aspx. Accessed January 19, 2020.
- Rothenberg, L., & Matthews, D. (2017). Consumer decision making when purchasing eco-friendly apparel. *International Journal of Retail & Distribution Management*, 45(4), 404–418.
- Sahni, S. K., & Osahan, M. K. (2019). Green lifestyle dimensions and cultural orientation of the users of green products: A conceptual analysis. *IUP Journal of Business Strategy*, 16(2), 43–52.

- Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology*, 25, 1–65.
- Sogari, G., Corbo, C., Macconi, M., Menozzi, D., & Mora, C. (2015). Consumer attitude towards sustainable-labelled wine: An exploratory approach. *International Journal of Wine Business Research*, 27(4), 312–328.
- Tan, C. N. L., Ojo, A. O., & Thurasamy, R. (2019). Determinants of green product buying decision among young consumers in Malaysia. *Young Consumers*, 20(2). <https://doi.org/10.1108/YC-12-2018-0898>
- The Times of India. (2023). Deo, Priyanka. Indias rapidly growing youth population a dividend or disaster, 97545222.
- Tsarenko, Y., Ferraro, C., Sands, S., & Mclead, C. (2013). Environmentally conscious consumption: The role of retailers and peers as external influences. *Journal of Retailing and Consumer Services*, 20(3), 302–310.
- Tseng, S., & Hung, S. (2013). A framework identifying the gaps between customers' expectations and their perceptions in green products. *Journal of Cleaner Production*, 59, 174–184.
- Visser, M., Schoormans, J., & Vogtländer, J. (2018). Consumer buying behaviour of sustainable vacuum cleaners-Consequences for design and marketing. *Journal of Cleaner Production*, 195, 664–673.
- Wang, L., Wong, P. P. W., & Narayanan Alagas, E. (2020). Antecedents of green purchase behaviour: An examination of altruism and environmental knowledge. *International Journal of Culture, Tourism and Hospitality Research*, 14(1), 63–82.
- Wang, Y., Xiang, D., Yang, Z., & Ma, S. S. (2019). Unraveling customer sustainable consumption behaviors in sharing economy: A socio-economic approach based on social exchange theory. *Journal of Cleaner Production*, 208, 869–879.
- Wu, S. I., & Chen, Y. J. (2014). The impact of green marketing and perceived innovation on purchase intention for green products. *International Journal Marketing Studies*, 6(5), 81–100.
- Youth in India 2017. (2019, December 20). http://mospi.nic.in/sites/default/files/publication_reports/Youth_in_India-2017.pdf
- Yu, S., & Lee, J. (2019). The effects of consumers' perceived values on intention to purchase upcycled products. *Sustainability*, 11(4), 1034.



Does Social Media Facilitate Admission to Business Schools: Evidence from Prospective Students

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INTRODUCTION

Due to the rapid growth of digital technology in the last couple of decades, there has been a major change in communication methods, models, and mediums in various fields. One major emergent communication model known as social media has grown more rapidly than others. Social media can be defined as a kind of electronic platform where people create and share ideas, interests, information, etc., through virtual communities or with like-minded people (Aichner et al., 2021). Since the inception of social media tools, their application has grown in many ways. In a dynamic learning environment, social media tool is one of

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those factors that has huge scope in academic communication (Camilleri, 2020). The peculiarity of social media expands students' possibilities in terms of how they might improve their experiences in higher education. Social media tools and the Internet have become major forces in India, Lot of people are using them for studies, work, education, entertainment, communication, banking, and online shopping (Saurabh & Sairam, 2016). Social media tools are used for institutional promoting, branding, and marketing of their services (Bose, 2016). Social Media is a powerful tool that has the potential to strengthen the level of communication between students and the institute (Safari & Rahman, 2019).

Due to the demand for bright employees and growing contributions from the service industry, India has experienced enormous growth in the field of advanced management education enterprises. In the past ten years, management training has evolved dramatically in higher education. However, due to shifting environmental conditions, administering these educational institutions, more notably management institutes, has grown more challenging (Kwok & Yu, 2013). Strategic planning has been impacted by and transformed by digital organizations' operations in India. In the sector of education, particularly, paradigm shifts will occur in management education in all facets of education, learning, and marketing (Kietzmann et al., 2011). Genuine worries about the type of output that would be produced about management education in India have been highlighted by the surge in digitization, particularly concerning social media. The main obstacles are educational programs, creative work, problems with going global, and a lack of highly qualified staff (Kaplan & Haenlein, 2010). Social media tools enhance the learning experiences of Indian B-Schools students. It also helps them to get job opportunities and relevant information. (Bharucha, 2018). The issues facing management institutes include marketing their organizations to students for admissions and recruiters for placements, managing internal operations, recruiting, and motivating human resources (Hodis et al., 2015).

As few researchers have only considered the communication perspective of social media, while others have only considered the relationship management perspective, the literature reviewed by the author is constrained in terms of the parameters considered for estimating social media as a marketing tool. However, in this research paper, the authors have attempted to understand how prospective students of the management stream perceive the usefulness of social media communication for college and university admission and marketing. Additionally, the study

released which is the preferred social media platform among prospective management students. To fulfill the above purposes, depth interview has been conducted in 8 different cities in India. The study, based on qualitative research, is divided into the following sections—Sect. 2 covers the review of literature, Sect. 3 consists of methodology, and Sect. 4 and 5 contains data analysis and conclusion and managerial implications.

LITERATURE REVIEW

Role of Social Media in College and University Marketing

The role of social media in the marketing of colleges and universities has long been recognized in the literature. IT-enabled networks help the institution disseminate information easily and rapidly (Rao, 2006). Social networking sites facilitate university admission and make the student recruitment process more robust (Hayes et al., 2009). Colleges and universities tend to use social media tools for three key reasons, viz. to increase interactivity level with the students, to engage the students with the college or the university, and to get feedback (Silius et al., 2010). Almadhoun et al. (2011) commented that there is great potential for social media tools in promoting Higher Education Institutions (HEIs) in Malaysia. Social media platforms enhance collaboration work in University and Higher Education Institutions (HEIs) (Bogdanov et al., 2012). Bogdanov et al. (2012) depicted that social media platform helps to collect, organize, and share resources among students. The use of social media approaches enhanced the learning experiences of undergraduate business students. Their use can cause both the instructor and students to realize their roles in the course and behavior in the classroom must change significantly (Gangwar et al., 2013). This is for the simple reason that social media tools (SMT) can serve as a valuable tool to improve faculty and students' immediacy (Kumi-Yeboah & Blankson, 2014).

Marciano (2015) depicted that the students found many uses of social media platforms, mainly Facebook, in their higher studies. Social media tools help with active content production and moderation, but Higher Education Institutions need to develop formal social media guidelines to enhance their productivity (Pomerantz et al., 2015). Social networking and the Internet have become major forces in India, Lot of people are using it for studies, work, education, entertainment, communication, banking, and online shopping (Saurabh & Sairam, 2016). Romero-Hall

(2016) discussed how social media is a means to share information about events, links, internships and jobs, and other announcements related to the field. This continuous communication has the potential to strengthen the bond between students and the institute. Earlier, social media platforms were being used for outbound marketing of the institutes. Now, the shift is towards inbound marketing where the audience or prospective applicants are pulled toward the institute (Bose, 2016).

The new media has helped to enrich the teaching and learning process and make it more useful in Nigeria (Udoudo & Ojo, 2016). There is a positive contribution of social media tools to students' academic life specifically in higher education (Boateng & Amankwaa, 2016). Students in Nigeria are using social media for collecting and disseminating information, group creation, and integrating the learning process (Bakator et al., 2016). Miller-Carpenter et al. (2016) depicted that in Malaysia social media tools have played a pertinent role in students' academic performance. Students are adversely affected by a lack of time management and health illness due to overuse of social media (Okyeadie Mensah & Nizam, 2016). Overall, SM appears to be a useful tool in the communication between teachers and students and this research shows the various alternatives offered by the application of the ICTs (SM) in the educational field (Bartosik-Purgat et al., 2017). Siti et al. (2017) stated how social media, particularly Facebook, is being used to connect learners and support teachers' teaching. The study was carried out in four countries as Russia, Turkey, Germany, and Switzerland and showed that many instructors in higher education actively use social media platforms for private reasons. Another study depicts the importance of the social media toolkit in enhancing and carrying out academic activities (Gülbahar et al., 2017). Manca and Whitworth (2018) showed how social media influences the classroom is influenced by how faculty members make judgments about the relevance of these media and their affordances, and how they subsequently enfold social media into their developing matrix. In another study carried out in Bulgaria, the authors depicted the informal use of social networks in the educational environment to their formal adoption by participants in the educational process (Doneva & Gaftandzhieva, 2017).

A study conducted by Bharucha (2018) depicts how social media tools enhance the learning experiences of Indian B-Schools students. It also helps them to get job opportunities and relevant information. This research revealed that Facebook dominates social network platforms in the education sector in India (Zachos et al., 2018). The researcher also

stresses the effectiveness of social media tools to develop the learner-centric approach (Amin, 2018). LinkedIn is a powerful tool to build the brand of an educational institute. It offers numerous scopes to improve brand image; the study was carried out at the IIT Kanpur India. The regular posting and updating of information enhance their presence (Sharma & Sharma, 2019). This research enhances the understanding of how social media tools could maximize the learning of students in Arab (Alzouebi & Isakovic, 2019). Social media facilitates lectures and students to involve in different tasks such as sharing content, communicating, and collaborating vigorously with their groups. It also facilitates blended learning in Indonesia (Jamridafrizal et al., 2019). The study depicts that the compulsive use of social media affects negatively academic, physical, and social performance in the UK (Benson et al., 2019). HEIs are reluctant to adopt rapid technological initiatives. The need to follow it strategically to make the learner more delighted (Orr et al., 2019). Social media specifically in the context of higher education need to be implemented in university. However, the adoption of social media tools enriches the teaching–learning process more and more interesting (Mardiana, 2019). Social media and digital technology enhance the visibility and association between college and home (Terracina-Hartman & Nulph, 2019). Social media offers a big opportunity to Higher Education Institutions in terms of student engagement and development in a very constructive way. Integration of specific social media tools throughout the journey of students can make their experience richer and more engaging and hence leading to the success of HEI (Kumar & Nanda, 2019). Social media is used both by professors and students in higher education for effective communication among them (Waller et al., 2019).

In higher education institutes, social media tools have become the most crucial mechanism for communication among students. Students use it both for academic and as well as for non-academic purposes (Samarasinghe & Chandrasiri, 2019). Social media technology enhances the learning experiences, and exchange of knowledge of students in higher education (Lahuerta-Otero et al., 2019). The rapid development of information technology and Web 2.0 applications has focused on knowledge sharing using social media to share academic knowledge (Hamid, 2020). The usage of social media impacts adversely likes as depressive symptoms, individual anxiety, and stress. There is no deep feeling of connection it has only superficial reasons (Iwamoto & Chun, 2020). For long-term sustainability HEIs specifically business schools need to focus on

marketing communication in digital form. However, digital marketing communication will make a difference among its competitor (Camilleri, 2020). MOOCs under the SWAYAM tool provide opportunities for life-long learning. It investigates 3 prime principles that are access, equity, and equality (Bordoloi et al., 2020). In today's era, HEIs are resorting to certain marketing communication techniques to promote educational services. They rely more on interactive media rather than the conventional medium of communication. It helps to improve brand equity among potential students and faculty members and others (Camilleri, 2020). Social media technology has become an essential part of people's life due to modern technology users that create, share their experiences, information, and skills, and communicate and share knowledge among people through the internet. Chauhan et al. (2021) did a review a paper on how information technology is a positive instrument in the process of transforming higher education. It also has played a positive influence on learning outcomes.

From the extant literature reviewed we did not find how prospective students of management, or any other field perceive the usefulness of social media platforms in the collection of various information related to college and university enrollment. However, many studies depicted the usability and application of social media tools for information sharing, informing, and communicating in general purpose. Therefore, the goal of this study is to investigate social media marketing insights for management institutes. Several empirical factors are considered. It is hoped that the research will address the issue of how social media tools can be become an effective marketing tools for prospective students in India.

RESEARCH OBJECTIVE AND METHODOLOGY

Based on the review of the literature the following 3 hypotheses were developed for the study.

- To understand the usage of social media tools among the prospective students.
- To know the preferences of the different social media tools among prospective students.
- To understand the importance of social media reviews and ranking for B-School enrollment among prospective students.

Research Methodology

To explore the usage of social media tools, the researcher conducted a qualitative in-depth interview. A qualitative in-depth interview technique is useful to understand prospective respondents' experiences and motives behind a situation (Carolyn Boyce, 2006). An in-depth interview is helpful when a researcher wishes to detailed information regarding an individual's thoughts and behaviors or wants to explore the latest issues in depth (Guion et al., 2011). Purposive sampling was adopted to ensure that there will be an equal representation of the samples from each zone of India. The items in the sample are chosen by the researcher, using judgment or skill, since it is thought that they are representative of the population of interest or are otherwise acceptable (Malhotra et al., 2017).

An interview guide was prepared by the researcher for the in-depth interview so that the study could be carried out successfully. There were 96 prospective students are expressed interest in taking part in the study. The interview consent was taken for the time and availability from the top 100 B-Schools of the National Institutional Ranking Framework (NIRF) list of the Ministry of Education (MoE), Government of India. In addition, a few participants were found to be unsuitable for further investigation leaving a total of 82 (77.76%) respondents who were interviewed. However, only 72 (75%) samples are deemed fit for the analysis. Unstructured and flexible depth interview questions approaches were adopted to extract the most insights possible from the process. The interview took place over three months via phone calls and the Zoom platform in English. The length of the interviews varied from 20 to 30 minutes.

Four Indian regions are represented by the sample (a. East b. West c. North and d. South). Two cities in each zone, Bhubaneswar, and Kolkata were used as our data sources in the east. The western region includes Ahmedabad and Mumbai. From the northern zone come to Delhi and Jaipur, while from the southern zone come to Hyderabad and Bangalore.

Method of Data Analysis

The interviews were conducted over the Zoom platform and via phone calls with participants who had already given their consent to participate and were available. At the outset, the study's objectives, and its inquiries—which pertained to the general usability of social media platforms—were briefly covered. The middle of the interview is where the researcher seeks

to thoroughly capture the value of social media tools in the academic lives of the participants. The author also inquires about how social media rankings and reviews promote the marketing and promotion of business schools.

The interview has been taped and the same has been transcribed with the help of software (Microsoft otter.ai.) since the qualitative data transcription process takes a considerable amount of time (Friese, 2019). The data was further cleaned and edited through a manual process because the software was unable to understand the different accents of the interviewee (Paulus et al., 2015). The data is processed through the Computer Assisted Qualitative Data Analysis Software (CAQDAS) i.e., *Atlas. ti* version 9. The transcripts are processed through *Atlas. ti*. Each transcript is coded using different quotations. The codes have been cross checked by to co-author to achieve interrater reliability. The master codes have been reported in the analysis part.

DATA ANALYSIS

Considering the demographic profile of the prospective students, the median and mode age of the respondents is 21 years. The minimum and maximum ages are about 19 and 27 years, respectively. The larger respondent falls in the age group of 22 to 24 years which contributed about (38.89%) of the whole. The next is 19 to 21 and 25 to 27 which contributed about (37.50%) and (23.61%), respectively. The respondents comprise 44.44 and 55.56% of female and male respondents, respectively. The details are summarized in Table 13.1.

The in-depth interview revealed that social media tools are primarily used by prospective students for social connectivity and to get updates on day-to-day happenings. Perspective students regularly come across different social media tools for sharing ideas, and important updates related to study and society at large. The first insight from the interviews revealed that 84.72% of prospective students used the social media platforms such as Instagram, LinkedIn and Facebook, and others for the sake of networking and socializing among them. Prospective students particularly connect with their peers, faculty, alumni, and others as well. Social connectivity primarily helps them to get familiar with the institute and provides a sense of satisfaction before enrollment into the college and university. They can get real and direct information as mentioned on websites and other digital platforms. The virtual connectivity on social

Table 13.1
Participants'
demographic

<i>Characteristics</i>	<i>Frequency</i>	<i>Percentage</i>
<i>Gender distribution</i>		
Male	40	55.56
Female	32	44.44
<i>Age distribution</i>		
19–21	27	37.50
22–24	28	38.89
25–27	17	23.61
<i>Zonewise distribution</i>		
East	19	26.39
Bhubaneswar	9	12.50
Kolkata	10	13.89
West	17	23.61
Ahmedabad	9	12.50
Mumbai	8	11.11
North	18	25.00
Delhi	9	12.50
Jaipur	9	12.50
South	18	25.00
Bangalore	9	12.50
Hyderabad	9	12.50
<i>n = 72</i>		

Source Author

media platforms reduces their level of anxiety and dissonance before joining the institute. Prospective students' interactivity with the alumni, faculty, institute, and their peer groups generate a favorable attitude towards the college and university.

Social media tools actively help prospective students in collecting admission-related information. About 56.94% of students seek information related to their entrance test date, pattern, procedure, course fee, college ranking, placement, and other information too. The social media tools Facebook, Instagram, LinkedIn, YouTube, and others are helping prospective students collect academic-related information such as faculty credibility, institute placement record, course fee, conferences, and other related information on these platforms. The prospective student also actively collects the reviews and rankings of the college and university from LinkedIn, Facebook, Instagram, YouTube, Quora, Shiksha.com, Pagalguy.com, MBA Universe, and others. 73.61% of students agreed that

online reviews and ranking on different social media platforms boost them to choose college and university.

The depth interview also revealed that 87.50% of prospective students reported that these social media tools play a key role in business school marketing and promotion. The educational institutions are considerably looking and investing a larger amount of money in B-Schools promotion and marketing. Past studies also depicted many avenues of social and digital media importance in college and university marketing, promotion, and brand building (Almadhoun et al., 2011; Calitz et al., 2012; Camilleri, 2020; Hayes et al., 2009; Kumar & Nanda, 2019; Sharma & Sharma, 2019; Singh & Bansal, 2018; Terracina-Hartman & Nulph, 2019) (Fig. 13.1).

The word cloud in Fig. 13.2 was developed based on how potential students used social media. The word transcripts are processed using *Atlas.ti* application. The criterion and filter considered terms with more than four letters, and they left out certain important words. The software was then given these words. Larger fonts indicate that the words are more significant and frequently used. The words social media, college, student, like, get, information, Instagram, management, helping, rating, reviews, etc., were discovered to be frequently occurring words in our analysis. It appears that prospective students rely on social media reviews and rankings to gather information about colleges and universities through social media platforms such as Instagram and others.

The study also revealed the preference for social media platforms among prospective students (Table 13.2). The qualitative interview found

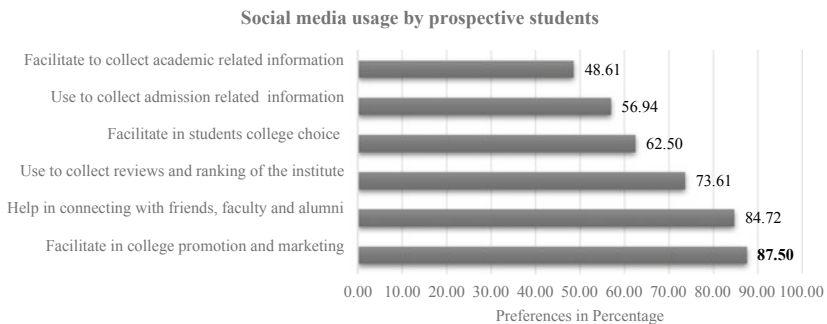


Fig. 13.1 Purposes of using the social media platform



Fig. 13.2 Word cloud based on usage of social media by the prospective student (*Source* Authors)

that Facebook is the most preferred social media platform in the eastern zone. It means the Bhubaneswar and Kolkata region students mostly use Facebook (38.5%) as their primary tools for sharing, networking, socialization, and communicating. The 2nd important platform is Instagram (27.8%) of students like to share, collect, and communicate. The social web portals like Quora/Shiksha/Pagalgyu/MBA Universe (30.8%) are the 3rd choice among prospective students for the social media platform. LinkedIn (25%) is the 4th choice among prospective students and Snapchat (25%) is ranked 5th preferred platform. However, the platform YouTube is the least preferred tool among prospective students of the eastern zone. Probably, prospective students of the eastern zone are not liked or influenced by YouTube. Rather, they are fond of Facebook and Instagram.

Table 13.2 Student’s preferences for social media platforms (%age preferring)

<i>Social Media Platform/ Zone</i>	<i>East</i>	<i>West</i>	<i>North</i>	<i>South</i>
Facebook	38.5	23.1	15.4	23.1
Instagram	27.8	27.8	27.8	16.7
LinkedIn	25.0	18.8	31.3	25.0
Quora/Shikhya/Paglgyu/MBA Universe	30.8	15.4	23.1	30.8
Snapchat	25.0	25.0	25.0	25.0
YouTube	0.0	37.5	25.0	37.5

*The bold item is the top preferred platform of the zones

Contrary, to the eastern the western zone (Ahmadabad and Mumbai) students, revealed that YouTube (37.5%) is the most liked platform and ranked 1st among the platforms. Instagram (27.8%) is ranked 2nd among the other platforms. The social media platform Snapchat contributed about (25%) and ranked 3rd among the platforms. Facebook contributing about (23.1%) is the 4th preferred platform among the others. However, LinkedIn (18.8%) and Quora/Shiksha/Pagalgyu/MBA Universe (15.4%) are the 5th and 6th choices that students use to share, collect, and communicate.

In the north (Delhi and Jaipur) region, students revealed that LinkedIn (31.3) is 1st preferred platform among others. The platform Instagram is contributing about (27.8%) and ranked 2nd among the social media platforms. The platform Snapchat and YouTube contributed about (25%) among the others. The web portals such as Quora/Shiksha/Pagalgyu/MBA Universe is contributing about (23.1%) and ranked 4th among the others. Facebook (15.4%) is the least preferred platform among prospective students, used to share, collect, and communicate.

Similarly, the zone south consists of (Bangalore and Hyderabad) region students who preferred YouTube (37.5%) as the most preferred platform among others. The web portals such as Quora/Shiksha/Pagalgyu/MBA Universe (30.8%) 2nd preferred medium students are used to communicating. Whereas LinkedIn contributes about (25%) and is ranked as 3rd most preferred among the others. The platform Snapchat comes under 4th and contributes (25%). However, Facebook (23%) and Instagram (16.7%) are chosen as the 5th and 6th tools, used to share, collect, and communicate.

To understand the importance of social media reviews and ranking in the B-Schools choice and marketing process the researcher compared its preferences among the 4 zones (Fig. 13.3). It was found about (83.3%) of management prospective students in the south zone consider social media reviews and ranking before enrolling in college and university. They believe that social media reviews and ranking will make them aware of different aspects of the institute such as placement records, campus environment, faculty credibility, and important information related to enrollment. Whereas in the eastern zone (78.9%) of students considered social media reviews and ranking before enrollment in college and university. Considering Western respondents (70.6%) of prospective students are concerned about social media reviews and ranking. However, about (66.7%) of students in the north zone consider social media review and

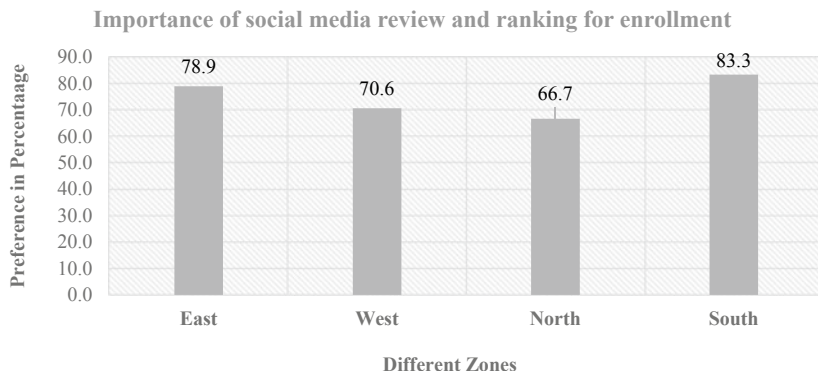


Fig. 13.3 Preferences of social media reviews and ranking among zones (*Source Authors*)

raking before enrollment in the institute. Hence, the social media platforms such as Instagram, LinkedIn, Facebook, Quora, PagalGuy, etc., are primary tools that play a key role during the college and university choice process. The college and university must promote and market their courses, faculty, institute, and other related services among prospective students.

CONCLUSION AND MANAGERIAL IMPLICATION

The depth interview revealed the many pertinent usefulness of social media among prospective students. The first objective was to understand the different usage of social media tools among prospective students. The study found that prospective students use social media platforms such as Facebook, Instagram, LinkedIn, YouTube, and others to connect with their friends, faculty, alumni, acquaintances, and others. These tools actively helping to prospective students collect academic-related information such as faculty credibility, institute placement record, course fee, conferences, and other related information. The prime purpose of the students is to get aware of the day-to-day happening, events, news, and many others.

According to the study, the majority (73.61%) of prospective students believed that ratings and reviews on various social media platforms influence their perceptions of colleges. College and university choice is

likely influenced by the reviews and rankings on social media. It specifically assists students in evaluating colleges and universities from several perspectives before joining, such as the campus environment, faculty credibility, placement record, and overall institute image.

Additionally, the in-depth interview found that (87.50%) of prospective students believed that these social media platforms are essential for business school marketing and promotion. The educational institutions are focusing on and spending more money on promoting and marketing B-Schools. Our finding also aligns with past studies by (Almadhoun et al., 2011; Camilleri, 2020; Hamid, 2020; Hayes et al., 2009; Kumar & Nanda, 2019; Saurabh & Sairam, 2016; Sharma & Sharma, 2019). Social and digital media have a variety of uses in college and university marketing, promotion, and institutional branding. According to the zone-wise correlation results, zone east has a considerably different level of linkage from the other zones. However, there is very little similarity between the north and west, and there is barely any similarity with the south. It implies that to target and market the resources of the institute of each zone, a distinct method and plan are needed.

To attract potential students, the management school administrator needs to advertise their campus events, faculty reputation, placement statistics, and other relevant information on digital and social media platforms. Most likely, these brand-building activities assist prospective students in becoming aware of and familiar with the institutional offerings that will influence their decision.

Prospective management students in India heavily rely on the rankings and reviews shared on various digital and social media platforms. The marketing of B-School also benefits from the use of cutting-edge websites like Quora, Shiksha.com, PagalGuy, and MBA Universe which is contributing the 2nd most preferred platforms in the east and south zone. Before enrolling, prospective Indian management students check the reviews and rankings of several platforms to be positive. The ratings and recommendations on social media are probably reducing the amount of dissonance before choosing the management institution. The study may be useful to educational administrators, social media managers, admission counselors, and other stakeholders for proper targeting and promotion of the institution and university.

Over the available social media tools, the private Indian B-Schools must prefer to advertise and promote the course, placement, faculty, infrastructure, and other relevant factors with the prospective students. For a wider

audience and a larger selective set of students, the promotional efforts will be carried out through Instagram, LinkedIn, Facebook, YouTube, Quora, Shiksha.com, PagalGuy, and MBA Universe. The social media managers of various B-Schools could target potential students based on the needs of each zone or location. The social managers need to promote the college and university offerings in the eastern region with the help of Facebook (38.5%) because it is the top preferred platform among the students in the zone. For the west YouTube (37.5%), in the north LinkedIn (31.3%), and for the south YouTube (37.5%) contributed the most among the zones. Hence, social media managers need to develop a unique approach and strategy to promote their offerings in the zones.

LIMITATION AND SCOPE FOR FUTURE RESEARCH

The sample sizes for the study are limited, but a bigger sample size likely paints a clearer picture of the findings. In the study, only 8 cities from 4 zones were included; other cities may have different interests and opinions. The study could therefore be extended to other Indian cities or other nations. This study only examined the opinions of prospective Indian management students. Future research may focus on other student branches or streams. The quantitative investigation perhaps more adequately confirms the results.

REFERENCES

- Aichner, T., Grünfelder, M., Maurer, O., & Jegeni, D. (2021). Twenty-five years of social media: A review of social media applications and definitions from 1994 to 2019. In *Cyberpsychology, behavior, and social networking* (Vol. 24, Issue 4, pp. 215–222). Mary Ann Liebert Inc. <https://doi.org/10.1089/cyber.2020.0134>
- Almadhoun, N. M., Dominic, P. D. D., & Woon, L. F. (2011). Social media as a promotional tool in higher education in Malaysia. *2011 National Postgraduate Conference—Energy and Sustainability: Exploring the Innovative Minds, NPC 2011*. <https://doi.org/10.1109/NatPC.2011.6136267>
- Alzouebi, K., & Isakovic, A. A. (2019). Exploring the learner perspective of social media in higher education in the United Arab Emirates. *Global Journal of Engineering Education*. <https://www.researchgate.net/publication/333055569>

- Amin, A. (2018). The conflict between social media and higher education institutions. *Global Business and Management Research: An International Journal*. <https://www.researchgate.net/publication/329671757>
- Bakator, M., Terek, E., Petrović, N., Zorić, K., & Nikolić, M. (2016). The Impact of Social Media on Students' Education. *International Conference on Information Technology and Development of Education—ITRO 2016 June, 2016. Zrenjanin, Republic of Serbia*. <https://www.researchgate.net/publication/331286961>
- Bartosik-Purgat, M., Filimon, N., & Kiygi-Calli, M. (2017). Social media and higher education—An international perspective. *Economics and Sociology*, 10(1), 181–191. <https://doi.org/10.14254/2071-789X.2017/10-1/13>
- Benson, V., Hand, C., & Hartshorne, R. (2019). How compulsive use of social media affects performance: Insights from the UK by purpose of use. *Behaviour and Information Technology*, 38(6), 549–563. <https://doi.org/10.1080/0144929X.2018.1539518>
- Bharucha, J. (2018). Exploring education-related use of social media: Business students perspectives in a changing India. *Education and Training*, 60(2), 198–212. <https://doi.org/10.1108/ET-07-2017-0105>
- Boateng, R. O., & Amankwaa, A. (2016). The impact of social media on student academic life in higher education. *Global Journal of HUMAN-SOCIAL SCIENCE: GLinguistics & Education*. <https://www.researchgate.net/publication/331000005>
- Bogdanov, E., Limpens, F., Li, N., el Helou, S., Salzmann, C., & Gillet, D. (2012). A Social Media Platform in Higher Education. *IEEE Global Engineering Education Conference (EDUCON)*. <https://doi.org/10.1109/EDUCON.2012.6201105>
- Bordoloi, R., Das, P., & Das, K. (2020). Lifelong learning opportunities through MOOCs in India. *Asian Association of Open Universities Journal*, 15(1), 83–95. <https://doi.org/10.1108/aaouj-09-2019-0042>
- Bose, A. (2016). Social media and education sector: Enriching relationship. *Global Media Journal—Indian Edition*. www.caluniv.ac.in
- Camilleri, M. A. (2020). Higher education marketing: Opportunities and challenges in the digital Era. *Academia (Greece)*, 2019(16–17), 4–28. <https://doi.org/10.26220/aca.3169>
- Calitz, A., & Cullen, M. (2012). *The Use of Social Media in Business School Marketing*. In International Business Conference (IBC).
- Carolyn Boyce, B. (2006). *Monitoring and evaluation-2 conducting in-depth interviews: A guide for designing and conducting in-depth interviews for evaluation input*.
- Chauhan, S., Gupta, P., Palvia, S., & Jaiswal, M. (2021). Information technology transforming higher education: A meta-analytic review. *Journal of Information*

- Technology Case and Application Research*, 23(1), 3–35. <https://doi.org/10.1080/15228053.2020.1846480>
- Doneva, R., & Gaftandzhieva, S. (2017). Social media in bulgarian higher education: An exploratory survey. *International Journal of Human Capital and Information Technology Professionals*, 8(4), 67–83. <https://doi.org/10.4018/IJHCITP.2017100106>
- Friese, S. (2019). *Qualitative data analysis with ATLAS.ti*.
- Gangwar, S., Deshbhratar, A., & Garg, P. (2013). Social media in quality enhancement in higher education. *International Journal of Research and Development—A Management Review (IJRDMR)*, 2, 2319–5479.
- Guion, L. A., Diehl, D. C., & McDonald, D. (2011). *Conducting an In-depth Interview I*. www.aidsmark.org/ipc_en/pdf/manual/14_Research
- Gülbahar, Y., Rapp, C., Kilis, S., & Sitnikova, A. (2017). Enriching higher education with social media: Development and evaluation of a social media toolkit. *International Review of Research in Open and Distance Learning*, 18(1), 23–39. <https://doi.org/10.19173/irrodl.v18i1.2656>
- Hamid, S. A. (2020). Knowledge Management using Social Media Tools in Higher Education Institution (Review). *Recent Trends in Information Technology and Its Application*, 3(1). <https://doi.org/10.5281/zenodo.3669992>
- Hayes, T. J., Ruschman, D., & Walker, M. M. (2009). Social networking as an admission tool: A case study in success. *Journal of Marketing for Higher Education*, 19(2), 109–124. <https://doi.org/10.1080/08841240903423042>
- Hodis, M. A., Sriramachandramurthy, R., & Sashittal, H. C. (2015). Interact with me on my terms: A four segment Facebook engagement framework for marketers. *Journal of Marketing Management*, 31(11–12), 1255–1284. <https://doi.org/10.1080/0267257X.2015.1012535>
- Iwamoto, D., & Chun, H. (2020). The emotional impact of social media in higher education. *International Journal of Higher Education*, 9(2), 239–247. <https://doi.org/10.5430/ijhe.v9n2p239>
- Jamridafrizal, Wibawa, B., & Ibrahim, N. (2019). Leveraging social media in accommodating collaborative learning in Indonesian Islamic higher education. *International Journal of Recent Technology and Engineering*, 8(2 Special Issue 9), 151–158. <https://doi.org/10.35940/ijrte.B1033.0982S919>
- Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, 53(1), 59–68. <https://doi.org/10.1016/j.bushor.2009.09.003>
- Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business Horizons*, 54(3), 241–251. <https://doi.org/10.1016/j.bushor.2011.01.005>

- Kumar, V., & Nanda, P. (2019). Social media in higher education: A framework for continuous engagement. *International Journal of Information and Communication Technology Education*, 15(1), 109–120. <https://doi.org/10.4018/IJICTE.2019010108>
- Kumi-Yeboah, A., & Blankson, H. (2014). Social media and use of technology in higher education. In *Handbook of Research on Education and Technology in a Changing Society* (pp. 217–234). IGI Global. <https://doi.org/10.4018/978-1-4666-6046-5.ch017>
- Kwok, L., & Yu, B. (2013). Spreading social media messages on Facebook: An analysis of restaurant business-to-consumer communications. *Cornell Hospitality Quarterly*, 54(1), 84–94. <https://doi.org/10.1177/1938965512458360>
- Lahuerta-Otero, E., Cordero-Gutiérrez, R., & Izquierdo-Álvarez, V. (2019). Using social media to enhance learning and motivate students in the higher education classroom. *Communications in Computer and Information Science*, 1011, 351–361. https://doi.org/10.1007/978-3-030-20798-4_30
- Malhotra, N. K., Nunan, D., & Birks, D. F. (2017). *An applied approach*. www.pearson.com/uk
- Manca, A., & Whitworth, A. (2018). Social media and workplace practices in higher education institutions: A review. *The Journal of Social Media in Society Spring*, 7 (1).
- Marciano, J. E. (2015). Becoming Facebook friendly: Social media and the culturally relevant classroom the Youth Voices Project View project. *The English Journal*, 104(5). <https://www.researchgate.net/publication/303689593>
- Mardiana, H. (2019). Social media in higher education and its effect on global challenge. *Indonesian Journal of Learning and Instruction*, 2(01). <https://doi.org/10.25134/ijli.v2i01.1682>
- Miller -Carpenter, S., Takahashi, B., Cunningham, C., & Alisa, P. (2016). The roles of social media in promoting sustainability in higher education. *International Journal of Communication*. <http://ijoc.org>
- Okyeadie Mensah, S., & Nizam, Dr. I. (2016). The impact of social media on students' academic. *International Journal of Education, Learning & Training (IJELT)*, 1(1), 14–21. <https://doi.org/10.24924/ijelt/2016.11/v1.iss1/14.21>
- Orr, D., Weller, M., & Farrow, R. (2019). How is digitalisation affecting the flexibility and openness of higher education provision? Results of a global survey using a new conceptual model. *Journal of Interactive Media in Education*, 2019(1). <https://doi.org/10.5334/jime.523>
- Paulus, T., Woods, M., Atkins, D. P., & Macklin, R. (2015). The discourse of QDAS: reporting practices of ATLAS.ti and NVivo users with implications

- for best practices. *International Journal of Social Research Methodology*, 20(1), 35–47. <https://doi.org/10.1080/13645579.2015.1102454>
- Pomerantz, J., Hank, C., & Sugimoto, C. R. (2015). The state of social media policies in higher education. *PLoS One*, 10(5). <https://doi.org/10.1371/journal.pone.0127485>
- Rao, S. S. (2006). Distance education and the role of IT in India. *Electronic Library*, 24(2), 225–236. <https://doi.org/10.1108/02640470610660396>
- Romero-Hall, E. (2016). Social media in higher education: Enriching graduate students' professional growth outside the classroom. In *Digital Tools for Seamless Learning* (pp. 255–277). IGI Global. <https://doi.org/10.4018/978-1-5225-1692-7.ch013>
- Safari, A. O., & Rahman, N. A. B. A. (2019). Higher education and social media: An empirical evidence from Jordan and Malaysia. *Advances in Journalism and Communication*, 07(04), 118–128. <https://doi.org/10.4236/ajc.2019.74008>
- Samarasinghe, S., & Chandrasiri, T. (2019). The impact of social media on students' academic performance. *Article in American Scientific Research Journal for Engineering*. <http://asrjetsjournal.org/>
- Saurabh, S., & Sairam, A. S. (2016). Effect of social networking on higher education in India. *Social Networking and Education*, 51–68. https://doi.org/10.1007/978-3-319-17716-8_4
- Sharma, A., & Sharma, R. P. (2019). Social media for branding of higher education institutes in India: A case study. *Journal of Information Technology and Sciences*. <https://doi.org/10.5281/zenodo.3270562>
- Silius, K., Miilumäki, T., Huhtamäki, J., Tebest, T., Meriläinen, J., & Pohjolainen, S. (2010). Students' motivations for social media enhanced studying and learning. *Knowledge Management & E-Learning: An International Journal*, 2(1), 53.
- Singh Bhandari, R., & Bansal, S. (2018). Prospects and challenges of social media marketing: study of Indian Management institutes. *Sanjeev Bansal/ East Asian Journal of Business Management*, 8(4), 5–15. <https://doi.org/10.13106/eajbm.2018.vol8.no4.5>
- Siti, D., Pg, N., & Besar, H. (2017). Social Media and its Implementation in Higher Education. *Journal Indonesia Untuk Kajian Pendidikan*. <http://ejournal.upi.edu/index.php/mimbardik>
- Terracina-Hartman, C., & Nulph, R. G. (2019). Examining the Social Media Linking College Media to “Home.” *Journal of the College Media Association*, 56. <http://cmreview.org/social-media-link-to-home/>
- Udoudo, A. J., & Ojo, G. O. (2016). New media and the development of education sector: Appraisal of selected schools. *SAGE Open*, 6(4). <https://doi.org/10.1177/2158244016671373>

- Waller, R. E., Lemoine, P. A., & Richardson, M. D. (2019). Instruction using social media in global higher education. *Journal of Education and Development*, 3(1), 28. <https://doi.org/10.20849/jed.v3i1.563>
- Zachos, G., Paraskevopoulou-Kollia, E. A., & Anagnostopoulos, I. (2018). Social media use in higher education: A review. *Education Sciences*, 8(4). MDPI AG. <https://doi.org/10.3390/educsci8040194>



Analytical Study of Factors Influencing Consumer Choice Heterogeneity for the Acceptance of Functional Foods (Foods with Health Claims) in India

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SCOPE AND RATIONALE

The “Food-Nutrition-Health-Wellbeing” paradigm has significantly changed in the last two decades. A complex interplay of demographic, psychographic and socio-economic factors such as rising incomes,

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consumer wellness trends, affluent lifestyles and desire for an improved quality of life with higher life expectancy have influenced this paradigm. Other factors like increasing incidences of lifestyle-related diseases, stress and changing diet patterns and rising health care costs have also influenced the above paradigm.

These factors have led to the development of the concept of food as medicine and medicine as food, where food has both a nutritive as well as therapeutic function playing a central role in the “*Food-Nutrition-Health-Wellbeing*” paradigm (Hasler, 1998; Menrad, 2003; Roberfroid, 2000) help enable prevent/delay the incidences of major diseases (Arai et al., 2002; European Food Information Council, 2005). Several global FMCG and Nutrition companies leveraging the above trends launched several innovative foods with nutritional and therapeutic properties with health claims such as *Probiotics, Prebiotics, Fortified Cereals, Fortified Oils, Fortified Confectionery, and Fortified Snacks* which have witnessed the largest growth rates among the various food categories.

The term “functional” when applied to food means—a food that provides an additional physiological benefit beyond that of meeting basic nutritional needs, the concept was first promoted in 1984 by Japanese scientists where a food category called FOSHU (Foods for Specific Health Use) was established in 1991 to reduce the health care costs. They are technically defined as those foods that by virtue of the presence of physiologically active components, provide a health benefit beyond basic nutrition these include whole, fortified, enriched or enhanced foods and should be consumed as part of a varied diet on a regular basis, at effective levels (Hasler, 2000) distinguishing them from drugs, pills or capsule

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making them a part of normal food consumed (Diplock et al., 1999; ILSI Europe, 2002).

RESEARCH PROBLEM

The consumer acceptance of functional foods is not unconditional and is determined by a complex interplay of a host of factors. Factors like primary health concerns, consumers' familiarity with the "functional food" concept and the functional ingredients, the manner of health effect communication, consumer demographics and psychographic variables like consumer beliefs, perceptions, their knowledge, awareness and attitudes towards health and nutritional, their lifestyles, their current diet patterns and health status, the health claims used in marketing of functional foods, even the degree to which sensory properties meet customer expectations; the price and availability of the food (Bech-Larsen & Grunert, 2003; De Jong et al., 2003; Frewer et al., 2003) play a very critical role in the consumer acceptance of these foods, and therefore, generalization of consumer characteristics is not valid.

The main aim of this study is to investigate and analyse, how various demographic factors, like age, gender, income and educational levels, combined with the differing levels of consumer awareness and knowledge, consumer perceptions, beliefs, attitudes and interests about health and nutrition, interplay and influence each other, to explain/determine the heterogeneity in consumer preference/acceptance of functional foods across different Indian consumer segments.

LITERATURE REVIEW

Functional Foods: Diet -Disease Relationship and Consumer Awareness, Beliefs and Attitudes

Consumer understanding, awareness and belief that nutrition plays a vital role in providing good health and prevention of disease (IFIC, 2000) has increased due to several government, public health and education campaigns (Childs, 1997). This has led to an increased demand for foods which help reduce the risk of disease (Toner & Pitman, 2004) prevent, manage or treat a condition. Most consumers today agree that eating healthfully is a better way to manage illness than medications (Childs, 1997). The HealthFocus survey identified a "Food as Medicine" segment

of consumers aged between 35 and 64 years of age with a concern for long-term health, better educated consumers (Childs & Poryzees, 1997) women, higher income groups, with significantly higher beliefs in the health benefits of foods compared to the younger consumers. The awareness of a relationship between diet and health (diet-disease relationship) coupled with attitudes and beliefs play an important role in shaping eating behaviour (Frazao, 1999) with attitudes being vital predictors with motivators of behavioural change along with knowledge that provides information essential for behavioural change. Attitudes routinely studied by nutrition surveys include belief in the relationship of diet and health, the importance of nutrition compared with other food attributes, the importance of following specific dietary guidelines and perceived barriers to dietary change (Frazao, 1999). Knowledge of diet-health relationships has led to changes in dietary habits (Bhaskaran & Hardley, 2002). Beliefs about diet-disease relationship and healthy eating vary across demographic groups with food eating choices based on the gender of an individual (Saher et al., 2004) age, race group also influencing the beliefs and attitudes of consumers.

Functional Foods: Gender and Age

Research shows that women as compared to men are strong believers in the health benefits of foods (Childs & Poryzees, 1998), display a stronger purchase interest in food that helps prevent disease (Childs & Poryzees, 1997, 1998), are more reflective about food and health issues and confident with uncritical and traditional view of eating (Beardsworth et al., 2002; Gilbert, 1997; Teratanavat & Hooker, 2006; Verbeke, 2004). This is perhaps because women being the primary food shopper bear a greater responsibility for selecting, preparing food for the household (Bech-Larsen & Scholderer, 2007). A study of adults and college students from Belgium, France, USA and Japan showed that the Americans generally associate food most with health and least with pleasure, while the French group was high on food-pleasure orientation but least on the food-health orientation (Rozin, 1996). In all four countries, women unlike men showed a pattern of attitudes resembling more with the Americans, and less like the French (Rozin, 1996). A vital socio-demographic factor is the presence of young children in the household (Maynard & Franklin, 2003) and the relatives' loss of good health influencing the

food choice decisions. With age the general health interest in food-related matters increases (Saher et al., 2004). The older age participants (>55 years) demonstrated more awareness, switching dietary behaviour to functional foods, were less sceptical of the manufacturer claims, making food choices that were preventive, influenced by their perceived vulnerability to the risk of chronic ailments compared to the younger individuals who choose food based on price, taste and promotional offer and who preferred low fat products for weight loss compared to consuming high fibre and calcium fortified foods and displayed resistance to shift to functional foods (Bhaskaran & Hardley, 2002). Study by (Childs & Poryzees, 1998) demonstrated that respondents with higher income and education showed higher levels of the diet-health belief compared to those with lower income Shepherd et al. (1996) state that positive attitudes towards eating a healthy diet are expressed by people of all income levels, with income having a destabilizing effect on food habits when there is a decrease in income. A long-term income reduction may lead to a greater proportion of income being spent on food, contrastingly an increase in income does not necessarily lead to increased expenditure on food nor improved diet quality overall.

Functional Foods: Health Claims, Trust and Communication

Healthiness being a credence attribute is not perceived directly by using the product itself but has to be communicated (Nelson, 1970; Mixon, 1995; Oude Ophuis & van Trijp, 1995). Confidence-related aspects strongly underlie the acceptance of functional foods (Poulsen, 1999; Verbeke, 2005) stressing a need to striking a balance between gaining the attention and trust of the consumer (Lähteenmäki, 2004). Men and women display different interests and beliefs in functional foods with men more interested in foods with energy boosting effects compared to women (Saher et al., 2004).

Research Objectives

- To study the role, type, nature and the influence of demographic factors.
- To study, how the various demographic factors and different consumer awareness and beliefs about health and nutrition explain/determine the heterogeneity in consumer preference and tastes.

- To study the various sources of information of consumers about functional foods and the trust enjoyed by them and their influence on the consumer.
- To study how the heterogeneity in consumer preference and demographics influence the consumer's relationship between lifestyle, health and nutrition.
- To enable the policymakers, food manufacturers and marketers to gain insights into the behavioural aspects of the Indian consumer.

RESEARCH METHODOLOGY

A thorough review of literature involving functional foods and its various dimensions was done spanning at least over a decade. A field survey using a structured questionnaire was conducted in Pune city geographically divided into six different regions, categorized on various criteria like location of population, in industrial clusters or pure residential clusters- upscale; working class suburbs- middle-income localities etc. 1222 completed questionnaires were selected out of total 1800 respondents surveyed. The questionnaire was divided into nine segments namely consumer demographics, consumer information and knowledge of nutrition and health, Consumer Information and Knowledge of Functional Foods, Consumer Sources of Nutrition Information of Functional Foods, Consumer Beliefs about Nutrition and Health, Consumer Health and Exercise History, Current Consumption Habits and Purchase Patterns, Consumer Beliefs about Functional Foods and Consumer Attitudes about Functional Foods (Buyers & Non Buyers section). Appropriate scale testing and validation was done employing a 7-point Likert scale.

Interdisciplinary Relevance of the Study

The major stakeholders like the food industry, consumers, the health sector and governments have differing but strongly interdependent interests (McConnon et al., 2002) with the trust enjoyed by the health professionals, the consumers, government's legislative role, all of this underscores the interdisciplinary relevance helping consumer's make informed dietary choices essential to achieve success in the functional foods market where world's leading food companies like Monsanto,

Table 14.1 Information, Knowledge about Nutrition and Health (IKNH) vs demographics

<i>Analysis Summary</i>				
<i>Information and Knowledge about Nutrition and Health (IKNH) vs demographics</i>				
<i>Test: ANOVA; p Value 0.05</i>			<i>Cronbach α Value: 0.800</i>	
<i>Variables</i>	<i>H_O</i>	<i>H_A</i>	<i>Sig. Value</i>	<i>REMARKS</i>
Age	Accept	Reject	0.351	IKNH does not significantly vary across Age groups
Gender	Reject	Accept	0.000	Gender significantly influences the respondent's IKNH
Education	Reject	Accept	0.000	Education Level significantly influences the respondent's IKNH
Income	Accept	Reject	0.163	Income Levels do not significantly influence the respondent's IKNH

Unilever, P&G, Nestle, Danone, etc., have invested huge resources in health food innovations.

Key Hypotheses

As shown in Table 14.1, the impact or the influence of the demographic variables such as age, gender, education and income on the respondent's level of information, knowledge about nutrition and health (IKNH), which in turn influences the consumer acceptance of functional foods and beverages is noted and analysed. The statistical analysis was carried out using ANOVA (p Value 0.05). This section employs a 7-point Likert scale from strongly agree to strongly disagree, the scale when tested for reliability and validity yielded a Cronbach α value = 0.800 suggesting a high degree of internal consistency and reliability.

OBSERVATION AND INTERPRETATION OF FINDINGS

It is observed that the demographic variables age and income do not have a significant influence on the consumer's levels of information and knowledge about the general aspects relating to nutrition and health (IKNH). Interpreted differently, this could probably because irrespective of age, people today are becoming more health conscious and want to

be more aware about the impact of their nutritional and dietary choices on their health. This is particularly true amidst the growing incidences of lifestyle diseases such as diabetes, hypertension, heart disease and cancer to name just a few. People are particularly concerned about the growing incidence of such diseases at a younger age that are associated with significant morbidity and mortality. Hence, they want to be proactive in their quest to achieve wellness and enhance the quality of their lives by leading a healthy and a disease-free life by being knowledgeable about aspects-related nutrition, their choice of diet and its impact on health irrespective of whatever their age and levels of income notwithstanding. Gender and education play a highly significant role in influencing the consumer's quest to achieve a longer and qualitatively better life in terms of leading a healthy and disease-free life. This finding is in line with several international studies, which observe that men and women while having a common desire to remain healthy and disease free, but women in general are more proactive and conscious about aspects concerning diet and nutrition and their impact on health, they are also more health conscious and aware as compared to men. This is probably due to the fact that women play a greater role in decisions related to the household's food choices and influence the food purchases and thus undertake greater responsibility in the maintenance of household health through appropriate dietary choices especially in the households with children or elderly. The women as compared to men therefore play a significantly more proactive role and knowledge with aspects relating to the diet and nutrition choices and their overall impact on their health as well as the health and well-being of the household where the involvement of men is generally observed to be secondary to women.

As shown in Table 14.2, the impact or the influence of the demographic variables such as age, gender, education and income on the respondent's level of information, knowledge about functional foods (IKFF), which in turn influences the consumer acceptance of functional foods and beverages is noted and analysed. The statistical analysis was carried out using ANOVA (p Value 0.05). It is significantly observed that the demographic variables age, education and income play a significant role in influencing the consumer awareness, information and knowledge about functional foods (IKFF). The variable gender does not play a significant role in influencing the respondent's awareness, information and knowledge about functional foods (IKFF) and beverages.

Table 14.2 Information, Knowledge about Functional Foods (IKFF) vs demographics

<i>Analysis Summary</i>				
<i>Information & Knowledge about Functional Foods (IKFF) vs demographics</i>				
<i>Test: ANOVA; p Value 0.05</i>			<i>Cronbach α Value: NA</i>	
<i>Variables</i>	<i>H_O</i>	<i>H_A</i>	<i>Sig. Value</i>	<i>Remarks</i>
Age	Reject	Accept	0.000	Age significantly influences the respondent's level of IKFF
Gender	Accept	Reject	0.854	Gender does not significantly influence the respondent's IKFF
Education	Reject	Accept	0.000	Education Level significantly influences the respondent's IKFF
Income	Reject	Accept	0.029	Income Level significantly influence the respondent's levels of IKFF

The above observations could probably be due the fact that functional foods being innovative foods with value-added ingredients promising health benefits or claims with better or improved health function claims; the consumers are more discerning in their adoption. As one advances in age, due to the probability of greater perceived risk and vulnerability to various diseases, people become conscious about their diets, their lifestyles, impact of their dietary choices on their health vis-a-vis the promised health benefits as compared to their younger counterparts. This could be one of the plausible reasons why age plays a very significant role in influencing consumer awareness about their knowledge and information about functional foods.

Functional foods contain ingredients with health enhancing claims which may require knowledge on the part of the consumers about their therapeutic effects with the consumers consuming these products in relation to their specific requirements or their health conditions which may not be common to everyone, and hence, education about the effects of these ingredients, its impact on their health and the nutritive value of these ingredients are areas of interest as well as concern to the consumers. Besides, the consumers would also be interested in the certification of these claims, the efficacy and the evidence of these claims where the issues concerning the consumer's trust and the regulatory role played by the food authorities would come into play. Here, consumer education plays

a key role in winning over their trust, allaying their concerns and fears relating to the adoption of these novel products with health enhancing claims.

The functional products and beverages being value-added products with the potential to enhance the health of the consumer. Therefore, the consumers with health concerns in particular or with a proactive approach towards health would be keen to adopt these products because of their therapeutic benefits irrespective of their gender. This provides the marketers and manufacturers an opportunity to price these products at a premium by positioning the value-added therapeutic benefits over its conventional counterparts to a segment of the consumers who would perceive that the price premium is justified vis-à-vis their health benefits, and thus, income plays a significant role in driving the consumer adoption of these products.

Table 14.3 titled “Consumer Trustworthiness about the Sources of Information about Functional Foods (SIFF)” intends to assess or evaluate how the various demographic variables namely age, gender, education and income impact or influence the consumer’s trust levels about the various sources of information about functional foods. The statistical analysis was carried out using ANOVA (p Value 0.05) and employed a 7-point Likert scale from totally trustable to do not trust at all. The scale when tested for reliability and validity yielded a Cronbach α value = 0.797 suggesting a high degree of internal consistency and reliability. As observed in the evaluation of the impact of the demographic variables such as age, gender, education and income on the respondent’s level of awareness, information and knowledge about functional foods (IKFF), it is also found that the demographic variables age, education and income play a significant role, while the variable gender does not significantly influence the respondent’s trust about the sources of information about functional foods (SIFF).

Due to the probability of greater perceived risk and vulnerability to various diseases as one advances in their age, people become conscious about the impact of their nutritional and dietary choices on their health vis-a-vis the promised health benefits. Hence with age it can be presumed that people show more involvement in aspects related to preservation of their health and wellness, a fact highlighted by several international studies. The segment of consumers with a proactive approach towards health would be keen to adopt these value-added products with healthy ingredients because of their therapeutic benefits and health enhancing potential. However, to convince the consumers and win their trust

Table 14.3 Sources of Information about Functional Foods (SIFF) vs demographics

<i>Analysis Summary</i>				
<i>Consumer Trust about Sources of Information about Functional Foods (SIFF) vs demographics</i>				
<i>Test: ANOVA; p Value 0.05</i>			<i>Cronbach's α Value: 0.797</i>	
<i>Variables</i>	<i>H_O</i>	<i>H_A</i>	<i>Sig. Value</i>	<i>Remarks</i>
Age	Reject	Accept	0.000	Age significantly influences the respondent's level of trust about SIFF
Gender	Accept	Reject	0.680	Gender does not significantly influences the respondent's level of trust about SIFF
Education	Reject	Accept	0.000	Education Level significantly influences the respondent's level of trust about SIFF
Income	Reject	Accept	0.005	Income Level significantly influences the respondent's levels of trust about SIFF

consumer education plays a very vital role through reliable and credible sources of information channels. The consumers must be adequately educated about the nutritive value of the ingredients, the certification of the efficacy and the evidence of the health claims from appropriate regulatory authorities helping build their trust by engaging the consumer through increased involvement which in turn influences the adoption of these products and beverages with health enhancing claims. Income also plays a significant role as the consumers aided by their rising incomes, increased purchasing power and affluent lifestyles have access to a wide range of information sources shaping their beliefs, perceptions and attitudes towards health and wellness and also their ability to purchase products enabling their desire for wellness, a fit and disease-free life irrespective of what gender they may belong to.

Table 14.4 titled "Consumer Beliefs about Nutrition & Health (CB-NH)" intends to assess or evaluate how the various demographic variables namely age, gender, education and income impact or influence the consumer's levels of beliefs about the nutritional and health issues. The statistical analysis was carried out using ANOVA (p Value 0.05). A 7-point Likert scale ranging from strongly agrees to strongly disagree was employed. The scale when tested for reliability and validity yielded a

Table 14.4 Consumer Beliefs about Nutrition and Health (CB-NH) vs demographics

<i>Analysis Summary</i>				
<i>Consumer Beliefs about Nutrition and Health (CB -NH) vs demographics</i>				
<i>Test: ANOVA; p Value 0.05</i>			<i>Cronbach's α Value: 0.722</i>	
<i>Variables</i>	<i>H_O</i>	<i>H_A</i>	<i>Sig. Value</i>	<i>REMARKS</i>
Age	Reject	Accept	0.045	Age plays a significant role in influencing the CB-NH
Gender	Accept	Reject	0.092	Gender does not play a significant role in influencing the CB-NH
Education	Reject	Accept	0.043	Education plays a significant role in influencing the CB-NH
Income	Reject	Accept	0.001	Income plays a significant role in influencing the CB-NH

Cronbach α value = 0.722 suggesting a high degree of internal consistency and reliability. The proposed hypotheses and a brief summarized discussion of the above findings is presented below.

As observed in the evaluation of the impact of the demographic variables namely age, gender, education and income on the respondent's level of awareness, information, knowledge about functional foods (IKFF), the respondent's level of trust about the various sources of information about functional foods (SIFF), it is quite significantly observed that the demographic variables age, education and income play a significant role, while the variable gender does not significantly influence the respondent's beliefs about nutrition and health (CB-NH).

The consumer beliefs about nutrition and health are significantly influenced by age probably due to the fact that respondents in the higher (elderly age group >45 years) age groups due to the probability of a higher perceived risk and vulnerability to age-related diseases show a greater involvement in health and nutrition-related issues to protect and keep them healthy compared to the respondents in a younger age group segment whose perceived risk and vulnerability to age-related diseases may be lesser as compared to their cohorts in the elderly age group >45 years. Therefore, their beliefs in health and nutrition-related issues may vary according to their age.

Consumer beliefs about nutrition and health-related issues are independent of gender. Due to the stressful, sedentary lifestyles and dietary patterns today, both the genders are equally at risk of early onset of several lifestyle diseases. Hence, respondents irrespective of their gender are more conscious and involved in the maintenance of their optimum health and fitness through proper diet and nutrition. Here are factors like higher educational levels, better knowledge, rising incomes shaping the consumer lifestyles, attitudes, perceptions and beliefs. The consumers have access to a broad range and variety of information sources which enables a better understanding of and significantly influences their beliefs about their health and nutritional issues and empowers them to discern the credibility and reliability of the various types and sources of information about foods with health claims. The respondents showed a “significantly strong agreement” towards the fact that “food, nutrition & exercise” along with the need for regularly consuming foods that are healthy and a balanced diet rich in nutrients vital to improving or maintaining overall health and lifespan and lead a disease-free healthy lifestyle. Some respondents also somewhat agree with the fact their current dietary choices were inadequate in fulfilling all their essential nutritional needs.

Table 14.5 titled “Consumption Habits & Purchase Patterns (CHPP)” evaluates the levels of consumer awareness and the influence of various demographic variables namely age, gender, education & income, upon their consumption habits and purchase preferences that shape their nutritional and health objectives. The statistical analysis was carried out using ANOVA (p Value 0.05). A 7-point Likert scale was employed ranging from strongly agrees to strongly disagree (Cronbach α value = 0.641) suggesting an acceptable degree of internal consistency and reliability. The proposed hypotheses and a brief summarized discussion of the above findings are presented below.

Age, gender and education play a significant role in influencing consumer awareness; their consumption habits and purchase preferences shape their nutritional and health objectives. The respondents in the higher (elderly age group >45 years) age groups due to the probability of a higher perceived risk and vulnerability to age-related diseases show a greater involvement in health and nutrition-related issues to protect and keep them healthy compared to the respondents in a younger age group segment whose perceived risk and vulnerability to age-related diseases may be lesser as compared to their cohorts in the elderly age group >45 years. Similarly, higher education and better knowledge aided by

Table 14.5 Consumption Habits and Purchase Patterns (CHPP) vs demographics

<i>Analysis Summary</i>				
<i>Consumption Habits and Purchase Preferences (CHPP) vs demographics</i>				
<i>Test: ANOVA; p Value 0.05</i>			<i>Cronbach's α Value: 0.641</i>	
<i>Variables</i>	<i>H_O</i>	<i>H_A</i>	<i>Sig. Value</i>	<i>Remarks</i>
Age	Reject	Accept	0.000	Age plays a significant role in influencing the respondent's CHPP
Gender	Reject	Accept	0.000	Gender plays a significant role in influencing the respondent's CHPP
Education	Reject	Accept	0.000	Education plays a significant role in influencing the respondent's CHPP
Income	Accept	Reject	0.288	Income Levels do not significantly influence the respondent's CHPP

the access to a broad range and variety of information sources enables a better understanding and awareness. This significantly influences the consumer beliefs about their health and nutritional issues, empowers them to discern the credibility and reliability of the various types and sources of information about foods with health claims and thus shaping their consumption habits and purchase preferences in line with their nutritional and health objectives. Gender plays an influential role too. Women as compared to men display significantly more awareness levels about health and nutrition-related aspects as they bear prime responsibility for the nurturance of health and nutritional choices of the household by influencing the purchase of household groceries, fruits, vegetables contributing to dietary consumption practices and health objectives habits of the family especially those with kids and the elderly. Irrespective of their genders, people today are becoming very health conscious. Whatever are their income levels, the consumers with their desire to remain healthy and fit and due to their perceived vulnerability to age and lifestyle-related ailments, they prioritize their consumption of healthy diets to perhaps compensate for their unhealthy, sedentary and stressful lifestyles to maintain their optimum wellness and fitness, increase their longevity and improve the quality of their life by leading a disease-free life.

Respondents have shown a marked preference for including foods with health and nutritional benefits such as “Fortified Foods” and “Natural

Fresh foods” and an aversion for “Packaged Foods” or fast food, fried foods, salty snacks and even tinned/canned carbonated beverages, fruit/vegetable juices. The consumers while buying food prioritized aspects like nutritional value/content of the food, taste or flavour of the food, its safety rating them significantly even above price. They attached a relatively low degree of importance to the efficacy and evidence of the health claims made by food manufacturers. This could be probably due to the fact that they may be educated and knowledgeable enough about the food they consume or because the food they consume belongs to a reputed company or brand and hence choose to consume it without much verification about its evidence or its efficacy-related aspects. Another plausible scenario could be due to the relative ignorance and lack of importance about food labelling issues in an Indian scenario, unlike in the western developed nations where in general there is a greater emphasis and awareness among the general people about issues related to food and nutritional labelling.

Table 14.6 titled “Consumer Beliefs about Functional Foods (CBFF)” intends to assess or evaluate how the various demographic variables namely age, gender, education and income impact or influence the consumer’s levels of beliefs about the acceptance of functional foods and beverages in helping achieve their nutritional and health goals. The statistical analysis was carried out using Pearson’s Chi Square of association (p Value 0.05). A 7-point Likert scale ranging from strongly agrees to strongly disagree was employed. The scale when tested for reliability and validity yielded a Cronbach α value = 0.777 suggesting a high degree of internal consistency and reliability. The proposed hypotheses and a brief summarized discussion of the above findings are presented below. It is significantly observed the demographic variables age, gender, education and income play a significant role in influencing the consumer beliefs and their acceptance of functional foods and beverages as a means to help them achieve their nutritional and health goals.

Consumers incorporate diets into their lifestyles which are not only nutritious but also taste good as they are at a greater perceived risk and vulnerability to diseases compared to their younger counterparts. The elder consumers try to delay or prevent the early onset of several lifestyle and age-related diseases through their choice nutritious and healthy diets thus trying to maintain optimum wellness and fitness to enhance their quality of life and their lifespan. Gender too plays a significant role, as women compared to men show greater levels of beliefs in the promise

Table 14.6 Consumer Beliefs about Functional Foods (CBFF) vs demographics

<i>Analysis Summary</i>				
<i>Consumer Beliefs about Functional Foods (CBFF) vs demographics</i>				
<i>Test: Pearson's Chi Square; p Value 0.05</i>				<i>Cronbach's α Value: 0.777</i>
<i>Variables</i>	<i>H_O</i>	<i>H_A</i>	<i>Sig. Value</i>	<i>REMARKS</i>
Age	Reject	Accept	0.000	Age plays a significant role in influencing the respondent's CBFF
Gender	Reject	Accept	0.010	Gender plays a significant role in influencing the respondent's CBFF
Education	Reject	Accept	0.000	Education plays a significant role in influencing the respondent's CBFF
Income	Reject	Accept	0.000	Income plays a significant role in influencing the respondent's CBFF

of health foods from the point of view of health and wellness of the family, as the women take the prime responsibility for the health and nutritional objectives of a household's health particularly so concerning the elderly, the kids and themselves and thereby significantly influence the household purchase preferences and tastes concerning health and nutritional decisions. Irrespective of their gender and income levels, the consumers have a desire to remain healthy and fit. Due to their hectic and sedentary lifestyles and lack of exercise is at an enhanced risk of lifestyle-related disease. Hence, they would like to achieve their optimum health and wellness-related priorities, improve the quality of their life by making appropriate dietary choices using the affordability and the purchasing power of their income. Education, awareness and knowledge aided by the access to a broad range and variety of information sources empowers the consumer to discern the credibility and reliability of the various types of food products with health claims and thus significantly influences the consumer beliefs and perception about functional foods and beverages which in turn determines their consumption habits and purchase preferences in line with their long-term nutritional and health objectives.

The consumers displayed a significant degree of "Agreement" and belief in the health enhancing potential of the functional foods and are eager to incorporate the functional foods and beverages as a part of their daily diets without compromising on nutrition which is a vital indicator of

the possibility of adopting these products with health claims in the long run, supported by the fact that the consumers significantly believed that the functional food are not a temporary fad and are here for the long run.

Table 14.7 titled “Consumer Attitudes about Functional Foods (CAFF-B)” intends to assess or evaluate the consumer attitudes among the buyers segment of functional foods and the influence of demographic variables namely age, gender, education and income on their purchase intentions and acceptance of functional foods and beverages in helping them achieve their nutritional and health objectives. The statistical analysis was carried out using Pearson’s Chi Square of association (p Value 0.05). A 7-point Likert scale ranging from strongly agrees to strongly disagree was employed with a Cronbach α value = 0.777 suggesting a high degree of internal consistency and reliability. It is significantly observed that the demographic variables age, education and income play a significant role in influencing the consumer attitudes about functional foods. This in turn helps the consumers form their attitudes about the acceptance of functional foods and beverages as a means to help achieve their nutritional and health objectives. It is also observed that the variable gender does not play a significant role in influencing the consumer attitudes of the buyers of the functional foods.

The plausible reasons for these could be due to the fact that as the consumer’s age they are at greater perceived risk or vulnerability to

Table 14.7 Consumer Attitudes about Functional Foods (CAFF-B) vs demographics

<i>Analysis Summary</i>				
<i>Consumer Attitudes about Functional Foods -Buyers (CAFF -B) vs demographics</i>				
<i>Test: Pearson’s Chi Square; p Value 0.05</i>				<i>Cronbach’s α Value: 0.874</i>
<i>Variables</i>	<i>H_O</i>	<i>H_A</i>	<i>Sig. Value</i>	<i>REMARKS</i>
Age	Reject	Accept	0.003	Age plays a significant role in influencing the CAFF-B
Gender	Accept	Reject	0.224	Gender does not play a significant role in influencing the CAFF-B
Education	Reject	Accept	0.000	Education plays a significant role in influencing the CAFF-B
Income	Reject	Accept	0.003	Income plays a significant role in influencing the CAFF-B

age-related diseases, and hence, consumers show greater involvement by building up knowledge and awareness through education on issues related to their diet or nutritional choices as it impacts their health. As already mentioned in the previous section on consumer beliefs about functional foods, education, awareness and knowledge aided by the access to a broad range and variety of information sources empowers the consumer to discern the credibility and reliability of the various types of food products with health claims and thus significantly influences the consumer beliefs, perception and attitudes about functional foods and beverages which in turn determines their consumption habits and purchase preferences in line with their long-term nutritional and health objectives.

Income is another variable that significantly influences the consumer attitudes about functional foods. Consumers with high levels of income have lifestyles that determine their consumption attitudes aided by their purchasing power which affords them the ability to consume products that help them achieve their nutritional and health objectives with minimal adjustments to their lifestyles. Consumers with relatively less purchasing power due to their low-moderate income levels attempt to optimize their consumption of health foods to remain fit and healthy.

Access to a vast array and sources of information through multiple media about issues related to health across the world today has led to an increased awareness and realization about lifestyle-related diseases, the desire to remain fit, healthy and lead a disease-free lifestyle among people of all age groups and across genders. People are more aware than ever before about the diet-disease-health linkages that impact the nutritional as well as their health objectives. Though men and women display different levels of beliefs and knowledge about issues related to diet and health with varying tastes and preferences, and however, when it comes to maintaining optimal health through appropriate dietary choices they demonstrate attitudes that are similar as there is a common desire to remain fit, healthy and lead a disease-free lifestyle irrespective of gender differences. Thus, gender does not play a significant role in influencing the consumer attitudes among the buyers of functional foods and beverages.

The consumers seemed to only slightly/moderately or somewhat agree with “*Disease Prevention*” and the “*Health Promotion*” role or aspect of the functional food and beverage products while they tended to have a neutral opinion, i.e., neither agree nor disagree about the “*Substitutive*” and the “*Compensatory*” role/aspect of the functional foods and beverages consumption. This above observations could be due to the fact

that the functional foods alone by themselves may not be sufficient for preventing chronic diseases or fully substitute for balanced diets or obviate/reduce the need to consume dietary supplements or medicines. They can, however, play a supportive complementary role along with their existing food choices as the functional foods being relatively new are yet to prove their full therapeutic potential in preventing disease and promoting health. The consumers unanimously display a relatively strong degree of agreement in the “Hedonic & Convenience” aspects of the functional foods and beverages. This is a particularly significant observation especially from a marketing perspective, which should help identify and position the most beneficial aspects about these products to the appropriate target segment, help design the right communication strategies to the consumers that look for pleasure and convenience in the products they consume. This would also help enable the marketer to command a sustainable price premium by designing strategies congruent with the needs of the consumer segment which besides helping them achieve their health and nutritional goals also provides them with pleasure and convenience.

It is observed that the consumers are quite discerning when it comes to their food and diet-related choices and have not given an outright approval to several aspects/roles of the functional foods. On the one hand the consumers appreciate the nutritional and health enhancing potential of these products, especially the hedonic and convenience aspects, while on the other hand they are also very cautiously optimistic and discerning about their choices concerning these foods before incorporating them into their daily dietary routines impacting their long-term holistic approach to attain their health and nutritional objectives.

CONCLUSIONS AND RECOMMENDATIONS

It is observed that the consumers are quite discerning when it comes to their food and diet-related choices and have given a calibrated approval to several aspects/roles of the functional foods. On the one hand the consumers displayed a significant degree of “Agreement” and belief in the nutritional and health enhancing potential, especially the hedonic and convenience aspects of these products, giving a vital indication of the possibility of the consumers adopting these products with health claims in the long run, also supported by the fact that the consumers significantly believed that the functional food are not a temporary fad.

While on the other hand, the consumers are also very cautiously optimistic and discerning about incorporating these foods into their daily dietary routines impacting their health and nutritional objectives. This could be due to the fact that the consumer's perceive that the functional foods alone by themselves may not be sufficient for preventing chronic diseases or fully substitute for balanced diets or obviate/reduce the need to consume dietary supplements or medicines, as these foods are relatively new are yet to prove their full therapeutic potential in preventing disease and promoting health, these foods can however play a supportive complementary role along with their other existing food choices.

To summarize, the demographic variables age and education play a significant role in influencing the consumer acceptance of functional foods and beverages. As the consumer's age they are at greater perceived risk or vulnerability to age-related diseases, hence, they show greater involvement by building up knowledge and awareness through education and access to a broad range and variety of information sources on issues related to their dietary or nutritional choices as it impacts their health and lifestyle as well. This empowers the consumer to discern the credibility and reliability of the various types of food products with health claims and thus significantly influences the consumer beliefs, perception and attitudes about functional foods and beverages which in turn determines their consumption habits and purchase preferences in line with their long-term nutritional and health objectives.

Across the world today there is an increased awareness and realization about the diet-health-disease relationship, the desire to remain fit, healthy and lead a disease-free lifestyle among people of all age groups irrespective of gender or income levels. Though men and women display different levels of awareness, beliefs and knowledge about issues related to diet and health with varying tastes and preferences, however, when it comes to maintaining optimal health through appropriate dietary choices, they demonstrate attitudes that are similar as there is a common desire to remain fit, healthy and lead a disease-free lifestyle irrespective of gender differences. However, it should also be noted that women being primarily responsible for the health and nurturance priorities for a family's health especially in families with kids or the elderly, they show greater involvement, are more knowledgeable and significantly influence the decisions related to the health and nutritional aspects, tastes and food preferences of the family compared to men. Income is another variable that significantly influences the consumer attitudes about functional foods.

Consumers make appropriate dietary choices using the affordability and the purchasing power of their income. Consumers with high levels of income have lifestyles that determine their consumption attitudes and the ability to consume products which help them achieve their nutritional and health objectives with minimal adjustments to their lifestyles and lead a disease-free lifestyle. Consumers with relatively less purchasing power due to their low-moderate income levels attempt to optimize their consumption of healthy foods to remain fit and healthy.

Implications

Understanding consumer driven insights will be a critical challenge for all the stakeholders, marketers, manufacturers, food policy regulators alike. This will help win consumer trust, help achieve faster consumer adoption, gain long-term consumer loyalty and successfully develop a market for such products.

It is highly imperative to gauge the level of consumer awareness, perceptions, beliefs and attitudes. This helps identify the right target segment, create the right image and position the functional products and beverages as an essential value addition to the potential consumers to help achieve their health, wellness and nutritional objectives holistically. Build consumer involvement by leveraging the right sources of communications, enabling the marketers to achieve a sustainable competitive differentiation, win long-term consumer trust and loyalty and achieve price premiums and develop market for their value-added innovative products.

Food innovation being a costly proposition coupled with high cost of failure it is imperative that they be consumer driven. By adapting food product innovation to consumer tastes, health and nutritional priorities, it will enable the food manufacturers to identify and develop the right product-market segments that increase the chances of consumer adoption and minimize product failure rates.

In the background of the rising socio-economic costs of burden of disease on scarce public financial resources the food regulatory authorities/food policymakers must proactively influence consumer awareness and opinions for adopting healthy lifestyles by consuming products with health enhancing potential. They must leverage public information campaigns to build consumers awareness, education and empowerment about the product benefits, nutritional claims information, adopting

healthy lifestyles across various demographic segments. The food regulatory authorities must also regulate, validate and certify the product claims, ensuring their credibility. This would help prevent frivolous claims and spurious products entering the market and prevent damage to the future growth potential, helping achieve long-term trust of the consumers in such products and also in the industry as a whole to successfully develop a market for such innovative healthy foods.

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REFERENCES

- Arai, S., Morinaga, Y., Yoshikawa, T., Ichishi, E., Kiso, Y., Yamazaki, M., et al. (2002). Recent trends in functional food science and the industry in Japan. *Biosciences Biotechnology Biochemistry*, 66(10), 2017–2029.
- Beardsworth, A., Bryman, A., Keil, T., Goode, J., Haslam, C., & Lancashire, E. (2002). Women, men and food: The significance of gender for nutritional attitudes and choices. *British Food Journal*, 104, 470491.
- Bech-Larsen, T., & Scholderer, J. (2007). Functional foods in Europe: Consumer research, market experiences and regulatory aspects. *Trends Food Science & Technology*, 18, 231–234.
- Bhaskaran, S., & Hardley, F. (2002). Buyers' beliefs, attitudes and behaviour: Foods with therapeutic claims. *Journal of Consumer Marketing*, 19, 591606.
- Childs, N. M. (1997). Functional foods and the food industry: Consumer, economic and product development issues. *Journal of Nutraceuticals, Functional and Medicinal Foods*, 1(2), 25–43.
- Childs, N. M., & Poryzees, G. H. (1997). Foods that help prevent disease: Consumer attitudes and public policy implications. *Journal of Consumer Marketing*, 14(6), 433–447.
- Childs, N. M., & Poryzees, G. H. (1998). Foods that help prevent disease: Consumer attitudes and public policy implications. *Journal of Consumer Marketing*, 14(6), 433–447.
- Gilbert, L. (1997). The consumer market for functional foods. *Journal of Nutraceuticals, Functional and Medicinal Foods*, 1(3), 5–21.
- International Food Information Council (IFIC). (2000). *Functional foods: Attitudinal research*. <http://iflc.org>
- Lähteenmäki, L. (2004). Consumers and health: Getting the probiotic message across. *Microbiological Ecology in Health and Disease*, 16, 145149.

- Maynard, L. J., & Franklin, S. T. (2003). Functional foods as a value-added strategy: The commercial potential of “cancer-fighting” dairy products. *Review of Agricultural Economics*, 25(2), 316–331.
- Menrad, K. (2003). Market and marketing of functional food in Europe. *Journal of Food Engineering*, 56, 181188 (Hasler, 1998).
- Nelson, P. (1970). Information and consumer behavior. *Journal of Political Economy*, 77, 311329.
- Oude Ophuis, P. A. M., & van Trijp, H. C. M. (1995). Perceived quality: A market driven and consumer oriented approach. *Food Quality and Preference*, 6, 177183.
- Poulsen, J. B. (1999). *Danish consumers' attitudes towards functional foods* (Working paper no 62, MAPP, Århus, Denmark).
- Roberfroid, M. B. (2000). Concepts and strategy of functional food science: the European perspective. *American Journal of Clinical Nutrition*, 71(supply), 1660S–4S.
- Rozin, P. (1996). Towards a psychology of food and eating: From motivation to model to meaning, morality and metaphor. *Current Directions in Psychological Science*, 5, 1–7.
- Saher, M., Arvola, A., Lindeman, M., & Lähteenmäki, L. (2004). Impressions of functional food consumers. *Appetite*, 42, 7989.
- Toner, C., & Pitman, S. (2004). Functional foods: Educating consumers about foods with health promoting benefits in today's challenging communications environment. *Topics in Clinical Nutrition*, 19(1), 71–78.
- Verbeke, W. (2004). Consumer acceptance of functional foods: Socio-demographic, cognitive and attitudinal determinants. *Food Quality and Preference*, 16(1), 45–57.
- Verbeke, W. (2005). Consumer acceptance of functional foods: Sociodemographic, cognitive and attitudinal determinants. *Food Quality and Preference*, 16, 4557.



COD: A Boon or Curse for Online Impulse Buying?

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INTRODUCTION

Impulse buying has become one of the critical issues in offline as well as online purchases (Redine et al., 2023). Bashar et al. (2022) suggested that the relevance of online shopping is increasing day by day, and therefore, a deeper understanding of online impulse buying is necessary. Prasad and Gautam (2015) suggested that impulse purchases are prevalent not only in brick-and-mortar stores but also in online settings. Their investigations suggest that impulse purchases are more prominent in online shopping as compared to offline shopping. Online shopping environment frees consumers from constraints such as inconvenient store locations, limited operating hours, social pressure from staff and other consumers (Chan

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et al., 2017). Therefore, online shopping environment is more prone to impulse purchases as compared to its offline counterpart. Verhagen and Dolen (2011) argued that approximately 40% of all the money spent on ecommerce sites is attributed to impulse purchase. A multitude of evidence shows that impulse purchase is prevalent in online shopping (Chen & Li, 2020). As impulse buying is crucial to online shopping, marketers and academicians are in continuous efforts to understand what enhances impulse buying. Impulse buying tendency (IBT henceforth) is a personality trait that is responsible for impulse buying behaviour (Rook, 1987). Further past research has already discussed a multitude of moderating factors in the relationship between IBT and impulse buying. For instance, Rook and Fisher (1995) suggested a moderating role of normative influence in the relationship between IBT and impulse buying.

In the context of online shopping context, the role of payment options is very important (Chan et al., 2017). Therefore, it becomes crucial to understand the mode of payment option that is most suitable for enhancing impulse buying. Our research adds to this underdeveloped stream of literature by suggesting cash on delivery (COD) mode of payment as an enhancer in the relationship between IBT and impulse buying. We suggest that COD plays a moderating role in the link between the impulsive buying tendency (IBT) and actual impulse purchasing, such that when COD is available, there is a higher likelihood that IBT will result in real impulse buying. Based on ideas of perceived risk and pain relief from earlier studies, we support our claims.

Although COD is a boon for marketers in online shopping context as it triggers impulse purchases, there is a negative side of it. COD strengthens the relationship between negative feelings aroused due to impulse buying and product returns. Sometimes, impulse buying is associated with negative feelings such as remorse as its consequences (Gardner & Rook, 1988). These negative feelings cause the customer to return the product. As impulse buying is prominent in online shopping context as discussed earlier, the probability of product returns is also more in online shopping context. We propose that this probability is further enhanced by the COD option. When COD option is available, product returns are more as compared to the case when COD is unavailable.

Our research can help the ecommerce industry in several ways. First, it gives a strong way-out for converting customers' impulse buying tendencies into actual impulse purchases. Impulse purchases are prominent in online shopping. For any e-tailor, increasing impulse purchase is very

important to increase overall sales as impulse purchases have a large contribution in overall sales. Our research suggests one of the ways to increase impulse purchases. Second, it deals with one of the major concerns in the online shopping industry known as increasing product returns. In online shopping environment, product returns vary by category with the highest return rates seen in fashion close to 25%, and other categories have combined return rate¹ of 10–15%. These product returns have become one of the critical problems for e-tailors because of the high costs involved in collecting and liquidating such items. It has been reported² that some of the sellers selling online are facing losses instead of gains especially when after sold products are returned to them. This is because they have to pay for logistics for both ways, plus commission, plus taxes. These product returns are more in presence of COD option. According to seller Worx, a business management platform for e-commerce sellers, 70% of all returns are made up of customers who do not accept deliveries of which the majority are cash on delivery arrangements.

The availability of COD has been highlighted as one of the key causes of an increase in product returns, making it crucial to understand the underlying causes of higher product returns in cases of COD. Product returns have become one of the most important challenges for e-tailors. 60% of all e-commerce orders, according to financial advice company Motilal Oswal, are COD orders. This offers us a notion of the popularity of the COD option among consumers, which further inspired us to investigate how COD can increase the likelihood of product returns. Our study investigates the fundamental causes of the rise in COD product returns. Finally, we conclude that although COD is a boon for online shopping industry to enhance impulse purchases, the same can act as a curse which can increase product returns. In some cases, the logistic costs such as packaging cost, shipping cost of product are so high that the e-tailor suffers a huge loss if customer cancels the order after purchase. Therefore, our suggestion suggests that impulse purchases should be enhanced through COD only in cases where probability of post-purchase negative feelings such as remorse and guilt is lower. If such negative feelings are

¹ For details see <http://economictimes.indiatimes.com/small-biz/policy-trends/e-tailors-target-product-returns-limit-returns-to-12/articleshow/55553649.cms>.

² For retails see <http://economictimes.indiatimes.com/industry/services/retail/fresh-trouble-for-e-commerce-vendors-losing-money-as-buyers-turn-back-cash-on-delivery-orders/articleshow/48180139.cms>.

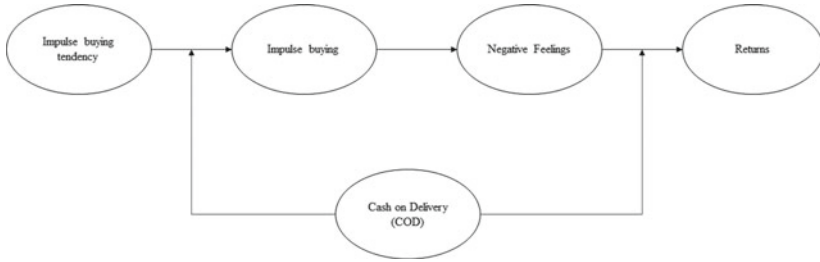


Fig. 15.1 Conceptual framework

not generated after impulse purchases, frequency of product returns can be reduced even in presence of COD.

The rest of the article is arranged as follows. The next section presents the conceptual framework. It discusses various constructs in the framework. It also describes the relationships between the constructs based on the theories from past literature. Based on these theories and conceptual framework, the article presents propositions. Further, theoretical and managerial implications of the proposed conceptual framework are discussed which will help the managers in handling the eminent issue of increasing product returns in the online shopping industry.

CONCEPTUAL FRAMEWORK

See Fig. 15.1.

IMPULSE BUYING TENDENCY AND IMPULSE BUYING

Impulse buying tendency (IBT) is a personality trait which has been initially treated as a one-dimensional construct by Rook and Fisher (1995). They established the moderating role of 'Normative influence' in the relationship between 'Buying impulsiveness' and 'Impulse buying.' This 'Buying impulsiveness' was further investigated as 'Consumer impulsiveness' by Puri (1996). She suggested the conceptualization of this personality trait as a two-dimensional construct. Further, while proposing a model of pre-cursors of impulse buying, Beatty and Ferrell (1998) treated this personality trait as a three-dimensional construct and named it as 'Impulse buying tendency (IBT).'

Research in the field of impulse buying has clearly established the relationship between impulse buying tendency and impulse buying (e.g. Beatty & Ferrell, 1998; Puri, 1996; Rook & Fisher, 1995). However, there are a few factors that may moderate this relationship. One of such factors was identified by Rook and Fisher (1995) known as ‘Normative influence.’ They suggested that the strength of relationship between buying impulsiveness and impulse buying depends on normative influence which indicates whether to act on the impulse is appropriate or not. When a person feels that acting on impulse felt is appropriate, the probability of buying impulsiveness trait to get converted into actual impulse buying behaviour is more as compared to the case when a person feels that acting on the impulse felt is inappropriate. Jones et al. (2003) suggested moderating role of product specific impulse buying tendency in the relationship of IBT and impulse buying. Youn and Faber (2000) suggested the moderating role of environmental or sensory cues, atmospheric cues in retail settings, marketer-controlled cues and marketing mix stimuli in the relationship of IBT and impulse buying. Although previous research has suggested many such moderating factors, the relationship between IBT and impulse buying behaviour is not investigated thoroughly in online context. Our research tries to fill this gap and investigates the relationship between IBT and impulse buying behaviour in an online context. It identifies a moderating factor known as ‘Cash on delivery (COD)’ in the relationship between IBT and impulse buying in online shopping context.

ONLINE IMPULSE BUYING

Previous research has suggested that online shopping context acts as a trigger for impulse buying. Online shopping context triggers impulse buying behaviour (Liu et al., 2013). Phau and Lo (2004) argued that “Internet is an alternative impulse channel that allows the consumer to shop at their leisure, offering 24 hour/7 days a week shopping and shopping in the comfort of their own home.” A stream of research in the literature has also focused in investigating the reasons behind large number of impulse purchases in online shopping context. Madhavaram and Laverie (2004) suggested that online retailing encourages impulse buying as consumers can browse and respond more easily to their changing moods. Jeffrey and Hodge (2007) suggested that in an online shopping environment, customers get triggered by easy access to products, easy purchasing (e.g. one-click ordering), lack of social pressures and

absence of delivery efforts. Their findings also suggested that almost 40% of online purchases are impulse purchases. They attributed this finding to the fact that in online shopping environment, customers have very easy access to products, their pain of travelling to the shop for purchase is nullified, and they just must click a button for purchasing a product or service. All these factors trigger impulse purchases. While modelling influences impulse buying behaviours, Zhang et al. (2007) suggested the importance of impulse buying in online shopping context. Due to the globalization of the internet and increasing number of shoppers on retail websites, online impulse buying has become a global phenomenon (Dawson & Kim, 2009). Based on the evidence from past literature, we infer the prominence of impulse buying in online shopping environment and therefore proceed our investigation of impulse buying in online context.

COD AS A MODERATOR IN IBT-IMPULSE BUYING RELATIONSHIP

In online shopping, one of the major concerns for buyers is the fear of being cheated as the buyer doesn't receive the product immediately after paying. This concern of online buyers can be related with 'perceived risk' which has been studied intensively in the past literature. Mitchell (1999) suggested that perceived risk is powerful in consumer behaviour because consumers are more often motivated to avoid mistakes than to maximize utility. In past research, perceived risk was mainly concerned with fraud and product quality (Wu et al., 2020). However, in the context of online shopping context, the definition of perceived risk has changed its focus. Kim (2007) defined perceived risk in online context as "Consumer's belief about the potential uncertain negative outcomes from the online transaction." Perceived risk refers to certain types of financial, product performance, social, psychological, physical and time risks (Boksberger et al., 2007; Chang & Chen, 2008; Smith & Sivakumar, 2004). Financial risk is defined as a net loss of money to a customer (Derbaix, 1983; Horton, 1976; Sweeney et al., 1999). In online, many consumers believe that sharing credit card information online for payment purpose is very risky (Caswell, 2000). Maignan and Lukas (1997) argued that consumers' unwillingness shopping to provide their credit card information over the web is a major obstacle to online purchases. Forsythe and Shi (2003)

suggested that consumers' apparent sense of insecurity regarding online credit card usage stems primarily from a concern about financial risk.

As past research has shown that one of the major obstacles for online purchases resulting from financial risk is centred around 'payment option' for online shopping, we tried to investigate alternatives for 'online payment options.' One of such alternatives identified which can alleviate financial risk is 'Cash on Delivery' (COD). We suggest that to alleviate the financial risk associated with online shopping, cash on delivery (COD) option can work effectively. In the case of COD, the customer is not paying money online. Therefore, perceived financial risk is absent. The absence of perceived financial risk will in turn strengthen relationship between 'Impulse Buying Tendency' (IBT) and 'Impulse Buying' (IB). If COD option is available, perceived financial risk is reduced and therefore the probability of IBT getting converted into IB increases. Therefore, we suggest moderating the role of COD in the relationship of IBT and IB.

In addition to reduction in financial risk, we also corroborate our argument about the moderating role of COD based on alleviation of pain of losing money. In offline shopping context, when a consumer purchases a product and pays money, the pain of losing money gets alleviated as he receives the product immediately. The immediate delivery of product acts as a reducing agent for reducing pain of losing money. In contrast, in online shopping context, the delivery of product is not immediate. Therefore, if the customer pays through options like NEFT, RTGS, Credit card, Debit card, etc., he feels pain of losing money. Also, as the product delivery is not immediate, this pain does not get alleviated. If COD option is available, then customer pays money at the time of product delivery. Therefore, there is no gap between losing money and reception of product. This alleviation of pain of losing money by COD option can act as a strong reason for 'Impulse buying tendency' (IBT) to get converted into 'Impulse Buying' (IB). Therefore, it also supports our arguments about moderating role of COD in the relationship between 'Impulse Buying Tendency' (IBT) and 'Impulse Buying' (IB). Therefore, we propose,

PI: In online shopping context, Cash on delivery (COD) option moderates the positive relationship between IBT and Impulse buying such that the relationship is stronger when COD option is available as compared to that when COD option is unavailable.

IMPULSE BUYING-NEGATIVE FEELINGS—RETURNS

One of the major concerns in the online shopping industry is the tendency of shoppers to return the products. The frequency of product returns is very high in case of online shopping due to shoppers' inability for physical product inspection and experience. While dealing with relevant issues in online retail stores, Madhavaram and Laverie (2004) suggested that the tendencies to return the product are more in online shopping as compared to that in offline shopping context. Further, the high frequency of returns in online shopping context can be attributed to the consequences of impulse buying.

Gardner and Rook (1988) investigated impulse buying related to pre- and post-purchase moods. They suggested that the main impetus for impulse purchases is a sudden urge to buy which gets created due to excitement. This urge is so powerful that it dominates self-control resulting into impulse purchase. They further suggested that when a product is bought on impulse due to sudden urge, in some cases, it creates negative feelings after purchase in customers. These negative feelings include anxiety and guilt. Therefore, impulse purchases can lead to negative feelings. When customers feel anxious or guilty after purchasing a product online, these negative feelings act as triggers for customers to return the products. These feelings of guilt, anxiety and remorse get generated in customers' even before the product delivery if they purchase the product impulsively. In line with this claim, Gardner and Rook (1988) investigated pre- and post-purchase moods of customers just before and after impulse purchase. Their findings suggested that when customers are in a powerful mood state before impulse purchase, immediately after impulse purchase, customers develop negative feelings such as guilt, remorse and anxiety. Therefore, in the context of online shopping context, when customer purchases a product impulsively, he or she might develop negative feelings like remorse, anxiety and guilt, etc., immediately after purchase even before actual product delivery. These negative feelings lead to product returns.

If the customer has already paid for the product through online payment options (e.g. NEFT, Credit card, etc.), there is a perceived financial risk of not getting refund. In contrast, if the product is purchased on COD, the financial risk of getting money back is absent as the customer has not yet paid. Therefore, in this case, the probability of these negative feelings getting converted into returns gets enhanced. Therefore, COD acts as a moderator in the relationship of negative feelings generated due

to impulse buying and returns. When COD is present, the relationship between negative feelings and return of products is stronger as compared to the case when COD is absent. Therefore, we propose:

P2: In online shopping context, Cash on delivery (COD) option moderates the positive relationship between negative feelings arising from impulse purchases and returns of products such that the relationship is stronger when COD option is available as compared to that when COD option is unavailable.

THEORETICAL AND MANAGERIAL IMPLICATIONS

Impulse purchase has become one of the critical issues in the online shopping industry. Due to changing lifestyles, increasing disposable income, ease of purchase, easy access to variety of products and impulse purchases are increasing day by day in online shopping. As discussed in previous sections, a considerable part of revenue is directly related to impulse purchase for e-tailors. Therefore, to boost overall sales in a highly competitive online shopping environment, e-tailors are putting continuous efforts for increasing impulse purchases. Our research proposes one of the ways to increase impulse purchases by means of COD. Past literature in impulse buying has focused on 'Impulse buying tendency (IBT)' as a personality trait. Everyone has certain level of 'IBT,' and however, this 'IBT' does not necessarily lead to actual 'Impulse Buying (IB).' There are many factors affecting this positive relationship. In the context of online shopping context, our research identifies one such factor known as COD. We suggest that when COD option is available, the relationship between 'IBT' and 'IB' is stronger as compared to that when COD is unavailable. We support our argument based on the theories in past literature. Therefore, e-tailors can utilize COD option effectively to boost impulse purchases for their products. E-tailors can make efficient use of COD option in order to convert customers' impulse buying tendencies (IBT) into actual impulse purchases.

As impulse buying is becoming prevalent in online shopping context, e-tailors are engaged continuously in finding some ways to increase their customer base who will purchase their products impulsively. Our research suggests one of such ways as providing COD option. Further, we corroborate our arguments not only based on the theories from past

literature but also on the actual data from industry regarding the share of COD-based purchases in total number of purchases.

Although, COD option is suggested as a boon for e-tailors to increase impulse purchases, there is another side of the coin. Our research focuses on the other side also. Past literature in impulse buying has suggested the relationships between pre- and post-impulse-purchase moods of customers. For example, while explaining the effects of impulse purchases on consumers' affective states, Gardner and Rook (1988) suggested that the affective state of customer before impulse purchase directly affects his or her post-impulse-purchase affective state. If the customer's pre-impulse-purchase affective state is 'pleasure' then post-impulse-purchase affective state is also 'pleasure.' If pre-impulse-purchase affective state is 'Excitement' then post-impulse-purchase affective state is also 'Excitement.' However, if pre-impulse-purchase affective state is 'powerful' then post-impulse-purchase affective state is anxiety, remorse or guilt.

From these findings, we inferred that sometimes impulse purchases can lead to negative feelings. These negative feelings lead the customers to cancel their orders online. Return of products has become one of the critical issues for e-tailors. If the product is packaged and shipped, then in case of order cancellation the vendor must suffer a loss. Sometimes these losses are too high. Therefore, this issue is of big concern for marketers. Our research identifies one of the major reasons of product returns. We suggest that when COD is available, the probability of product return due to negative feelings generated by impulse purchases is more as compared to the case when COD is unavailable. Therefore, COD acts as a threat for marketers.

As the same COD is acting in favour of marketers as well as creating a threat for them, it is obvious that marketers are in dilemma of how to use COD efficiently. They are in search of some efficient way that will optimize the cost-benefit trade-off in case of COD. Our research suggests one such way to solve this dilemma. Our research claims that the impetus behind this dilemma is the prevalence of online impulse buying. Therefore, we studied the extent of literature on impulse buying and based on thorough literature review, we conclude that negative feelings may arise after impulse purchases which lead to product returns. When COD option is available then these negative feelings lead to product returns very easily. Therefore, we investigated the ways to reduce post-impulse-purchase negative feelings.

To get rid of this problem of whether to use COD or not, we suggest that managers focus on customers' pre-purchase moods when they shop online. According to past research, when a customer is in a pleasant mood, then no negative feelings are generated post-impulse-purchase. If marketers can ensure that customers are in a good or pleasant mood and not in powerful mood when they are shopping online, then probability of product returns can be reduced. Several measures such as a good website outlook, user-friendly interface and easily accessible options can be used to ensure pleasant pre-purchase moods of customers. Future research can further investigate the ways of ensuring pleasant pre-purchase moods of online shoppers. In addition, future research can also validate the propositions made here by conducting an empirical study. It will validate the propositions which are derived from the theories from past literature.

FUTURE SCOPE

This paper investigates COD from a marketer's point of view. Impulse buying tendency (IBT) is a personality trait that has been discussed widely in the past literature and there are several studies that have discussed various moderators such as demographics, ease of product use, packaging, time availability in the relationship between IBT and impulse buying (Stern, 1962). This paper suggests COD as one of the moderators such that the relationship between IBT and impulse buying gets accentuated in presence (versus absence) of COD. Although our research has suggested this based on theories on perceived financial risk, there is no empirical evidence for it. We call future research to investigate this relationship empirically. Further, COD could work differently for different age groups and across genders. Future research can investigate this moderating role of COD for such different demographic factors.

This research has also discussed the other side of COD. Impulse buying leads to post-purchase negative feelings such as regret and remorse (Rook & Fisher, 1995). These negative feelings due to impulse buying is one of the major reasons for product returns in online shopping context. Based on the theories of perceived financial risk, our research has suggested moderating role of COD in the relationship between negative feelings and impulse buying such that in presence (versus absence) of COD, the relationship is stronger. Again, although we propose this based on a strong theoretical background, there is no empirical evidence for this. We call future research to fill this gap.

Next, as mindset of individuals changes according to age, gender and other demographic factors, this moderating relationship could be different across various demographic factors. We encourage future research to look into this. Empirical research across various demographic factors could help to fill this gap.

REFERENCES

- Bashar, A., Singh, S., & Pathak, V. K. (2022). A bibliometric review of online impulse buying behaviour. *International Journal of Electronic Business*, 17(2), 162–183.
- Beatty, S. E., & Ferrell, M. E. (1998). Impulse buying: Modeling its precursors. *Journal of Retailing*, 74(2), 169–191.
- Boksberger, P. E., Bieger, T., & Laesser, C. (2007). Multidimensional analysis of perceived risk in commercial air travel. *Journal of Air Transport Management*, 13(2), 90–96.
- Caswell, J. A. (2000). An evaluation of risk analysis as applied to agricultural biotechnology (with a case study of GMO labeling). *Agribusiness: An International Journal*, 16(1), 115–123.
- Chan, T. K., Cheung, C. M., & Lee, Z. W. (2017). The state of online impulse-buying research: A literature analysis. *Information & Management*, 54(2), 204–217.
- Chang, H. H., & Chen, S. W. (2008). The impact of online store environment cues on purchase intention: Trust and perceived risk as a mediator. *Online Information Review*, 32(6), 818–841.
- Chen, C., & Li, X. (2020). The effect of online shopping festival promotion strategies on consumer participation intention. *Industrial Management & Data Systems*, 120(12), 2375–2395.
- Dawson, S., & Kim, M. (2009). External and internal trigger cues of impulse buying online. *Direct Marketing: An International Journal*, 3(1), 20–34.
- Derbaix, C. (1983). Perceived risk and risk relievers: An empirical investigation. *Journal of Economic Psychology*, 3(1), 19–38.
- Forsythe, S. M., & Shi, B. (2003). Consumer patronage and risk perceptions in Internet shopping. *Journal of Business Research*, 56(11), 867–875.
- Gardner, M. P., & Rook, D. W. (1988). Effects of impulse purchases on consumers' affective states. *ACR North American Advances*, 15, 127–130.
- Horton, R. L. (1976). The structure of perceived risk: Some further progress. *Journal of the Academy of Marketing Science*, 4, 694–706.
- Jeffrey, S. A., & Hodge, R. (2007). Factors influencing impulse buying during an online purchase. *Electronic Commerce Research*, 7, 367–379.

- Jones, M. A., Reynolds, K. E., Weun S., & Beatty, S. E. (2003). The product-specific nature of impulse buying tendency. *Journal of Business Research*, 56, 505–511.
- Kim, I. (2007). The role of perceived risk on purchase intention in internet shopping. *International Journal of Electronic Marketing and Retailing*, 1(3), 279–288.
- Liu, Y., Li, H., & Hu, F. (2013). Website attributes in urging online impulse purchase: An empirical investigation on consumer perceptions. *Decision Support Systems*, 55(3), 829–837.
- Madhavaram, S. R., & Laverie, D. A. (2004). Exploring impulse purchasing on the internet. *ACR North American Advances*, 31, 59–66.
- Maignan, I., & Lukas, B. A. (1997). The nature and social uses of the Internet: A qualitative investigation. *Journal of Consumer Affairs*, 31(2), 346–371.
- Mitchell, V. W. (1999). Consumer perceived risk: Conceptualisations and models. *European Journal of Marketing*, 33(1/2), 163–195.
- Phau, I., & Lo, C. C. (2004). Profiling fashion innovators: A study of self-concept, impulse buying and Internet purchase intent. *Journal of Fashion Marketing and Management: An International Journal*, 8(4).
- Prasad, R. K., & Gautam, M. K. (2015). Typology of online shoppers in India: An empirical study in Uttar Pradesh. *Journal of Marketing and Consumer Research*, 14, 52–62.
- Puri, R. (1996). Measuring and modifying consumer impulsiveness: A cost-benefit accessibility framework. *Journal of consumer Psychology*, 5, 87–113.
- Redine, A., Deshpande, S., Jebarajakirthy, C., & Surachartkumtonkun, J. (2023). Impulse buying: A systematic literature review and future research directions. *International Journal of Consumer Studies*, 47(1), 3–41.
- Rook, D. W. (1987). The buying impulse. *Journal of Consumer Research*, 14(2), 189–199.
- Rook, D. W., & Fisher, R. J. (1995). Normative influences on impulsive buying behavior. *Journal of Consumer Research*, 22(3), 305–313.
- Smith, D. N., & Sivakumar, K. (2004). Flow and Internet shopping behavior: A conceptual model and research propositions. *Journal of Business Research*, 57(10), 1199–1208.
- Stern, H. (1962). The significance of impulse buying today. *Journal of Marketing*, 26(2), 59–62.
- Sweeney, J. C., Soutar, G. N., & Johnson, L. W. (1999). The role of perceived risk in the quality-value relationship: A study in a retail environment. *Journal of Retailing*, 75(1), 77–105.
- Verhagen, T., & Van Dolen, W. (2011). The influence of online store beliefs on consumer online impulse buying: A model and empirical application. *Information & Management*, 48(8), 320–327.

- Wu, L., Chiu, M. L., & Chen, K. W. (2020). Defining the determinants of online impulse buying through a shopping process of integrating perceived risk, expectation-confirmation model, and flow theory issues. *International Journal of Information Management*, 52, 102099.
- Youn, S., & Faber, R. J. (2000). Impulse buying: Its relation to personality traits and cues. *ACR North American Advances*, 27, 179–185.
- Zhang, X., Prybutok, V. R., & Strutton, D. (2007). Modeling influences on impulse purchasing behaviors during online marketing transactions. *Journal of Marketing Theory and Practice*, 15(1), 79–89.

PART IV

Entrepreneurship and Sustainability



Innovation-Led Entrepreneurial Growth Amid Business Disruption: Analyzing Shifts in Social Entrepreneurial Paradigm

José Anselmo Pérez Reyes and Miguel Cervantes Jiménez

INTRODUCTION

Corporate social responsibility (CSR) can be explained as a way of managing companies based on the management of the impacts that their activity generates on their environment and stakeholders. It can be understood as a cross-cutting concept that affects all operational areas of the company as they are all linked by an activity, a vocation, and a commitment. According to the Corporate Social Responsibility Observatory (2016), this concept addresses three thematic areas that define its multidimensional nature. These are: economic, social, and environmental,

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which derives in different areas of company management, such as human rights, labor and employment practices, health protection, environmental issues, the fight against fraud and corruption, and consumer interests.

As a result, most companies have incorporated active management of CSR issues in their analysis and strategies, as they have a significant influence on company profitability and even on investment risk; in the latter respect, attention to CSR factors is increasingly important in making an investment decision. The reason for this is based on the conflicts provoked by the company itself in the event of not assuming the risks associated with the firm's reputational value, its competitive position, and, consequently, its ability to generate revenues or penalties depending on the results when these criteria are considered or not. Table 16.1 shows a general classification of the risks that are caused by the company itself and that were identified during the preparation of this study.

According to J. Chhadwa et al. (2022), the type of risks that, as an example, are indicated in Table 16.1 assume willingness and responsibility

Table 16.1 General classification of risks caused by the company

<i>Governance-related</i>	<i>Environment</i>	<i>Social</i>	<i>Environment and social</i>
Lack of diversity in administrative committee	Greenhouse gas emissions	Production of unhealthy goods	Damage to the ecosystem
Poor senior management remuneration policies	Water pollution	Misuse of personal data	Lack of respect for animal rights
Deficiencies in transparency and communication with shareholders	Low efficiency in the use of water in production	Lack of worker motivation	
Deficient CSR policies	Low efficiency in the use of raw materials in production processes	Difficulties in reconciling work and personal life	Damage to human communities in production processes
Participation in corruption activities	Low efficiency in the use of electricity in production processes	Deficiencies in the improvement of intellectual capital	

on the part of the company and their implementation requires robust strategic planning, and therefore, a lot of time and patience to observe the expected results. From the above discussion, it can be assumed that the involvement of all stakeholders is imperative to ensure that the company remains in tune with the changing expectations of the business and social environments.

In a post-pandemic context associated with the recent health crisis caused by COVID-19, the actions taken by companies should be decisive in contributing not only to the internal well-being of the firm but also to the generation of greater value for all its stakeholders soon. Therefore, the actions that the company should follow in favor of its environment should be based on an ethical management that goes beyond regulatory compliance and seeks to contribute to the development of the common welfare. In the situation of systemic crisis¹ such as the one we are going through, visionary, and courageous companies are required to act positively in four different dimensions: the business, its employees, its customers, and the environment (social responsibility). In order to achieve it, the company management should be based on fundamental pillars of development that are associated with: operational efficiency (corporate sustainability), caring for the health and well-being of employees, strengthening the links between the company and its customers (value creation), and strengthening the general good of society in terms of creating synergies to promote its development.

According to Jordan Bar Am et al. (2020), the current economic crisis requires leaders to rediscover the needs of customers and evolve along with them; in the case of organizations, the same authors point out that companies can prioritize on valuable problems that address the potential market where the value of customers is assumed as the main generator of concepts to provide real satisfaction in the face of such health phenomenon. Based on the above, this study considers that an important part of the competitive performance of the economy in emerging countries is associated with their small and medium-sized enterprises,²

¹ In the case of emerging countries such as Mexico contextual to the economic crisis caused by economic slowdown followed by the health crisis induced by the pandemic, some authors argue that the best alternatives for recovery lie in a multidimensional development vision that involves political, social, and cultural factors.

² According to G. G. Fang et al. (2022), the SMEs performance could be improved by entrepreneurial orientation and innovation capabilities.

particularly those operating in the secondary sector. According to N. da S. Miranda Junior et al. (2022), a feasible strategy for economic recovery could consist of specializing in labor-intensive activities in order to increase competitiveness in meeting the needs of the population. The industry that belongs to the secondary sector of the economy is important because it uses inputs from the primary economic sector, and in this sense, it can be considered as one of the main economic triggers for the stimulation of the creation of synergies between society and business.

Thus, this study assumes that the secondary sector has much to contribute in terms of CSR and economic development. However, in the face of the crisis already defined, new and innovative ways must be proposed for this economic sector to have a positive and lasting impact on the new needs of its customers. Therefore innovation, as a central element for the creation of value, can be established as the ideal mechanism to take advantage of the opportunities that arise in the face of this crisis. In such a way that, in the face of new market realities and new customer expectations, new business models can be identified to eliminate the barriers that are now being faced during the post-pandemic economic recovery.

In particular, this research study proposes that a real and feasible recovery strategy must involve the specialization of activities, the increase of local competitiveness and a state intervention that determines market policies with a view to the creation of value in the above-mentioned dimensions. Therefore, in the first place, conventional strategies and actions for value creation will be explored. Subsequently, innovative ones are proposed, which are assumed here to be necessary for a real economic recovery in a post-pandemic context. The aim is then to show evidence that allows decision-makers to identify challenges and responsibilities and, in another context, to confront current government policies with the intention of providing perspectives in the contextual framework of the systemic crisis we are going through.

THEMATIC SIGNIFICANCE AND CORE CONTRIBUTIONS

This study proposes a theory-based approach that confronts current business strategies in a context of emerging economies, and particularly, in a post-pandemic scenario has negative implications on the economic and social dimensions of business development. Accordingly, the conceptual study developed here seeks to show that open innovation and corporate

social responsibility,³ together, can have a positive impact on companies for the benefit of social improvement through increased market share and CSR. Thus, the vision proposed here adopts holistic strategies for economic recovery which makes it conditional based on the efficiency in the connections between CSRs and innovative actions. Accordingly, the study contributes to the existing literature by means of a heterodox approach that studies the link between CSR and disruptive innovation as necessary elements for the effective generation of knowledge banks. The above, within what this study assumes as an effective means for post-pandemic economic recovery, i.e., the secondary economic sector.

LITERATURE REVIEW AND THE STRUCTURE OF THE PROPOSITIONS

The analysis developed here is based on the current review of business models of small and medium-sized companies in this sector and assumes the risk and cultural measures that are observed in terms of the commitment of the governments of emerging countries to the economic recovery that is being sought today.⁴ The relationship between competitiveness variables and the social responsibility practices adopted by the governments of emerging countries is also confronted and contrasted with the initiatives proposed here in terms of new corporate social responsibility strategies that are analyzed from some competitiveness indexes.⁵

In the context of this study, collaboration between the primary and secondary economic sectors is of fundamental importance because cooperative relationships exist that foster stronger and more competitive labor markets and, therefore, more resilient in the face of the systemic crisis described. Because of their productive importance, SMEs demand greater

³ According to G. Ivana (2020), SMEs that demonstrate high engagement in the area of innovations have a higher tendency to engage also in CSR.

⁴ In a context of systemic crisis, some authors propose the application of orthodox policies that focus on the specialization of labor-intensive activities to increase competitiveness through systemic state intervention. Among the most fundamentalist theories, the General Theory of J. M. Keynes (1936) stands out, where it can be assumed that an alternative for economic recovery would reside in a two-dimensional strategy: technical and political. This would require a more systemic intervention by the government to promote and implement initiatives in this regard.

⁵ Instituto Mexicano de la Competitividad. (2016, September 14). *Índice de competitividad internacional 2022*. Centro de Investigación en Política Pública.

attention as new paradigms have emerged that limit the actions of the entrepreneur. According to B. Mitrică et al. (2021), in a classic way, both sectors operate through basic mechanisms based on the relationship between public policies, technology, and social aspects that do not necessarily incorporate added value to the productive process. These relationships are established within a framework of standardized procedures in the public domain and, therefore, are easy to operate. Considering that a real economic recovery requires the generation of more competitive markets, disruptive innovation, and CSR play a decisive role. Based on the above, the following research study argues that the current mechanisms of corporate social cooperation can be favored through the incorporation of a new organizational perspective that integrates resources of intangible legitimacy associated with innovation so that they represent opportunities for growth that detonate new routes for the development of the market in which they participate:

RPI: The classic paradigm of entrepreneurship between the primary and secondary economic sectors, which only concerns basic supply-demand mechanisms, can benefit from the incorporation of high-impact ventures that occupy scalable projects that make use of disruptive innovation for the benefit of creating positive impacts on the market in which they compete.

As long as high-impact ventures are characterized by being innovative and represent a positive social commitment, it is possible to achieve sustainable growth of the company whose main motivator is the focus on the customer (Sustainable Business Growth and Profitability from Customer Value Management, 2002). Therefore, the role of the proposed new venture must adopt the economic, social, political, technological, and cultural dimensions since, in this way, the creation of new businesses and their positive impact on the environment where they are developed is feasible.

According to L. Torán Jiménez (2015), from the economic point of view, new entrepreneurship is essential for economic development since both are directly related because decisions regarding entrepreneurship have an impact on economic growth. However, for entrepreneurship to be effective, it requires the implementation of innovative procedures and the promotion of an entrepreneurial culture that addresses new mechanisms of impact and social responsibility. Thus, innovation is proposed as an essential condition for the generation of ideas that, in a context of

economic recovery, make it possible to renew existing capacities based on the demand for new needs arising from the systemic crisis (Valdez-Juárez et al., 2022).

In view of the above discussion, it is proposed that the implementation of innovative business models that go hand in hand with new ways of proceeding and that optimize the necessary supply and demand processes to revolutionize markets, economic models, the way of relating them and the interactions between those whom this study proposes as the economic sectors that can increase competitiveness in the face of such a crisis. In this regard, the second research proposal is established, which points out the route to follow for the consolidation of the attributes that will change and positively impact society to satisfy its new needs:

RP2: The incorporation of disruptive innovation elements in the holistic cooperation models between the primary and secondary economic sectors, promotes the creation of disruptive business models that visibly impact society in terms of the optimization of products, processes and services that satisfy the new needs of the post-pandemic market.

Based on the above, it can be assumed that the new capabilities acquired by the SME's that incorporate disruptive business models will allow the companies to effectively enter the new market that arises from the health crisis and where products and services are offered that are more attractive to the population. Thoughtfully, these new business models allow satisfying new needs that arose due to the current conditions of the environment for the benefit of the strength of both sectors and, therefore, of a real economic recovery. At the same time, it is important to point out that innovation has many connotations and is still not well understood by people or societies, which makes the processes of gestation and competitiveness very difficult.

The present research assumes that, during the post-pandemic economic recovery process, the new market born from it is large enough for secondary sector SMEs to test and validate solutions, refine business models, reach a new commercial scale, and capitalize on market experience. In turn, that this sector benefits from the externalities found in the primary sector and, above all, that new contact networks are generated between the two sectors but now characterized by innovative initiatives that enrich the creation of value chains, providing real economic growth and, at the same time, strengthening both sectors. Based on the above, the following research proposal is established:

RP3: The assimilation of disruptive business models in the secondary sector stimulates sustained economic growth that derives in an economic potential with multidimensional vision.

THEORETICAL MOTIVATION

Small and medium enterprises (SMEs) account for more than half of the formal jobs in the world. According to S. Roper (2011), these companies provide fundamental solutions for development, such as energy, drinking water, sanitation, education, and health. Thus, to drive the sustained growth that is necessary in the post-pandemic phase, these types of companies must be aware of the new challenges for development, especially those related to positive social impact and the provision of new services that consumers will demand during the economic recovery phase.

Nevertheless, the new ways that are determined for an effective economic recovery must assume that the pandemic is not only a health emergency but also a business emergency that has shown that companies need to be resilient and develop positive impact management in terms of their corporate social responsibility. According to A. Khalil et al. (2022), SME's are the most vulnerable group in the context of the recent crisis because such companies do not have the necessary resources to absorb losses. One of the ways to mitigate the negative effects of the pandemic, as pointed out by the same authors, has to do with finding new innovative ways to allow them to operate in the new post-pandemic context. Moreover, it must be recognized that an essential element to sustain the development of these types of companies has to do with government support through the implementation of public policies that have a positive impact on the resilience of the firms.

According to the Mexican Institute of Competitiveness (IMCO) (2022), the 10 most competitive countries in the International Competitiveness Index 2022 stand out for having a more productive labor market and allocate a higher proportion of their Gross Domestic Product (GDP) to spending on research and development. It should be noted that this index captures different aspects of the economic, political, and social structure of the countries evaluated to determine their level of competitiveness. In the case of Mexico, J. Rangel (2021) indicates that SMEs in the construction sector face several important challenges to continue with the economic recovery. The study discussed above states that the

main challenge facing the sector has to do with the post-pandemic stage in which its revenues will be affected by a likely shortfall in the demand for construction services. Therefore, the business models of these companies must adapt to a new normality that, among other things, demands more digital services that are characterized by their ease and speed.

W. Dyduch et al. (2021), stated that the companies, which have dynamic capabilities that allow them a conscious and skillful modification of their strategic potential, derive in key actions for the creation of value, the generation of competitive advantage, and superior performance in the face of environments with uncertainty such as the one we are living. It follows from the above that the main task of companies during the development of their strategic management has to do with searching for the sources of value to capture it and finally create it. It should be noted that in a post-pandemic context; it is important for companies to develop sufficient dynamic capabilities to enable them to identify new sources of value creation arising from the crisis. At this point, it is worth noting that innovation increases the possibilities for such creation and also for generating financial liquidity in the company. In fact, when companies apply innovative methods, they have a greater chance of maintaining positive liquidity and even increasing production levels exponentially. In turn, the development of their dynamic capabilities allows companies to connect with certain internal processes and also value capture mechanisms through the creation of new networks with the target market. Thus, the nature of the dynamic capabilities that the firm develops will enable it to deal effectively with economic uncertainty.

Institutional theory shows, among other aspects, that social needs and environmental impact determine the practices of companies, where innovation plays a very important role in terms of the results sought (Sardon Steinhauser et al., 2022). According to J. Michal and R. Magdalena (2016), the Doblin approach stands out where it is stated that cooperation in external and internal interactions has common mechanisms that help drive functionality within the web of business networks. Based on a multidimensional vision, this approach promotes the creation of knowledge groups that consolidate in three dimensions: consumers, companies, and public entities. Together, it seeks to achieve the optimization of key resources that can add value to the customer proposition but, at the same time, improve production factors such as the technical resources of companies and infrastructure. According to M. Jasiński and M. Rzeźnik (2016), it can be argued that institutional theory is based on innovation

tactics that serve as universal tools for the reinvention of the basic components of business models, i.e., perspectives that emphasize behavioral theories and organizational structures that impact consumer decision. At this point, it is proposed that disruptive innovation can serve as a central tool for resolving the theoretical and practical conflicts that arise in the context of the current economic recovery. It is argued that this can be achieved by determining the practical requirements that affect business models and thus the way the market and industry function in the post-pandemic context.

In turn, as a central element for the creation of value in business and society, disruptive innovation can be understood as an essential element to achieve it. Disruptive innovation is defined as a process by which an existing solution is transformed, usually with the help of technology. According to W. Liu et al. (2020), disruptive innovation has common characteristics, among them, that it is a discontinuous type of innovation in terms of improving the performance of products or services. In turn, from the market dimension, disruptive innovation is initially focused on the marginal or emerging market that is normally not valued due to its low profitability. It should be noted that, in the context of emerging countries, socio-economic and political challenges dictate the organizational perspective of companies based on compliance with social norms and the value of successfully gaining market share. In this regard, the health crisis we are now facing, and the consequent deterioration of the financial sector have highlighted the importance of intangible legitimacy resources in shaping organizational attributes that promote real economic recovery. In the context of emerging markets, this crisis may represent an unusual opportunity to identify growth opportunities for developing companies. Disruptive innovation could be seen as an essential growth mechanism for small companies, in this case in the secondary sector, to grow within their sector and to use innovation as an essential route for the development of the market in which they participate. N. Steenkamp and V. Kashyap (2010) state that the intangible assets that come from innovation are very important for the success and growth of the company.

According to Hang et al. (2010), the rapid development of emerging countries, together with the fact that there is little demand for foreign products, makes emerging economies a valuable opportunity to develop and test disruptive innovations that meet consumer needs. In the context of economic recovery, the emergence of new consumer needs can trigger new mass markets that exploit the interest of raw material production

from the new demands identified by the secondary sector. The development of high-level markets can then be achieved through the creation of joint value between the primary and secondary economic sectors.

CONCEPTUAL FRAMEWORK

The dynamic capabilities that make it possible to increase a company's strategic potential are the key drivers for the creation of value and competitive advantage for the firm. E. T. Penrose (1959), proposed a theory of growth that distinguishes two distinct connotations. The first indicates an expansion of the company in terms of sales, exports, etc., and the second refers to a natural process of the firm in which it determines internal changes that respond to its development needs. Among the most important limitations for the development of companies identified by the same author are the following elements: non-entrepreneurial management, inefficient administration, insufficient capital, and, particularly, the lack of adaptation to circumstantial changes. Based on the above and with the passage of time, the concept of entrepreneurial talent was introduced with the intention of making a difference between companies that remain and those that disappear from the market. In this concept, intangible factors take on a very important dimension, since they are those that effectively enhance the firm's growth by increasing its market share. J. Barney (1986) indicates that the growth of the company is a function of the firm's ability to influence the market through the development of new products and innovations. In this sense, emphasis is given to the formation and diffusion of organizational knowledge to develop the firm's differences on the market. In turn, it assumes that the internal characteristics of the company are heterogeneous in relation to the resources they possess, and this derives in the strategy that the firm implements.

In addition to the internal dimension of the company, this work assumes that, in the face of an adverse context generated by the health crisis, companies must count on the support of the government through the generation of public policies that improve the growth potential of the firms, their innovation, and, finally, their competitiveness. According to A. Durán (2014), SMEs are considered worldwide as the driving engines of economic growth and job creation. These companies are at the core of economic activity and account for most existing jobs. Therefore, the same author considers that the promotion of these types of enterprises should be considered as a viable approach to sustainable development. Hence,

such development requires specific guidelines that, among other things, include strengthened legislation, policies, guiding institutions, and public goods that support the prospects and opportunities for growth within the different economic sectors. That is, public policies that contribute to the sustainability and growth of SME's and that, in a second stage, stimulate innovation processes to contribute to the strengthening and the improvement of the management of these firms.

In the context of the health crisis, SMEs are facing different challenges and opportunities that, by nature, are focused on the intensive support of supply chains. Therefore, innovation takes on great relevance because it can provide companies with a lever for the development of cross-cutting initiatives that are relevant to the economic crisis we are going through. In this regard, the need for sustainable development,⁶ which is becoming more relevant in the post-pandemic context, has motivated SMEs to play an increasingly leading role in terms of innovative development. Some authors suggest that an effective way to contribute to sustainable development is through the intensive progress of innovative solutions, and this is due to the fact that this type of company plays an increasingly important role in the global economy because of its labor share, and, in the best of cases, its capacity to generate business strategies that create value from the linkage with the collective knowledge that can arise during the consolidation of supply chains. According to J. Jin et al. (2022), matching the innovation strategy and the choice of knowledge sources is crucial for the success of innovation in this type of firm. In this regard, the right balance between market demands and the resources available to the firm would represent its key to success.

It can be assumed that one of the main axes for the growth of productive economic sectors is precisely innovation. With this, greater economic value can be given to the productive process and, therefore, provide greater wealth to the SME's that participate in this process. Thus, this article assumes that the introduction of disruptive innovative processes in the relationship between companies in these sectors promotes the

⁶ According to R. Stanisławski (2022), sustainable development, in addition to assuming an ecological dimension, conceives the strengthening of economic, social, and technological aspects. Therefore, this concept should be seen as a multidimensional process involving changes in social structures and in the attitudes of national and supranational institutions with the aim of accelerating ecological growth, reducing inequality and eliminating poverty.

satisfaction of new customer needs in the new post-pandemic context, and, with this, new alternative production and logistics strategies are achieved, resulting in a more attractive market and, consequently, in the new production methods required in the context of economic recovery. In other words, it is suggested that SME's with the quality they possess as an economic engine for development (Durán, 2014) added to the innovation process in the firm will detonate an effective economic recovery that is based on knowledge and new skills that are required today in terms of competitiveness and the ability to create value under an adverse economic context. It should be noted that, at the government level and within the policies established for economic dynamics, industrial promotion policies and initiatives should be established that, due to their level of impact, occupy economic and political research groups with theoretical and applied approaches. In other words, if the strategic sector assumed here (the secondary economic sector) presents a certain level of uncertainty, incentives should be established and the agents that can collaborate in the transmission of knowledge should be coordinated. According to A. Segarra (2014) innovation policy, like industrial policy, entails the adoption of a medium-term strategy with prioritization of sectors and activities, emphasizing the promotion of cooperation between agents in the system. Based on the above, this research study establishes the conceptual framework in Fig. 16.1.

In summary, it is assumed that structural changes are required in the organizational methods for the development of products and processes in the secondary sector, which will result in a sustainable growth strategy based on the creation of value to face the economic crisis we are going through. It is also proposed that the government, particularly that of emerging countries, should provide incentives, policies and public resources for the identification and elimination of market barriers to the benefit of the creation of high-level processes among the productive sectors.

GENERAL DISCUSSION

In the context of a systemic crisis that is characterized as ambidextrous (global and dynamic), SME's must compete to position themselves in the market and, at the same time, struggle to be financially profitable. The nature of SME's in emerging economies plays a decisive role in the post-pandemic economic recovery because today they are considered to

A process model towards a new paradigm innovation-led entrepreneurial growth and business disruption

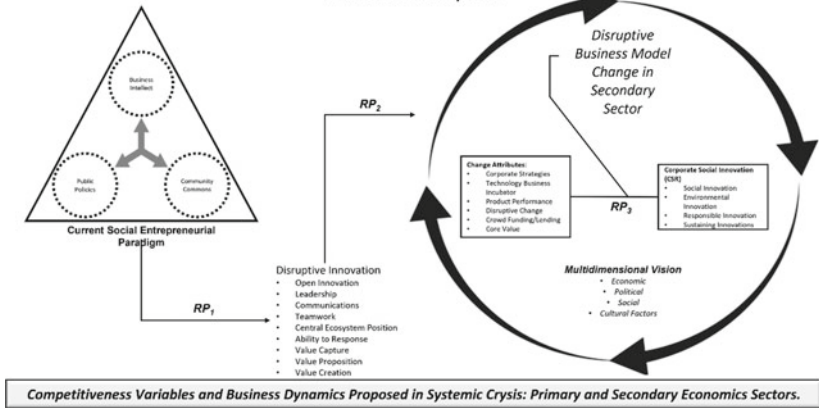


Fig. 16.1 Schematic discussion model (*Source* Authors)

be the main engine of growth in developed economies. Therefore, this research study proposes that multifactor and multidimensional investment in innovation processes for SME’s is critical since this can represent a transforming element for the business fabric of the relationships between economic productive sectors. Based on the theory discussed, there is empirical evidence that the improvement in the competitiveness of this type of company depends on the establishment of a business strategy that invests in innovative elements. In other words, innovation in SME’s must assume a spirit of growth and business development based on capturing new customer needs and, particularly, on the creation of value arising from the opening of new markets that were formed after the health crisis.

It should be noted that because of the size of SMEs and, above all, their limited economic resources, SMEs tend to optimize resources and reduce labor costs. However, this type of strategy is not sustainable over time and even worse, may represent a disadvantage because it does not respond to the new diversity of market needs and the new complexity of the market as a result of the health crisis we are facing. Therefore, innovation must bring a new dimension of growth and value to the customer, allowing SMEs to adapt efficiently. As discussed in this study, the customer and his new needs become the main beneficiary of

such innovation and companies should provide a service that is increasingly personalized and ahead of the customer's needs. E. Revilla et al. (2016) indicates that to achieve this task, companies must match innovation strategy and the choice of knowledge sources to achieve an efficient internal and external network structure; internal in terms of a business strategy that adopts innovation as a source of growth, and external in terms of the linkage, in this case, of the productive economic sectors, particularly the secondary sector. Therefore, this study promotes effective communication between the business sector, the government and, of course, with society, since such cooperation would represent a sustainable growth of the company, society, and the economy itself. Also, business aspects would be improved and, at the same time, would create value and, consequently, promote the economic growth necessary for a real economic recovery. It is worth mentioning that, as a whole, this would result in the creation of new lines of business that would respond directly to the needs of the market in crisis.

Nevertheless, this study contributes to the literature on innovation by SME's, particularly open innovation. The adoption of innovation by SME's is little researched and shows a potential on the adoption of open innovation processes, which have been studied more in large companies.⁷ According to B. G. Góngora and G. A. Madrid (2010), innovation is not a central issue in the support of SME's since public policies associated with the growth of this type of companies focus more on employment generation, increasing business feasibility and minimizing financial and market problems, which implies that innovation is relegated to complementary or secondary considerations.

This study assumes that open innovation is the most appropriate way for SME's to create value because such innovation is characterized by capitalizing on the company's internal and external ideas. Accordingly, the study refers to a process in which different agents participate to develop solutions and solve challenges in a very efficient way. As H. Chesbrough (2005) points out, open innovation combines internal and external ideas within platforms, architectures, and systems, which ensures that the business models that emerge as a result of this process generate value. In turn,

⁷ According to F. I. J. Odriozola (2020), the study of open innovation has been the subject of several studies for large companies. However, SMEs have a more flexible internal structure and shorter decision-making processes, which makes them more susceptible to adapting to incorporate new innovative practices.

the same author distinguishes between two paths for this type of innovation: the outflow of ideas from the organization to the market and inflow of customer needs from the market to the firm. And, in consequence, this derives in collaboration with external agents through the establishment of functional work teams.

Finally, this study considers that the economic crisis we are going through represents a valuable opportunity to radically innovate from the productive sectors. This is due to the innovations that are developed in this context will do so in a market that did not exist until recently. That is, the new needs of today's consumers and the architectures of the products or services that will now be successful are not known with certainty. The new market that emerged during the healthcare crisis is developing in a context where traditional management mechanisms would not necessarily work. Hence, the innovative practices proposed here, particularly within the productive economic sectors, will surely offer disruptive solutions that did not exist before, since they will now have to satisfy unmet needs in the new market that emerged during the pandemic.

CONCLUSION

The main objective of this research has been to demonstrate that, in a context of systemic crisis generated by the pandemic, the best alternatives for economic recovery lie in a multidimensional vision that involves economic, political, social, and cultural factors that allow the design of an effective development strategy. Accordingly, it has been considered that new public policies aimed at post-pandemic economic recovery should include innovative elements that involve the adoption of a medium- and long-term strategy that prioritizes the productive sectors, particularly the secondary economic sector. Particularly in the case of emerging countries, and in the context of the economic crisis we are currently experiencing, in-depth strategies must be developed that adopt an innovation-driving dimension that will lead to the strengthening of the productive fabric of the economy. In other words, innovation should be consolidated in the economic recovery strategy as an element that allows SMEs to penetrate markets with added value. These economic recovery policies must adopt new organizational methods that must be multifactorial (society, culture, sustainability, government, environment, etc.) and lead to innovations in products and services, but also in processes within the functional framework of the new market and government strategies.

It should be noted that, among the main obstacles to the implementation of this strategy, the research work has identified the lack of awareness on the part of the authorities to give priority to innovative initiatives. This is particularly due to the fact that public policies aimed at strengthening SME's assume their capacity as fundamental sources for the generation of employment as the main axis for their growth. An additional obstacle that stands out from the research is the lack of qualified personnel to carry out the innovative processes that the company needs. Therefore, the incorporation of specialized human capital or the training of the company's existing personnel is required to efficiently carry out the activities related to the innovative process.

In conclusion, this study suggests that innovative strategies for SME's are the basis for helping the economy of emerging countries to cope with post-pandemic market turbulence. Moreover, it is proposed that SME's belonging to the secondary sector of the economy use innovation as a collaborative tool to generate new channels of communication and distribution between primary sector suppliers and public policies orchestrated by the government. With this, the companies could develop business models that conceive a strategy based on the new market. That is, optimize the value chains that are formed between stakeholders in terms of marketing. In view of the discussion in this study, a business strategy based on networks characterized by closer communication between the productive sectors, but which also receives information from the market itself and, in turn, determines new channels of communication between the government, society, and the company itself. It is suggested then that this type of strategy transforms the business but, consequently, responds to the demands of the new market. This can happen if SME's, in collaboration with government and society, focus on those strategic assets that offer the most value to the market. That is, the new initiatives for post-pandemic economic recovery should seek growth opportunities through participative innovative processes.

IMPLICATIONS IN THEORY AND PRACTICE

The first mentions of the concept of open innovation were found in the book by H. Chesbrough (2005). In which, the author states that most companies develop their innovation strategies in a closed way, so that when a product or service is ready to be marketed it is distributed without any cooperation from agents outside the company. Thus, these ways of

carrying out the innovative process are focused on the ideas generated within the company, which are then developed, patented, and launched into the market. However, with a view to developing viable alternatives for post-pandemic economic recovery, this article proposes a heterodox conception of the theory of open innovation developed that, in principle, provides good expectations in terms of the application of its fundamentals to SMEs in the secondary sector. However, in turn and with greater emphasis, it is developed in a model of open collaboration where, from the generation of feedback systems between external agents, multiple actors can contribute to the incubation of new developments.

Nonetheless, beyond conceiving open innovation as a collaborative model, this article proposes that the key to its success in a context of systemic crisis is the search for effective participation between business, society, and government. And this leads to the generation of products or services that will respond more effectively to the new market needs that emerged from the health crisis (Panja & Choudhury, 2022). The combination of knowledge that emerges from this collaboration scheme will result in the creation of value that the new market needs to sustain the economic development of emerging countries.

For SME's in the secondary sector, this work also assumes that thanks to the implementation of open innovation and collaboration with external agents, new products, or services can be conceived efficiently and very economically. In the current economic crisis scenario, it is essential to develop products or services that are close to real demand, and the way proposed here is to use innovation as a source of knowledge. At the same time, with the intention of achieving a better understanding of the new post-pandemic market, it is proposed that the behavioral changes arising from the identification of new consumer needs have an impact on the development of disruptive strategies that offer the best approach between supply and demand of the new market. Moreover, the turning point represented by the health crisis for the economy of emerging countries will allow the relationship between business, government, and society to be consolidated in order to take advantage of disruptive innovations that were already on the market but had not been applied because they were considered inappropriate for a market prior to the one that now prevails.

In the context of emerging countries, the public policies that have been documented for the benefit of SMEs maintain a limited and biased planning system that ignores the importance of generating sustained growth based on an understanding of the real needs of customers. These

laws apparently do not consider real demand planning, much less the management of supply chain optimization. Thus, it is argued that open innovation, in conjunction with the collaborative paradigm proposed here, can be very useful in times of crisis, since communication between stakeholders would make it possible to meet real demand based on the new needs identified in the current context. In other words, if innovation is established as a key focal point for the economic development of SMEs, it must be assumed that the most important thing is to effectively identify what the customer needs and, secondly, how to provide an effective response that avoids the threats that may exist in the process of collaboration between parties. Therefore, it is proposed here that a solid way to help stabilize the market in times of crisis is by optimizing the value chain between productive economic sectors.

FUTURE RESEARCH

The theory discussed in this research, which supports open innovation as a guiding axis for economic recovery, allows us to argue that its effective application in SME's would lead to potential economic growth by increasing the competitiveness of the productive sectors. It should be understood that in the current context; the universe of SME's in emerging economies not only represents an essential engine for job creation but also a guiding axis for expansion and acceleration of economic growth.

From the point of view of an economic recovery sustained on the pillars of innovation, it is essential to analyze the series of factors that shape the business models of the companies that now need to know in depth the new market that emerges from the health crisis. In other words, a holistic vision of the post-pandemic ecosystem is now required to find new ways of creating value in a new virtuous circle of growth that conceives the effective interaction of business, society, and government. Accordingly, the main limitations identified in this study lie in a sectorial vision that, although it assumes the interaction of the productive and raw material sectors, does not study additional supports that can be found in other elements of interaction with the SME's, such as the scarce empirical information available on the new market and the asymmetry existing between the laws, initiatives, and legislations that arise from it.

Among the elements that theory recognizes as drivers of SME growth, but which have not been explored in this study, are financial control, the use of economic resources and the development of growth strategies with

an administrative and, at the same time, financial vision. Therefore, it is suggested that new empirical studies should be carried out to take an integral view and, above all, to determine how the typology of companies that use open innovation models are capitalizing on the benefits that their performance in the market brings them globally.

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REFERENCES

- Am, J. B., Furstenthal, L., Jorge, F., & Roth, E. (2020). *Innovation in a crisis: Why it is more critical than ever*. McKinsey & Company. <https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/innovation-in-a-crisis-why-it-is-more-critical-than-ever?cid=other-eml-alt-mip-mck&hlkid=9aacdb23318d4146a40ef2f3916ed7d0&hctky=12146941&hdpid=e5020cc2-cda2-4474-b1e5-595494a2a52e>
- Barney, J. (1986). Strategic factors markets: Expectations, lacks, and business strategy. *Management Science*, 32(10), 1231–1241.
- Chesbrough, H. (2005). Innovación abierta. Innovar con éxito en el siglo XXI. In *Reinventar la Empresa* (pp. 397–410). OpenMind BBVA. <https://www.bbvaopenmind.com/wp-content/uploads/2015/01/BBVA-OpenMind-libro-Reinventar-la-Empresa-en-la-Era-Digital-empresa-innovacion1-1.pdf>
- Chhadwa, J., Bhojar, P. K., & Sharmiladevi, J. C. (2022). Role of corporate social responsibility in building brand loyalty and purchase consideration of products and services for millennials. *Cardiometry*, 23, 577–584. <https://doi-org.pbidi.unam.mx:2443/10.18137/cardiometry.2022.23.577584>
- Durán, A. (2014, August 23). *Políticas públicas para apoyar las PYMES de la región del gran caribe*. Asociación de Estados del Caribe. <http://www.acs-aec.org/index.php?q=es/centro-de-prensa/comunicados/2014/politicas-publicas-para-apoyar-las-pymes-de-la-region-del-gran-car>
- Dyduch, W., Chudziński, P., Cyfert, S., & Zastempowski, M. (2021). Dynamic capabilities, value creation and value capture: Evidence from SMEs under Covid-19 lockdown in Poland. *PLoS ONE*, 16(6), 1–28. <https://doi-org.pbidi.unam.mx:2443/10.1371/journal.pone.0252423>
- Fang, G. G., Qalati, S. A., Ostic, D., Shah, S. M. M., & Mirani, M. A. (2022). Effects of entrepreneurial orientation, social media, and innovation capabilities on SME performance in emerging countries: A mediated–moderated model. *Technology Analysis & Strategic Management*, 34(11), 1326–1338. <https://doi-org.pbidi.unam.mx:2443/10.1080/09537325.2021.1957816>

- Góngora, B. G., & Madrid, G. A. (2010). El apoyo a la innovación de la PyME en México. *Un estudio exploratorio. Investigación y Ciencia*, 18(47), 21–30.
- Hang, C. C., Chen, J., & Subramian, A. M. (2010). Developing disruptive products for emerging economies: Lessons from Asian cases. *Research-Technology Management*, 53(4), 21–26.
- Instituto Mexicano de la Competitividad. (2022, September 14). *Índice de competitividad internacional 2022*. Centro de Investigación en Política Pública. <https://imco.org.mx/indice-de-competitividad-internacional-2022/#:~:text=M%C3%A9xico%20obtuvo%20la%20posici%C3%B3n%2037,a%20las%20otras%2042%20econom%C3%ADas>
- Ivana, G. (2020). Influence of innovation activities on CSR of SMEs in selected CEE countries. *Ad Alta: Journal of Interdisciplinary Research*, 10(1), 70–81.
- Jasieński, M., & Rzeźnik, M. (2016). Building bridges between business model concepts: The Canvas and Doblin's Ten Types. In R. Knosala (Ed.), *Innowacje w zarządzaniu i inżynierii produkcji* (pp. 96–103). Oficyna Wydawnicza Polskiego Towarzystwa Zarządzania Produkcją.
- Jin, J., Guo, M., & Zhang, Z. (2022). Selective adoption of open innovation for new product development in high-tech SMEs in emerging economies. *IEEE Transactions on Engineering Management*, 69(2), 329–337. <https://doi-org.pbidi.unam.mx:2443/10.1109/TEM.2019.2948739>
- Khalil, A., Abdelli, M. E. A., & Mogaji, E. (2022). Do digital technologies influence the relationship between the COVID-19 crisis and SMEs' resilience in developing countries? *Journal of Open Innovation*, 8(2), 100. <https://doi-org.pbidi.unam.mx:2443/10.3390/joitmc8020100>
- Keynes, J. M. (1936). *The general theory of employment, interest and money*. Cambridge University Press.
- Liu, W., Liu, R., Chen, H., & Mboga, J. (2020). Perspectives on disruptive technology and innovation: Exploring conflicts, characteristics in emerging economies. *International Journal of Conflict Management (Emerald)*, 31(3), 313–331. <https://doi-org.pbidi.unam.mx:2443/10.1108/IJCM-09-2019-0172>
- Michal, J., & Magdalena, R. (2016). *Building bridges between business model concepts: The Canvas and Doblin's Ten Types*.
- Miranda Junior, N. d. S., Câmara Viana, L. F., de Oliveira Carneiro, D. K., Costa Filgueiras, R., & da Silva Goulart, G. (2022). Initial actions of the Brazilian regional innovation ecosystem against the Covid-19 pandemic. *International Journal of Innovation*, 10(2), 291–318. 2318-9975. <https://doi-org.pbidi.unam.mx:2443/10.5585/iji.10i2.21576>
- Mitrică, B., Săgeată, R., Mocanu, I., Damian, N., & Neagoe, A. (2021). Recent Dynamics of the Secondary Sector in Romania. Regional Disparities. *Romanian Journal of Geography/Revue Roumaine de Géographie*, 65(2), 143–158.

- Observatorio de Responsabilidad Social Corporativa. (2016). *¿Qué es RSC?* <https://observatoriorisc.org/la-rsc-que-es/>
- Odriozola, F. I. J. (2020). *La gestión de la innovación abierta en las pymes: Retos, tendencias y oportunidades para competir en el mercado* (Doctoral Thesis). Faculty of Economics and Social Sciences, UIC Barcelona.
- Panja, A., & Choudhury, S. M. (2022). Role of science, technology and innovation for responding to Covid-19. *Asian Journal of Medical Sciences*, 13(3), 176–181. <https://doi-org.pbidi.unam.mx:2443/10.3126/ajms.v13i3.41543>
- Penrose, E. T. (1959). *The theory of the growth of the firm*. Oxford University Press.
- Rangel, J., (July 7, 2021). *Las PYMEs en México ven crecimiento tras la pandemia*. Cámara Mexicana de la Industria de la Construcción. <https://www.cmic.org/las-pymes-en-mexico-ven-crecimiento-tras-la-pandemia/>
- Revilla, E., Prado, B. R., & Cui, Z. (2016). A knowledge-based framework of innovation strategy: The differential effect of knowledge sources. *IEEE Transactions on Engineering Management*, 63(4), 362–376.
- Roper, S. (2011). SMEs in a globalised world: Survival and growth strategies on Europe's geographical periphery—Edited by Helena Lenihan, Bernadette Andreosso-O'Callaghan, and Mark Hart. *Economic Geography*, 87(3), 367–368. <https://doi-org.pbidi.unam.mx:2443/10.1111/j.1944-8287.2011.01119.x>
- Sardon Steinhauser, V. P., da Rocha, A., & de Oliveira Paula, F. (2022). Institutional theory and international entrepreneurship: A review. *Internext: Revista Eletrônica de Negócios Internacionais Da ESPM*, 17(2), 264–283. <https://doi-org.pbidi.unam.mx:2443/10.18568/internext.v17i2.684>
- Segarra, A. (2014). *La política de innovación* (pp. 251–264). Mediterráneo Económico 25. Universidad Rovira i Virgili.
- Stanislawski, R. (2022). Characteristics of open innovation among Polish SMEs in the context of sustainable innovative development focused on the rational use of resources (energy). *Energies*, 15(18), 6775 (19961073). <https://doi-org.pbidi.unam.mx:2443/10.3390/en15186775>
- Steenkamp, N., & Kashyap, V. (2010). Importance and contribution of intangible assets: SME managers' perceptions. *Journal of Intellectual Capital*, 11(3), 368–390. <https://doi-org.pbidi.unam.mx:2443/10.1108/14691931011064590>
- Sustainable business growth and profitability from customer value management. (2002). *Chemical Week*, 164(29), 25.

- Torán Jiménez, L. (2015, March). *Paradigma empresarial del siglo XXI. El emprendimiento y las startups*. Universidad Pontificia Comillas. <https://repositorio.comillas.edu/jspui/bitstream/11531/4561/1/TFG001282.pdf>
- Valdez-Juárez, L. E., Castillo-Vergara, M., & Ramos-Escobar, E. A. (2022). Innovative business strategies in the face of COVID-19: An approach to open innovation of SMEs in the Sonora Region of Mexico. *Journal of Open Innovation*, 8(1), 47. <https://doi-org.pbidi.unam.mx:2443/10.3390/joitmc8010047>



Women Entrepreneurs-Moving Center and Front: An Overview of Research in Karnataka, India

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INTRODUCTION

An entrepreneur is a person who is inventive, determined, strong decision-maker, and manages to run the business. Entrepreneurship is an innovative and creative process which constantly tries to make people's life easier and better through its products or services. Nations economic growth is extensively dependent upon entrepreneurship by creating new job opportunities. Economic growth of the nation would be asymmetrical with no participation of women in entrepreneurial activities who constitute approximately half of the population of our county. When a business is established and controlled by a woman then we may identify it as a women entrepreneurship.

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Shri Jawahar Lal Nehru, first prime minister of India has remarked “when a woman moves forward, the family moves, the village moves, and the nation moves.” Ministry of Statistics and Programmed Implementation (MoSPI) in its sixth economic census explain that women represent around 14% of the total entrepreneurship in India. The percentage of women entrepreneurs are raising in the economies of nearly all countries. This study will attempt to explore factors that influence the success of women entrepreneurs in Karnataka, India. Karnataka is a state in the southwestern region of India. It is the sixth-largest Indian state by area with 61,130,704 inhabitants at the 2011 census; Karnataka is the eighth-largest state by population, comprising 31 districts (census reference 2021). Karnataka is the manufacturing hub for some of the largest public sector industries in India. Since the 1980s, Karnataka has emerged as the pan-Indian leader in the field of IT (information technology). In 2007, there were nearly 2,000 firms operating in Karnataka many of them, including two of India’s biggest software firms. Educated women are involved in business like IT firms, small manufacturing units, beauty parlors, and designer boutiques in urban areas. The desire for financial independence, knowledge, and ability are the key motivations for women to start business ventures. “Women entrepreneur is an individual who accepts a challenging role to fulfill her personal needs and turn out to be financially independent”. Venture provides assurance to women to have a self-sustaining career and to be independent. The success of women entrepreneur is influenced by her managerial skills like creative thinking, adoption of innovations, analytical capabilities, etc. Family support also plays an important role in achieving the success of women entrepreneurs.

The paper is divided into six parts. Section 1 contains the introduction, Sect. 2 reviews the literature, Sect. 3 objectives of the study and hypothesis formation, Sect. 4 discusses the methodology, Sect. 5 deals with the data analysis, results, and discussion, and Sect. 6 contains the conclusion.

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LITERATURE REVIEW

The significant increase in female entrepreneurship over the past several decades has led to a positive shift and modification in women's traditional roles (De Sousa, 2013; Khan, 2014). However, managing personal and professional lives has become a major problem for women in business (Khan, 2014). As working moms and company owners, women entrepreneurs manage their domestic duties, childcare duties, and establishment of their businesses in addition to other tasks (Rehman & Roomi, 2012; Wambua, 2014). Women are still accountable for a greater proportion of household tasks than males, though (Agarwal et al., 2015; Rehman & Roomi, 2012). Consequently, a greater comprehension of the significance of family support, management skills, and personal success abilities is required. Hence, a deeper understanding of the role of family support, managerial competencies, and individual competencies for success of women entrepreneurs' is essential. The focus of the study is to examine whether these factors will impact the success of women entrepreneurs in Karnataka.

Family Support (FS) in Women-Owned Business

Family support has a huge impact on the survival and growth of women-owned enterprises (Teoh & Chong, 2008). The family has also been acknowledged as playing an important role in the entrepreneurship start-up process, especially in fostering the entrepreneurial enterprise, since family members assist in mobilizing physical, financial, and labor resources (Aldrich & Cliff, 2003; Welsh et al., 2014, 2016). Like how successful businesses tend to have strong family backing (Cruz et al., 2014). Women who have the support of their families are better able to handle their job stress and focus more on their professional obligations, which ultimately improves the success of the company (Karatepe & Bekteshi, 2008). Family members are valuable resources that female entrepreneurs may rely on when other support networks are limited, especially (Greve & Salaf, 2003; Welsh et al., 2014). Every human being needs family support since it gives them a crucial support network throughout their whole lives, not only during their formative years (Imbaya, 2012). The existing literature (Mari et al., 2016; Roger, 2005; Welsh et al., 2016) has identified three forms of family supports—financial help, emotional support, and instrumental support—that might help women entrepreneurs in their businesses.

Family members provide as a safety net for female company owners throughout the early stages of business development and during financial hardship (Powell & Eddleston, 2013). Researchers have also noted that family members contribute significantly financially to the firm by offering both paid and unpaid labor to the company (Danes et al., 2008; Matzek et al., 2010). According to Matzek et al. (2010)'s research, married women's husbands serve as their primary financial backers and decision-makers when launching a firm. Direct and indirect financial contributions from spouses are made to a firm owned by a partner. Additionally, family members must provide emotional support to women business owners. That happens when family members take an interest in their company and offer timely advice while making decisions. Family support in the form of encouragement encourages and stimulates the woman entrepreneur to follow her goals throughout the entrepreneurial process as well as to maintain her composure and optimism in the face of obstacles to her firm (King et al., 1995; Mari et al., 2016; Van Aukem & Werbel, 2006). The finding of Vadnjaj and Vadnjaj (2007) that emotional support is more important than a break from home duties is also supported by this study (2013). Additionally, family members can contribute significantly by offering suggestions and counsel (Chrisman et al., 2005; Kim et al., 2014).

Role of Individual Competencies (IC) in Success of Women Entrepreneurs

Entrepreneurship is the spirit to innovate (Schumpeter, n.d.-b). So, we consider various opinions concurring to describe that entrepreneurship is the newest entry into or creation of new organization aiming to initiate, innovate, and increase profit by taking benefit of opportunity combining resources in those ways which can make an impact on the market. Certainly, entrepreneurs are a catalyst for sustainable economic growth because of their creativity and innovative competencies in the entrepreneurial process, guiding them to achieve their goals (Lee et al., 2004). Family members can educate entrepreneurs how to productively imbibe the behaviors in their family roles such as risk taking, multitasking, and effective communications to better their businesses. These competencies will help manage employees, customers, and suppliers (Grzywacz et al., 2007; Powell & Eddleston, 2013; Ruderman et al., 2002).

Role of Managerial Competencies (MC) in Success of Women Entrepreneurs

According to the literature, managerial competencies for entrepreneurs are a set of integrated knowledge, skill, and attitude components (Bird, 2002; Man et al., 2002; Volery et al., 2015; Wagener et al., 2010). To compete with competitors, strategic thinking, market analysis, and business expertise are crucial. Entrepreneurship is a resourceful and original reaction to the environment that can occur in a variety of fields (Okpara, 2007). In his investigations, Katila et al. (2008) highlighted how obtaining financial resources is a crucial responsibility for a successful commercial firm. Entrepreneurs should think about financing from a variety of sources, be able to make judgments on money matters, and be able to appraise prospects (Man et al., 2002).

Hence, this study hypothesizes that, the combination of the family support, individual competencies and managerial competencies will make a positive influence on the success of the women entrepreneurs. The study also aims at identifying three factors which factor influences the most the effective performance of the women entrepreneur. The literature shows the significant study on these factors, but there is very little research is being carried out in Karnataka state on the same. Considering this gap focus of the study is to examine whether these factors will impact the success of women entrepreneurs in Karnataka, India. Hypothesis and literature review instigates the author following objectives:

- To examine the influence of family support of women-owned firms' performance.
- To examine the influence of individual competencies on women-owned firms' performance.
- To examine the influence of managerial competencies on women-owned firms' performance.

HYPOTHESIS DEVELOPMENT

Family Support

As mentioned earlier, the success of women entrepreneur is influenced by family support, individual competencies, and managerial competencies. In the survival and growth of women-owned businesses is significantly

influenced by Family support (Teoh & Chong, 2008). To measure the influence of family support, following questions are used Rely on the advice of my spouse to help me run my business, Members of my family are interested in my business, when I am occupied by my business someone in my family will help me in domestic chores, obtained money from the family to start the business or to support the business activities, when things are going well in my family life, my outlook regarding my job is improved, having a good day with my family improves my frame of mind at work, feeling good about my family life puts me in a good mood at work. Hence, the proposed hypothesis is as follows:

H1: Family support (FS) will have a positive and significant influence on women-owned firms' performance.

Individual Competencies

Risk taking, multitasking, and effective communications to better their businesses these competencies will help manage employees, customers, and suppliers (Grzywacz et al., 2007; Powell & Eddleston, 2013; Ruderman et al., 2002). Entrepreneurship is a creative and innovative response to the environment which can take place in a diversified field (Okpara, 2007). To measure the influence of individual competencies on the success of women entrepreneur these questions are used. For the success of Women Entrepreneurs, one should have: creative thinking, adoption to innovations, risk taking ability, multitasking ability, effective communication, leadership, and decision-making. Hence, the proposed hypothesis is as stated below:

H2: Individual competencies (IC) will have a positive and significant influence on women-owned firms' performance.

Managerial Competencies

Strategic thinking, market analysis and business know how knowledge is essential for competing with competitors. Katila et al. (2008) in his studies showcased that attaining finance resource as a key task for a successful business enterprise. To measure the influence of managerial competencies on the success of the women-based enterprises following factors is used, analytical thinking, strategic thinking, business operational competency,

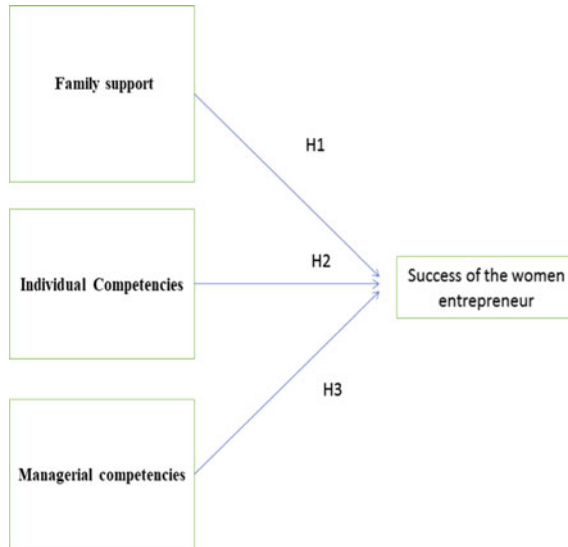


Fig. 17.1 Hypothesized model

finance management competency, and marketing knowledge (Fig. 17.1). Hence, the proposed hypothesis is

H3: Managerial competencies (MC) will have a positive and significant influence on women-owned firms' performance.

METHODOLOGY

The research model of this study envisages an empirical approach. Hence, the data required was gathered through a structured questionnaire. The items used in the questionnaire are all based on literature and were closed-ended questions. Initially, the questionnaire was reviewed by 4 subject experts for its content and face validation as recommended (Zaichkowsky, 1985). The questionnaire was subjected to a pilot test and based on the feedback; necessary changes were incorporated. Cronbach's test was used to test the reliability of the items. The respondents were asked to reply

to a questionnaire on a 5-point Likert scale, where 1 stood for strongly agree and 5 for strongly disagree.

Sampling Method and Size

A sample size of 250 women entrepreneurs across Karnataka was finalized based on the Krejcie (1970) table as the total population was huge. Both online and offline modes were used to collect the data. Convenient Sampling method was adopted for sample selection. 15 different cities of Karnataka were selected, and samples were selected. Convenient sampling method is easier to collect the data hence this method has been adopted.

DATA ANALYSIS

This research used exploratory factor analysis (EFA) and structural equation modeling (SEM) to identify the influence of different parameters on women-owned firms' performance.

Exploratory Factor Analysis (EFA)

In the social sciences, EFA is a commonly used and applied statistical method (Hogarty et al., 2005). EFA is a multivariate statistical technique that, among other things, builds dimensions and offers construct validity to condense a huge number of variables into a manageable number of elements (Field, 2005; Williams et al., 2010). Kiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity were used in this study to assess the appropriateness of the sample size. In order for Bartlett's test of sphericity to be suitable, the factor analysis must show significance at (P0.05) (Hair et al., 2014). The typical acceptable index is more than 0.6; however, the KMO has a range of 0–1 (Hoque & Zainuddin, 2016). Total variance explained, which extracts things into a manageable quantity before further analysis, was also investigated. Items with eigenvalues greater than 1.0 are separated into several components throughout this procedure (Zainuddin, 2012). Only elements with a factor loading greater than 0.6 were kept for additional analysis after the rotated component matrix was evaluated. However, only items having a Cronbach's Alpha of 0.60 or above were taken into consideration once the EFA and reliability analysis processes were completed.

Structural Equation Modeling (SEM)

SEM enables simultaneous estimation of several dependent and independent connections. A two-step model construction procedure for using SEM was adopted, as advised by (Hair et al., 1998). The structural model and the measurement model make up the two stages. Confirmatory factor analysis was done first, then AMOS was used to assess structural models that matched proposed hypotheses (version 20). Structural equation modeling has several advantages since it evaluates the relationship between two constructs concurrently when there are numerous constructs involved. Many researchers believe it to be a more effective approach than multiple regressions. Path analysis and factor analysis may both be replaced with SEM as more effective alternatives.

RESULTS OF EXPLORATORY ANALYSIS

Exploratory factor analysis is a statistical technique used to reduce the data to a smaller set of variables KMO has a general acceptability value greater than 0.6. Table 17.1 demonstrates that the KMO value of 0.891, which is higher than the advised value of 0.6, is outstanding. For the component analysis to be valid, the significance value of the Bartlett's Test of Sphericity must be less than 0.05. The significance value of the Bartlett's Test is 0.000, which satisfies the requirement of a significance value less than 0.05 (Zainuddin, 2012). KMO value around 1.0 and Bartlett's test significance value near 0.0, respectively, indicate that the data are sufficient and appropriate to continue with the reduction operation. Total variance explained is a method of extracting data from items to make it more manageable to analyze. This technique separates components with eigenvalues greater than 1.0 into several components (Hoque et al., 2016; Zainuddin, 2012).

Table 17.1 KMO and Bartlett's Test for the items of ET construct

Kaiser–Meyer–Olkin measure of sampling adequacy		0.891
Bartlett's Test of sphericity	Approx. Chi-Square	8.0243
	Df	153
	Sig	0.000

Table 17.2 displays the four dimensions of the ET construct that the EFA has recovered, with eigenvalues of 6.908 for component 1, 3.245 for component 2, 2.757 for component 3, and 2.389 for component 4. This means that the objects are categorized into four dimensions and will be considered for additional analysis. The cumulative variance explained, as shown in Table 17.2, is 84.996%.

*Reliability Analysis for Measuring Factors Influencing Success
of Women-Owned Enterprises*

Reliability analysis is a method for measuring all the items under each concept and assessing how error-free they are. The dependability of items is evaluated using the Cronbach's Alpha formula. The recognized Cronbach's Alpha value varies among writers, though. A valid Cronbach's Alpha of greater than 0.50 is recommended by Kerlinger and Lee (2000) for internal consistency dependability. Cronbach's Alpha of 0.60 or greater is recommended to assess internal consistency, whereas 0.95 indicates that the instrument has a high reliability standard (Hoque & Zainuddin, 2016; Hoque, 2018). A Cronbach's Alpha of 0.60 is taken into consideration for this study. Table 17.3 shows there are 4 items of component 1 which is Individual Competency, 4 items of component 2 which is family support, 4 items of component 3 which is managerial competency and 5 items of component 4 which is firm performance. Hence, the theoretical framework used for the study is accepted.

RESULTS OF STRUCTURAL EQUATION MODELING (SEM)

The Measurement Model

In the literature review and the creation of hypotheses, the many factors that are crucial to the current investigation have been briefly explained. All the items included as part of the study's scale were measured using a 5-point Likert scale. Assessments of reliability and validity were performed to confirm the measurement methodology (Fig. 17.2).

A total of 4 constructs were included in the measurement model which included firms performance (5-item scale), Managerial competencies (5-item scale), Family support (4-item scale), and individual competencies (4-item scale) (Table 17.4).

Table 17.2 Total variance explained for ET construct

Component	Initial eigenvalues		Extraction sums of squared loadings		Rotation sums of squared loadings				
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	6.908	38.377	38.377	6.908	38.377	38.377	4.199	23.326	23.326
2	3.245	18.030	56.407	3.245	18.030	56.407	3.985	22.142	45.467
3	2.757	15.319	71.726	2.757	15.319	71.726	3.567	19.819	65.286
4	2.389	13.270	84.996	2.389	13.270	84.996	3.548	19.710	84.996
5	0.437	2.426	87.422						
6	0.341	1.895	89.318						
7	0.295	1.636	90.954						
8	0.259	1.439	92.393						

Table 17.3 EFA procedures has extracted four components

<i>Cronbach's Alpha</i>	<i>N of items</i>	<i>Construct</i>
0.956	4	Individual competency
0.956	4	Family support
0.852	4	Managerial competency
0.952	5	Firm performance

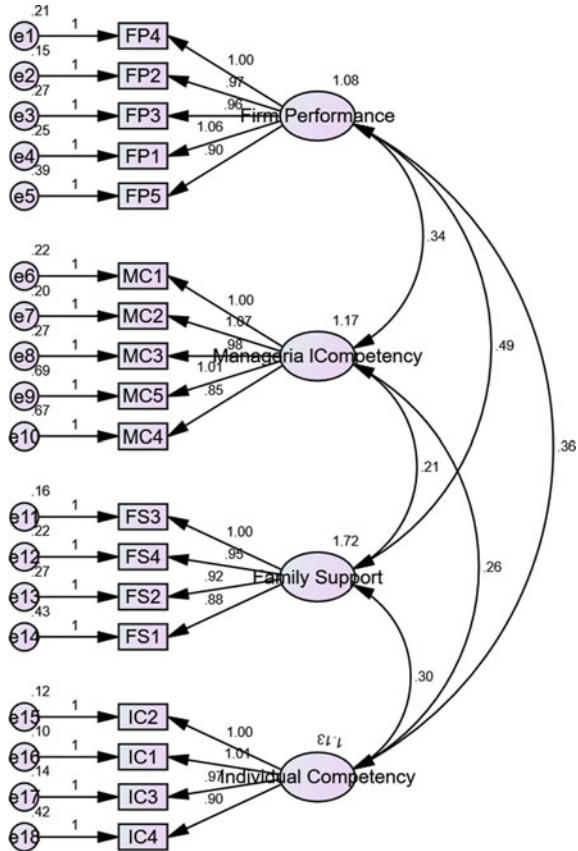


Fig. 17.2 Confirmatory factor analysis

Table 17.4 Model fit measures

<i>Measure</i>	<i>Estimate</i>	<i>Threshold</i>	<i>Interpretation</i>
CMIN	340.805	–	–
DF	129	–	–
GFI	0.916	>0.90	Good
CMIN/DF	2.642	Between 1 and 3	Excellent
CFI	0.974	>0.95	Excellent
SRMR	0.041	<0.08	Excellent
RMSEA	0.063	<0.06	Acceptable

The result indicates an acceptable fit to the data: $\chi^2 = 340.805$, degrees of freedom (df) = 129, adjusted goodness-of-fit index (AGFI) = 0.916, comparative fit index (CFI) = 0.974, GFI = 0.916, root mean square error of approximation (RMSEA) = 0.063. The *t*-values corresponding to all items was significant ($p < 0.001$). Based on extant literature, all values obtained were within an acceptable range (Byrne, 2001; Wilson et al., 2010). The factors loadings of all the items corresponding to their constructs were adequately above thresholds as recommended (Wilson et al., 2010). Factor loadings of the items ranged from 0.619 to 0.980. The study further considered the reliability and validity of the constructs. Reliability was assessed through composite reliability, a measure to assess the consistency of the items reflecting a construct. Similarly, the validity of convergence and discriminant was also carried out.

Composite Reliability

It is another variant of measuring uni-dimensionality among the items associated with a latent construct. It indicates the consistent among the items measuring a latent construct. Values above 0.6 indicate good convergent validity (Bagozzi & Yi, 1988).

Convergent Validity

It assesses whether two measures of a construct that are theoretically supposed to be measuring the latent variable are indeed measuring that variable. To gauge the convergent validity, we assessed the factor loadings

and average variance explained as suggested (Fornell & Larcker, 1981). Average Variance Explained (AVE) is the amount of variance. The values of factor loading are supposed to be above 0.6, which was met by all the indicators in our study. The higher the factor loadings, the higher is the connection between the variable and the latent construct.

Discriminant Validity

The second test that the constructs have to undergo validation is the discriminant validity, which signified the uniqueness of each of the constructs. Discriminant validity ensures that each of the constructs under the study is unique and the measures of each of the constructs do not overlap with the measures of any other construct (Simatupang, 2015). It can be evaluated by comparing the variance captured by the latent construct that of the shared variance of other latent constructs. It was proven that discriminant validity by (Fornell & Larcker, 1981). The average variance explained (AVE) square roots are shown on the diagonal of Table 17.5 to show the correlation between the model's components. It passed the test of discriminant validity since all of the diagonal values are higher than the non-diagonal ones (Fornell & Larker, 1981).

By contrasting the AVE of each measure with the square of correlations between constructs, discriminant validity was proven (Fornell & Larcker, 1981). The data analysis reveals the discriminant validity of family support, as shown in Table 17.5. Each construct's AVE was higher than the variance it shared with any other construct. Therefore, it is suggested that all first-order components are one-dimensional (Lings, 2005).

Table 17.5 Discriminant and convergent validity

	<i>CR</i>	<i>AVE</i>	<i>Managerial competency</i>	<i>Firm performance</i>	<i>Individual competency</i>	<i>Family support</i>
Managerial competency	0.935	0.743	0.862			
Firm performance	0.953	0.801	0.301***	0.895		
Individual competency	0.957	0.849	0.222***	0.322***	0.922	
Family support	0.957	0.847	0.151**	0.363***	0.213***	0.921

Structural Model Results

The hypotheses were verified using structural equation modeling with a maximum likelihood estimation technique. Owing to the confirmatory nature of the study, a covariance-based SEM approach was used (Hair et al., 2011). The fit indices of the structural model showed χ^2/df (2.642), GFI (0.916), AGFI (0.916), and CFI (0.974), RMSEA (0.063) which satisfactorily fit the indices as recommended (Hair et al., 2011). Further, the research hypotheses were verified with the path analysis (Fig. 17.3).

It is evident from the path model, that family support has a positive and significant influence on firm’s performance. Similarly, individual competency has a positive and significant influence on the firm’s performance

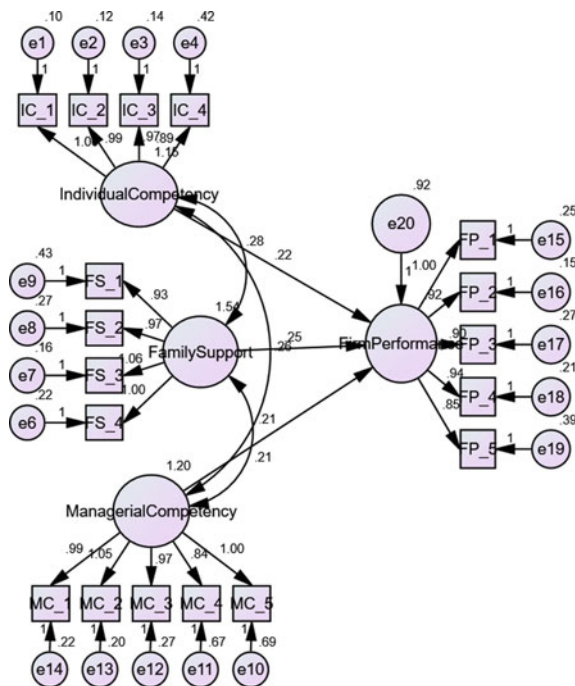


Fig. 17.3 Structural relationships among constraints

Table 17.6 Regression weight (structural path model)

	<i>Estimate</i>	<i>S.E.</i>	<i>C.R.</i>	<i>P</i>	<i>Label</i>
Firm performance ← Individual competency	0.219	0.049	4.485	***	Accepted
Firm performance ← Family support	0.253	0.042	6.012	***	Accepted
Firm performance ← Managerial competency	0.211	0.048	4.360	***	Accepted

Note *** $p < 0.001$; * $p < 0.05$; sig = significant

and managerial competency also has positive and significant influence on the firm's performance (Table 17.6).

FINDING AND IMPLICATIONS

The path analysis shows that hypothesis 1 is supported in our study. Family support plays most significant role in the success of the women-owned business compared to other two hypotheses. Women rely on the advice of their family members in making the decisions. In case of married women, their partner or spouses act as a major supporter in making decisions and financial investments. Family members showing interest in their business motivates them. Women feel stressed between business and house chores hence domestic help from family members make them perform better in business and feel stress free. Family members also provide a security blanket in terms of financial crises. Having a good day with family improves her frame of mind at work.

Our second hypothesis that individual competencies have a positive and significant influence on women-owned firm's performance is accepted. Creativity, adoption of innovations Risk takes, multitasking, and effective communications these competencies will help enhance the performance of firms. Our third hypothesis is that managerial competencies have a positive and significant influence on women-owned business is also accepted. Analytical ability will help entrepreneurs to analyze situations for effective decision-making. Strategic thinking, market analysis and business know how knowledge is essential for competing with competitors. Attaining finance resources is a key task for a successful business enterprise. In the future, there is a scope to study the influence of family support on managerial competencies. And also we can consider the other variables like age, education, and location influence on firm's performance.

CONCLUSIONS

Due to their ability to improve the economic well-being and overall welfare of developing countries, women entrepreneurs have been acknowledged in current literature as the driving force behind economic growth and development in emerging nations. According to several academics (De Vita et al., 2014; Vossenber, 2013), the reason why women are still underutilized as a source of economic growth and development in underdeveloped nations may be due to a lack of knowledge about or underappreciation of their unique skills.

The aim of this study is to investigate the influence of family support, individual competencies, and managerial competencies on performance of women-owned business. The findings of the study indicate that family support, individual competencies, and managerial competencies have positive and significant influence on success of the women-owned business. Among three factors family support plays a crucial role in performing effectively in business such as emotional, instrumental, and financial family support were positively and significantly associated with firm performance. Additionally individual competencies like creativity, adoption of innovations in business, multitasking, risk taking and managerial competencies like strategic thinking, market analysis, and business know how knowledge is essential for success of the business.

This study also has some limitations and provides future research challenges. First factors in terms of their age, education, knowledge, and so further factors reflecting their unique characteristics relationship with success of the women entrepreneurs need to be explored. Second, the influence of family support on enhancement of individual competencies and managerial competencies. Third, this study tested the hypotheses only based on the analyses of the data collected from women entrepreneur based in Karnataka. Therefore, further studies from other diverse states could make study more robust.

REFERENCES

- Agarwal, R., Mishra, A. K., & Dixit, P. (2015). *Gender and work-life balance*. Retrieved 26 January 2017, from <http://data.conferenceworld.in/ICSTM2/P57-65.pdf>

- Aldrich, H. E., & Cliff, J. E. (2003). The pervasive effects of family on entrepreneurship: Toward a family embeddedness perspective. *Journal of Business Venturing*, 18(5), 573–596.
- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation model. *Journal of Academy of Marketing Science*, 16(1), 74–94.
- Bird, B. (2002). Learning entrepreneurship competencies: The self-directed learning approach. *International Journal of Entrepreneurship Education*, 1, 203–227.
- Byrne, B. M. (2001). Structural equation modeling with AMOS, EQS, and LISREL: Comparative approaches to testing for the factorial validity of a measuring instrument. *International journal of testing*, 1(1), 55–86.
- Census reference tables, B-Series—Area. Retrieved 25 December 2021, from cen.susindia.gov.in
- Chrisman, J. J., Chua, J. H., & Sharma, P. (2005). Trends and directions in the development of a strategic management theory of the family firm. *Entrepreneurship Theory and Practice*, 29(5), 555–576.
- Cruz, C., Larraza-Kintana, M., Garcés-Galdeano, L., & Berrone, P. (2014). Are family firms really more socially responsible? *Entrepreneurship Theory and Practice*, 38(6), 1295–1316.
- Danes, S. M., Lee, J., Stafford, K., & Heck, R. K. (2008). The effects of ethnicity, families and culture on entrepreneurial experience and extension of sustainable family business theory. *Journal of Developmental Entrepreneurship*, 13(3), 229–268.
- De Sousa, V. A. G. (2013). *Family-work conflict, job satisfaction and burnout of working women with children* (Doctoral thesis). University of Pretoria, South Africa. Retrieved 18 January 2017, from <http://repository.up.ac.za/bitstream/handle/2263/24304/07back.pdf?sequence=2>
- De Vita, L., Mari, M., & Poggesi, S. (2014). Women entrepreneurs in and from developing countries: Evidence from the literature. *European Management Journal*, 32(3), 451–460.
- Field, A. (2005). *Factor analysis using SPSS*.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50.
- Greve, A., & Salaf, J. (2003). Social networks and entrepreneurship. *Entrepreneurship Theory and Practice*, 28(1), 1–22.
- Grzywacz, J. G., Carlson, D. S., Kacmar, K., & Wayne, J. (2007). A multi-level perspective on the synergies between work and family. *Journal of Occupational and Organizational Psychology*, 80(4), 559–574.
- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis* (5th ed.) Prentice Hall.

- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Multivariate data analysis*. Pearson Education.
- Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2011). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European business review*, 26(2), 106–121.
- Hogarty, K., Hines, C., Kromrey, J., Ferron, J., & Mumford, K. (2005). The quality of factor solutions in exploratory factor analysis: The influence of sample size, communality, and over determination. *Educational and Psychological Measurement*, 65(2), 202–226.
- Hoque, A. S. M. M. (2018). Does government support policy moderate the relationship between entrepreneurial orientation and Bangladeshi SME performance? A SEM approach. *International Journal of Business Economics and Management Studies*, 6(3), 37–59.
- Hoque, A. S. M. M., & Zainuddin, A. (2016). *The sway of entrepreneurial marketing on firm performance: Case of small and medium enterprises (SMEs) in Bangladesh*. Paper presented at the Terengganu International Business and Economics Conference (TiBEC-V), Terengganu, Universiti Teknologi Mara (UiTM).
- Hoque, A. S. M. M., Zainuddin, A., & Ghani, N. A. (2016). *Conceptual model for quality of life in the perspective of social entrepreneurship*. Paper presented at the International Conference on Science, Engineering, Management and Social Science (ICSEMSS 2016), Universiti Teknologi Malaysia (UTM), Johor Bahru, Malaysia.
- Imbaya, B. H. (2012). The role of family support in performance of women-operated micro and small enterprises in Eldoret, Kenya. *Journal of Emerging Trends in Economics and Management Sciences*, 3(5), 502–508.
- Karatepe, O. M., & Bekteshi, L. (2008). Antecedents and outcomes of work-family facilitation and family-work facilitation among frontline hotel employees. *International Journal of Hospitality Management*, 27(4), 517–528.
- Katila, R., Rosenberger, J. D., & Eisenhardt, K. M. (2008). Swimming with sharks: Technology ventures, defense mechanisms and corporate relationships. *Administrative Science Quarterly*, 53(2), 295–332.
- Kerlinger, F. N., & Lee, H. B. (2000). *Foundations of behavioral research*. Harcourt College Publisher.
- Khan, N. (2014). Family to work conflict among working mothers in UAE. *European Scientific Journal*, 10(20), 205–216.
- Kim, I., Kim, W., & Nochajski, T. H. (2014). Emotional support, instrumental support, and gambling participation among Filipino Americans. *Community Mental Health Journal*, 50(6), 681–687.

- King, L. A., Mattimore, L. K., King, D. W., & Adams, G. A. (1995). Family support inventory for workers: A new measure of perceived social support from family members. *Journal of Organizational Behavior*, 16(3), 235–258.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607–610.
- Lee, S. Y., Florida, R., & Acs, Z. (2004). Creativity and entrepreneurship: A regional analysis of new firm formation. *Regional Studies*, 38(8), 879–891.
- Man, T. W., Lau, T., & Chan, K. F. (2002). The competitiveness of small and medium enterprises: A conceptualization with focus on entrepreneurial competencies. *Journal of Business Venturing*, 17(2), 123–142.
- Mari, M., Poggesi, S., & De Vita, L. (2016). Family embeddedness and business performance: Evidences from women-owned firms. *Management Decision*, 54(2), 476–500.
- Matzek, A. E., Gudmunson, G. C., & Danes, M. S. (2010). Spousal capital as a resource for couples starting a business. *Family Relations*, 59(1), 60–73.
- Okpara, F. O. (2007). The value of creativity and innovation in entrepreneurship. *Journal of Asia Entrepreneurship and Sustainability*, 3(2), 1.
- Powell, N. G., & Eddleston, A. K. (2011). Work-family enrichment and entrepreneurial success: Do female entrepreneurs benefit most? *Academy of Management Annual Meeting Proceedings*, 1(1), 1–6.
- Powell, N. G., & Eddleston, A. K. (2013). Linking family-to-business enrichment and support to entrepreneurial success: Do female and male entrepreneurs experience different outcomes? *Journal of Business Venturing*, 28(2), 261–280.
- Rehman, S., & Roomi, M. A. (2012). Gender and work life balance: A phenomenological study of women entrepreneurs in Pakistan. *Journal of Small Business and Enterprise Development*, 19(2), 209–228.
- Ruderman, M. N., Ohlott, P. J., Panzer, K., & King, S. N. (2002). Benefits of multiple roles for professional women. *Academy of Management Journal*, 45(2), 369–386.
- Schumpeter, J. (n.d.-a). *Theory of economic development* (p. 74). Cited in: Holt, D. H. (2001). *Entrepreneurship: New venture creation* (5th ed., p. 7). Prentice Hall of India.
- Schumpeter, J. (n.d.-b). *Theory of economic development* (p. 74). Cited in: Bose, T. K. (2012). Business innovation the study of entrepreneurship. *Entrepreneurship Development* (p. 10). Khulna University.
- Simatupang, T. M., Schwab, A., & Lantu, D. (2015). Introduction: Building sustainable entrepreneurship ecosystems. *International Journal of Entrepreneurship and Small Business*, 26(4), 389–398.
- Teoh, W. M., & Chong, S. C. (2008). Improving women entrepreneurs in small and medium enterprises in Malaysia: Policy recommendations. *Communications of the IBIMA*, 2(1), 31–38.

- Van Aukem, H., & Werbel, J. (2006). Family dynamic and family business financial performance: Spousal commitment. *Family Business Review*, 19(1), 49–63.
- Vadnjaj, J., & Vadnjaj, M. (2013). The role of husbands: Support or barrier to women's entrepreneurial start-ups? *African Journal of Business Management*, 7(36), 3730–3738.
- Vadnjaj, M., & Vadnjaj, J. (2007). The role of family support in women's start-ups? *African Journal of Business Management*, 7(36), 3730–3738.
- Volery, T., Mueller, S., & von Siemens, B. (2015). Entrepreneur ambidexterity: A study of entrepreneur behaviours and competencies in growth-oriented small and medium-sized enterprises. *International Small Business Journal*, 33(2), 109–129.
- Vossenbergh, S. (2013). *Women entrepreneurship promotion in developing countries: What explains the gender gap in entrepreneurship and how to close it?* (Maastricht School of Management Working Paper No. 2013/08). Retrieved 2 February 2017, from <http://web2.msm.nl/RePEc/msm/wpaper/MSM-WP2013-08.pdf>
- Wagener, S., Gorgievski, M., & Rijdsdijk, S. (2010). Businessman or host? Individual differences between entrepreneurs and small business owners in the hospitality industry. *The Service Industries Journal*, 30(9), 1513–1527.
- Wambua, A. K. (2014). *Factors affecting the performance of women small and medium enterprises in Mombasa Central Business District, Kenya* (Doctoral dissertation).
- Welsh, D. H. B., Kim, G., Memili, E., & Kaciak, E. (2014). The influence of family moral support and personal problems on firm performance: The case of Korean female entrepreneurs. *Journal of Developmental Entrepreneurship*, 19(3), 1–17.
- Welsh, D. H. B., Memili, E., & Kaciak, E. (2016). An empirical analysis of the impact of family moral support on Turkish women entrepreneurs. *Journal of Innovation and Knowledge*, 1(1), 3–12.
- Williams, B., Onsmann, A., & Brown, T. (2010). Exploratory factor analysis: A five-step guide for novices. *Journal of Emergency Primary Health Care (JEPHC)*, 8(3), 1–13.
- Wilson, J., Hair, C., Knight, R., Catto-Smith, A., Bell, S., Kamm, M., ... & Connell, W. (2010). High incidence of inflammatory bowel disease in Australia: A prospective population-based Australian incidence study. *Inflammatory bowel diseases*, 16(9), 1550–1556.
- Zaichkowsky, J. L. (1985). Measuring the involvement construct. *Journal of Consumer Research*, 12, 341–352.
- Zainuddin, A. (2012). *Research methodology and data analysis*. UiTM Press.



A Narrative Review of Research on the Sustainable Development Goals in the Business Discipline

Pável Reyes-Mercado

INTRODUCTION

The current world faces grand social challenges that endanger continuity of life. In the political arena, the narratives of political leaders are heightened by the effect of echo chambers—the effect of only agreeing with political positions similar to ours and discarding different political views—in digital social networks that generate polarized political positions. Under these circumstances, agreements among stakeholders become difficult to achieve owing to an altered group dynamic, which hinders policy planning and implementation, whereas groups of consumers develop a more salient political identity that makes them prone to psychological bias (Weber et al., 2021). In economic terms, global supply chains have become even more fragile since the COVID-19 pandemic. The resulting effect has been

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twofold. On the one hand, inflation rates around the world have reached historical levels, which seems to signal a change in the way globalization has taken off in the last 30 years. A consequence is the emergence of near shoring of global manufacturing and logistics hubs to decrease the political and operational risks of conducting operations overseas (Hartman et al., 2017). At the sociocultural trend level, consumer vulnerability and discrimination are more salient, and brands develop strategies to develop awareness of this issue. In particular, gender issues have made brands develop intersectional value proposals that appeal to social groups on the fringes of the market (Basu et al., 2023). Simultaneously, artificial intelligence and big data have become commoditized attributes in products and services, mainly in software-as-a-service business models and digital platforms (Loukis et al., 2019).

Climate change remains a major challenge. Stakeholders are aware of climatic impacts and have contributed several ways to mitigate it. The concept of sustainability has gained traction, and the level of companies and brands as part of corporate strategies and as an additional attribute of value proposals attempt to communicate new ways of adding value not only to shareholders but also to several stakeholders (Freeman et al., 2007). This standard narrative of economic liberalism seems inadequate when addressing sustainability issues in a complex world. This notion of '*stakeholders capitalism*' argues that (1) value can be created and exchanged among stakeholders to satisfy mutual needs on the basis of voluntary agreements, (2) stakeholders engage in exchanges and are accountable for their actions while considering each consumer, community, government or NGO as a situated social and psychological entities, and (3) stakeholders assume collaboration based on values and competition is no more considered as a necessary condition for capitalism to continue; rather, it is only emergent (Freeman et al., 2007).

Since their inception, the SDGs advocate the creation of a better world that is inclusive and provides opportunities for the global population. The set of 17 goals provides a roadmap to create stakeholder engagement to fulfill the objectives of the 2030 global agenda (United Nations, 2015). Economic theories provide approaches for addressing these challenges. On the one hand, the liberal view of economics advocates that economic actors mainly focus their resources on profit maximization, and some argue that the marketing function lacks substantive contribution to societal well-being (Gaski, 2022). In contrast, the sustainability paradigm advocates for an augmented role of marketing in business that addresses

not only economic profits but also social and environmental issues (Laczniak & Shultz, 2021). This dichotomy raises the question of the degree to which scholarly research in business and management leans. That is, to what extent do institutions, researchers, and research teams engage in studies focused on sustaining SDGs?

In summary, this chapter offers a narrative review of research conducted in relation to the selected UN-SDGs in business research outlets: no poverty, affordable and clean energy, decent work and economic growth, and responsible production and consumption. This chapter contributes by (1) providing an overview of the scholarship in business; currently, few studies offer such an overview or offer a fragmented view, (2) analyzing the relative importance of researched topics, which helps identify apparent gaps that need stakeholders' attention and resources, and (3) advancing research propositions to increase the research that sustains SDGs.

To achieve this narrative review, the following section provides the methodological underpinnings of the bibliometric study design. Subsequently, a condensed version of the social, intellectual, and conceptual dimensions of the available literature on marketing outlets is presented and analyzed. The chapter concludes with implications for social, academic, and business stakeholders.

METHODOLOGY OF BIBLIOMETRIC ANALYSIS

Bibliometric analysis has become popular in business and management, owing to its ability to process large amounts of scientific products. This enables researchers to gain insight into the temporal evolution of topics and their relative impact, as measured with objective metrics, and to identify relationships between topics, researchers, institutions, and journals.

The methodology follows two dimensions of analysis (Donthu et al., 2021; Mukherjee et al., 2022). The first dimension is performance analysis, which describes the impact of scientific products using metrics that include publications, citations, and *h*-index, among others, around a specific field of knowledge, hence signaling the contribution of authors, institutions, and academic journals. Second, scientific mapping analyzes the relationships between scientific entities, thereby revealing the conceptual and intellectual structure of knowledge. In particular, citation analysis identifies influential studies in a specific field (intellectual structure),

whereas co-citation analysis reflects past collaborations among parties. Bibliographic coupling identifies thematic clusters and shows the current state of development. Finally, co-word analysis is based on the context of scientific products (*i.e.*, keywords), and under the assumption that similar keywords are thematically related, it can signal the future trajectory of the discipline. To discuss research questions, the analytical procedure is as detailed below:

Setting Queries

Predefined database queries to locate the scientific literature for each of the 16 SDGs are available (Jayabalasingham, et al., 2019) and were used in this study. They reflect the work of a multidisciplinary team of researchers that assures a fit between the UN goals and keywords to locate related scientific literature; hence, they can be deemed valid queries.

Data Collection and Screening

Each query was run in the Scopus database, followed by an inclusion criterion to shortlist academic articles written in English from 2015 (the year in which the SDGs were adopted by the UN) to the end of 2022, in core business and management journals indexed in Scopus. The exclusion criteria were conference papers, book chapters, books, and reports written in languages other than English prior to 2015. Data were analyzed using the Bibliometric R package (Aria & Cuccurullo, 2017) with default options for the selected analysis.

Data Analysis

Given the extensive breadth of bibliometric analysis for each SDGs and in line with the goal of this study, which is narrative in nature, the descriptive performance analysis was kept to its minimum constituencies, whereas science mapping focused on topical analysis for each SDG.

RESULTS: PERFORMANCE ANALYSIS

The body of research identified 6,325,690 articles for the 16 SDGs in all disciplines during the analyzed period. The research volume ranged from 16,077 articles (SDG 1) to 4,280,772 (SDG 3). The total output of

business-related research for all SDGs reached 2.4% of the overall research during the analyzed period, ranging from a minimum of 1,285 articles (SDG 6) to a maximum of 29,878 articles (SDG 8). The proportion of business-related research ranged from 0.4% (SDG 3) to 28.9% (SDG 9). Table 18.1 presents the total output as a proportional output. Figure 18.1 shows the relationship between research output growth (measured by the number of articles published) and growth rate of research output (measured by the number of article citations). Therefore, the research output in Fig. 18.1 can be categorized according to its impact and growth. In this line, the cluster of research in blue groups research goals 2, 6, 7, 9, 11, 13, and 15, which can be deemed ‘*field movers*’ given their high impact and high growth. Another cluster of research in orange refers to lower growth and low impact; therefore, this cluster can be referred to as ‘*slowpokes*’. SGD 10 can be referred to as *laggard* because it showed the slowest impact and growth. Finally, SDGs 8 and 12 have a high impact but slow growth in the interplay between production, consumption, and economic growth. These goals can be deemed as ‘*academic fielders*’. The size of the bubbles represented the research volume. SDGs 15 and 16 attracted the most attention whereas SDGs 1–5 attract the least research interest.

Table 18.1 Proportion of business-related research for selected UN-SDG

SDG	SDG name	Total of articles on the SDG	Proportion of business-related articles (%)	Main country of affiliation in articles	Top 3 countries (by research volume)
1	No poverty	16,077	14.5	Developed	USA, India, China
7	Affordable and clean energy	442,356	3.4	Emerging	China, USA, India
8	Decent work and economic growth	127,098	23.5	Emerging	China, USA, UK
12	Responsible production and consumption	125,983	20.0	Developed	China, USA, UK

Source Author

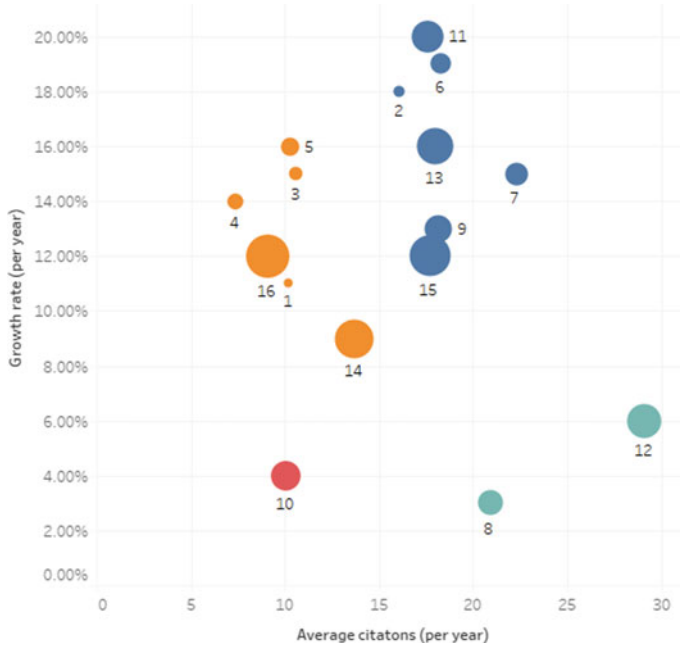


Fig. 18.1 Impact and growth of the research literature addressing the UN-SDGs (*Source* Author)

Regarding the type of international collaboration in publishing research on SDGs, a minimum of international collaboration was found for SDG 4 (19.29%), whereas the maximum was 34.29% for SDG 12. The main affiliation related to studies shows mixed results: Some SDGs are initiated in emerging countries, whereas affiliations in developed countries show the main participation in research for other studies. Regardless of the country of affiliation, the main producers of business-related research for all SDG are India, China, and the USA. Australia and the UK are secondary producers of research, and the remaining research is scattered across many countries around the world.

Table 18.2 Thematic clusters and relevant topics for business and management in the scholar research of UN-SDGs

<i>SDG</i>	<i>SDG name</i>	<i>Main thematic clusters</i>	<i>Business-related topics</i>
1	No poverty	Microfinance, tourism management	Tourism economics, entrepreneurship
7	Affordable and clean energy	Green growth, energy efficiency, renewable energy	Innovation, circular economy
8	Decent work and economic growth	Circular economy, informal economy, financial inclusion	Entrepreneurship, innovation
12	Responsible production and consumption	Circular economy, CSR, digital transformation	CSR, circular economy, life time cycle

Source Author

RESULTS: SCIENTIFIC MAPPING

Scientific mapping deals with the interactions between the identification of knowledge clusters. Relevant insights include identifying the current stage of the field; mapping the social interactions of authors, affiliations, and countries; and the temporal evolution of the field. While these results are extensive in nature, this study opted to focus on the current stage of the literature as a way to identify the motor research topics for each SDG and, from there, locate actionable paradigms for business and management (see Table 18.2). In addition, apparent knowledge gaps were identified to enable academics to propose research avenues.

ANALYSIS OF RESEARCH TOPICS

Thematic Clusters

The bibliometric analysis included an analysis of the main topics addressed in the literature during the period 2015–2022. To identify insights on the conceptual structure of research for the selected SDG, a co-word analysis was conducted separately for the literature on each SDG. Co-word analysis takes the article's keywords and their simultaneous occurrence in different articles based on the assumption that similar words are related, and they help dig deeper into the actual content of each topic identified. This analysis helped identify thematic clusters.

Bibliographic Coupling

An additional analysis that couples similar words based on cited studies is pertinent to assess topics in the literature. Under the assumption that articles that share bibliographic references have similar content, studies share a high number of cited studies as motor topics, whereas sharing only a handful of references signals niche topics. After conducting the analysis, the following section presents an overview of the topics in the corpus of literature previously described.

Review of Thematic Clusters, Business-Related Topics, and Implications

In analyzing the research, SDDs were purposively selected to maintain a focus on business and management disciplines. A tradeoff between the breadth of content and depth of analysis is always present, and this chapter chose four SGDs: no poverty, affordable and clean energy, decent work and economic growth, and responsible production and consumption. This decision involves considering at least one SDG for each cluster, as shown in Fig. 18.1.

SDG I NO POVERTY

This topic is deemed by the UN to be the most important factor to be fulfilled on the 2030 agenda. One expectation is to attract many studies. However, neither business discipline attracts an interest in business and management. Figure 18.1 shows that this SDG is in a cluster of *slowpokes* with a small amount of research. From the business and management perspective, the literature addressing this goal shows that the topics of microfinance and tourism management are the most important. Since Mohammed Younus advocated a system with equal opportunities, interest in microfinances has increased. Concerns regarding the impact of financial reporting have been studied (Bananuka et al., 2019), as governance practices and their influence on the performance of micro financial institutions in emerging countries. Self-help groups and women's empowerment are also topics addressed in the literature (Ahmed & Khan, 2016). On the other hand, (Gao & Wu, 2017) explain that rural tourism can act as a revitalizing mechanism for villages in emerging economies. Similarly, the knowledge provided by local communities can be an asset for potentiating sustainable tourism (Dodds et al., 2018).

These two topics encompass entrepreneurship because of the potential of microfinance to provide formal and informal lending to tourism-based new enterprises (Ngoasong & Kimbu, 2016). Particularly, in lower socio-economic segments, social entrepreneurship is an idea that has been used to assess financial technology adoption by micro-entrepreneurs to reduce poverty (Rahman et al., 2017). An emerging gap is that research on the link between microfinances, tourism management, entrepreneurship, and poverty reduction remains unclear. Researchers require a multidisciplinary approach to elucidate this link. Practitioners must be cautious about business initiatives oriented toward social development. They must implement performance metrics both inside and outside the business to assess the effectiveness of social initiatives.

SDG 7 AFFORDABLE AND CLEAN ENERGY

Research on renewable and clean energy has had the highest academic impact and a relatively high growth rate in research volume. This goal aims to achieve a stage at which people have access to sustainable energy. The interest in developing research within this SDG involves energy-economic growth, renewable energy, and energy consumption. The first cluster developed this topic in order to identify several links. One example is the relationship between the use of renewable energy and its positive impact on economic growth in the long term and the negative impact of energy consumption on economic growth in developing countries (Ito, 2017). Carbon capture is a potential innovation to mitigate climate change in developed countries, followed by developing countries to continue developing this technology (Wennersten et al., 2015). Additionally, regulations have an impact on industries. For example, by relocating highly polluting industries along with building wastewater processing facilities, pollution is reduced, and the emergence of free pollutant regions is avoided (Shen et al., 2017). Importantly, forecasting the sales of electric vehicles indicates that almost 30% of vehicles will be electric by 2032; however, high heterogeneity among countries will prevail, and CO₂ will continue to grow despite electric vehicles reaching a 50% share (Rietmann et al., 2020). Second, renewable energy clusters also involve the impact of energy policy mixes on economic growth and sustainability transitions. For example, at the country level, studies have shown the benefits of using renewable energy sources, such as reducing the ecological footprint, in contrast to non-renewable energy

sources, which degrade the environment (Destek & Sinha, 2020). At the industry level, simulations show that by using alternative raw materials such as bottom ash, fly ash, and gypsum, the cement industry may be able to reduce greenhouse emissions (Mikulčić et al., 2016). Third, regarding energy consumption, urbanization and industrialization processes increase CO₂ emissions in the short and long terms (Liu & Bae, 2018) whereas green technology innovations can reduce emissions, but only in high-income countries, making energy transitions for developing countries more difficult (Du et al., 2019). Overall, R&D expenses are necessary but insufficient to decouple carbon emissions from economic growth (Wang & Zhang, 2020). In researching the link between energy-economic growth and suitable policy mixes, research is needed on how and under what circumstances consumers adopt small-scale renewable sources to reduce their energy consumption. In addition, the sources of clean energy vary across countries. Although high-income countries have access to electric vehicles, consumers in emerging economies lack this capacity. This heterogeneity may decrease the overall positive effects of clean energy sources. Moreover, alternative clean energy sources must be assessed for these countries. Therefore, researchers must push this research avenue. Practitioners must assess their specific conditions to analyze energy efficiency using sociotechnical approaches. Similarly, cost-effective energy mixes and their impact on economic growth need to be implemented.

SDG 8 DECENT WORK AND ECONOMIC GROWTH

The goal addressed the importance of promoting good working conditions for people as well as providing inclusive and sustainable economic growth. However, Fig. 18.1 shows that this goal presents the lowest growth but continues to grow according to the general trend during 2015–2033, in research but with a relatively high impact. As such, the research goal was deemed as ‘*academic fielders*’ in which research widely shared among the academic constituencies. Central to the business and management discipline, this research addresses the topics of the circular economy, informal economy, and financial inclusion. First, the circular economy is a paradigm advanced from the general systems theory and industrial ecology with the idea of using the waste output of business processes as inputs of other processes; the three principles of reducing waste, reusing materials, and recycling lie at the core of the paradigm that

aims to achieve sustainable development (Ghisellini et al., 2016) as well as social benefits and human well-being (Murray et al., 2017). Techniques such as additive manufacturing (Ford & Despeisse, 2016) help reduce input waste and redesign the supply chain under the assumption that a circular economy leads to a reduction in emissions, waste is recovered, and there is less use of new resources (Genovese et al., 2017). Second, the informal economy has been researched by considering economic factors (employment, sales growth), social factors (fulfill basic needs, empowerment), and environmental factors (proper use of water and energy) as they relate to the sustainability of informal micro-entrepreneurs (Khan & Quaddus, 2015). At the macro level, the quality of political and economic institutions is associated with a higher proportion of entrepreneurs' formal entry of entrepreneurs (Autio & Fu, 2015). Importantly, research suggests that the commercialization of grassroots innovations—those that focus on an overlooked need—in informal markets positively impacts the lives of customers, although economic benefits may be scarce (Sharma & Kumar, 2019). Drawing from this literature, actionable ideas for practitioners include entrepreneurship and innovation, the impact of which may increase with proper incentives from formal institutions. Researchers must assess the extent to which a circular economy and entrepreneurship can improve working conditions and provide clear economic benefits. Practitioners need to design a circular economy for segments of entrepreneurs so that they can act at the local level, ranging from SMEs to large enterprises, and implement technological solutions for large segments of consumers.

SDG 12 RESPONSIBLE PRODUCTION AND CONSUMPTION

This goal is central to all market mechanisms involved in economic exchanges across value chains, from procurement to product disposal. This goal addresses the promotion of sustainable tourism, production, and consumption as well as the avoidance of soil pollution due to chemical products. Like the research on SDG 8, the research on this topic had the highest average number of citations for all the SDGs, but their impact was low. This was an additional *academic fielder*. Research on this topic focuses on the paradigms of corporate social responsibility (CSR), life cycle assessment of products, and digital transformation. First, the concept of CSR was derived from the need to reconcile the economic, social, and environmental performance of firms (Mintzberg,

1983; Windsor, 2001) because it directly addresses the sustainability issue raised by the 2030 agenda. The concept of sustainability is prevalent across the timeline considered during the search phase of the bibliometric analysis. Delving into CSR constituents, this study focuses on the design of efficient supply chains that avoid emissions while providing value to stakeholders, corporate monitoring and reporting, and firm reputation. First, CSR is fostered by internal and external factors: firms can use CR to attract and retain talent, enhance trust in the company, boost product design and innovation, generate more profits and growth, and achieve product efficiencies. External factors refer to avoiding fines, fulfilling stakeholders' needs, maintaining ethical corporate behavior, mitigating pressures from the government and NGOs, and entering new markets (Lozano, 2015). For example, institutional investors drive the economic and social performance of firms in countries where a belief in the importance of this type of performance is important and export this social norm to other countries (Dyck et al., 2019). In terms of CSR reporting, board composition and firm size influence the extent to which corporate social reputation but board features in which a job post duality of having a CEO Chairperson negatively influences firm reputation (Lu et al., 2015). CSR reporting trends enable firms to engage in stakeholder communication by maintaining trust, reputation, and general issues (Jain & Winner, 2016). Second, supply chains are redesigned such that inputs and outputs can travel in circular ways instead of being linear. For example, the supply chain of biodiesel production may have several outputs. One of them is forward in the chain to offer regular biodiesel, whereas a reverse chain reprocesses waste from biodiesel production to offer byproducts; a third way is down the chain in which the waste from the production process is offered as another byproduct (Genovese et al., 2017). In another example, the nature of the supply chain switches from a linear to a coordinated socially responsible model of a closed-loop chain by recycling retail products through a reverse channel, which has a positive effect on revenue and profit maximization (Panda et al., 2017). Third, in line with supply chain modifications, the life cycle assessment paradigm focuses on identifying emissions, carbon, energy consumption, and the carbon footprint of products. For example, insects are a new alternative that reduces food waste and emissions, while providing high levels of protein and lipids to people (Salomone et al., 2017). Similarly, the agricultural supply chain of raw organic products has a 20% lower impact than traditional farming, but this supply chain still needs improvement in terms of

the volume of harvested products (Tasca et al., 2017). Another sustainable alternative is the use of urban and peri-urban agriculture, in which citizens grow their products in small gardens at low volumes, reducing global warming potential by 2.6% and food waste by 7.3%. Interestingly, the associated dietary changes from using this technique reduce global warming potential by 22% (Benis & Ferrão, 2017). Third, digital transformation refers to changes in the process and business model levels that aim to transform offline tasks into online tasks. Digital transformation entails achieving a full digital business model. First, *digitization* refers to encoding offline information and processes into a digital format so that systems of information and technology can store, retrieve, and communicate this data. Second, *digitalization* entails the routines and practices by which information is exchanged and by whom digital channels are used. Third, digital transformation entails the overall application of digitization and digitalization in such a way that many business processes are altered and, hence, the business model is modified to maintain digital competitive advantage (Verhoef et al., 2021). Regarding responsible production and consumption, the digital transformation process has been applied to waste management such that by applying artificial intelligence and process robots, non-recycled waste can be reduced by 20% (Maiurova et al., 2022). Similarly, food waste has been mitigated by supermarkets using big data and artificial intelligence, which helps manage the deterioration stages of fruits and vegetables, along with marketing strategies such as dynamic pricing, suitable storage, and repositioning of products on the shelf (de Souza et al., 2021). The CSR paradigm has been around for a long time and has been applied to a variety of business phenomena with social, economic, and environmental outcomes. Researchers must assess the extent to which CSR is an effective business strategy. In view of the new ideas of circular economy and digital transformations, CSR may become a necessary but insufficient strategy for tackling social challenges. Hence, there is a need to understand the interplay between these strategies and their outcomes; specifically, finding strategic complementarities is a promising roadmap. Practitioners need to develop capabilities and obtain resources to deploy best practice scenarios, so that the social impacts increase.

DISCUSSION

The results of the previous analysis of the selected SDGs show an increasing interest in topics that have a societal impact. Citation and growth patterns showed heterogeneity in the studies conducted for each SGD. This chapter has purposely chosen the SDG to be more inclined to be attended to by market mechanisms, which makes them central to the business and management discipline. In this line, the academic impact of the research signals the importance of the processes of production and consumption and the critical role of energy and work as catalyzers of economic growth and well-being.

Taken together, the results of the bibliometric analysis show that research in business and management has a two-fold orientation. First, one stream of research is oriented toward the strategic and public policy realms of business. That is, implementing business strategies to enter new markets or reap new consumer segments through innovative products based on the paradigms of CSR, the circular economy, and digital transformation. For example, the waste from processes can be marketed to other segments as input materials. Second, research has been conducted on how to improve internal business processes to reduce emissions, carbon footprint, and costs. In this regard, much of the research on the life cycle of products has gained prominence given its transversal approach to the value chain.

Based on the previous analysis, there are still research gaps, as discussed for each SGD. As in the case of CSR, the identified business paradigms are clearly theorized. However, the circular economy and digital transformation can be located in an emerging phase, in which more empirical work is needed to assess the extent to which these ideas can fulfill the SDGs. Other topics, such as the assessment of life cycle for products, are ideas with roots in engineering and applied in the business and management discipline, and they still need to cover more industries and products.

The narrative review explicitly addressed producers and consumers as the main stakeholders of research and its application in firms. However, the role of business schools at the crossroads between business students and future managers is unclear. Therefore, business schools may become important stakeholders that conduct rigorous research in collaboration with practitioners and policymakers to address *wicked social problems*.

CONCLUSION

The bibliometric study in this chapter included a dataset from the Scopus database, and other studies may also include datasets from the Web of Science, so a complete view of the research on each SDG was achieved. This chapter includes all activities within business and management, and the analysis lacks a functional perspective, which opens the way for future studies on functional activities such as organizational behavior, marketing, operations, and strategic management. Finally, the database queries utilized for this study were conceptualized as a tool to gather research regarding each SDG. However, solving a social problem requires gathering specific types of information, and future studies may develop their own queries to gather information on a specific social problem.

REFERENCES

- Ahmed, K., & Khan, R. (2016). Disclosure practices and governance quality: Evidence from micro finance institutions. *Journal of Accounting & Organizational Change*, 13(2), 325–350.
- Aria, M., & Cuccurullo, C. (2017). Bibliometrix: An R-tool for comprehensive science mapping analysis, *Journal of Informetrics*, 11(4). <https://doi.org/10.1016/j.joi.2017.08.007>
- Autio, E., & Fu, K. (2015). Economic and political institutions and entry into formal and informal entrepreneurship. *Asia Pacific Journal of Management*, 32, 67–94. <https://doi.org/10.1007/s10490-014-9381-0>
- Bananuka, J., Tumwebaze, Z., Musimenta, D., & Nuwagaba, P. (2019). Determinants of adoption of international financial reporting standards in Ugandan micro finance institutions. *African Journal of Economic and Management Studies*, 10(3), 336–355.
- Basu, R., Kumar, A., & Kumar, S. (2023). Twenty-five years of consumer vulnerability research: Critical insights and future directions. *Journal of Consumer Affairs*, 57(1), 673–695.
- Benis, K., & Ferrão, P. (2017). Potential mitigation of the environmental impacts of food systems through urban and peri-urban agriculture (UPA)—A life cycle assessment approach. *Journal of Cleaner Production*, 140, 784–795.
- de Souza, M., Pereira, G. M., de Sousa Jabbour, A. B. L., Jabbour, C. J. C., Trento, L. R., Borchardt, M., & Zvirtes, L. (2021). A digitally enabled circular economy for mitigating food waste: Understanding innovative marketing strategies in the context of an emerging economy. *Technological Forecasting and Social Change*, 173, 121062.

- Destek, M. A., & Sinha, A. (2020). Renewable, non-renewable energy consumption, economic growth, trade openness and ecological footprint: Evidence from organisation for economic Co-operation and development countries. *Journal of Cleaner Production*, *242*, 118537.
- Dodds, R., Ali, A., & Galaski, K. (2018). Mobilizing knowledge: Determining key elements for success and pitfalls in developing community-based tourism. *Current Issues in Tourism*, *21*(13), 1547–1568.
- Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, *133*, 285–296.
- Du, K., Li, P., & Yan, Z. (2019). Do green technology innovations contribute to carbon dioxide emission reduction? Empirical evidence from patent data. *Technological Forecasting and Social Change*, *146*, 297–303.
- Dyck, A., Lins, K. V., Roth, L., & Wagner, H. F. (2019). Do institutional investors drive corporate social responsibility? International evidence. *Journal of Financial Economics*, *131*(3), 693–714.
- Ford, S., & Despeisse, M. (2016). Additive manufacturing and sustainability: An exploratory study of the advantages and challenges. *Journal of Cleaner Production*, *137*, 1573–1587.
- Freeman, R. E., Martin, K., & Parmar, B. (2007). Stakeholder capitalism. *Journal of Business Ethics*, *74*, 303–314.
- Gao, J., & Wu, B. (2017). Revitalizing traditional villages through rural tourism: A case study of Yuanjia Village, Shaanxi Province, China. *Tourism Management*, *63*, 223–233.
- Gaski, J. F. (2022). Toward social responsibility, not the social responsibility semblance: Marketing does not need a conscience. *AMS Review*, *12*(1–2), 7–24.
- Genovese, A., Acquaye, A. A., Figueroa, A., & Koh, S. L. (2017). Sustainable supply chain management and the transition towards a circular economy: Evidence and some applications. *Omega*, *66*, 344–357.
- Ghisellini, P., Cialani, C., & Ulgiati, S. (2016). A review on circular economy: The expected transition to a balanced interplay of environmental and economic systems. *Journal of Cleaner Production*, *114*, 11–32.
- Jayabalasingham, B., Boverhof, R., Agnew, K., & Klein, L. (2019). Identifying research supporting the United Nations Sustainable Development Goals. *Elsevier Data Repository*, VI. <https://doi.org/10.17632/87txkw7khs.1>
- Hartman, P. L., Ogden, J. A., Wirthlin, J. R., & Hazen, B. T. (2017). Nearshoring, reshoring, and insourcing: Moving beyond the total cost of ownership conversation. *Business Horizons*, *60*(3), 363–373.
- Ito, K. (2017). CO2 emissions, renewable and non-renewable energy consumption, and economic growth: Evidence from panel data for developing countries. *International Economics*, *151*, 1–6.

- Jain, R., & Winner, L. H. (2016). CSR and sustainability reporting practices of top companies in India. *Corporate Communications: An International Journal*, 21(1), 36–55.
- Khan, E. A., & Quaddus, M. (2015). Development and validation of a scale for measuring sustainability factors of informal microenterprises—A qualitative and quantitative approach. *Entrepreneurship Research Journal*, 5(4), 347–372.
- Laczniaik, G., & Shultz, C. (2021). Toward a doctrine of socially responsible marketing (SRM): A macro and normative-ethical perspective. *Journal of Macromarketing*, 41(2), 201–231.
- Liu, X., & Bae, J. (2018). Urbanization and industrialization impact of CO2 emissions in China. *Journal of Cleaner Production*, 172, 178–186.
- Loukis, E., Janssen, M., & Mintchev, I. (2019). Determinants of software-as-a-service benefits and impact on firm performance. *Decision Support Systems*, 117, 38–47.
- Lozano, R. (2015). A holistic perspective on corporate sustainability drivers. *Corporate Social Responsibility and Environmental Management*, 22(1), 32–44.
- Lu, Y., Abeyssekera, I., & Cortese, C. (2015). Corporate social responsibility reporting quality, board characteristics and corporate social reputation: Evidence from China. *Pacific Accounting Review*, 27(1), 95–118.
- Maiurova, A., Kurniawan, T. A., Kustikova, M., Bykovskaia, E., Othman, M. H. D., Singh, D., & Goh, H. H. (2022). Promoting digital transformation in waste collection service and waste recycling in Moscow (Russia): Applying a circular economy paradigm to mitigate climate change impacts on the environment. *Journal of Cleaner Production*, 354, 131604.
- Mikulčić, H., Klemeš, J. J., Vujanović, M., Urbanec, K., & Duić, N. (2016). Reducing greenhouse gasses emissions by fostering the deployment of alternative raw materials and energy sources in the cleaner cement manufacturing process. *Journal of Cleaner Production*, 136, 119–132.
- Mintzberg, H. (1983). The case for corporate social responsibility. *Journal of Business Strategy*, 4(2), 3–15. <https://doi.org/10.1108/eb039015>
- Mukherjee, D., Lim, W. M., Kumar, S., & Donthu, N. (2022). Guidelines for advancing theory and practice through bibliometric research. *Journal of Business Research*, 148, 101–115.
- Murray, A., Skene, K., & Haynes, K. (2017). The circular economy: An interdisciplinary exploration of the concept and application in a global context. *Journal of Business Ethics*, 140, 369–380.
- Ngoasong, M. Z., & Kimbu, A. N. (2016). Informal microfinance institutions and development-led tourism entrepreneurship. *Tourism Management*, 52, 430–439.

- Panda, S., Modak, N. M., & Cárdenas-Barrón, L. E. (2017). Coordinating a socially responsible closed-loop supply chain with product recycling. *International Journal of Production Economics*, *188*, 11–21.
- Rahman, S. A., Taghizadeh, S. K., Ramayah, T., & Alam, M. M. D. (2017). Technology acceptance among micro-entrepreneurs in marginalized social strata: The case of social innovation in Bangladesh. *Technological Forecasting and Social Change*, *118*, 236–245.
- Rietmann, N., Hügler, B., & Lieven, T. (2020). Forecasting the trajectory of electric vehicle sales and the consequences for worldwide CO2 emissions. *Journal of Cleaner Production*, *261*, 121038.
- Salomone, R., Saija, G., Mondello, G., Giannetto, A., Fasulo, S., & Savastano, D. (2017). Environmental impact of food waste bioconversion by insects: Application of life cycle assessment to process using *Hermetia illucens*. *Journal of Cleaner Production*, *140*, 890–905.
- Sharma, G., & Kumar, H. (2019). Commercialising innovations from the informal economy: The grassroots innovation ecosystem in India. *South Asian Journal of Business Studies*, *8*(1), 40–61.
- Shen, J., Wei, Y. D., & Yang, Z. (2017). The impact of environmental regulations on the location of pollution-intensive industries in China. *Journal of Cleaner Production*, *148*, 785–794.
- Tasca, A. L., Nessi, S., & Rigamonti, L. (2017). Environmental sustainability of agri-food supply chains: An LCA comparison between two alternative forms of production and distribution of endive in northern Italy. *Journal of Cleaner Production*, *140*, 725–741.
- United Nations. (2015). *Transforming our world: The 2030 agenda for sustainable development*. United Nations.
- Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J. Q., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, *122*, 889–901.
- Wang, Q., & Zhang, F. (2020). Does increasing investment in research and development promote economic growth decoupling from carbon emission growth? An empirical analysis of BRICS countries. *Journal of Cleaner Production*, *252*, 119853.
- Weber, T. J., Hydock, C., Ding, W., Gardner, M., Jacob, P., Mandel, N., & Van Steenburg, E. (2021). Political polarization: Challenges, opportunities, and hope for consumer welfare, marketers, and public policy. *Journal of Public Policy & Marketing*, *40*(2), 184–205.

- Wennersten, R., Sun, Q., & Li, H. (2015). The future potential for carbon capture and storage in climate change mitigation—an overview from perspectives of technology, economy and risk. *Journal of Cleaner Production*, *103*, 724–736.
- Windsor, D. (2001). The future of corporate social responsibility. *The International Journal of Organizational Analysis*, *9*(3), 225–256.



Assessing the Environmental & Social Aspects in Supply Chain Using Analytic Hierarchy Technique

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INTRODUCTION

Industry and organizations now operate and compete on a supply chain as a result of increased globalization and ongoing outsourcing in a variety of industries. A supply chain that is resource-intensive, extractive, and unsustainable over the long term has been produced as a result of this situation. Suppliers, manufacturers, distributors, and retailers all collaborate

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to extract raw materials, transform those raw materials into predetermined end goods, and transport those final products to retailers as part of a supply chain (Beamon, 1999). Environmental management, on the other hand, is the control of human interactions with the environment and their effects. The term “green supply chain management” (GSCM) has, however, only recently begun to be used to describe the integration of supply chain management and environmental management. Recently, integrating social and environmental factors into supply chain management has emerged as a critical strategy for businesses looking to become ecologically sustainable. As “green” concerns are advanced by customers and regulatory frameworks, GSCM is becoming a topic of increasing relevance for many businesses (Lee, 2008; Rao, 2006, 2007; Yang et al., 2011, 2013). Due to its dedication to sustainability for the companies, it is a concept that is gaining popularity day by day. It is viewed as a tool for improving the environment, such as lowering the use of chemicals and hazardous materials, energy use, waste production, and air pollution, as well as enhancing economic performance and competitive advantage. With regard to incoming logistics, internal supply chains and manufacturing processes, outgoing logistics, reverse logistics, customer needs, responsiveness, quality, and efficiency, GSCM demands integration and coordination of the business segments.

By reducing their environmental risks and consequences while increasing their ecological efficiency, GSCM is considered as a new strategy for businesses to attain profit and market share goals (Kumar et al., 2012). One of the crucial steps in integrating environmental practices into a traditional supply chain is choosing the appropriate green

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practices (Genovese et al., 2017). The duty of developing sustainability orientations for lowering liabilities based on various factors connected to economic, environmental, and social aspects falls on decision-makers in SCs. Several multiple criteria decision-making methods of GSCM implementation have been used by many authors, one of them being analytical hierarchy process (AHP) (Dey & Cheffi, 2012; Gandhi et al., 2016; Hsu & Hu, 2008; Mangla et al., 2015; Mathiyazhagan et al., 2013; Sarmiento & Thomas, 2010; Wang et al., 2013, 2016).

The Analytic Hierarchy Process (AHP), commonly known as the analytical approach for multi-criteria decision-making, is employed in this article. The AHP is a hierarchical technique created by Thomas Saaty in 1971 (Saaty, 1980) for resolving difficult issues involving several criteria. It is an effective and adaptable method for helping decision-makers define priorities and choose the optimal course of action while considering both qualitative and quantitative components of a situation. The AHP proposed by Saaty (1980) is a widely used method for MCDM analysis weight determination. The AHP uses pairwise comparison matrices to deal with both quantitative and non-quantifiable factors and decomposes the decision-making process into a hierarchical framework.

AHP is a practical method for evaluating decision alternatives, identifying the top choices based on decision-maker preferences, and ranking them. When various criteria and sub-criteria are included in the decision-making process, it has been proven to be an effective strategy for rating several choices. The decision-making issues are organized into a hierarchical structure, and pairwise comparisons are used to derive ratio scales between choice elements at each level of the hierarchy for each of the decision-making problems. According to the relative relevance of the elements influencing decision-making, the technique ranks the criteria. Researchers have applied AHP methodology in supply chain aspects in regard to supplier selection, green practices, drivers, barriers and for green purchasing and procurement decisions (Barbarosoglu & Tazgac, 1997; Bhutta & Huq, 2002). Based on AHP, Handfield et al. (2002) suggested making purchases that are ecologically friendly. A six-dimension strategic decision framework for green supply chain management was created by Sarkis (2003) using ANP. Amy Lee (2009) used Delphi and fuzzy extended AHP to simulate the capabilities of green suppliers and the evaluation and selection that followed. Vinodh et al. (2013) conducted a case study of an Indian manufacturing organization to evaluate the use of AHP and utilized AHP for selection of the best lean concept. To

promote sustainability in supply chain management, this article discusses sustainability standards. To address the rising sustainability challenges, possibilities for sustainability must be created through the adoption of green practices. It is important for industries to understand the various green attributes which can help them align sustainability in a supply chain scenario. To successfully implement sustainability in a supply chain, it is important to identify initiatives which can be taken to meet the triple bottom line (economic, environmental, and social) objectives of the company. Therefore, this paper aims to understand the following perspectives:

- (i) The key green practices for introducing sustainability interventions in a supply chain &
- (ii) Introducing a framework through a construct design based on AHP on achieving the performance on triple bottom line.

With these considerations, this paper proposes AHP, an MCDM technique, to evaluate the different criteria for GSCM. The paper outlines and introduces a comprehensive framework for green supply chain management implementation. It evaluates, through a comparative analysis involving a *sample of industries*, environmentally sustainable supply chain management practices. The theoretical framework focuses on four major constructs. These constructs include *Organizational commitment*, *Business operations*, *Social Aspect*, and *Environmental Aspect*.

LITERATURE REVIEW

Interventions in sustainability can take many forms in an organization, from the early stages of policy development through their application in daily business operations. One innovative green practice in coordinating supply chain activities toward a greener supply chain is organizational commitment to environmental and social factors. According to Hoemose et al. (2012), senior management support is one of the variables that functions as a strategic facilitator to sustainability efforts, making it vital to have strategic thinking on sustainability-related agendas to advance toward greening endeavors. Organizations that are oriented toward sustainability may benefit from top management commitment

to risks associated with it, environmental compliances, policy, and planning Eight critical factors of quality management in a business unit were identified by Saraph et al. (1989) while studying the synthesis of the literature. They also highlighted the importance of top management leadership in shaping the profile of the organization to develop theories and models that link the critical factors of quality management to the organization's quality environment and quality performance. According to reports (Handfield et al., 2002; Lee, 2008), it is also said to be crucial for coordinating sustainable practices with corporate operations.

Environmental regulations are seen as another crucial tool that can have a positive influence on raising the environmental performance while striving to meet statutory compliances (Koh et al., 2012; Amy Lee et al., 2009). Government regulations and legislation is a major driver that propels businesses to implement GSCM practices (Drohometetski et al., 2014; Mudgal et al., 2010). Environmental regulations that are tailored to comply with regulations can encourage industrial rivalry and boost both profitability and environmental performance. As a result of the organizations' need to improve operational efficiency to comply with environmental requirements, this can also increase the firm's competitiveness.

The fundamental supply chain, including product design, material sourcing and selection, manufacturing methods, and distribution of the finished product to customers, may be made greener by integrating environmental and social practices into these operations. Green practices are seen as important components in ingraining sustainability in core operations, which in the long run can result in payoffs like cost and risk reduction (Zhu & Sarkis, 2004). Green practices start at the product design stage in the form of design for environment (DfE), to manufacturing by incorporating greener production principles like optimized resource use (water, energy, raw materials). Initiatives like design for greener goods and greener processes in making manufacturing more economical and efficient were described by Chiou et al. (2011) and Zhu et al. (2007). Some methods to introduce the idea of design for the environment include compact designs with increased functionality while requiring less resources for production, the use of non-hazardous materials, and recyclable products or components (Ninlawan et al., 2010). In order to score all material and energy flows of a product from the removal of raw materials from the environment through the disposal of the product back into the environment, Arena et al. (2003) used

the life cycle assessment methodology (Srivastava, 2007). According to reports, logistics is a key sector for adopting sustainable practices. Corporate environmental footprint at the distribution stage of the supply chain may be significantly reduced by using recyclable packaging materials, minimizing packing needs, and using routing software to save time during logistics (Meera & Chitramani, 2014; Ninlawan et al., 2010). Some of the practices toward sustainable procurement include buying raw materials or components from “Green Partners” that meet green partner environmental quality criteria and pass an audit procedure in ISO14000, OHSAS18000, and/or RoHS regulations. The additional operations-related interventions include reduced material usage, closed loop manufacturing, and using inputs with comparatively lower environmental consequences (Thun & Müller, 2010; Ninlawan et al., 2010). The negative consequences of discarded raw materials or byproducts have been observed to be considerably reduced through just-in-time production, energy efficiency, and process improvements. Along with environmental laws, environmental standards and certifications may play a crucial role in putting sustainability solutions into practice (Carter & Rogers, 2008).

Along with environmental interventions, Dubey et al., (2015a, 2015b) identified social sustainability, particularly in relation to ethics, working conditions, human rights, safety, and community engagement, as a driving force for green supply chain management. The development of a worldwide competitive advantage now heavily depends on social responsibility. Businesses are demonstrating their commitment to green practices because of rising public concern and awareness for environmentally friendly business practices. To remain competitive in the market, manufacturers are creating greener products to fulfill consumer demand. According to Seuring and Müller (2008), companies are being pressured more and more to switch their business operations to a greener mode by stakeholders such as customers, investors, regulators, and non-governmental organizations (NGOs). In this situation, the requirement for corporate activities to be transparent to satisfy the demands of civil society and regulators is fostering the development of socially responsible business practices. These catalysts have raised interest in sustainable or green supply chain management. As responsible actors, Nike, McDonald's, Nestle, Walmart, Xerox, Disney, Levi Strauss, Benetton, Adidas, and Du Pont have evolved into thought leaders in the sustainability field.

Therefore, it is crucial to map the complete supply chain and add the qualities of environment management through prioritization in a traditional supply chain.

The idea of GSCM is being put out by academics and industry professionals as a viable remedy for raising environmental performance. Although there are references to the GSCM idea from the early 1990s, the trend in the increase of academic papers reveals that it only really began to acquire traction around 2000 (Seuring & Muller, 2008; Srivastava, 2007). The idea of GSCM, dates to the environmental management movement of the 1960s. According to Seuring and Muller (2008), the GSCM notion took on a more formal form after the 1990s as a brand-new field. Green supply chain management is a concept that has been developing for some time. In the words of sustainability aspects, the whole range of environmental management concepts may be used to the entire set of activities across the whole customer order cycle. GSCM is defined as an integrating environmental concerns into the inter-organizational practices of sustainable supply chain management, including reverse logistics.

In general, it can be said that the concept of GSCM is broad, and there is no clear, holistic definition available to describe it. It is challenging to define GSCM by a single definition because the notion is described variably by scholars. Several common terms, including “supply chain environmental management”, “green purchasing and procurement”, “green logistics and environmental logistics”, and “sustainable supply network management” (Yuang & Kielkiewicz Young, 2001), are clearly used despite variations in definitions. A coordinated green supply chain is the outcome of integrating green supply chain practices into several business process segments. Better environmental and financial performance across supply chain participants as a whole lead to an improvement in the company organization.

Among all the green schemes, upgrading organizational environmental performance through green supply chain initiatives is of utmost importance for industry professionals (Luthra et al., 2011). However, it appears that practitioners are not yet ready to implement green supply chain management practices (GSCMP) organization wide. Bunse et al. (2011) find that extensive and easy-to-use tools for measuring the environmental performance of green materials are not available to industry professionals, which is a major impediment to GSCMP initiatives. The inexperience of industry practitioners in adopting GSCMP can magnify the initial cost of green supply chain schemes. Eventually, professionals who are not

involved in the green supply chain tend to overestimate the additional cost of GSCMP initiatives. This overestimation leads professionals to use conventional supply chain processes, as these seem to be reliable to them. An organization-wide positive attitude toward green supply chain initiatives and organizational environmental policies taken by the managerial staff are the main enablers of GSCMP adoption. Therefore, it is thought that a significant obstacle to the adoption of GSCMP is a lack of environmental missions and strategies. The top management should carefully assign environmental responsibilities among individual departments in order to achieve the organization's environmental goals through coordination and support from all departments. Green supply chain initiatives cannot be implemented effectively without coordination from all departments. The implementation of GSCMP will be negatively impacted by industry personnel's false perceptions of their environmental duties.

Additionally, GSCMP attempts are hampered by administrative staff members who are unaware of environmental issues. The adoption of sustainable practices and the development of green industries are hampered by experts who are unaware of and ignorant of environmental concerns. Sometimes employing green materials is an unpleasant experience, which deters practitioners from implementing GSCMP. Several sectors are not interested in a green supply chain due to the poor performance of green products in terms of compatibility and cost benefit. Lack of environmentally acceptable products might potentially seriously deter companies from adopting GSCM (Lorek & Spangenberg, 2014).

The key motivators for a supply chain to be green include operating cost reductions, increased efficiency, building brand awareness, etc. Professionals in the textile industry tend to agree that the market is the only source of external motivation for environmental activities. The lack of customer knowledge of green products is another issue (Lorek & Spangenberg, 2014). Because of this, the market's demand for green goods is unpredictable. The adoption of GSCMP efforts by practitioners is hampered by this ambiguity. While consumers in underdeveloped economies tend to ignore the negative environmental consequences of items instead of focusing on price and quality of clothing products, purchasers from wealthy nations are increasingly seeking green products. Even consumers in industrialized nations may not be sufficiently aware of the green supply chain or green products, according to a recent study. Additionally, previous research indicates that while the lowest price is the primary criterion in low-cost nation sourcing, the suppliers' ability

to adopt a green supply chain is frequently disregarded throughout the supplier selection process. Because of this, manufacturers in industrialized nations concentrate on obtaining the lowest possible price for their goods as their primary competitive advantage. In other words, the absence of consumer demand makes it harder for firms in emerging countries to implement GSCMP (Table 19.1).

METHODOLOGY

An extensive assessment of the literature and informal interviews with company executives, academics, consultants, and specialists in the subject of sustainability were conducted to establish a workable model. The debates helped create a set of evaluation standards that considered social, economic, technological, and environmental factors. The decision-making team's perspective was used to construct the assessment criteria, and questionnaires were circulated. As a result, more impartial assessment criteria may be checked. In order to choose the GSCM criteria, a poll was also run. As a result, in the current study, criteria from a literature review and the opinions of experts were considered and accepted.

The present study consists of two stages: first, identification of the criteria to be used for alternative evaluation; second, AHP computation, i.e., AHP was applied to give weights and to find the importance degree of each criterion. The list of criteria considered for the study derived from the literature support is exhibited in Table 19.2.

DATA COLLECTION

The present study conducted a thorough search of scholarly publications, databases, and bibliographical sources in the current field of green supply chain practices. To ascertain the primary motivating factors behind the selection and eventual implementation of green practices, a literature search survey of real-world case studies on GSCM practices and their implementation was carried out. Industry-specific categories were used to group the replies provided by the many specialists in this sector. The six industries that were selected and categorized were consulting (which refers to the comments and replies made by experts that have cross-functional domain competence across several industries), banking, IT, FMCG, energy, and telecom. Each aspect was studied with respect to

Table 19.1 Relevant factors for green supply chain management

<i>Constructs/Aspects</i>	<i>Factors</i>	<i>Definition</i>
Organizational Commitment	Support & Commitment from leadership	It defines the commitment of the top management in supporting green initiatives
	Total Quality Environmental Management	It identifies application of quality management principles in bringing in eco-efficiency in the industrial systems and processes
	Environmental Compliance & Auditing	It states conforming to environmental laws, regulations, standards related to environmental attributes. Talks about setting environmentally conducive policies needed to meet the compliances. Environmental audit can be one of the ways to measuring conformance to compliances
	Training Programs For Employees	Training programs can be instrumental in building capacity of the employees and other stakeholders in bringing environmental improvements
Business Operations	Design for Environment	It is the foremost criteria in imbining sustainability in product and processes. Green design philosophy can be brought about by adopting cradle to cradle approach
	Sustainable Procurement	Sustainable Procurement aims at setting environmental criteria while purchasing goods and services. Purchasing decisions must meet the environmental objectives of the organization to ensure least environment impact

(continued)

Table 19.1 (continued)

<i>Constructs/Aspects</i>	<i>Factors</i>	<i>Definition</i>
Social Aspect	Green Production	Green production involves practices and tools necessary to minimize the environmental impacts of manufacturing processes. It works on the principles of industrial ecology, cradle to cradle, life cycle analysis, and green design
	Eco-friendly Packaging & Logistics	Eco-friendly packaging involves increased use of life cycle inventory and life cycle assessment to help guide the use of packaging which reduces the environmental impact and ecological footprint. Supply loop management, Green logistics, or reverse logistics can be one of the ways in ensuring greener logistics
	Supplier & Distributor Assessment	Involves assessment of suppliers on environmental criteria's viz. resource use, material consumption, waste generation, GHG emissions, and social factors
	Health & Safety	Safety & Health related risks and interventions along the supply chain
	Role of Government & NGOs	Involves role of government organizations and NGOs in greening business operations and impacts across the value chain. This involves networking with the external stakeholders in improving business impacts on environmental and social bottom line

(continued)

Table 19.1 (continued)

<i>Constructs/Aspects</i>	<i>Factors</i>	<i>Definition</i>
Environmental Aspect	Responsible Investing	Responsible investment governs investment approaches that integrate environmental, social, and governance (ESG) in the financial decision-making.
	Renewable Energy & Energy Efficiency	Renewable energy & energy efficiency are the technical interventions which can help in decarbonizing the economy. Thrust on RET and EE can help in generating revenues and mitigating climate change-related issues
	Green Buildings	Green building refers to environmentally benign design in the building to lessen the environmental impacts of structures. This can begin from siting to design phase, construction, operation, maintenance, renovation to demolition stage
	GHG Emissions & Carbon Foot-printing Reporting	GHG emission and carbon footprint are mechanisms to measure and manage corporate carbon emissions
	Environmental KPI Ratings	KPIs are metrics which help in identifying and assessing the status of the organization in implanting green practices. KPI can be based on quantum of material consumption in an organization, percentage of materials recycled, percentage of water recycled and reused, direct and indirect GHG emissions by weight, internal audit scores, percentage of renewable resource used

Table 19.2 Environmental and social evaluation criteria used in the study

<i>Factors</i>	<i>Sources</i>
Support & Commitment from leadership	Dashore and Sohani (2013), Jin Sung Rha (2010), Buyukozkan and Cifci (2012), Luthra et al. (2016), Walker et al. (2008), Zhu & Sarkis (2007)
Total quality environmental Management Environmental Compliance & auditing	Jin Sung Rha (2010), Green et al. (1996) Arimura et al. (2011), Jin Sung Rha (2010), Kull and Talluri (2008), Min and Galle (2001)
Training programs for employees	Bowen et al. (2001), Darnall et al. (2008), Menzel et al. (2010), Mathiyazhagan et al., (2013, 2014), Toke et al. (2012)
Design for Environment	Kumar and Chandrakar (2012), Kuo et al. (2012), Wang et al. (2013)
Sustainable Procurement	Chen et al. (2012), El Tayeb et al. (2011), Min and Galle (2001), Yuang & Yuang (2001)
Green Production	Chiang and Tseng (2005), Glavic and Lukman (2007), He et al. (2005), Jin Sung Rha (2010), Liu et al. (2005), Sangwan (2006)
Eco-friendly Packaging & Logistics	Beamon (1999), Chhabra et al. (2017), Cruijssen et al. (2007), Chin-Chia (2011), Rao (2006), Lee and Dong (2009)
Supplier & Distributor (Stakeholder) assessment	Beil (2010), Bali et al. (2013), Holt (1998), Degraeve et al. (2000), Hu et al., (2012, 2013), Hsu and Hu (2008, 2009), Lu et al. (2007), Weber et al., (1991, 2000)
Health & Safety	Cosimato Troisi (2015), Esty and Winston (2009), Mutingi (2013), Victor Guang Shi (2012), Walters et al. (2009)
Role of Government & NGOs	Damlamian (2006), Johnson (2009), Vermeulen and Kok (2012)
Responsible Investing	Buyse and Verbeke (2002), Flammer (2013), Jin Sung Rha (2010), Henriques and Sadorsky (1996)
Renewable Energy & Energy Efficiency	Al-mulali et al. (2015), Bazmi & Zahedi (2011), Tock et al. (2010), Zhang et al. (2011), Zou and Couani (2011)

(continued)

Table 19.2 (continued)

<i>Factors</i>	<i>Sources</i>
Green Building	Henry and Paris (2009), Prum & Del Percio (2010), Pillar Cordero (2013), Theaker and Cole (2001a, 2001b)
GHG Emissions & Carbon Foot-printing Reporting	Marvinney et al. (2015), Muthu et al. (2011), Rizet et al. (2012), Kendall et al. (2015), Kendall et al. (2009), Kendall (2012), Patarra et al. (2012), Vázquez-Rowe et al. (2013), Vázquez-Rowe et al., (2012a, 2012b), Young et al. (2012)
Environmental KPI Ratings	Dey and Cheffi (2012), Azevedo et al. (2011), Shaw et al. (2010), Doublet et al. (2014)

the industry type as to which of the aspects and factors are important and critical to their respective supply chains in increasing the green quotient.

The two phases in which the data is used are as follows are discussed. To arrive at the multivariable criteria for an effective (green) supply chain, the concept (aspects) and their components are first identified through literature study. Following expert review, a total of 16 practices were chosen for additional assessment to identify their relative relevance using AHP (Tables 19.3, 19.4, 19.5, 19.6 and 19.7). To collect data for this, a survey questionnaire with four major components defining the sustainability in the supply chain and several sub factors was created (Fig. 19.1). Various business specialists in the supply chain, environment, social, sustainability, and climate change fields answered this survey questionnaire.

According to Saaty (1980) and Dey and Cheffi (2012), the AHP technique assesses the problem by breaking it down into aim, criteria, sub-criteria, and alternatives/factors. Three tiers make up the hierarchical framework (Fig. 19.2): assessing the four categories of green supply chain practices (Level 2), 16 individual sub practices (Level 3), and the green supply chain practices themselves (Level 1) for relative value. To establish the relative relevance, pairwise comparison matrices were used, and weights were assigned to each category of green practices.

The stepwise procedure employed in the present study is as shown below:

Table 19.3 Pairwise assessment matrix for *Organizational Commitment* category for green supply chain management

<i>Organizational commitment</i>							
	<i>A1</i>	<i>A2</i>	<i>Weight</i>	<i>A4</i>	<i>GM</i>	<i>Weight</i>	<i>Rank</i>
A1	1	3.181818	0.486111	5	2.326698	0.486111	1
A2	0.314286	1	0.152778	1.571429	0.731248	0.152778	3
A3	0.542857	1.727273	0.263889	2.714286	1.263064	0.263889	2
A4	0.2	0.636364	0.097222	1	0.46534	0.097222	4

A1: Support & Commitment from leadership; A2: Total Quality Environmental Management; A3: Environmental Compliance & Auditing, A4: Training Programs for employees

Table 19.4 Pairwise assessment matrix for *Business Operations* category for green supply chain management

<i>Business operations</i>							
	<i>B1</i>	<i>B2</i>	<i>B3</i>	<i>B4</i>	<i>GM</i>	<i>Weight</i>	<i>Rank</i>
B1	1	1.153846	2.142857	5	1.875114	0.394737	1
B2	0.866667	1	1.857143	4.333333	1.625099	0.342105	2
B3	0.466667	0.538462	1	2.333333	0.875053	0.184211	3
B4	0.2	0.230769	0.428571	1	0.375023	0.078947	4

B1: Design for Environment; B2: Sustainable Procurement; B3: Green Production; B4: Eco-friendly Packaging & Logistics

Table 19.5 Pairwise assessment matrix for *Social Aspect* category for green supply chain management

<i>Social aspects</i>							
	<i>C1</i>	<i>C2</i>	<i>C3</i>	<i>C4</i>	<i>GM</i>	<i>Weight</i>	<i>Rank</i>
C1	1	0.781818	3.909091	1.592593	1.485325	0.316176	2
C2	1.27907	1	5	2.037037	1.899835	0.404412	1
C3	0.255814	0.2	1	0.407407	0.379967	0.080882	4
C4	0.627907	0.490909	2.454545	1	0.932646	0.198529	3

C1: Supplier & Distributor Assessment; C2: Health & Safety; C3: Role of Government & NGO's; C4: Responsible Investing

Table 19.6 Pairwise assessment matrix for *Environmental Aspect* category for green supply chain management

	<i>Environmental aspects</i>				<i>GM</i>	<i>Weight</i>	<i>Rank</i>
	<i>D1</i>	<i>D2</i>	<i>D3</i>	<i>D4</i>			
D1	1	5	1.296296	1.129032	1.644732	0.35	1
D2	0.2	1	0.259259	0.225806	0.328946	0.07	4
D3	0.771429	3.857143	1	0.870968	1.268793	0.27	3
D4	0.885714	4.428571	1.148148	1	1.456763	0.31	2

D1: Renewable Energy & Energy Efficiency; D2: Green Buildings; D3: GHG Emissions & Carbon Foot Printing Reporting; D4: Environmental KPI Ratings

- **Step 1: Formulation of aim of work**

The aim of aligning the supply chain into greener was evaluated by identifying the green practices (environmental and sustainability aspects)

- **Step 2: Establishing the hierarchical structure.**

The hierarchical structure with decision elements was constructed and the decision-makers were requested to make pairwise comparisons between decision alternatives and criteria using a scale. All matrices were developed, and all pairwise comparisons were obtained from each decision-maker.

- **Step 3: Constructing the pairwise comparison matrix.**

A set of pairwise comparison matrices was constructed. Each element in an upper level was used to compare the elements in the level immediately below with respect to it.

- **Step 4: Calculating the Eigen values, Eigen vectors, and relative importance weights.**

Eigen values and Eigen vectors were obtained from the pairwise comparison matrices which were analyzed to calculate the relative importance of the weights of the factors.

- **Step 5: Calculation of consistency ratio**

Consistency index (CI) for each matrix was computed the order n using Equation (19.1). Based on the CI and Random Consistency index (RI), the consistency ratio (CR) was calculated using Equation (19.2).

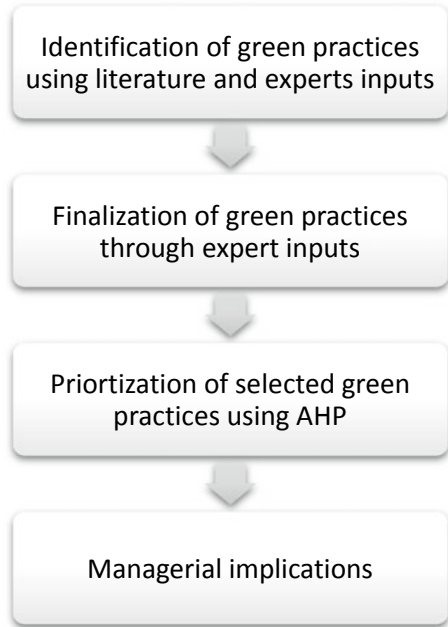
The CI and CR are defined as follows:

Table 19.7 The AHP Matrix on the construct

	<i>Company</i>	<i>Weights</i>	<i>Banking</i>	<i>IT</i>	<i>FMCG</i>	<i>Energy</i>	<i>Telecom</i>	<i>Consultancy</i>	<i>Overall Rank</i>
A1	Organizational Commitment	0.25	0.031	0.019	0.019	0.006	0.019	0.028	0.122
A2	Support & Commitment from leadership								
	Total quality environmental Management	0.153	0.008	0.008	0.008	0.002	0.008	0.006	0.038
A3	Environmental Compliance & auditing	0.264	0.014	0.018	0.011	0.011	0.004	0.009	0.066
A4	Training programs for employees	0.097	0.005	0.005	0.005	0.001	0.005	0.003	0.024
B1	Business Operations	0.25	0.020	0.005	0.020	0.010	0.020	0.024	0.099
B2	Design for Environment Sustainable Procurement	0.342	0.021	0.009	0.017	0.004	0.017	0.017	0.086
B3	Green Production	0.184	0.012	0.005	0.010	0.002	0.008	0.010	0.046
B4	Eco-friendly Packaging & Logistics	0.079	0.005	0.001	0.005	0.001	0.003	0.004	0.020
C1	Social Aspect	0.25	0.014	0.005	0.014	0.005	0.023	0.019	0.079
	Supplier & Distributor assessment								
C2	Health & Safety	0.404	0.018	0.030	0.006	0.006	0.030	0.012	0.101

(continued)

Fig. 19.1 Decision hierarchy of green practices for green supply chain management



Consistency index for each matrix of order n by the formulae:

$$CI = (\lambda_{\max} - n) / (n - 1) \quad (19.1)$$

where λ_{\max} is the maximum average value

The consistency ratio is then calculated using the formulae:

$$CR = CI / RI \quad (19.2)$$

RESULT & DISCUSSION

The study uses an analytical hierarchical method to rank the green supply chain management practices. All the construct's factors—organizational commitment, business operations, social aspect, and environmental aspect—were compared on a pair-by-pair basis. The construct has four main variables and 16 auxiliary elements. For each category of green

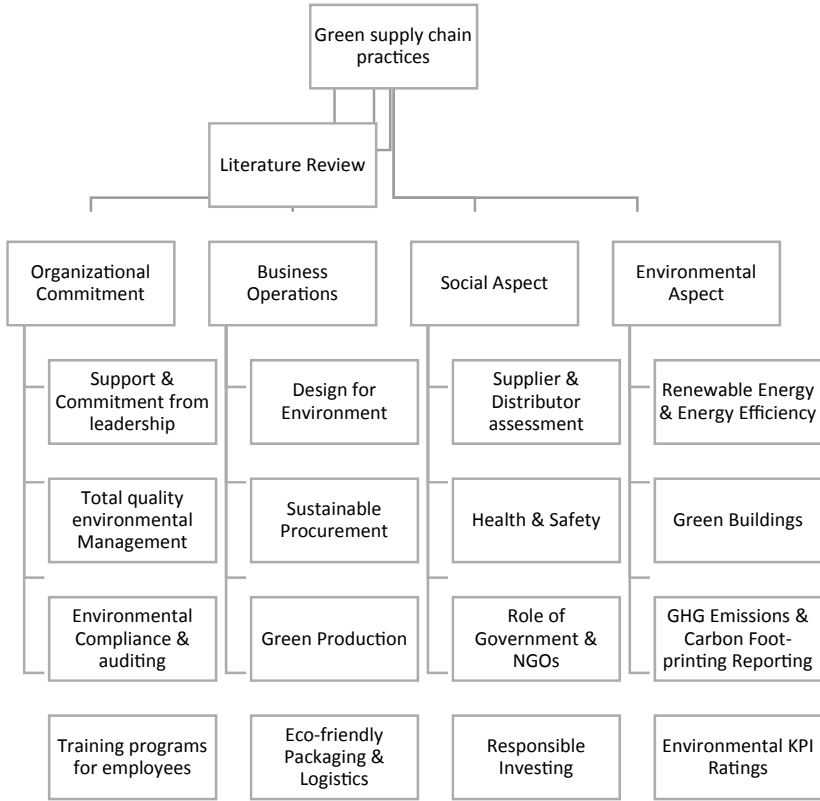


Fig. 19.2 Hierarchal levels representing the factors and sub factorial structure of the construct

supply chain practices, pairwise comparisons were made, and relative weights were determined (Tables 19.3, 19.4, 19.5 and 19.6).

Organizational Commitment

GSCM can be seen as a mechanism of integrating environmental issues into the supply chain management process starting from product development stage to its final delivery.

When comparing the four major aspects of this component across all sectors, it is clear from the AHP table that leadership support and

commitment are among the most valuable and essential elements for a company to begin greening its supply chain. One way to think about the internal management role play is as a strategic facilitator for achieving the objectives of GSCM implementation. Setting long-term strategic goals may significantly increase a supply chain's sustainability while also lowering risks and liabilities. GSCM implementation in any organization should ideally emerge from the organization's business philosophy where it receives momentum from top management and its leadership (Chkanikova & Mont, 2015; Dubey et al., 2015a, 2015b; Lorek & Spangenberg, 2014; Luthra et al., 2011, 2016). This is based on the findings of the current study. As a result, establishing a roadmap for going greener depends on top management's involvement, dedication to implementing environmentally friendly practices, and responsibility toward environmental goals (Luthra et al., 2016). Access to any necessary financial and human resource investments may be ensured by top-level commitment. In order for an organization to choose sustainability initiatives that directly support the business goals, solid governance frameworks and strong commitment from decision-makers are essential. According to Gunasekaran and Spalanzani (2012), embracing sustainability initiatives in supply chains depends on senior management's commitment to moving beyond compliance and regulation as well as the government's role play through legislation.

The second-highest priority in the field of organizational commitment belongs to the concept of environmental compliance and audits. As part of compliances, which are the primary facilitators in dictating environmental actions, it is becoming clear that rules, legislation, standards, and audits are evolving (Arimura et al., 2011; Malviya et al., 2016). To improve both environmental and economic performance, organizations must remodel their processes and systems to become compliant in their business operations (Koh et al., 2012; Amy Lee et al., 2009). It can serve as a framework for analyzing present procedures and putting into action plans that are supportive of environmental requirements (Drohomeretski et al., 2014; Mudgal et al., 2010). Environmental compliance and audits provide a better knowledge of a facility's and its activities' compliance status. These can be used to identify environmental liabilities associated with a facility's operations, such as poor housekeeping, negligent handling, storage, or disposal of hazardous materials, operational inefficiencies, faulty or misused equipment that results in spills or releases of hazardous materials, risks to human health, or improper permitting

and recordkeeping that can result in fines and the loss of a company's operating license.

Business Operations

Design for Environment (DfE) has the highest value when comparing the 4 main components of this feature across all sectors. The DfE concept is in line with the idea that every process or product should take environmental considerations into account from the very beginning. Design for recyclability (RECY), manufacturability (REMAN), reuse (REUSE), disassembly (DISASS), and disposal (DISP) are all included in the functionality viewpoint. Environmentally friendly technology must be used throughout the design phase of products if they are to significantly reduce environmental damage over the course of their existence. Additionally, while the product is in its operational stage, planning for the environment can also be highly economically advantageous. Design for Environment tools can help to reduce the effort for environmental evaluation because of their direct integration in the designer's workflow.

Sustainable Procurement was identified as the second most important reason in favor of greening activities. Local sourcing and the purchase of environmentally friendly items are two examples of green supply chain management strategies. Local sourcing may be a beneficial practice that is linked toward sustainability given the idea of global supply chains, where producers and customers are dispersed around the globe. Today, corporations place a great priority on sustainable buying. It may increase profitability, lessen waste, boost competitiveness, and enhance a company's reputation. These may contribute to employment creation and local economic growth by sourcing goods. Additionally, it promotes revenue growth and expense savings. Green buying has been cited by Teixeira et al. (2015) as one of the easiest ways to apply green practices. By incorporating relevant sustainability criteria into the procurement practice, it minimizes the environmental effect while maximizing economic and social gain. Since logistics and transportation activities account for 5.5% of global carbon emissions, focusing on these activities can have a significant impact on a company's greenhouse gas (GHG) emissions and carbon footprint. As a result, logistics-related activities can have a significant impact on supply chain performance from a sustainability perspective.

During the logistics stage of the supply chain, efficiency in transportation, route optimization, and warehousing may be employed to improve environmental performance.

Social Aspect

When the four components of this aspect are compared across all industries, it is shown that Health & Safety has the highest value. Taking care of health and safety concerns can be considered as a means to boost employee productivity, which can benefit the business. Supplier and distributor evaluation is the second most important aspect. The cooperation of suppliers at the upstream and distributors at the downstream of the supply chain is essential to achieving the anticipated environmental goals, making suppliers one of the key stakeholders and significant contributors in greening supply chains (Malviya & Kant, 2016; Simpson et al., 2007). To make sure that suppliers abide by environmental norms and requirements, businesses are putting in place a number of regulatory inspections and processes (Awasthi et al., 2010). A strategy for greening the supply chain was put up by Walton et al. (1998), who suggested including suppliers in environmental management procedures. In order to integrate environmental factors with the supplier selection process and compare suppliers' environmental performance to legal requirements, Humphreys et al. (2006) presented a multi-stage framework. Hervani et al. (2005) developed an integrative framework for the research, creation, and assessment of green supply chain management performance tools. These might be connected to proactive supply chain interventions by involving external stakeholders and can play a key role in environmentally friendly corporate operations. An efficient supplier assessment process has a number of advantages, including increased environmental performance, capacity growth, and small-scale operational improvements (Zhu et al., 2013). According to Zhu et al. (2013), the advantages often include buying from vendors who offer high standards for product and service levels together with enough capacity and commercial stability. The performance criteria for the green supplier selection process have been developed by Noci (1997). Using a fuzzy technique, Shen et al. (2013) suggested assessing the green providers. Customer and supplier assessment can aid in locating and removing supply chain hidden cost drivers. Strategies focused on the supply chain, such as those that are risk- or opportunity-oriented, can be used to establish diverse types of suppliers and improve environmental

performance. A strategic approach to managing supplier relationships is a consideration at each stage of this process, and is a key enabler for creating mutual value.

To further establish the relative relevance and weights, a pairwise matrix was produced (Table 19.7). The highest ranking in the organizational commitment component belongs to the leadership support and commitment element (0.486), which is followed by environmental compliance and auditing (0.264). Like this, the Aspect on Business Operations gave the most weight to green practices like design for the environment (0.395) and sustainable procurement.

The practice of evaluating suppliers and distributors came in at number two (0.316) and was considered as the second most crucial factor in the greening of the supply chain, behind only health and safety (0.40). On the aspect of “*Environment*”, renewable energy (0.350) and setting of KPIs (0.310) held the most importance in the AHP matrix.

Environmental Aspect

The AHP table showed that renewable energy and energy efficiency had the greatest value when comparing the four main variables of this aspect across all industries, making it the most crucial and significant factor. Energy management is one strategy to move toward a low-carbon economy in an ecologically responsible way. Energy efficiency may be viewed as a low-hanging fruit, whereby optimizing energy consumption through improved housekeeping, technical advancement, retrofits, or technological innovation may significantly cut down on energy waste and carbon emissions. Transitioning to renewable energy technologies is creating new options for relieving strain on traditional sources of energy in response to the world’s expanding energy needs and worries about climate change. Another initiative that can reduce the environmental footprints left by conventional energy sources globally is the investment in and implementation of renewable energy technology. This may save costs and reduce risk throughout the supply chain when it is viewed as a strategic asset as opposed to a tactical expense.

The environmental KPI ratings are the second most important aspect. Key Performance Indicators (KPIs) can be used to gauge the extent to which sustainability objectives and targets have been attained in actual practice (Gunasekaran & Kobu, 2007). Measurement and management of a supply chain’s environmental qualities can be aided by well-defined

supply chain performance indicators. According to Colicchia et al. (2011), Harms et al. (2013), performance indicators based on environmental factors like greenhouse gas emissions, health and safety, resource consumption (energy, water, and materials), waste reduction, stakeholder engagement, product quality, and material handling can be set to measure a company's performance along the triple bottom line. For the integration of social and environmental responsibility issues into performance measurement systems, many conceptual frameworks have been put forth. These frameworks call for the establishment of KPIs on environmental and social qualities (Avram & Avasilcai, 2014; Goyal et al., 2013; Searcy, 2012). These KPIs can be used in performance measurement framework to benchmark company's sustainability endeavors.

GHG emissions and carbon footprint are viewed as indicators that can significantly help green supply chains. Carbon footprints are a measure of the greenhouse gases released over time by various activities or organizations along the supply chain. This exercise allows for the tracking of scope 3 emissions, which are mostly generated by supply chain operations. By investing in appropriate environmental interventions (cleaner technology, cleaner manufacturing, and sustainable procurement), the integration of these externalities into operations, procurement, and logistics can minimize supply chain impacts (Lee et al., 2012). This calls for a comprehensive strategy that connects supply chain choices to the three pillars of profit, profit, and planet (Chaabane et al., 2012; Kumar et al., 2012). Thus, it can be said that key performance indicators could be instrumental in deploying sustainability (Gunawan et al., 2008).

CONCLUSION

Decision-makers are now better equipped to comprehend the different intricacies of the GSCM problem and prioritize them for competitive advantage and effective management thanks to the proposed model described in this study. This study explains how the suggested AHP-based decision model may facilitate decision-making by explicitly taking into account the many forms of dependencies in the decision structure through the assessment of the relative dominance of the relevant criteria and alternatives.

The present study emphasizes many supply chain aspects and develops a paradigm for green supply management. The results of this study can

help businesses streamline their operations in terms of social and environmental factors. The presented technique offers advantages for both concrete and abstract criteria based on expert paired comparison judgment. Since the numerous features may alter depending on the type of industry, the research may be expanded to include more industrial sectors. The work may also assist supply chain managers in setting priorities for their sustainability initiatives to achieve business benefits such as risk mitigation, cost containment, and revenue generation.

The proposed model cannot be used universally since there may be biases and misconceptions about the fundamental problems that result in inadequate solutions. Future study must thus make sure that the level of ambiguity is reduced. The ranking for the assessment criteria may also change depending on the socioeconomic, cultural, and geographic context. In this field of research, it may also be advantageous to evaluate the model using sensitivity analysis and make adjustments by adding or removing certain criteria as needed. As a result, the decision-makers will be able to make a choice that is more prudent, clear, rational, and methodical.

REFERENCES

- Al-Mulali, U., Saboori, B., & Ozturk, I. (2015). Investigating the environmental Kuznets curve hypothesis in Vietnam. *Energy Policy*, *76*, 123–131.
- Arena, U., Mastellone, M. L., & Perugini, F. (2003). The environmental performance of alternative solid waste management options: A life cycle assessment study. *Chemical Engineering Journal*, *96*, 207–222.
- Arimura, T. H., Darnal, N., & Katayama, H. (2011). Is ISO 14001 a gateway to more advanced voluntary action? The case of green supply chain management. *Journal of Environmental Economics and Management*, *61*, 170–182.
- Avram, E., & Avasilcai, S. (2014). Business performance measurement in relation to corporate social responsibility: A conceptual model development. *Procedia—Social and Behavioral Sciences*, *109*, 1142–1146.
- Awasthi, A., Chauhan, S. S., & Goyal, S. K. (2010). A fuzzy multicriteria approach for evaluating environmental performance of suppliers. *International Journal of Production Economics*, *126*, 370–378.
- Azevedo, S. G., Carvalho, H., & Cruz Machado, V. (2011). The influence of green practices on supply chain performance: A case study approach. *Transportation Research Part e: Logistics and Transportation Review*, *47*(6), 850–871.

- Bali, O., Kose, E., & Gumus, S. (2013). Green supplier selection based on IFS and GRA. *Grey Systems: Theory and Application*, 3, 158–176.
- Barbarosoglu, G., & Tazgac, T. (1997). An application of the analytic hierarchy process to the supplier selection problem. *Production and Inventory Management Journal*, 18(1), 14–21.
- Bazmi, A. A., Zahedi, G., & Hashim, H. (2011). Progress and challenges in utilization of palm oil biomass as fuel for decentralized electricity generation. *Renewable and Sustainable Energy Reviews*, 15, 574–583.
- Beamon, B. (1999). Designing the green supply chain. *Logistics Information Management*, 12(4), 332–342.
- Beil, R. D. (2010). Supplier selection. *Wiley Encyclopedia of Operations Research and Management Science*. John Wiley & Sons.
- Bhutta, K. S., & Huq, F. (2002). Supplier selection problem: A comparison of total cost of ownership and analytical hierarchy process approach. *Supply Chain Management: An International Journal*, 7, 126–135.
- Bowen, F. E., Cousins, P. D., Lamming, R. C., & Faruk, A. C. (2001). The role of supply management capabilities in green supply. *Production and Operations Management*, 10(2), 174–189.
- Buysse, K., & Verbeke, A. (2002). Proactive environmental strategies: A stakeholder management perspective. *Strategic Management Journal*, 24, 453–470.
- Buyukozkan, G., & Cifci, G. (2012). Evaluation of the green supply chain management practices: A fuzzy ANP approach. *Production Planning & Control*, 23(6), 405–418.
- Carter, C. R., & Rogers, D. S. (2008). A framework of sustainable supply chain management: Moving toward new theory. *International Journal of Physical Distribution and Logistics Management*, 39(5), 360–387.
- Chaabane, A. R., & Paquet, M. (2012). Design of sustainable supply chains under the emission trading scheme. *International Journal of Production Economics*, 135(1), 37–49.
- Chen, C. C., Shih, H. S., Shyur, H. J., & Wu, K. S. (2012). A business strategy selection of green supply chain management via an analytic network process. *Computers & Mathematics with Applications*, 64(8), 2544–2557.
- Chhabra, D., Garg, S. K., & Rajesh, K. S. (2017). Analyzing alternatives for green logistics in an Indian automotive organization: A case study. *Journal of Cleaner Production*. In press.
- Chiang, J., & Tseng, M. (2005). The impact of environmental characteristics on manufacturing strategy under cleaner production principles guidance. *The Journal of American Academy of Business*, 7(1), 163–168.
- Chin-Chia, L. (2011). Performance evaluation of logistics systems under cost and reliability considerations. *Transportation Research Part e: Logistics and Transportation Review*, 47(2), 130–137.

- Chiou, T. Y., Chan, H. K., Lettice, F., & Chung, S. H. (2011). The influence of greening the suppliers and green innovation on environmental performance and competitive advantage in Taiwan. *Transportation Research Part e: Logistics and Transportation Review*, 47(6), 822–836.
- Chkanikova, O., & Mont, O. (2015). Corporate supply chain responsibility: Drivers and barriers for sustainable food retailing. *Corporate Social Responsibility and Environmental Management*, 22(2), 65–82.
- Colicchia, C., Melacini, M., & Perotti, S. (2011). Benchmarking supply chain sustainability: Insights from a field study. *Benchmarking an International Journal*, 18(5), 705–732.
- Cordero, P. (2013). Carbon footprint estimation for a sustainable improvement of supply chains: State of the art. *Journal of Industrial Engineering and Management*, 6(3), 805–813.
- Cosimato S., & Troisi, O. (2015). Green supply chain management practices and tools for logistics competitiveness and sustainability. The DHL case study. *The Total Quality Management Journal*, 27(2), 256–276.
- Cruijssen, F., Coolls, M., & Dullaert, W. (2007). Horizontal co-operation in logistics: Opportunities and impediments. *Transport Research Part E: Logistics & Transportation Review*, 43(2), 129–142.
- Damlamian, C. (2006, May 24). Corporate-NGO Partnerships for Sustainable Development. *CUREJ: College Undergraduate Research Electronic Journal*. University of Pennsylvania. <http://repository.upenn.edu/curej/12>
- Darnall, N., Jolley, G. J., & Handfield, R. (2008). Environmental management systems and green supply chain management: Complements for sustainability? *Business Strategy and the Environment*, 17(1), 30–45.
- Dashore, K., & Sohani, N. (2013). Green supply chain management-barriers and drivers: A review. *International Journal of Engineering Research and Technology*, 2(4), 2021–2030.
- Degraeve, Z., Labro, E., & Roodhooft, F. (2000). An evaluation of vendor selection models from a total cost of ownership perspective. *European Journal of Operational Research*, 125(1), 34–58.
- Dey, P. K., & Cheffi, W. (2012). Green supply chain performance measurement using the analytic hierarchy process: A comparative analysis of manufacturing organizations. *Production Planning & Control*, 24(8–9), 702–720.
- Doublet G., Ingólfssdóttir, G. M., Yngvadóttir, E., Landquist, B., Jungbluth, N., Aronsson, A., Ramos, S., Keller, R., & Ólafsdóttir, G. (2014). Key Environmental Performance Indicators for a simplified LCA in food supply chains. 9th International Conference LCA of Food San Francisco, USA.
- Drohomeretski, E., Gouvea da Costa, S., & Pinheiro de Lima, E. (2014). Green supply chain management: Drivers, barriers and practices within the Brazilian automotive industry. *Journal of Manufacturing Technology Management*, 25(8), 1105–1134.

- Dubey, R., Gunasekaran, A., Papadopoulos, T., & Childe, S. J. (2015a). Green supply chain management enablers: Mixed methods research. *Sustainable Production and Consumption*, 4, 72–88.
- Dubey, R., Gunasekaran, A., & Ali, S. S. (2015b). Exploring the relationship between leadership, operational practices, institutional pressures and environmental performance: A framework for green supply chain. *International Journal of Production Economics*, 160, 120–132.
- Eltayeb, T. K., Zailani, S., & Ramayah, T. (2011). Green supply chain initiatives among certified companies in Malaysia and environmental sustainability: Investigating the outcomes. *Resource Conservation & Recycling*, 55(5), 495–506.
- Esty, D. C., & Winston, A. S. (2009). *Green to gold: How smart companies use environmental strategy to innovate, create value, and build a competitive advantage*, rev. and updated ed., Wiley, Chichester and Hoboken, NJ.
- Flammer, C. (2013). Corporate social responsibility and shareholder reaction: The environmental awareness of investors. *Academy of Management*, 56(3), 758–781.
- Gandhi, S., Mangla, S. K., Kumar, P., & Kumar, D. (2016). A combined approach using AHP and DEMATEL for evaluating success factors in implementation of green supply chain management in Indian manufacturing industries. *International Journal of Logistics Research and Applications*, 19(6), 537–561.
- Genovese, A., Acquaye, A. A., Figueroa, A., & Koh, S. C. L. (2017). Sustainable supply chain management and the transition towards a circular economy: Evidence and some applications. *Omega*, 44, 344–357.
- Glavic, P., & Lukman, R. (2007). Review of sustainability terms and their definitions. *Journal of Cleaner Production*, 15(18), 1875–1885.
- Goyal, P., Rahman, Z., & Kazmi, A. A. (2013). Corporate sustainability performance and firm performance research. Literature review and future research agenda. *Management Decision*, 51, 361–379.
- Green, K., Morton, B., & New, S. (1996). Purchasing and environmental management: Interactions, policies and opportunities. *Business Strategy and the Environment*, 5, 188–197.
- Gunasekaran, A., & Spalanzani, A. (2012). Sustainability of manufacturing and services: Investigations for research and applications. *International Journal of Production Economics*, 140, 35–47.
- Gunasekaran, A., & Kobu, B. (2007). Performance measures and metrics in logistics and supply chain management: A review of recent literature (1995–2004) for research and applications. *International Journal of Production Research*, 45(12), 2819–2840.

- Gunawan, G., Ellis-Chadwick, F., & King, M. (2008). An empirical study of the uptake of performance measurement by Internet retailers. *Internet Research*, 18, 361–381.
- Handfield, R., Walton, S. V., Sroufe, R., & Melnyk, S. A. (2002). Applying environmental criteria to supplier assessment: A study in the application of the analytical hierarchy process. *European Journal of Operational Research*, 141(1), 70–87.
- Harms, D., Hansen, E. G., & Schaltegger, S. (2013). Strategies in sustainable supply chain management: An empirical investigation of large German companies. *Corporate Social Responsibility and Environmental Management*, 20, 205–218.
- He, Y., Liu, F., Cao, H., & Zhang, H. (2005). Process planning support system for green manufacturing and its application. *Computer Integrated Manufacturing System*, 11(7), 975–980.
- Henriques, I., & Sadorsky, P. (1996). The determinants of an environmentally responsive firm: An empirical approach. *Journal of Environmental Economics and Management*, 30, 381–395.
- Henry, E., & Paris, M. (2009). Institutional dynamics and barriers to sustainable construction in France, the United Kingdom and the Netherlands. In M. Symes & I. Cooper (Eds.), *Sustainable Urban Development*, Vol. 4 (pp. 171–196). Routledge.
- Hervani, A. A., Helms Marilyn, M., & Sarkis, J. (2005). Performance measurement for green supply chain management. *Benchmarking: An International Journal*, 12(4), 330–352.
- Hoejmoose, S., Brammer, S., & Millington, A. (2012). Green supply chain management: The role of trust and top management in B2B and B2C markets. *Industrial Marketing Management*, 41(4), 609–620.
- Holt, G. D. (1998). Which contractor selection methodology? *International Journal of Project Management*, 16(3), 153–164.
- Hsu, C. W., & Hu, A. H. (2008). Green supply chain management in the electronic industry. *International Journal of Environmental Science and Technology*, 5(2), 205–216.
- Hsu, C. W., & Hu, A. H. (2009). Applying hazardous substance management to supplier selection using analytic network process. *Journal of Cleaner Production*, 17(2), 255–264.
- Hu, A. H., Chen, S.-H., Hsu, C.-W., Wang, C., & Wu, C. L. (2012). Development of sustainability evaluation model for implementing product service systems. *International Journal of Environmental Science Technology*, 9(2), 343–354.
- Humphreys, P., McClokey, A., McIvor, R., Maguire, L., & Glackin, C. (2006). Employing dynamic fuzzy membership functions to assess environmental

- performance in the supplier selection process. *International Journal of Production Research*, 44(12), 2379–2419.
- Johnson, T. (2009). Extending environmental governance: China's environmental state and civil society. Unpublished doctoral dissertation. University of Glasgow.
- Kendall, A. (2012). Time-adjusted global warming potentials for LCA and carbon footprints. *The International Journal of Life Cycle Assessment*, 17(8), 1042–1049.
- Kendall, A., Chang, B., & Sharpe, B. (2009). Accounting for time-dependent effects in biofuel life cycle greenhouse gas emissions calculations. *Environmental Science & Technology*, 43(18), 7142–7147.
- Kendall, A., Marvinney, E., Brodt, S., & Zhu, W. (2015). Life cycle-based assessment of energy use and greenhouse gas emissions in almond production, Part I: Analytical framework and baseline results. *Journal of Industrial Ecology*, 19(6), 1008–1018.
- Koh, S. C. L., Gunasekaran, A., & Tseng, C. S. (2012). Cross-tier ripple and indirect effects of directives WEEE and RoHS on greening a supply chain. *International Journal of Production Economics*, 140(1), 305–317.
- Kull, T. J., & Talluri, S. (2008). A supply risk reduction model using integrated multicriteria decision making. *IEEE Transactions on Engineering Management*, 55(3), 409–419.
- Kumar, R., & Chandrakar, R. (2012). Overview of green supply chain management: Operation and environmental impact at different stages of the supply chain. *International Journal of Engineering and Advanced Technology*, 1(3), 1–6.
- Kumar, S., Teichman, S., & Timpernagel, T. (2012). A green supply chain is a requirement for profitability. *International Journal of Production Research*, 50(5), 1278–1296.
- Kuo, T. C., Hsu, C. W., Ku, K. C., Chen, P. S., & Lin, C. H. (2012). A collaborative model for controlling the green supply network in the motorcycle industry. *Advanced Engineering Informatics*, 26(4), 941–950.
- Lee, A. H. I., Kang, H.-Y., Hsu, C.-F., & Hung, H.-C. (2009). A green supplier selection model for high-tech industry, Expert Systems with Applications. *An International Journal*, 36(4), 7917–7927.
- Lee, D. H., & Dong, M. (2009). Dynamic network design for reverse logistics operations under uncertainty. *Transportation Research Part E: Logistics and Transportation Review*, 45(1), 61–71.
- Lee, S. M., Kim, S. T., & Choi, D. (2012). Green supply chain management and organizational performance. *Industrial Management & Data Systems*, 112(8), 1148–1180.

- Lee, S. Y. (2008). Drivers for the participation of small and medium-sized suppliers in green supply chain initiatives. *Supply Chain Management an International Journal*, 13(3), 185–198.
- Liu, F., Yin, J., Cao, H., & Yan, H. (2005). Investigations and practices on green manufacturing in machining systems. *Journal of Central South University of Technology*, 12(2), 18–24.
- Lorek, S., & Spangenberg, J. H. (2014). Sustainable consumption within a sustainable economy—beyond green growth and green economies. *Journal of Cleaner Production*, 63, 33–44.
- Lu, L. Y. Y., Wu, C. H., & Kuo, T. C. (2007). Environmental principles applicable to green supplier evaluation by using multi-objective decision analysis. *International Journal of Production Research*, 45(18), 4317–4331.
- Luthra S., Garg, D., & Haleem. (2016). The impacts of critical success factors for implementing green supply chain management towards sustainability: An empirical investigation of Indian automobile industry. *Journal of Cleaner Production*, 121, 142–158.
- Luthra, S., Kumar, V., Kumar, S., & Haleem, A. (2011). Barriers to implement green supply chain management in automobile industry using interpretive structural modeling technique-an Indian perspective. *Journal of Industrial Engineering and Management*, 4(2), 231–257.
- Malviya, R. K., & Kant, R. (2016). Hybrid decision making approach to predict and measure the success possibility of green supply chain management implementation. *Journal of Cleaner Production*, 135, 387–409.
- Mangla, S. K., Kumar, P., & Barua, M. K. (2015). Risk analysis in green supply chain using fuzzy AHP approach: A case study. *Resources, Conservation and Recycling*, 104, 375–390.
- Marvinney, E., Kendall, A., & Brodt, S. (2015). Life cycle-based assessment of energy use and greenhouse gas emissions in almond production, Part II: Uncertainty analysis through sensitivity analysis and scenario testing. *Journal of Industrial Ecology*, 19(6), 1019–1029.
- Mathiyazhagan, K., Govindan, K., & Noorul Haq, A. (2014). Pressure analysis for green supply chain management implementation in Indian industries using analytic hierarchy process. *International Journal of Production Research*, 52, 1–16.
- Mathiyazhagan, K., Govindan, K., Noorul Haq, A., & Geng, Y. (2013). An ISM approach for the barrier analysis in implementing green supply chain management. *Journal of Cleaner Production*, 47, 283–297.
- Meera, B. L. L., & Chitramani, P. (2014). Environmental sustainability through green supply chain management practices among Indian Manufacturing Firms with special reference to Tamil Nadu. *International Journal of Scientific and Research Publications*, 4(3), 1–8.

- Menzel, V., Smagin, J., & David, F. (2010). Can companies profit from greener manufacturing? *Measuring Business Excellence*, 14(2), 22–31.
- Min, H., & Galle, W. P. (2001). Green purchasing practices of US firms. *International Journal of Operations and Production Management*, 21, 1222–1238.
- Mudgal, R. K., Shankar, R., Talib, P., & Raj, T. (2010). Modeling the barriers of green supply chain practices: An Indian perspective. *International Journal of Logistics Systems and Management*, 7(1), 81–107.
- Muthu, S. S., Li, Y., Hu, J. Y., & Mok, P. Y. (2011). Carbon footprint of shopping (grocery) bags in China, Hong Kong and India. *Atmospheric Environment*, 45(2), 469–475.
- Mutingi, M. (2013). Developing green supply chain management strategies: A taxonomic approach. *Journal of Industrial Engineering and Management*, 6(2), 525–546.
- Ninlawan C., Seksan, P., Tossapol, K., & Pilada, W. (2010). The implementation of green supply chain management practices in Electronics Industry. *Proceeding of International Multi Conference of Engineer and Computer Scientists*, Vol III.
- Noci, G. (1997). Designing ‘green’ vendor rating systems for the assessment of a supplier’s 18 environmental performance. *European Journal of Purchasing & Supply Management*, 3(2), 103–114.
- Patarra, C., Raggi, A., & Cichelli, A. (2012). Life cycle assessment and carbon footprint in the wine supply chain. *Environmental Science*, 49, 1247–1258.
- Prum, D. A., & Del Percio, S. (2010). Green building contracts: Considering the role of consequential damages & Limitation of liability provisions. *Loyola Consumer Law Review*, 23(2), 113–146.
- Rao, P. (2006). Greening of suppliers/in-bound logistics. In J. Sarkis (Ed.), *Greening the supply chain* (pp. 189–204). Springer Publishing.
- Rao, P. (2007). Greening of the supply chain: An empirical study for SMES in the Philippine context. *Journal of Asia Business Studies*, 1(2), 55–66.
- Rha, J. S. (2010). The impact of green supply chain practices on supply chain performance Dissertations and Theses from the College of Business Administration.
- Rizet, C., Browne, M., Cornelis, E., & Leonardi, J. (2012). Assessing carbon footprint and energy efficiency in competing supply chains: Review ± Case studies and benchmarking. *Transportation Research Part d: Transport and Environment*, 17(4), 293–300.
- Saaty, T. L. (1980). *The analytic hierarchy process*. McGraw-Hill International.
- Sangwan, K. S. (2006). Performance value analysis for justification of green manufacturing systems. *Journal of Advanced Manufacturing Systems*, 5(1), 59–73.

- Saraph, J. V., Benson, P. G., & Schroder, R. G. (1989). An instrument for measuring the critical factors of quality management. *Decision Science*, 20(4), 810–829.
- Sarkis, J. (2003). A strategic decision framework for green supply chain management. *Journal of Cleaner Production*, 11(4), 397–409.
- Sarmiento, R., & Thomas, A. (2010). Identifying improvement areas when implementing green initiatives using a multitier AHP approach. *Benchmarking an International Journal*, 17(3), 452–463.
- Searcy, C. (2012). Corporate sustainability performance measurement systems: A review and research agenda. *Journal of Business Ethics*, 107, 239–253.
- Seuring, S., & Müller, M. (2008). From a literature review to a conceptual framework for sustainable supply chain management. *Journal of Cleaner Production*, 16(15), 1699–1710.
- Shaw, S., & Grant, D. B. (2010). Developing environmental supply chain performance measures. *Benchmarking an International Journal*, 17(3), 320–339.
- Shen, L., Olfat, L., Govindan, K., Khodaverdi, R., & Diabat, A. (2013). A fuzzy multi criteria approach for evaluating green supplier's performance in green supply chain with linguistic preferences. *Resources, Conservation and Recycling*, 74, 170–179.
- Shi, V. G., Koh, S. L., Baldwin, J., & Cucchiella, F. (2012a). Natural resource based green supply chain management. *Supply Chain Management: An International Journal*, 17(1), 54–67.
- Simpson, D., Power, D., & Samson, D. (2007). Greening the automotive supply chain: A relationship perspective. *International Journal of Operations & Production Management*, 27(1), 28–48.
- Srivastava, S. K. (2007). Green supply-chain management: A state-of-the-art literature review. *International Journal of Management Reviews*, 9(1), 53–80.
- Teixeira, A. A., Jabbour, C. J. C., de Sousa Jabbour, A. B. L., Latan, H., & de Oliveira, J. H. C. (2015). Green training and green supply chain management: Evidence from Brazilian firms. *Journal of Cleaner Production*, 116, 170–176.
- Theaker, I. G., & Cole, R. J. (2001a). The role of local governments in fostering 'green' buildings: A case study. *Building Research & Information*, 29(5), 394–408.
- Theaker, I., & Cole, R. (2001b). The role of local governments in fostering "green" buildings: A case study. *Building Research and Information*, 29(5), 394–408.
- Thun, J., & Muller, A. (2010). An empirical analysis of green supply chain management in the German automotive industry. *Business Strategy and the Environment*, 19, 119–132.
- Tock, J. Y., Lai, C. L., Lee, K. T., Tan, K. T., & Bhatia, S. (2010). Banana biomass as potential renewable energy resource: A Malaysian case study. *Renewable and Sustainable Energy Reviews*, 14, 798–805.

- Toke, L. K., Gupta, R. C., & Dandekar, M. (2012). An empirical study of green supply chain management in Indian perspective. *International Journal of Applied Science and Engineering Research*, 1(2), 372–383.
- Vázquez-Rowe, I., Rugani, B., & Benetto, E. (2013). Tapping carbon footprint variations in the European wine sector. *Journal of Cleaner Production*, 43, 146–155.
- Vázquez-Rowe, I., Villanueva-Rey, P., Iribarren, D., Moreira, M. T., & Feijoo, G. (2012a). Joint life cycle assessment and data envelopment analysis of grape production for vinification in the *Rías Baixas* appellation (NW Spain). *Journal of Cleaner Production*, 27, 92–102.
- Vázquez-Rowe, I., Villanueva-Rey, P., Moreira, M. T., & Feijoo, G. (2012b). Environmental analysis of Ribeiro wine from a timeline perspective: Harvest year matters when reporting environmental impacts. *Journal of Environmental Management*, 98(1), 73–83.
- Vermeulen, W., & Kok, M. (2012). Government interventions in sustainable supply chain governance: Experience in Dutch front-running cases. *Ecological Economics*, 83, 183–196.
- Shi, V. G., Lenny Koh, S. C., Baldwin, J., & Cucchiella, F. (2012). Natural resource based green supply chain management. *Supply Chain Management: An International Journal*, 17(1), 54–67.
- Vinodh, S., Kamala, V., & Shama, M. S. (2013). Compromise ranking approach for sustainable concept selection in an Indian modular switches manufacturing organization. *International Journal of Advanced Manufacturing Technology*, 64, 1709–1714.
- Walker, H., Di Sisto, L., & McBain, D. (2008). Drivers and barriers to environmental supply chain management practices, lessons from the public and private sector. *Journal of Purchasing and Supply Management*, 14, 69–85.
- Walters, D., & James, P. (2009). *Understanding the role of supply chains in influencing health and safety management*. IOSH.
- Walton, S. V., Handfield, R. B., & Melnyk, S. A. (1998). The green supply chain: Integrating suppliers into environmental management processes. *Journal Supply Chain Management*, 34(2), 2–11.
- Wang, Y. F., Chen, S. P., Lee, Y. C., & Tsai, C. T. S. (2013). Developing green management standards for restaurants: An application of green supply chain management. *International Journal of Healthcare Management*, 34, 263–273.
- Wang, Z., Mathiyazhagan, K., Xu, L., & Diabat, A. (2016). A decision making trial and evaluation laboratory approach to analyze the barriers to Green Supply Chain Management adoption in a food packaging company. *Journal of Cleaner Production*, 117, 19–28.
- Weber, C. A., Current, J. R., & Benton, W. C. (1991). Vendor selection criteria and methods. *European Journal of Operational Research*, 50(1), 2–18.

- Weber, C. A., Current, J. R., & Desai, A. (2000). An optimization approach to determining the number of vendors to employ. *Supply Chain Management: An International Journal*, 5(2), 90–98.
- Wu, G. C., Ding, J. H., & Chen, P. S. (2012a). The effects of GSCM drivers and institutional pressures on GSCM practices in Taiwan's textile and apparel industry. *International Journal of Production Economics*, 135(2), 618–636.
- Wu, G. C., Ding, J. H., & Chen, P. S. (2012b). The effects of GSCM drivers and institutional pressures on GSCM practices in Taiwan's textile and apparel industry. *International Journal of Production Economics*, 135(2), 618–636.
- Yang, C. S., Lu, C. S., Haider, J. J., & Marlow, P. B. (2013). The effect of green supply chain management on green performance and firm competitiveness in the context of container shipping in Taiwan. *Transportation Research Part e: Logistics and Transportation Review*, 55, 55–73.
- Yang, M. G., Hong, P., & Modi, S. B. (2011). Impact of lean manufacturing and environmental management on business performance: An empirical study of manufacturing firms. *International Journal of Production Economics*, 129, 251–261.
- Young, D. M., Hawkins, T., Ingwersen, W., Lee, S., Ruiz-Mercado, G., Sengupta, D., & Smith, R. L. (2012). Designing sustainable supply chains. *Chemical Engineering Transactions*, 29, 253–258.
- Yuang, A., & Kielkiewicz-Yuang, A. (2001). Sustainable supply network management. *Corporate Social Responsibility and Environmental Management*, 8(3), 260–268.
- Zhang, Y., Luan, S., Chen, L., & Shao, M. (2011). Estimating the volatilization of ammonia from synthetic nitrogenous fertilizers used in China. *Journal of Environmental Management*, 92(3), 480–493.
- Zhu, Q., & Sarkis, J. (2007). The moderating effects of institutional pressures on emergent green supply chain practices and performance. *International Journal of Production Research*, 45(18–19), 4333–4355.
- Zhu, Q., & Sarkis, J. (2004). Relationships between operational practices and performance among early adopters of green supply chain management practices in Chinese manufacturing enterprises. *Journal of Operations Management*, 22(3), 265–289.
- Zhu, Q., Sarkis, J., & Lai, K. H. (2013). Institutional-based antecedents and performance outcomes of internal and external green supply chain management practices. *Journal of Purchasing and Supply Management*, 19(2), 106–117.
- Zhu, Q., Sarkis, J., & Lai, K. H. (2007). Green supply chain management: Pressures, practices and performance within the Chinese automobile industry. *Journal of Cleaner Production*, 15(11), 1041–1052.
- Zou, P., & Couani, P. (2011). Risks in green building development: A supply chain perspective Conference Papers. Paper 3. http://epublications.bond.edu.au/auba_2011/3

PART V

Corporate Social Responsibility



Business Disruption on TikTok: Quiet Quitting Challenging Corporate Social Responsibility Policies

Andrée Marie López-Fernández

INTRODUCTION

The Internet of Things (IoT) suggests a nearly total connectivity of everyday objects and devices; they are networked on an intelligence-based system (Xia et al., 2012) with global implications. The IoT has, therefore, impacted nearly all communication and information technologies including government operations, healthcare systems, gaming, and social media, among many others. Social media and social networking sites include platforms that, given their function, characteristics, and advantages, are of particular interest for researchers as well as organizational leaders (Whiting & Williams, 2013); for instance, among other aspects, they enable users to communicate with each other (Williams et al., 2012)

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by sharing their thoughts and experiences with others simultaneously and globally. Although there are more popular social networking sites, TikTok is rapidly becoming a preferred source of content creation and consumption related to just about every conceivable theme and topic. One that has become popular is related to work conditions, environment, and culture.

Stakeholders, particularly collaborators, around the world have become much less tolerant of organizations' performative actions. In other words, when they state to be ethical and socially responsible, and their actions do not match their assertions. Furthermore, taking to social media to vocalize their degree of dissatisfaction with organizations' practices has become normalized. And, doing so has significantly influenced a disruption of business dynamics in relation to the collaborator movement known as quiet quitting. The decision of many to partake in quiet quitting has impacted countless workers across industries and sectors globally, as they view associated content on social media, such as Facebook, Instagram, and TikTok, and at the very least find their experiences relatable; the question is, does their voice reach firms' decision-making?

Although the disruption in the form of social damage caused by social media misuse has been previously addressed (Oxford Analytica, 2022), there is paucity in literature regarding disruption of business dynamics. Therefore, the general objective of this study was to analyze the potential effects of content creation and sharing via social media on the disruption of business dynamics. The specific objectives included: (i) to understand the socially responsible implications of collaborators' voice on social media regarding organizational practices; and (ii) to study the effects of collaborator empowerment on word-of-mouth occurring on social networking sites regarding organizations' performative actions.

LITERATURE REVIEW

Corporate Social Responsibility

Organizations that state to be engaged in corporate social responsibility (CSR) prioritize both business and social growth and development. CSR constitutes a series of proactive practices, based on policies, norms, and standards, aligned with business strategy with the aim to maximize the firm's positive effects on both business and society. Corporate social responsibility positively impacts stakeholders (Low, 2016), including current and potential collaborators, consumers, suppliers, shareholders,

regulatory authorities, the community, environment, investors, and the firm itself (Fernández & Rajagopal, 2014). As such, corporate social responsibility can be viewed from two perspectives, internally and externally. Internally, CSR relates to collaborator management (Al-bdour et al., 2010). In other words, practices that are focused on collaborator development, which includes, yet is not limited to, their empowerment (Ugoani, 2020), engagement, and wellbeing (Sánchez-Hernández et al., 2021). Therefore, it makes sense that firms' engagement in CSR would have a positive effect on collaborators' perceptions which, in turn, impacts their engagement with their jobs (Cunha et al., 2022).

Collaborator empowerment is achieved via managerial practices aimed to enhance their decision-making power (Lbianca et al., 2000), in such way that they have greater autonomy and active participation in key or strategic decisions related to their tasks, the department, and even the organization. Empowered collaborators are more committed to the organization (Laschinger et al., 2001), and demonstrate greater work satisfaction (Logan & Gangster, 2007). Engaged collaborators develop an emotional connection with the organization (Saks, 2006) and, therefore, are more likely to account for higher levels of productivity, as well as performance (Holbeche, 2018). Moreover, they display an increased willingness to go beyond the call of duty; meaning that they are much more proactive with their functions and activities. For such matters, engaged collaborators tend to have a greater commitment with the attainment of organizational objectives.

Collaborators' satisfaction with their work is also related to their wellbeing (Bowling et al., 2017). According to Linton et al., (2016) there are six dimensions that relate to wellbeing, including: "mental, social, spiritual, physical, activities and functioning, and personal circumstances". And, according to Khatri and Gupta (2019), collaborator wellbeing is achieved with the coexistence of four main dimensions, these being: "purpose in life, work-life balance, job wellness, and physical wellness". Thus, internal corporate social responsibility practices focusing on wellbeing will work toward ensuring that collaborators have personal and professional growth and development. Further, ensuring work-life balance is essential in effective collaborator management as it has a positive effect on collaborators and the organization; on the one hand, it directly impacts collaborators' health and overall wellbeing; on the other hand, and consequently, it influences their level of productivity and performance (Zheng et al., 2015), directly impacting organizational performance.

Corporate social responsibility, when designed and executed strategically and authentically, may further collaborators' engagement (Gao et al., 2018), strengthen empowerment and commitment, enhance wellbeing and satisfaction and, in turn, increase productivity and performance. In other words, internally, engaging in CSR makes good business sense as it aids in the achievement of desired results. Although the number of organizations stating to be socially responsible has gradually increased over the years, many seem to find its execution difficult, struggle to effectively implement socially responsible policies, standards, and norms, and/or do not follow through with the latter. Moreover, in most organizations which state to be engaged in CSR, related practices remain voluntary (Ihugba, 2012); meaning that there are no systems in place for its regulation and, more importantly, to ensure accountability. For such reasons, it has become increasingly common for firms to state engagement in corporate social responsibility yet are merely executing performative actions.

CSR and Performative Actions

Many organizations do genuinely strive to be ethical and socially responsible; however, there are others, too many, that align their discourse to social responsibility with the sole purpose of appeasing current and potential stakeholders' demands. The reality is that these organizations have delegated a significant amount of effort toward appearing to be something they are not, in other words, toward what is known as corporate hypocrisy (Wagner et al., 2009). It is true that organizational leaders are under significant pressure to ensure stakeholder satisfaction in terms of both financial performance (i.e. profit enhancing results) and social performance (i.e. maximizing positive effects on society); for instance, consumers are increasingly vocalizing their demands for organizations to be socially responsible and offer sustainable products (Low, 2014). The issue arises with the lack of understanding that there is a positive correlation between business and social growth and development; furthermore, they are equally consequential, and ought not to be analyzed or managed as tradeoffs.

Performative actions occur when organizations use a certain language and/or symbols to seem as though they are acting in a particular manner; thus, performativity may be described as organizations' non-socially responsible actions followed by socially responsible statements (Baker & Modell, 2019), or the significant difference between their

discourse and actions (i.e. a display of cognitive dissonance, organizational hypocrisy); in other words, their statements are just for show. As such, instead of working toward CSR, organizational leaders are merely displaying performative actions that are more in line with cancel culture avoidance. While much has been said about the external effects of performative actions such as greenwashing (Yu et al., 2020), social washing (Rizzi et al., 2020), and pinkwashing (Lubitow & Davis, 2011), among others, the internal effects are rarely discussed in the same terms. When firms' actions are visible and on a large scale or are made public, outrage follows. Naturally, practices such as outright exploitation and modern-day slavery receive some degree of response, although nearly not enough to eradicate them; however, there are many other insidious practices that do not receive the merited attention. The latter include microaggressions, devaluation, inequity, public shaming, and humiliation, as well as overwork. In fact, in the business world, enduring these practices is common, even expected, and mostly tolerated; they tend to be viewed as *the way things are*, and *the way one proves her/his/their loyalty* to the team and the organization, and ultimately a necessity to keep their jobs.

Microaggressions are subtle aggressions made to demean another person, usually a minority or a person perceived to be inferior or in an inferior position. They are received negatively, are prejudicial, can typically only be validated by the recipient, and cause negative effects on the latter's mental health (Lilienfeld, 2017). There are many types of microaggressions, including but not limited to race (Wong et al., 2014), gender (Capodilupo et al., 2010), age, disability, immigration, and religion (Dalton & Villagran, 2018). There are also microaggressions that are meant to delegitimize recipients as well as undermine the confidence they may have in their abilities and competencies, or at least make them question their abilities to effectively perform their functions and activities. According to Robbins (2000), devaluating means to "diminish the worth of something or someone, to attack, to criticize". When collaborators are devalued on the basis of their efforts and capabilities, as well as in terms of inequity and access to opportunities, and/or by enduring public shaming and/or humiliation, the repercussions can be severe; the reason being that the intent behind devaluation is negative and aggressive as "it is meant to weaken, hurt, or even annihilate the object while establishing a sense of control" (Robbins, 2000). Therefore, as devaluation is associated with coercive autocratic leadership which is disengaging and

causes dissatisfaction and ill-being, and CSR is aligned with participatory democratic leadership, the former is inconsistent with the latter.

Overwork refers to the amount of work that exceeds the previously agreed upon tasks and activities (i.e. when collaborators were hired and/or with contractual changes), as well as the delegated time to perform them (i.e. exceeding work hours); furthermore, it is described as the work that surpasses collaborators' degree of endurance and their ability to recuperate (Rhoads, 1977) from the consequences. Overwork can cause increased levels of stress, anxiety, depression, exhaustion and burnout, and even death—Karoshi (Hamajima, 1992). The work environment is also a strong determinant for burnout which has negative effects on collaborators across industries and sectors, as well as before, during, or after a crisis, such as that of the COVID-19 Pandemic (Lam et al., 2022). The effects of overwork are, then, negative for both collaborators and the organization.

Organizations that state to be engaged in corporate social responsibility and are fostering the behavior and practices are depicting performative actions as these are not aligned with a collaborator management aiming to positively impact growth and development via empowerment, engagement, and wellbeing. Far from it, at the very least these actions are directly related to poor health and, even more concerning, they can cause significant temporary and permanent damage related to collaborators' physical, emotional, and mental health.

Business Dynamic Disruptors

The COVID-19 Pandemic, along with its collateral effects, has generated a series of effects on the business world. In a sense, it has been the most significant disruptor across industries and sectors worldwide in the last decades. Rather than a particular event, disruptions are processes (Wessel & Christensen, 2012), therefore, even when we reach the post-pandemic context, there will still be effects to manage. That being said, according to Carroll (2021), it has led to a crucial moment to improve firms' engagement in corporate social responsibility. In such way that the pandemic has generated an opportunity for organizations to redesign their corporate socially responsible strategic objectives, strategies, and tactics to shift from performative actions to authentic CSR with the aim to achieve and sustain both business and social growth and development.

Collaborators, as key stakeholders, play an important role in corporate social responsibility, particularly in relation to its policies, execution, and evaluation, and are subjected to its effects (Onkila & Sarna, 2022). Their engagement is closely associated with the firm's CSR engagement. And, while some years ago anything developed or stated in favor of the collaborator was seen as socially responsible, today, current, and potential stakeholders can read through the nonsense of performative actions. Just ten years ago, a firm stating that they cared about their collaborators was considered more socially responsible than most firms that would openly state that shareholder value was their number one concern. However, today, any sign of performative actions will lead to significant backlash on social media which can range from: calling out the firm's practices, calling for a ban or boycott, or even calling for the firm and/or brand to be cancelled.

While before COVID-19 workers were already addressing organizations' questionable and unethical practices, once the pandemic hit, their level of patience and tolerance for said practices decreased significantly. Further, social media and social networking sites provided them with the perfect platforms to voice their thoughts, experiences, and overall grievances with the entire world as their audience. In such way that communication on social media, word-of-mouth (WOM), or electronic word-of-mouth (e-WOM), has become a significant disruptor to business dynamics.

Disruption Led on Social Media

The Internet of Things (IoT) has been described as a “global network composed of multitude connected things that depend on various technologies, such as sensors, communication, networking, and information processing” (Tan & Wang, 2010). Therefore, it has the potential to further increase the ubiquitousness of the Internet (Xia et al., 2012). For instance, the IoT has significantly impacted governments' operational effectiveness (Osman et al., 2019), agriculture management (Si et al., 2022), power systems (Long, 2022), healthcare networks (Jabbar et al., 2022), social internet of things (Zhang et al., 2022), gaming (Ahmad et al., 2022) and, certainly, social media and social networking sites' growth.

Social media serves a variety of purposes and can provide a series of benefits for users, who are connecting globally and, thanks to the Internet

of things, can be connected at any given time. Social networking sites (SNSs) are online platforms that enable users to connect with others (Boyd & Ellison, 2007) around the world. The Internet and social networking sites have put forth means to propel word-of-mouth (WOM) (Kimmel & Kitchen, 2014) or e-WOM (López & Sicilia, 2014) by which users are able to share ideas, experiences, recommendations, as well as memes, pictures, videos, audio, etcetera. Therefore, social media users are both content and data producers and consumers (Scheibmeir & Malaiya, 2021). For instance, Whiting and Williams (2013) developed a study and found that eighty percent of participants use social media with the intent of obtaining information on a variety of topics. And, according to Murugesan (2007), social media can be used by consumers to share information with other consumers about their experiences with products and/or services as well as brands in general.

Word-of-mouth occurring on social networking sites' platforms, such as Facebook, Instagram, and Twitter, is powerful given the number of monthly users and the social media effect; however, even though Facebook and Instagram have more monthly active users (Statista, 2022), TikTok is gradually taking over as the most influential social media platform. TikTok's mission is "to inspire creativity and bring joy" (TikTok, 2022); the more than 1 billion monthly active users (Oxford Analytica, 2022) view and/or create content in the form of short videos of no more than ten minutes. There is a variety of content that is selected and allotted, via an algorithm, to each user given their behavior (*i.e.* time viewing each video, likes and dislikes, comments, shares, stitches, duets, etcetera) on the app. There is a variety of content on the platform covering just about all themes and topics such as: music, dance, movies, interior design, health, cleaning, comedy, small business operations, nature, motivation, lifestyle, exercise, travel, cooking, pets, news, and work, among many others.

Not surprisingly, one of the types of content that has taken off on TikTok is work-related. Content creators discuss a range of topics such as: job opportunities, interview strategies, how to achieve a healthy work-life balance, tips on continuous training and courses, among many others. Commonly used hashtags include, but are not limited to: #corporatetiktok, #worklife, #corporatelife, #officetiktok, #officelife, #coworkers, #wfh, #remotework, #corporate, and #workfromhome. During the COVID-19 lockdown, content mainly referred to the challenges and benefits of working remotely. However, gradually, the content began shifting toward addressing questionable corporate behavior. Since

then, as could be expected, content creators have been exposing and discussing decisive issues which have led to the great resignation (Fuller & Kerr, 2022) and the quiet quitting (Tapper, 2022) movement.

People who participated in the great resignation mostly did so because they could no longer identify the benefit of continuing to work for an organization where they were undervalued, underpaid, discriminated, exploited, and mistreated. It is fair to say that they had enough and saw more value in their personal wellbeing than in a lacking paycheck. Moreover, during lockdown, many collaborators realized that they were able to effectively perform their jobs remotely and found a series of advantages that added value to their wellbeing (i.e. in terms of commute time, expenses, work-life balance, etcetera), and post-lockdown organizational leaders have been eager for workers to return to in-office work. While some have worked on encouraging workers to work from the office, others have chosen a more authoritarian path by dealing out ultimatums, which has been negatively received by their collaborators.

Quiet quitting is not a new practice; however, because in July 2022, a TikToker had used the concept in a now viral video (Christian, 2022), audiences were and continue to be in the millions. The reality is that the information has been disseminated via a ubiquitous and powerful social networking site, and quiet quitting is coming up on the tails of the great resignation which was propelled by pre-pandemic unfair, questionable, and non-socially responsible work conditions that were only exacerbated during the COVID-19 pandemic. Therefore, it makes sense that quiet quitting has gone viral and not just as an idea, but as an increasingly common practice.

To be clear, quiet quitting does not mean that collaborators are resigning, rather, they are no longer working extra hours, specially without compensation, are not defining themselves by the work they do or the position they hold or subscribing to the *hustle-culture mentality* which means that they live to work. It has been mistakenly referred to as doing the bare minimum; this notion is misleading as it means doing the least amount of work possible. It is not accurate because collaborators practicing quiet quitting are certainly complying with the agreed upon tasks and functions, the difference is that they are no longer going above and beyond. In other words, they are not doing anything wrong, they are not failing to achieve their objectives, or deliver results; they are, in fact, doing their jobs and nothing more.

Collaborators partaking in quiet quitting are equally fed-up with organizations' unethical and questionable practices related to collaborator management, the difference being that resigning is not a viable alternative for them. For such reasons, quiet quitting has also been referred to as acting one's wage; meaning that collaborators are performing the tasks they are being paid for, and no longer providing free work. It is, then, collaborators' clear response to organizations' performative actions, and they do so by setting clear boundaries in the workplace; because boundaries are limits that promote integrity, create order, and empower (Katherine, 1991), this gives them a sense of control and power within an autocratic environment and makes it possible for them to voice their opinions both online and offline.

There are various content creators that have covered experiences on their pages that led them to resignation and quiet quitting. Table 20.1 includes examples of such content. The behavior reported in the content relates to a type of management violence. According to the Violence Prevention Alliance, violence is defined as "the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation" (WHO, 2022). Thus, management violence is perceived as abuse of power, lack of boundaries, mistreatment, toxic behavior, and environments. Pradhan et al. (2020) held a study and found that there is a positive correlation among abusive leadership and collaborators' burnout as well as their intention to quit their jobs; therefore, under such circumstances, quiet quitting presents as a viable alternative.

This content certainly generated a discussion on the platform with other workers and, of course, management, and well-known businesspeople also chimed in. While other workers found the content relatable and decided that they would act their wage (*i.e.* do only what they were hired to do), higher-ups took to the platform to provide a live performance of exactly what workers were complaining about. They made statements such as: quiet quitting is Millennials and Generation Z (Gen Z) just being lazy; only mediocre people quite quit; it is doing the minimal and extracting the maximum; it is just cashing a paycheck; it only hurts the person that is quiet quitting, there are others willing to do the job. As a result, yet another element was added to the ongoing generational debate, where the loyalty of Boomers, Generation X, Millennials, and Gen Z was yet again compared. Younger generations are, in

Table 20.1 Work-related TikTok content leading to resigning and quiet quitting

<i>Managements' actions</i>	<i>Worker's actions</i>
Refused to provide work hours or a raise, stating no available hours and no resources. Instead hired a replacement with a lower salary	Resigned
Persistently insisted worker attend a meeting on their day off	Quiet quitting
Constantly berated worker causing increased stress and poor physical and mental health	Resigned
Continuously increased workload, causing overwork (hours and tasks) because they <i>work so well</i>	Quiet quitting
Told worker that being sick is no excuse for not working	Quiet quitting
Told worker that they did not sound sick enough	Quiet quitting
Threatened worker with a decrease in work hours, pay cut, and blacklisting them with other companies if they did not work on their day off	Resigned
Did not let paramedics tend to an ill worker as they had pending tasks and could not leave	Resigned
Told worker they must work extra hours without compensation	Quiet quitting
Told worker that arriving and leaving on time is letting top management know that they do not need their job	Quiet quitting
Did not value worker's 60 hour work week	Quiet quitting
Berated worker for asking for a mental health day	Quiet quitting

Source Author

fact, questioning what they are willing to tolerate, the type of organization they want to work at, the meaning of a work–life balance, and overall wellbeing. Therefore, their decision to both voice their opinions on social media as well as practice quiet quitting has become an important business dynamic disruptor. Based on the above discussion, the following propositions have been framed:

- P₁: The greater the collaborator perception of the organizations' performative actions, the lower the collaborator engagement.
- P₂: The lower the collaborator engagement, the greater the empowerment to voice opinions on social media.

- P₃: The greater the perceived and/or created information via TikTok regarding unfair practices, the greater the influence to engage in quiet quitting.

CONCEPTUAL MODEL AND DISCUSSION

The general objective of the study was to analyze the potential effects of content creation and sharing via social media on the disruption of business dynamics. Figure 20.1 includes the study’s conceptual model which associates the study’s constructs with the abovementioned propositions. The growing popularity of TikTok across generations has provided another platform for collaborators to voice their opinions on work-related matters, particularly those negatively impacting their wellbeing.

Leaders guide organizations’ moral and ethical compass, and their style of leadership is a strong determinant of decision-making throughout the firm. The less democratic the style of leadership, the greater the organizational control and the less the individual autonomy and sense of personal control. When such a type of leadership is coupled with performative actions, collaborators grow restless, and their levels of dissatisfaction and disengagement increase (P₁). More and more, collaborators do not want to be associated with firms that engage in questionable and unethical practices and, furthermore, working in a potentially toxic and violent environment has negative effects on collaborators’ physical, emotional, and psychological wellbeing.

Although some may argue that collaborators who feel that their wellbeing is compromised should voice their concerns to management rather

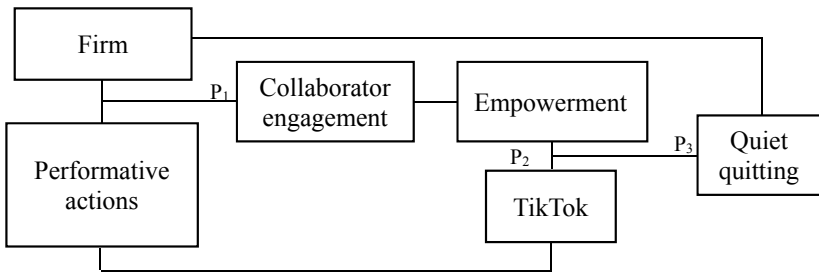


Fig. 20.1 Conceptual model (Source Author)

than engage in quiet quitting, the reality is that if leadership is not democratic, let alone socially responsible, doing so may be less than fruitful and may even be cause for further repercussions. In fact, in response to workers taking to social media to discuss and support quiet quitting, organizational leaders opted to further belittle collaborators' experiences, many on the same platform, rather than actively listening to them. In other words, they continue to put profit over people, which is certainly not socially responsible.

While social networking sites are commonly used to socialize and maintain connections with others (Brandtzæg & Heim, 2009), they are also important avenues for users to express their opinions (Whiting & Williams, 2013), ideas, and experiences. And, while collaborators' work engagement decreases given performative actions, witnessing injustices, even as a narrative, such as inequity, discrimination, and abuse of power, among others, can certainly build their sense of purpose and empowerment (Rinker, 2017). Therefore, it is a natural progression for them to use social media platforms to voice their opinions, expose organizations' performative actions as well as their disapproval (P_2).

The great resignation and quiet quitting have shed light on the fact that there is work to be done in order to guarantee that collaborator management is carried out in a socially responsible manner. This is particularly relevant as stakeholders, in general, prefer to associate with firms that are socially responsible (Dawkins & Ngunjiri, 2008), in terms of their policies and actions. For instance, among the lessons learned, in relation to collaborator management, during the global health pandemic is that collaborators' awareness and priority of their wellbeing is steadily increasing and it is required (Gorgenyi-Hegyves et al., 2021) to safeguard mental health, and ultimately have a positive effect on productivity and performance.

TikTok has been an important platform for collaborator voice and can be a significant disruptor in business dynamics, particularly related to collaborator management, in two main manners: (*i*) via empowered collaborators willing to make their voice go public, and even viral, and (*ii*) via current and future workers witnessing such narrative on the platform (P_3). While current collaborators are sharing their experiences on TikTok, future workers are already deciding what type of behavior they will not be tolerating for a paycheck. According to Pluut and Wonders (2020), when collaborators do not experience clear boundaries between their

personal life and work, their health and overall wellbeing worsen significantly. Further, according to a study conducted by Gallup, collaborator engagement significantly decreased in the second half of 2021 (Harter, 2022a) and, as a result, approximately fifty percent of the workforce in the United States is quiet quitting (Harter, 2022b).

While organizations cannot control the content developed, published, and commented on social media (Thomas et al., 2012), they can ensure that their practices are ethical and socially responsible which could minimize the negative e-WOM and potentially increase the positive e-WOM on social networking sites' platforms. Both positive and negative content impact firms and, therefore, for organizations to ride the disruption successfully, they need to proactively listen to collaborators' voice and actually take it into account to improve their processes and procedures related to collaborator management, to begin with.

CONCLUSION

TikTok has been taking off as a preferred social media and, not surprisingly, has hosted content creators and users discussing the effects of organizations' performative actions, including the great resignation and quiet quitting. The latter has resulted in several viral videos reaching current and future workers globally. The reality is that collaborators take on quiet quitting because, given their circumstances, they cannot afford to quit their jobs, resign. In other words, they do not condone organizational leaders' practices and performative actions but cannot survive without a job. The latter alone is problematic because it means that in many cases, if not most, collaborators are not earning nearly enough to account for sufficient savings to sustain them in the transition from one job to another. There are also certain implications related to collaborator management, specifically, collaborator engagement, empowerment and voice, which are associated with differing perceptions of equity.

While top management has regarded quiet quitting as a negative practice, and some have done so publicly, there seems to be no concern to understand why collaborators are burning out and leaning into quiet quitting. Why does it make sense for firms not to go above and beyond for their people and, yet, when collaborators do so it is construed as mediocre and lazy behavior, even going as far as saying that it means taking advantage of the organization itself? Why is it *just business and nothing personal*,

even strategic, when collaborators are not fairly compensated, but when workers set boundaries, they are suddenly ungrateful and disloyal?

To avoid quiet quitting and talent drain, organizations need to ride the disruption instead of avoiding it or hindering it. As such, it is an opportunity for organizational leaders to engage in corporate social responsibility, authentically, or make significant improvements to their current engagement. In other words, the hope, then, is that the level of disruption rises to the level of significant if not radical organizational change.

FUTURE RESEARCH DIRECTIONS

Future research could study the effects of quiet quitting on organizations' socially responsible policies; in other words, assess the extent to which collaborator voice is managed and considered for substantial organizational change. Also, future research could analyze the extent to which collaborators are quiet quitting in different industries and countries to determine if there are significant distinctions, as well as understand the various lessons learned by management.

REFERENCES

- Ahmad, S., Umirzakova, S., Jamil, F., & Whangbo, T. K. (2022, November). Internet-of-things-enabled serious games: A comprehensive survey. *Future Generation Computer Systems*, 136, 67–83. <https://doi.org/10.1016/j.future.2022.05.026>
- Al-bdour, A. A., Nasruddin, E., & Lin, S. K. (2010). The relationship between internal corporate social responsibility and organizational commitment within the banking sector in Jordan. *International Journal of Economics and Management Engineering*, 4(7), 1842–1861. <https://doi.org/10.5281/zenodo.1054799>
- Baker, M., & Modell, S. (2019). Rethinking performativity: A critical realist analysis of accounting for corporate social responsibility. *Accounting, Auditing & Accountability Journal*, 32(4), 930–956. <https://doi.org/10.1108/AAAJ-11-2017-3247>
- Bowling, N. A., Wagner, S. W., & Beehr, T. A. (2017, June). The facet satisfaction scale: An effective affective measure of job satisfaction facets. *Journal of Business and Psychology*, 33(3), 383–403. <https://doi.org/10.1007/s10869-017-9499-4>

- Boyd, D. M., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 13(1), 210–230. <https://doi.org/10.1111/j.1083-6101.2007.00393.x>
- Brandtzæg, P. B., & Heim, J. (2009). Why people use social networking sites. In A. A. Ozok & P. Zaphiris (Eds.), *Online communities and social computing*. OCSO 2009. Lecture Notes in Computer Science, 5621. Springer. https://doi.org/10.1007/978-3-642-02774-1_16
- Capodilupo, C. M., Nadal, K. L., Corman, L., Hamit, S., Lyons, O. B., & Weinberg, A. (2010). The manifestation of gender microaggressions. In D. W. Sue (Ed.), *Microaggressions and marginality: Manifestation, dynamics, and impact* (pp. 193–216). John Wiley & Sons Inc.
- Carroll, A. B. (2021). Corporate social responsibility: Perspectives on the CSR construct's development and future. *Business & Society*, 60(6), 1258–1278. <https://doi.org/10.1177/00076503211001765>
- Cunha, S., Proença, T., & Ferreira, M. R. (2022). Employees perceptions about corporate social responsibility—Understanding CSR and job engagement through meaningfulness, bottom-up approach and calling orientation. *Sustainability*, 14(21), 14606. <https://doi.org/10.3390/su142114606>
- Christian, A. (2022, August 29). *Why 'quiet quitting' is nothing new*. Retrieved August 20, 2022 from BBC: <https://www.bbc.com/worklife/article/20220825-why-quiet-quitting-is-nothing-new>
- Dalton, S., & Villagran, M. (2018, November). Minimizing and addressing microaggressions in the workplace: Be proactive, Part Two. *College & Research Libraries News*, 79(10), 538–538. <https://doi.org/10.5860/crln.79.10.538>
- Dawkins, C., & Ngunjiri, F. W. (2008). Corporate social responsibility reporting in South Africa: A descriptive and comparative analysis. *International Journal of Business Communication*, 45(3), 286–307. <https://doi.org/10.1177/0021943608317111>
- Fernández, A. M. L., & Rajagopal. (2014). Convergence of corporate social responsibility and business growth: An analytical framework. *International Journal of Business Excellence*, 7(6), 791–806. <https://doi.org/10.1504/IJBEX.2014.065508>
- Fuller, J., & Kerr, W. (2022, March 23). *The great resignation didn't start with the pandemic*. Retrieved July 20, 2022 from Harvard Business Review: <https://hbr.org/2022/03/the-great-resignation-didnt-start-with-the-pandemic>
- Gao, Y., Zhang, D., & Huo, Y. (2018). Corporate social responsibility and work engagement: Testing a moderated mediation model. *Journal of Business and Psychology*, 33, 661–673. <https://doi.org/10.1007/s10869-017-9517-6>
- Gorgenyi-Hegyés, E., Nathan, R. J., & Fekete-Farkas, M. (2021). Workplace health promotion, employee wellbeing and loyalty during Covid-19

- Pandemic-large scale empirical evidence from Hungary. *Economies*, 9(2), 55. <https://doi.org/10.3390/economies9020055>
- Hamajima, N. (1992). “Karoshi” and causal relationships. *Nihon Kosbu Eisei Zasshi. Japanese Journal of Public Health*, 39(8), 445–448. PMID: 1392028.
- Harter, J. (2022a, January 7). *U.S. employee engagement drops for first year in a decade*. Retrieved September 24, 2022a from Gallup: <https://www.gallup.com/workplace/388481/employee-engagement-drops-first-year-decade.aspx>
- Harter, J. (2022b, September 6). *Is quiet quitting real?* Retrieved September 24, 2022b from Gallup: <https://www.gallup.com/workplace/398306/quiet-quitting-real.aspx>
- Holbeche, L. S. (2018). Organisational effectiveness and agility. *Journal of Organizational Effectiveness: People and Performance*, 5(4), 302–313. <https://doi.org/10.1108/JOEPP-07-2018-0044>
- Ihugba, B. U. (2012). Compulsory regulation of CSR: A case study of Nigeria. *Journal of Politics and Law*, 5(2), 68–81. <https://doi.org/10.5539/jpl.v5n2p68>
- Jabbar, M. A., Shandilya, S. K., Kumar, A., & Shandilya, S. (2022, September). Applications of cognitive internet of medical things in modern healthcare. *Computers and Electrical Engineering*, 102, 108276. <https://doi.org/10.1016/j.compeleceng.2022.108276>
- Katherine, A. (1991). *Boundaries. Where you end and I begin*. Simon & Schuster.
- Khatri, P., & Gupta, P. (2019). Development and validation of employee wellbeing scale—A formative measurement model. *International Journal of Workplace Health Management*, 12(5), 352–368. <https://doi.org/10.1108/IJWHM-12-2018-0161>
- Kimmel, A. J., & Kitchen, P. J. (2014). Word of mouth and social media. *Journal of Marketing Communications*, 20(1–2), 2–4. <https://doi.org/10.1080/13527266.2013.865868>
- Labianca, G., Gray, B., & Brass, D. J. (2000, March–April). A grounded model of organizational schema change during empowerment. *Organization Science*, 11(2), 235–257. <https://doi.org/10.1287/orsc.11.2.235.12512>
- Lam, L. T., Lam, M. K., Reddy, P., & Wong, P. (2022). Factors associated with work-related burnout among corporate employees amidst COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, 19(3), 1295. <https://doi.org/10.3390/ijerph19031295>
- Laschinger, H. S., Finegan, J., & Shamian, J. (2001). The impact of workplace empowerment, organizational trust on staff nurses’ work satisfaction and organizational commitment. *Advances in Health Care Management*, 26(3), 59–85. <https://doi.org/10.1097/00004010-200107000-00002>
- Lilienfeld, S. O. (2017). Microaggressions: Strong claims, inadequate evidence. *Perspectives on Psychological Science*, 12(1), 138–169. <https://doi.org/10.1177/1745691616659391>

- Linton, M.-J., Dieppe, P., & Medina-Lara, A. (2016). Review of 99 self-report measures for assessing well-being in adults: Exploring dimensions of well-being and developments over time. *BMJ Open*, 6(e010641). <https://doi.org/10.1136/bmjopen-2015-010641>
- Logan, M. S., & Gangster, D. C. (2007, December). The effects of empowerment on attitudes and performance: The role of social support and empowerment beliefs. *Journal of Management Studies*, 1523–1550. <https://doi.org/10.1111/j.1467-6486.2007.00711.x>
- Long, L. (2022, May). Research on status information monitoring of power equipment based on Internet of Things. *Energy Reports*, 8(2), 281–286. <https://doi.org/10.1016/j.egy.2022.01.018>
- López, M., & Sicilia, M. (2014). Determinants of E-WOM influence: The role of consumers' internet experience. *Journal of Theoretical and Applied Electronic Commerce Research*, 9(1), 28–43. <https://doi.org/10.4067/S0718-18762014000100004>
- Low, M. P. (2014). Internal corporate social responsibility: An overview. *Australian Journal of Basic and Applied Sciences*, 8(16), 18–29. <https://ssrn.com/abstract=3611542>
- Low, M. P. (2016). Corporate social responsibility and the evolution of internal corporate social responsibility in 21st century. *Asian Journal of Social Sciences and Management Studies*, 3(1), 56–74. <https://doi.org/10.20448/journal.500/2016.3.1/500.1.56.74>
- Lubitow, A., & Davis, M. (2011). Pastel injustice: The corporate use of pinkwashing for profit. *Environmental Justice*, 2(2), 139–144. <https://doi.org/10.1089/env.2010.0026>
- Murugesan, S. (2007). Understanding Web 2.0. *IT Professional*, 9(4), 34–41. <https://doi.org/10.1109/MITP.2007.78>
- Onkila, T., & Sarna, B. (2022, March). A systematic literature review on employee relations with CSR: State of art and future research agenda. *Corporate Social Responsibility and Environmental Management*, 29(2), 435–447. <https://doi.org/10.1002/csr.2210>
- Osman, I. H., Anouze, A. L., Irani, Z., Lee, H., Medeni, T. D., Weerakkody, V. (2019, October). A cognitive analytics management framework for the transformation of electronic government services from users' perspective to create sustainable shared values. *European Journal of Operational Research*, 278(2), 514–532. <https://doi.org/10.1016/j.ejor.2019.02.018>
- Oxford Analytica. (2022). TikTok's rise will transfer social media problems. *Expert Briefings*. Retrieved October 19, 2022 from: <https://doi.up.clogim.com/10.1108/OXAN-ES267119>
- Pluut, H., & Wonders, J. (2020, December 23). Not able to lead a healthy life when you need it the most: Dual role of lifestyle behaviors in the association

- of blurred work-life boundaries with well-being. *Frontiers in Psychology*, *11*, 607294. <https://doi.org/10.3389/fpsyg.2020.607294>
- Pradhan, S., Srivastava, A., & Jena, L. K. (2020). Abusive supervision and intention to quit: Exploring multi-mediational approaches. *Personnel Review*, *49*(6), 1269–1286. <https://doi.org/10.1108/PR-12-2018-0496>
- Rhoads, J.M. (1977, June 13). Overwork. *JAMA*, *237*(24), 2615–2618. <https://doi.org/10.1001/jama.1977.03270510037018>
- Rinker, J. (2017). Engaging narrative as rights-based peace praxis: Framing, naming, and witnessing in overcoming structural violence. In P. M. Kellett, & T. G. Matyók (Eds.), *Communication and conflict transformation through local, regional, and global engagement* (pp. 355–376). Lexington Books.
- Rizzi, F., Gusmerotti, N., & Frey, M. (2020, January). How to meet reuse and preparation for reuse targets? Shape advertising strategies but be aware of “social washing”. *Waste Management*, *101*, 291–300. <https://doi.org/10.1016/j.wasman.2019.10.024>
- Robbins, B. (2000). Under attack: Devaluation and the challenge of tolerating the transference. *Journal of Psychotherapy Practice and Research*, *9*(3), 136–141. PMID: 10896738.
- Saks, A. M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology*, *21*(7), 600–619. <https://doi.org/10.1108/02683940610690169>
- Sánchez-Hernández, M. I., Vázquez-Burguete, J. L., García-Miguélez, M. P., & Lanero-Carrizo, A. (2021). Internal corporate social responsibility for sustainability. *Sustainability*, *13*(14), 7920. <https://doi.org/10.3390/su13147920>
- Scheibmeir, J. A., & Malaiya, Y. K. (2021, July). Social media analytics of the Internet of Things. *Discover Internet of Things*, *1*(16), 1–15. <https://doi.org/10.1007/s43926-021-00016-5>
- Si, L. F., Li, M., & He, L. (2022, August). Farmland monitoring and livestock management based on internet of things. *Internet of Things*, *19*, 100581. <https://doi.org/10.1016/j.iot.2022.100581>
- Statista. (2022). *Most popular social networks worldwide as of January 2022, ranked by number of monthly active users*. Retrieved August 19, 2022 from Social Media & User-Generated Content: <https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/>
- Tan, L., & Wang, N. (2010, August). Future internet: The internet of things. In *2010 3rd International Conference on Advanced Computer Theory and Engineering (ICACTE)* (Vol. 5, pp. V5–376). IEEE. <https://doi.org/10.1109/ICACTE.2010.5579543>
- Tapper, J. (2022, August 6). *Quiet quitting: Why doing the bare minimum at work has gone global*. Retrieved August 17, 2022 from

- The Guardian: <https://www.theguardian.com/money/2022/aug/06/quiet-quitting-why-doing-the-bare-minimum-at-work-has-gone-global>
- Thomas, J. B., Peters, C. O., Howell, E. G., & Robbins, K. (2012). Social media and negative word of mouth: Strategies for handling unexpected comments. *Atlantic Marketing Journal*, 1(2). <https://digitalcommons.kenesaw.edu/amj/vol1/iss2/7>
- TikTok. (2022). *Our mission*. Retrieved August 29, 2022 from: <https://www.tiktok.com/about?lang=en>
- Ugoani, J. (2020, August 4). Environmental perspectives on corporate social responsibility and its effect on employee empowerment and performance. *International Journal of Environmental Planning and Management*, 6(3), 68–75. <https://ssrn.com/abstract=3666816>
- Wagner, T., Lutz, R. J., & Weitz, B. A. (2009). Corporate hypocrisy: Overcoming the threat of inconsistent corporate social responsibility perceptions. *Journal of Marketing*, 73(6), 77–91. <https://doi.org/10.1509/jmkg.73.6.77>
- Wessel, M., & Christensen, C. M. (2012, December). Surviving disruption. *Harvard Business Review* (pp. 1–10). Retrieved October 20, 2022 from: https://www.naadac.org/assets/2416/kim_johnson_ac15_bhbusiness_ho2.pdf
- Whiting, A., & Williams, D. (2013). Why people use social media: A uses and gratifications approach. *Qualitative Market Research: An International Journal*, 16(4), 362–369. <https://doi.up.ealogim.com/10.1108/QMR-06-2013-0041>
- WHO. (2022). *The VPA approach. Definition and typology of violence*. Retrieved October 15, 2022 from: <https://www.who.int/groups/violence-prevention-alliance/approach>
- Williams, D. L., Crittenden, V. L., Keo, T., & McCarty, P. (2012). The use of social media: An exploratory study of uses among digital natives. *Journal of Public Affairs*, 12(2), 127–136. <https://doi.org/10.1002/pa.1414>
- Wong, G., Derthick, A. O., David, E. J. R., Saw, A., & Okazaki, S. (2014). The what, the why, and the how: A review of racial microaggressions research in psychology. *Race and Social Problems*, 6, 181–200. <https://doi.org/10.1007/s12552-013-9107-9>
- Xia, F., Yang, L. T., Wang, L., & Alexey Vine, A. (2012). Internet of Things. *International Journal of Communication Systems*, 25, 1101–1102. <https://doi.org/10.1002/dac.2417>
- Yu, E. P.-y., Van Luu, B., & Chen, C. H. (2020, April). Greenwashing in environmental, social and governance disclosures. *Research in International Business and Finance*, 52, 101192. <https://doi.org/10.1016/j.ribaf.2020.101192>
- Zhang, H., Zhu, L., Dai, T., Zhang, L., Feng, X., Zhang, L., & Zhang, K. (2022, May). Smart object recommendation based on topic learning and

joint features in the social internet of things. *Digital Communications and Networks*. <https://doi.org/10.1016/j.dcan.2022.04.025>

Zheng, C., Molineux, J., Mirshekary, S., & Scarparo, S. (2015). Developing individual and organisational work-life balance strategies to improve employee health and wellbeing. *Employee Relations*, 37(3), 354–379. <https://doi.org/10.1108/ER-10-2013-0142>

PART VI

Economic and Post-Pandemic Recovery



Global Health and Public Policy Imperatives in the Post-pandemic Times: A Study on the Pharmaceutical Industry from the Global South and Global North

Pinaki DasGupta and Sampada Kumar Dash

BACKGROUND

The world shares both common global health challenges and shared aspirations. In the post-pandemic times,¹ the approaches to global health around the world directed a global solidarity, equity, and shared responsibility, authentic partnering, inclusion, shared benefits, commitment to the future, responsiveness to the causes of inequities and humility. The United Nations (UN) Sustainable Development Goal 3 (SDG-3) articulates transnational cooperation, collaboration, and solidarity to protect health,

¹ WHO Coronavirus (COVID-19) Dashboard, Available at <https://covid19.who.int/>.

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peace, and prosperity through a collective mobilization of global intellect, ambition, and action.² In this context, our study is to understand how the improved integration of health policies, practices, and products in the global North strengthens the link between the research commitments between Global South and Global North prioritizing knowledge mobilization in respective geographies. In the backdrop, we proposed to create an inference on investment, capacity building, and implementation measures in strengthening and facilitating collaborative research uptake, preventive mass awareness of disease conditions to leverage, and use the research findings at both places.

RATIONALE

Some of the challenges of the Global Health System include access to quality healthcare, challenges in affordability and challenges in distribution of and investment directions in the post pandemic times. Strengthening of the same requires addressing the challenges of sovereignty, accountability, and sectoral disparity along with a credible decision-making process. Leaving no one behind and, increasing multiple stakeholders' engagement, leveraging innovative technologies and investing in infrastructure can contribute to equitable access to quality healthcare for all. In this context, authors proposed to identify and implement effective knowledge mobilization strategies to integrate in for Global Health Research across the global health ecosystem.

OBJECTIVES

The overall goal is to support the identification and implementation of effective knowledge mobilization strategies to ensure global health is practiced in an equitable way and is actively anti-colonial in its orientation. The principal objectives of the research are as stated below:

- To take stock of awareness of the Principles within the Healthcare ecosystem (including researchers, universities and academic settings, research and policy partners in Global South and Global North, NGOs, and research funders) in the Global South and North.

² <https://sustainabledevelopment.un.org/topics/sustainabledevelopmentgoals>.

- To identify and implement the best strategies and opportunities for encouraging the uptake and institutionalization of the Principles across the Global Health Eco-system in the Global South and North.
- To create open-access tools and resources and provide guidance and support to facilitate and scale-up the use and institutionalization of the Principles in the Global South and North in building Global health knowledge ecosystem.

Our objective is to establish whether Global Health ecosystem in the North has influence in the South depends on the institutional frameworks.

NEED, OBJECTIVE, AND SCOPE

Keeping in view the above objectives of the project, we seek to conduct an case-based evaluations, to understand partners and stakeholders from the Global North as well as from the Global South in order to increase the reach and impact in driving solutions and in influencing national, regional, and global development agendas, including through synthesizing and communicating results to share knowledge for greater uptake and use.

SCOPE OF WORKS

- Review of all possible sources of the existing document to understand the scope of North and South healthcare policies.
- Understand the impact of Global North dominance on Global South
- Understand capacity gaps for Global South as well as Global North and strengthen networks and social accountability.
- Understand the Role of Global governance and treaties in the post-pandemic times.
- Responsibilities of Citizens, Communities from the Global North and the Global South
- Understand the role of existing knowledge and standards among multiple stakeholders from Global North as well as Global South to know current situation and achievements on different issues in the Global Health areas.

METHODOLOGY

The study was based on a systematic desk review of existing literatures and content analysis of global health system from the USA and India. The following points were covered in the study. North South Global Health Architecture, a) Health Governance, Global Health Knowledge Ecosystem for North and South, Health awareness, insights, impact, investment, innovation, treaties, policy conflicts, and convergence, Understanding Cooperation mechanisms—tariffs, technology transfer, labor migration, etc. and North South Global Health Conflicts and Convergence. Based on the findings, a case study on North–South Global Health cooperation and barriers relating to the pharmaceutical industry is developed.

RESEARCH FRAMEWORKS

The proposed research frameworks are used for addressing the research questions raised. The study adopted a systematic desk review-based approach. To minimize bias, first would attempt to develop framing questions for a review. Secondly relevant work was identified, with a conceptual model of the global health system that covers disease prevalence and incidences, health and healthcare infrastructure, role of multilateral organizations such as WHO, treaties, financing, sharing of data and samples; access to vaccines and drugs, trade, and travel restrictions; animal–human health, humanitarian assistance; universal health coverage and geopolitics aligned to SDG 3 of United Nations SDGs. The impacts are proposed to be best understood and explained by following research questions that focus on understanding, awareness, investment, collaboration, engagement, implementation, and accountability frameworks with the following research questions that have been formulated for a greater understanding:

- How do the open access tools and resources of the Global North impact and influence policy decisions in the Global South?
- How does the awareness on the Global Health principles of the Global North influence researchers, universities and academic settings, research, and policy partners in LMICs, NGOs, and research funders?

- How the investment infrastructure of the Global North has induced vertical innovation, improving global health efficiencies and outcomes amid tighter IPRs during post-pandemic times in the Global South?
- How is the existence of an optimal degree of Global Health System in the Global North in implementing strategies encouraging to institutionalize the principles in the Global South?
- What factors influence North–South Global Health policy conflicts and what are the barriers to North South cooperation amid the post-pandemic times?
- What are the synergizes of Health and Development policies to stimulate a vibrant Global Health Architecture between Global North as well as the Global South mitigating existing and future global health challenges?
- The possible policy implications will be illustrated on North–South Global Health, and Healthcare policy integrations to drive a resilient, integrated, affordable, efficient, inclusive, and accountable Global Health System.

FINDINGS

The dichotomy of North and the South with respect to global health interms of access and health equity in the post-pandemic times attracted a greater deal of policy interest in the recent times. The access to health and healthcare benefits among the Global South and Global North had a significant disparity. *Sustainable Development Goals-1,2,3*, compromised post-COVID-19 times. Pharmaceutical and Healthcare Sectors are of the important componets of the Global Health Architectures where quality, effeicacy, and safety matters a lot. Maintaining quality of the pharmaceuticals and healthcare sector is always a priority.

India, one of an emerging economy in the Global South has 6.81 Medical doctors and 17.72 Nursing and midwifery personnel per 10,000 population in the year 2018. At the same time, USA from the Global North has 26.1 medical doctors and 156.1 Nursing and midwifery personnel per 10,000 population in the year 2018 (WHO, 2022).³ The

³ Medical Doctors per 10,000 (<https://www.who.int/data/gho/data/themes/topics/health-workforce>).

Indian pharmaceutical industry ranks third in pharmaceutical production by volume, and has grown steadily by CAGR of 9.43% past 09 years. The Indian pharmaceutical sector produces generic medicines and low-cost vaccines globally for domestic as well as international consumption. During 2020–2021, total pharma export was USD 24.35 Billion against the total pharma import of USD 6.66 Billion, thereby generating trade surplus of USD 17.68 Billion. With highest number of US-FDA compliant plants, the sector is one of the top ten attractive sectors for foreign direct investment in India (GOI, 2022). There has been a significant contribution of the Indian pharmaceutical industry aligned to the global health commitments of affordability, availability, and accessibility of health and healthcare products and services. However, the failure during COVID-19 pandemic, impacting the health and well-being of people, proposes the importance of globally shared risks and responsibilities that require collective action to achieve good health for all, understanding and acting on health risks, determinants, responsibilities, and solutions that transcend national boundaries.

As illustrated in the Figure 1, the developed regions—The Americas and Europe—were the worst affected WHO regions⁴ attributed to highest mortality of 4.99 million. Unemployment, inequality, and poor health were some of the extremities witnessed in the aftermath of the pandemic crisis.⁵ Another area of health concern includes non-communicable diseases (NCDs). In LMICs, more than three quarters of NCD deaths occur. Diseases such as⁶ cardiovascular diseases, cancers, chronic respiratory diseases, and diabetes including kidney disease are the four main groups of NCDs accounted for over 80% of all premature NCD deaths globally. 74% of all deaths globally killing 41 million people each year. In the low- and middle-income countries (LMICs), the NCDs-related deaths accounted for 77% of all deaths and 86% of premature deaths that killed 17 million people before age 70. Globally 17.9 million people died annually due to cardiovascular diseases, followed by 9.3 million by cancers, 4.1 million by chronic respiratory diseases, and 2.0 million by diabetes, including kidney diseases. NCDs notably are the

⁴ WHO COVID Data <https://covid19.who.int/data>.

⁵ ³ *World Bank 2022 and* ⁴ *FAO, 2021*.

⁶ Non-communicable diseases, Key Facts, WHO, September, 2022.

leading global cause of death and an important public health challenge in all countries.

India, from the Global South along with other emerging and Low- and Middle-Income Countries has more than 1.35 billion population. The socio-economic, political, geographic, and cultural diversity, and demographic transitions incurred a huge surge of COVID-19 pandemic from 03 January 2020 till date that attributed 44.67 million confirmed cases of COVID-19 with 5.3 million deaths, as of 23 December 2022. A total of 2,200.15 million vaccine doses have been administered as of 20 December 2022.⁷ In India, over two quarters of death (63%) occur due to NCDs. There were 06 million total number of NCD deaths, and 23% of premature mortality from NCDs⁸ in India. The diversity in dialects, cultural and religious practices, and differing gender and identity constructs, local beliefs and customs, in the country impacted the daily life and influence health and wellbeing behaviors.⁹ Despite the progress in Sustainable Development Goals and indicators, health indicators remain a priority for the countries in the post-pandemic world. In the Global North, the United States of America has 332.2 million population with 88% of deaths from NCDs and 2.474 000 million of total number of NCDs death. In the USA, there was a 15 percent probability of premature mortality from NCDs. From 3 January 2020 to 23 December 2022, in the United States of America, there have been 99.02 million confirmed cases of COVID-19 with 1.08 million deaths, reported to WHO. As of 15 December 2022, a total of 652.47 million vaccine doses have been administered.¹⁰

⁷ <https://covid19.who.int/region/searo/country/in>.

⁸ NCDs progress monitor, WHO—2020 (<https://www.who.int/publications/i/item/9789240000490>).

⁹ The World Bank In India. October, 25, 2019 (<https://www.worldbank.org/en/country/india/overview>).

¹⁰ <https://covid19.who.int/region/amro/country/us>.

PHARMACEUTICAL INDUSTRY IN THE GLOBAL SOUTH (INDIA)

Indian Pharmaceutical industry in the Global South witnessed a significant growth over the time. Globally, the Industry ranks third in pharmaceutical production by volume and supplies 20 percent of generic medicines to the world. Quality of the finished formulations and active pharmaceutical ingredients and the price competitiveness enabled the Indian Pharmaceutical Industry to be a dominant player in the world market. There are 500 API manufacturers contributing about 8% in the global API Industry. 60,000 different generic brands across 60 therapeutic categories were manufactured by the Indian Pharmaceutical Industry for global supply and distribution.¹¹

The total pharmaceutical export trade surplus during 2020–2021 was US\$17.5 Bn with total pharma export US\$ 24.4 Bn against the total pharma import of US\$7.0Bn. The favorable government schemes witnessed an extraordinary growth of foreign direct investments (FDIs) in the pharma sector making the country as the global pharmacy of the world. In 2020–2021, the buoyant inflow of FDI has shown 200 percent increase of FDI inflow to the sector and the total FDI inflows in 2021–2022 continued to be at USD 588.39 million, with 53 percent over the same period in 2020–2021. The surge in the FDI inflows are mainly on account of investments to meet global COVID-19 related demands for therapeutics and vaccines. Import dependence on bulk drugs varies between 80 and 100 percent. To mitigate the supply and demand gaps and challenges, Government of India Schemes for Promotion of Bulk Drug Parks, Production linked incentive (PLI) scheme for Bulk drugs, Production linked incentive (PLI) scheme for Pharmaceuticals, and Manufacturing of Medical Devices were some of the key measures. Another major initiative includes incentivizing biopharmaceuticals, API/KSM/drug intermediates, and drugs of pharmaceutical products with a total financial outlay of US\$2000 Million in 2020–2021, US\$456 million for the medical devices sectors. Accordingly, a budgetary allocation of US\$926.6 million for the next eight years, to promote domestic manufacturing of 53 critical Active Pharmaceutical Ingredients (APIs).¹²

¹¹ Annual report 2021–2022, DoP, Ministry of Chemicals and Fertilizers, GoI.

¹² Economic Survey Report 2021–2022.

The major segments of Indian pharmaceutical Industry in the Global South are Generic drugs, OTC Medicines and API/Bulk Drugs, Vaccines, Contract Research & Manufacturing, Biosimilar & Biologics. With the highest number of US-FDA compliant pharmaceutical manufacturing plants outside of USA, India is home to more than 3,000 WHO GMP approved pharmaceutical companies with a strong network of over 10,500 manufacturing facilities.¹³ India filed 71,510 patents in the year 2020 filed by Resident Indians, NRIs, and from abroad, and granted 34,442 as on 2020. India, as a global hub to pharmaceutical generics, has a very robust accreditation. Companies like Biocon, Intas, Sun Pharma, Zydus Healthcare, Macleods Pharmaceuticals, Akums Drugs & Pharmaceuticals, Dr. Reddy, Synokem Pharmaceuticals, Glenmark Hetero labs, Biological E, USV, Cipla, Bharat Serum, and Alkem are some of the leading manufacturers from the Global South. These companies are into investigational drugs for which they are conducting BA/BE studies or clinical trials for fulfilling the pre-market requirement to market the products.

In order to have greater accessibility, Government of India fixed the retail prices of around 1,798 formulations under DPCO, from 2013 till December 31, 2021. Keeping the public interest in mind, prices of coronary stents and knee implants have also been fixed. The trade margin up to 30 per cent on selected 42 anti-cancer non-schedule medicines was fixed by National Pharmaceutical Pricing Authority, Government of India. During COVID-19 pandemic, the trade margin for Oxygen Concentrators at 70 per cent on Price to Distributor (PTD) level and other home healthcare devices such as Pulse Oximeter, Glucometer, Blood Pressure Monitor, Nebulizer, and Digital Thermometer were capped, and the prices of these devices were dropped by 89 percent. Simultaneously, prices of various medicines like remdesivir, tocilizumab, and amphotericin were dropped during COVID-19 pandemic by National Pricing Authority (NPA) Government of India to address the affordability issues.

¹³ Annual report, 2021–2022 Department of Pharmaceuticals (<https://pharmaceuticals.gov.in/sites/default/files/English%20Annual%20Report%20,202,122%20281%29.pdf>).

PHARMACEUTICAL INDUSTRY IN THE GLOBAL NORTH (THE USA)¹⁴

The global pharmaceutical market was estimated to total \$ 1,077,856 million at ex-factory prices in 2020. North America (USA)¹⁵ contributes to 40.08% of the global market share to pharmaceuticals. The USA-based pharmaceutical companies in the Global North market innovative research-based formulations as well as generic medicines to the World Market. The pharmaceutical products marketed by the USA are Pharmaceuticals (biopharmaceuticals, drugs, medicines), Innovative (originator) chemically-derived drugs, Active pharmaceutical ingredients (APIs) and excipients, Generic drugs, Biologics (biotech drugs, biological drugs, biopharmaceuticals), and Biosimilars. The pharmaceutical industry in the Global North plays a critical role in improving the healthcare outcomes of patients around the world. Market access barriers and IP protection are vitally important for continued innovation in pharmaceutical products. The pharmaceutical companies in the Global North spend billions of dollars in research and development activities to have positive influence on global health, economic development, and prosperity. Due to the rapid surge of NCDs, the therapeutics and diagnostics support have been an integral part of treatment across many global households. As one of the heavily regulated sectors, the safety, efficacy, quality, and evidence-based treatment plays an important role for pharmaceutical products for human and animal consumption. Lifetime global revenues of a new drug, capital costs, and expenditures on drugs versus profits realization, sales volumes, and to address supply and demand gaps are the motivating factors for the USA pharmaceutical companies in the global North. US-FDA approved 1117 New Drugs between 1980 and 2021, and 399 novel drugs between 2015 and 2021.¹⁶ The amount of money spent in R&D is determined by the amount of projected revenues. The pharmaceutical industry in the Global North spends billions of Dollars on Drug Discovery. In 2021,

¹⁴ <https://www.efpia.eu/media/602709/the-pharmaceutical-industry-in-figures-2021.pdf>.

¹⁵ Pharma 50: The 50 largest pharmaceutical companies in the world, Available at <https://www.drugdiscoverytrends.com/pharma-50-the-50-largest-pharmaceutical-companies-in-the-world/>.

¹⁶ Statista 2022 report, Total number of novel drugs approved by CDER from 2008 to 2021.

the pharmaceutical industry spent \$102.3 billion dollars on Research and Development.

In 2014, total pharmaceutical revenues worldwide exceeded 1 trillion United States dollars (USD). In 2019, the global revenues of USA Pharmaceutical Firms in the Global North estimated as 275.42 billion United States dollars. There has been an increasing trend in the revenues worldwide by the USA pharmaceutical companies in the Global North. In 1980, the revenues from the pharmaceutical industry were with US\$ 60.95 billion with six-fold increase in 2019. The revenue growth is doubled in every 10 years, however, emergence of newer disease pattern, prevalence, and types, increase in global population and the recent pandemic have contributed the growth of the pharmaceutical company in the Global North to six-fold increase before time in 2021. The year-wise revenue trend is illustrated in Table 21.1

The R&D spending of the US pharmaceutical industry in the Global North has increased approximately 6–7 percent in every 10 years as a **percent of total revenues**. In 1990, the US Pharmaceutical companies spent 14.40 percent, 17.40 percent in 2010 and 21.20 percent in 2021 for research and development as a percentage of total revenues. In 2022, the top 20 pharmaceutical companies in the USA in Global North by revenue are Pfizer (\$101.1 billion), Abbvie (\$57.4 billion), Merck & Co (\$57.2 billion), Bristol Myers and Squibb (\$47.1 billion), Johnson and Johnson (\$95.6 billion), Gilead (\$27.5 billion), Amgen (\$6.4 billion), Eli Lilly (\$29.1 billion), Moderna (\$23 billion), Regeneron (14.2 billion),¹⁷ Biogen (13.44 billion), Viatis (\$11.94 billion).¹⁸

Policy makers at the USA are concerned about the uneven regulations, protectionist policies, and price control mechanism imposed by Government in the Developing countries and LMICs, however, regulatory complexities, market, and healthcare associated costs are always a challenge to both caregivers and the Industry.

¹⁷ Statista report on the U.S. pharmaceutical industry 2022.

¹⁸ 2021 revenue, Fierce Pharma <https://www.fiercepharma.com/special-reports/top-20-pharma-companies-2021-revenue>.

Table 21.1 Year-wise trend (1980–2019) of pharmaceutical revenues of the pharmaceutical industry in the Global North

<i>Year</i>	<i>Worldwide</i>	<i>Domestic</i>
1980	60.95	32.21
1981	57.80	31.38
1982	58.80	34.12
1983	60.21	37.18
1984	62.95	40.63
1985	65.19	42.77
1986	73.96	47.69
1987	80.92	51.14
1988	88.69	54.83
1989	91.20	60.23
1990	103.64	68.39
1991	113.93	75.86
1992	123.36	80.35
1993	122.46	79.28
1994	123.89	81.00
1995	142.26	89.30
1996	157.96	100.67
1997	167.05	108.14
1998	185.45	120.98
1999	214.54	149.14
2000	232.09	166.97
2001	251.35	183.96
2002	267.09	192.72
2003	283.97	201.19
2004	306.69	213.83
2005	304.73	214.51
2006	318.62	222.43
2007	332.19	225.02
2008	340.83	218.28
2009	324.42	212.67
2010	340.09	215.63
2011	349.62	215.35
2012	321.33	200.40
2013	311.65	193.80
2014	309.82	193.47
2015	323.98	216.82
2016	342.01	232.08
2017	348.35	234.27
2018	415.43	286.34
2019	376.71	275.42

GLOBAL HEALTH, NORTH–SOUTH PARTNERSHIP, AND SUSTAINABLE DEVELOPMENT GOAL 3 (SDG-3)

Sustainable Development Goal 3 (SDG-3) denotes “Ensure healthy lives and promote well-being for all at all ages”, is impeded by poor health in the Low- and Middle-Income Countries (United Nations, 2022; WHO, 2022). The aim of SDG-3 is to maintain the highest attainable standard of health for all people in all countries. SDG 3 has 9 “thematic” targets to ensure healthy lives and promote well-being for all at all ages, and “means-of-implementation” targets. Goal 3 has 27 indicators and has the largest share of indicators among all SDGs. The COVID-19 pandemic as well as NCDs become barriers to the progress of SDG-3, impacting the 2030 Agenda on Health. Poor health due to NCDs is closely related to poverty. The rising incidence of NCDs in the LMICs poses barriers to poverty reduction initiatives, due to increasing household costs associated with higher health and healthcare-related costs. The deteriorated health and well-being of people has negative impact on the SDG 3, affecting other SDG goals including SDG-1 (No Poverty), SDG-2 (Zero Hunger), SDG-4 (Quality Education), SDG-5 (Gender Equality), SDG- 8 (Decent work and Economic Growth), and SDG 10 (Reduced Inequalities). The widening disparity proposes the need to strengthen SDG 17, which focuses partnership for the Sustainable Development Goals. Despite of the government initiatives, the low- and middle-income populations in the LMICs have limited access to health services due to NCDs-related exorbitant healthcare costs, lengthy treatment, loss of income, and exhaustion of savings in the process of out-of-pocket expenses.

In their study, Mukhopadhyay, Batra, and Gupta (2014) indicated that gender discrimination accounts for 73 percent of the gender difference in cumulative total expenditure and 64 percent of the difference in cumulative medical expenditure during the treatment of cancer in rural India. Cancer in rural India attributed to higher mortality and further due to higher treatment costs was seen as deterrent factors.

The World Health Organization plays a key leadership role in the coordination and promotion of the global fight against NCDs and response to the pandemic crisis globally. WHO Global action plans for the prevention and control of NCDs from 2020 to 2030 include nine global targets. WHO advises member countries to provide NCDs targets and indicators and mortality data. The risk factor surveys by the member countries help to assess the prevalence of NCDs, and the capacity building workshop,

integrated with NCD policy, strategy, and action plan supports member countries to develop appropriate health policies. Based on WHO guidelines, member states develop time bound national targets. To reduce risk on tobacco-related products, policies are integrated to reduce tobacco demand-reduction policy measures such as increased excise taxes and prices, smoke-free policies, large graphic health warnings/plain packaging, bans on advertising, promotion and sponsorship and mass media campaigns. Similarly, to minimize harmful use of alcohol reduction, policy measures such as advertising bans or comprehensive restrictions, restrictions on physical availability and increasing excise taxes on alcohols are some of the measures adopted by member countries. The unhealthy diet reduction measures include saturated fatty acids and trans-fats policies, prohibition of marketing of salt and sodium-based products to children, and restrictions of marketing of breast-milk substitutes restrictions. Strengthen health systems to address NCDs through people-centered primary healthcare and universal health coverage, building on guidance public education and awareness campaign on physical activity, technical guidelines for management of cancer, CVD, diabetes and chronic renal diseases and counseling on prevent heart attacks and strokes are some of the other targets are included. The global agenda laid by WHO are for individual countries and related to their achievement of the NCD progress, however an agenda related to cross country partnership, collaborations, and monitoring could help LMICs to adapt to greater health disparities.

Increase in health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing. The USA, in the Global North, is highly competent in technology and scientific innovations whereas India in the Global South has low cost technical manpower, the synergies between the two economies could build scientific innovations to manufacture drugs and healthcare equipment at an affordable cost which can benefit LMICs to make the world a healthcare by addressing diagnostics and therapeutic challenges. This can further address SDG 3d targets that advocate partnership, support, and collaboration goals and SDG target 3.b that has the target to support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries. SDG 3.8 by addressing universal health coverage is a national priority that includes financial risk protection, access to quality essential

healthcare services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all.

Access to affordable essential medicines and vaccines in accordance with the Doha Declaration on TRIPS and Public Health that affirms the right of developing countries to use Trade-Related Aspects of Intellectual Property Rights (TRIPS agreement) on flexibilities to protect public health and, in particular, provide access to medicines for all is an important aspect¹⁹ (WTO, 2022). The political as well as corporate will between the two economies, partnership and handholding can help addressing SDG 3.b.1 that aims to cover all population with vaccines by including in national program, SDG 3.b.2 official development assistance to medical research and basic health sectors, and 3.b.3 to set up health facilities that have a core set of relevant essential medicines available and affordable on a sustainable basis.

The limitations of the Governments are also well felt in every country in the World during COVID-19 Crisis. The socio-economic disruptions, and exacerbated systemic challenges, have been great difficulties in addressing the United Nations 2030 Global Agenda on Sustainable Development Goals (SDGs) on health, poverty, hunger, education, equality, climate action, partnership, etc. SDG 3c that supports to increase health financing and the recruitment, development, training, and retention of the health workforce in developing countries, especially in least developed countries and Small Island developing States can be fulfilled with national, regional as well as global healthcare integrative practices. This will further help addressing the healthcare workers disparity addressing SDG 3.c.1 on the health worker density and distribution at a global note. The partnership, and collaborative measures are furthered by strengthening the capacity of all countries, in particularly developing countries, for early warning, risk reduction and management of national and global health risks and will address UNSDG 3d agenda.

There were glaring gaps observed in the global health system for preventing and responding to potential pandemics like COVID-19. Post-pandemic reforms are unlikely to leave the world fully prepared for the next emergency and argue for a focus on strong monitoring systems and flexible arrangements. (Bezruki & Moon, 2021). Emergency preparedness to counter pandemics like COVID-19 requires to strengthen the

¹⁹ TRIPS and public health, WTO, 2022 (https://www.wto.org/english/tratop_e/trips_e/pharmpatent_e.htm).

capacity of all countries, in particular developing countries, for early warning, risk reduction, and management of national and global health risks to achieve SDG 3 target 3.d and 3.d.1 agenda on International Health Regulations (IHR) capacity and health emergency preparedness.

The COVID-19 pandemic issues go beyond health agendas and areas like “trade and intellectual property, sustainable energy, income, inequality, migration, food security, and sustainable consumption and production” needs through multiparty governmental and intergovernmental discussions to drive health as a core global agenda.^{20,21}

The Global Health System requires inter-sectoral and inter-jurisdictional action. The recent COVID-19 pandemic has brought everything into a standstill. Due to uneven understanding for rural urban, geographic variations, and digital divide, in the LMICs, COVID-19 has created huge socio-economic, political as well as cultural disruptions. The health and well-being of people and communities is a global priority, and there is an urgent need for the interconnectedness of business, society, and all stakeholders to achieve better health. Multiple relationships are maintained across supply chains. Innovative business models and long-term engagement by the pharmaceutical industry involving stakeholders from the government, civil society, interested skilled individuals, academia, and others may help as key drivers for better health tackling the current challenges. The economies are moving from the immediate crisis phase, and a robust partnership and collaboration is essential to collectively build more inclusive, resilient, sustainable, and healthy societies. The synergies between public health, Intellectual property rights, and trade-related legal and policy considerations that influence public health outcomes can facilitate timely and affordable access to pharmaceutical and healthcare products, including diagnostics, vaccines, treatments, and medical devices.

India in the Global South that includes a reduced child and maternal mortality, raising life expectancy and improving the defense mechanism against several major communicable diseases. India aspires to better the lives of all its citizens and become a high-middle-income country by 2030. Policy measures have propelled rapid economic growth and poverty was minimized at a very fast pace over the years for both the economies. India is world’s third largest economy in purchasing parity terms. The country’s

²⁰ https://www.who.int/gho/publications/world_health_statistics/2019/en/

²¹ https://www.wipo.int/policy/en/global_health/trilateral_cooperation.html.

aspiration to achieve better growth, promoting inclusion and sustainability has brought a paradigm change to human development, social protection, financial inclusion, rural transformation, and infrastructure development.²²

EXPECTED RESEARCH OUTCOME AND POLICY RELEVANCE

Based on the data, it is envisaged that the USA policies influence the basic pharmaceutical research and R&D spending of pharmaceutical companies in the Global North. Policy makers in the Global North argue market exclusivity of novel pharmaceutical products which were largely protected in a much robust IPR regime adopted by the National Governments in the Global South and other LMICs. However, the pandemic effect and rising cases of NCDs were found to be a threat to the social welfare of the patients and caregivers both in Global South and Global North. In many instances, the consumers and caregivers in the Global South end up spending an exorbitant amount of money on life saving drugs in the treatment of cancer that turned out to have little clinically meaningful effect, ended up in debts, and loss of lives. In a global health and healthcare landscape, a synchronized Global Health system for both global North and Global South in terms of capacity building, knowledge, and technology transfer, continued medical education, health-awareness programs as preventive measures can mitigate the health inequality driving a better global health scenario.

REFERENCES

- Batra, A., Gupta, I., & Mukhopadhyay, A. (2014). Does discrimination drive gender differences in health expenditure on adults: evidence from Cancer patients in rural India. *Indian Statistical Institute Discussion Paper*, (14–03).
- Bezruki, A., & Moon, S. (2021). Post-covid reforms: can we avoid fighting the last war? *BMJ*, 373.
- Khan, K. S., Kunz, R., Kleijnen, J., & Antes, G. (2003). Five steps to conducting a systematic review. *Journal of the Royal Society of Medicine*, 96(3), 118–121.

²² <https://www.worldbank.org/en/country/india/overview>.

- GOI. (2022). Annual report, 2021–22 Ministry of Chemicals and Fertilizers, Department of Pharmaceuticals Retrieved from: <https://pharmaceuticals.gov.in/sites/default/files/English%20Annual%20Report%202021-22%20%281%29.pdf> on September 29, 2022
- PhRMA. (2019). 2019 Biopharmaceutical in Perspective. Pharmaceutical Research and Manufacturers of America. <https://www.phrma.org/en/Report/Chart-Pack-Biopharmaceuticals-in-Perspective-Summer-2019>
- UN. (2022). Transforming Our World - the 2030 Agenda for Sustainable Development. Retrieved from: <https://sustainabledevelopment.un.org/topics/sustainabledevelopmentgoals> on September 29, 2022
- WHO. (2019). World Health Statistics 2019: Monitoring health for the SDGs. Retrieved from: https://www.who.int/gho/publications/world_health_statistics/2019/en/ on September 29, 2022
- WHO. (2022). Global Health Observatory. Retrieved from: <https://www.who.int/data/gho/data/indicators> on September 29, 2022
- World Bank. (2020a). The World Bank In India. October, 25, 2019. Retrieved from: <https://www.worldbank.org/en/country/india/overview> on September 29, 2022
- World Bank. (2020b). COVID-19 (Coronavirus) Response. July, 08, 2020b. <https://www.worldbank.org/en/country/india/coronavirus> on September 29, 2022
- WTO. (2022). TRIPS and public health. https://www.wto.org/english/tratop_e/trips_e/pharmpatent_e.htm on September 29, 2022
- Medical Doctors per 10,000 (<https://www.who.int/data/gho/data/themes/topics/health-workforce>)
- WHO COVID Data <https://covid19.who.int/data>
- 3World Bank 2022 and 4 FAO, 2021.
- Non-communicable diseases, Key Facts, WHO, September, 2022 <https://covid19.who.int/region/searo/country/in>
- NCDs progress monitor, WHO—2020. (<https://www.who.int/publications/item/9789240000490>)
- The World Bank In India. October, 25, 2019. (<https://www.worldbank.org/en/country/india/overview>) <https://covid19.who.int/region/amro/country/us>
- Annual report 2021–22, DoP, Ministry of Chemicals and Fertilizers, GoI
- Source: National Accounts Statistics-2021, Ministry of Statistics and Programme Implementation, GoI.
- Economic Survey Report 2021–22
- Annual report, 2021–22 Department of Pharmaceuticals. (<https://pharmaceuticals.gov.in/sites/default/files/English%20Annual%20Report%20202122%20%281%29.pdf>)

Pharma 50: The 50 largest pharmaceutical companies in the world. <https://www.drugdiscoverytrends.com/pharma-50-the-50-largest-pharmaceutical-companies-in-the-world/>

Statista 2022 report, Total number of novel drugs approved by CDER from 2008 to 2021

CBO's April 2021 report Research and Development in the Pharmaceutical Industry.

Statista Report 2022 on Research and development expenditure of total U.S. pharmaceutical industry from 1995 to 2021 (in billion U.S. dollars)

Statistica report on the U.S. pharmaceutical industry 2022

2021 revenue, Fierce Pharma. <https://www.fiercepharma.com/special-reports/top-20-pharma-companies-2021-revenue>

TRIPS and public health, WTO, 2022. (https://www.wto.org/english/tratop_e/trips_e/pharmpatent_e.htm)

<https://www.iqvia.com/-/media/iqvia/pdfs/institute-reports/the-changing-landscape-of-research-and-development.pdf>

<https://pharmaceuticals.gov.in/sites/default/files/english%20Annual%20Report%202020-21.pdf>

<https://www.efpia.eu/media/602709/the-pharmaceutical-industry-in-figures-2021.pdf>

https://www.who.int/gho/publications/world_health_statistics/2019/en/

https://www.wipo.int/policy/en/global_health/trilateral_cooperation.html

<https://www.worldbank.org/en/country/india/overview>



Effects of Supply Chains During COVID-19: Analyzing 3R Strategies in Gujarat

Manisha Paliwal, Nishita Chatradhi, and Naresh Hans

INTRODUCTION

An unprecedented public health event erupted in late 2019. COVID-19 quickly swept the world, causing significant harm to people's lives while also having a significant impact on businesses. While we've all altered our behavior in response to the crisis. Some changes were forced upon us, while others represent the pinnacle of crisis innovation. The workforce and work itself have been reset, as has the employer/employee relationship and the business ecosystem. For the most part, the pandemic

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has had a negative impact on business; for others, it has had a positive impact. While some disruptions to organizations and supply chains are external—such as natural (e.g., earthquakes) and man-made (e.g., terrorism) disasters—others originate within the supply chain. Furthermore, the effects of some disruptions are exacerbated by the strategies firms employ. According to Fortune 2020, as of February 21, 2020, 94 percent of the Fortune 1000 companies were experiencing supply chain disruptions due to COVID-19. A survey completed on April 4, 2020, found that mass layoffs and closures had already occurred a few weeks into the crisis for small businesses (Bartik et al., 2020). The World Trade Organization economists estimated in April 2020 that global trade would decrease by 13%–32% in 2020 due to the worldwide disruption of normal economic activities and lives caused by the COVID-19 pandemic (WTO, 2020).

In such a scenario, there is an urgent need for companies all over the world to improve the resilience of their global supply chains to deal with future shocks (Linton & Vakil, 2020). Numerous studies on supply chain risk management have been conducted and are still being researched from various angles (Margolis et al., 2018; Sawik, 2013). The current pandemic has highlighted the need for additional research on supply chain resilience based on real-life events (Remko, 2020), which considers all parameters in a unified manner. Effective supply chain risk management can mitigate the impact of COVID-19-induced supply chain disruptions on supply chain resilience and robustness (El Baz et al., 2021). A responsive supply chain and transportation flexibility allow for more efficient product delivery to clients (Ghavamifar et al., 2018). Some numerous causes and sub-factors contributed to supply chain transportation disruptions. Inclement weather, for example, hampered transportation and harmed supply chains (Sheffi, 2015).

A disruption such as the COVID-19, on the other hand, poses a significant risk to supply chain mobility and has created meta-uncertainty. COVID-19 has harmed supply chains in the transportation industry to varying degrees across the air, rail, road, and sea sectors. As a result of transportation disruptions, there are numerous potential consequences for the supply chain, necessitating possible detecting threats via innovative SCM practices and sturdy mitigation strategies via supply chain risk management (SCRM) to rebuild from business slowdown. Businesses should develop an effective mitigation and recovery strategy in the event of logistics and transportation delays. However, little research

has been conducted on the effect of COVID-19-induced interruptions on SCDs. In light of this, we reviewed the literature on supply chains, SCDs, and SCM about pandemics like COVID-19 to identify research gaps and recommended mitigation strategies, including a recovery model and micro- and macro-measures for firms experiencing disruptions in the Indian context. Through this study, the following research objectives are evaluated:

- To study the contexts and theoretical lenses used in supply chain resilience studies on the COVID-19 pandemic.
- To examine lessons learned by business enterprises as a deterrent to pandemic uncertainties.

The remainder of this paper is organized as follows. Reviews of the related literature, including that on supply chain disruption, resilience strategies, and management in this unprecedented pandemic, have been presented followed by the discussion on 3R strategy comprising Respond, Recover, and Renew elements. This discussion follows the research methodology adopted for the paper and discussion of the results of the empirical study, the impact of COVID-19 on supply chains, and the coping strategies of firms in Gujarat, which further highlights the direct investments, including an integrated supply chain structure led by a specific business model and several intelligent platforms supporting its daily operations. We quantitatively present the scenario of supply chain resilience during the pandemic and summarize significant difficulties experienced by the 31 firms' exceptional demands and delivery network disruptions. We describe the practical strategies to address the challenges. Using the intelligent platforms built before the pandemic, it precisely flexibly adjusted its operational strategy to deal with the volatile market conditions and external requirements caused by COVID-19. Finally, the main conclusions and implications are summarized at the end of this chapter.

LITERATURE REVIEW

Supply Chain Resilience

While some disruptions to organizations and supply chains are external—such as natural (e.g., earthquakes) and man-made (e.g., terrorism) disasters—others originate within the supply chain. Furthermore, the effects of some disruptions are exacerbated by the strategies firms employ.

The concept of resilience refers to the ability of physical and human systems to respond to and recover from extreme events. It has become a topic in disaster research recently (Bruneau et al., 2003; Rose & Liao, 2005). Resilience is an extension of the traditional concept of resistance, defined as measures that improve the performance of structures, infrastructure elements, and institutions in reducing disaster losses. While disaster resistance emphasizes the importance of disaster prevention, the concept of resilience broadens those ideas to include improvements in a system's flexibility and performance both during and after a disaster. Based on those assumptions, we can define supply chain resilience as the ability of a supply chain system to reduce the likelihood of a disruption, the consequences of those disruptions once they occur, and the time required to return to average performance.

The concept of resilience first appeared in the supply chain literature a few years ago and has recently gained traction (Christopher & Peck, 2004; Craighead et al., 2007; Sheffi & Rice, 2005). Despite the increasing number of papers published on supply chain resilience, few quantitative modeling techniques have been applied to the topic; in general, most articles have simply provided qualitative insights into the problem.

Furthermore, researchers typically examine supply chain disruptions from the perspective of either mitigation or response measures rather than both stages concurrently, as we propose here. Only recently has work on supply chain disruption and resilience been published in the quantitative modeling arena. The primary focus of this research has been on tactical considerations, i.e., decisions that do not affect the overall design of the supply chain. For example, Tomlin (2006) created a model to determine the best contingency and mitigation strategies for a company with a single product and two alternative suppliers. The author's parameters include supplier dependability, capacity and costs, transit lead time, volume and response time flexibility, and various inventory and demand considerations. These parameters are then used to determine appropriate supply chain disruption response tactics. The resulting model is most applicable

to individual supply chain members and tactical decision making, and it does not explicitly consider supply chain design decisions.

Because of the multiplicity of disruptive events in global supply chains that make them highly vulnerable, supply chain resilience (SCRE) has become a topic of renewed interest in academia and the business world (Juttner & Maklan, 2011). Following a global pandemic, supply chain managers must adopt a more intense resilient approach (Christopher & Lee, 2004). To deal with unexpected changes, supply chain resilience and responsiveness are critical (Barbieri et al., 2020). Ponomarov and Holcomb (2009) define supply chain resilience as “the supply chain’s adaptive capability to prepare for unforeseen circumstances, respond to disruptions, and recover from them by maintaining operational continuity at the desired level of connectedness and control over structure and function.” According to Ivanov (2020), a viable supply chain has three dimensions: agility, resilience, and sustainability. They established the link between resilience and viability.

Deft resets also increase organizational resilience. Enterprises are better positioned to weather the next disruption by identifying and eliminating flaws in their business and operating models. This is especially important in the current economic climate. Without a cure for COVID-19, any increase in business activity could quickly be followed by another round of response, recovery, and renewal. It is critical to absorb lessons learned quickly and incorporate long-term changes into business and operating models. But first, there’s a need to figure out where and how the crisis has stretched and broken existing models and where the risks and opportunities result.

A resilient supply chain must develop resilience capabilities to respond to the negative consequences of unanticipated events and quickly return to its original state (Barroso et al., 2015). Supply chain professionals have little guidance on what results to expect from the implementation of resilience-focused strategies unless they have a clear understanding of the performance outcomes associated with resilience. According to Asbjørnslett (2009), there is a link between a disruptive event and business predictors. In this sense, disruptions in physical and/or information flows between supply chain members can have unfavorable consequences, such as product availability issues, delivery delays, or a lack of supply chain reactivity. According to Wagner and Bode (2008) and Ouabouch and Paché (2014), the companies that are most affected by supply chain failures are the least likely to produce logistics-related performance with

their partners. It is worth noting that the above definitions of organizational resilience share a common perspective that goes beyond the recovery boundary and implies a certain level of flexibility, improvisation, and adaptability to both positive and negative environmental influences (Ponis & Koronis, 2012). Resilience means that a supply chain can quickly return to a previous state or shift to a more desirable alternative (Waters, 2011). As a result, it describes the ability to return to a stable condition following a disturbance. This concept also appears relevant in analyzing the continuity of flow following a supply chain rupture. Some factors are proposed to guide a resilience improvement process to achieve this. Given the link between increased resilience and improved supply chain performance, good logistics management would consider both efficiency and stability in its analyses.

Supply Chain and COVID-19

Most companies relied on company datasets rather than end-to-end supply chain data for demand and supply forecasting prior to the pandemic, illustrating the limited use of IT and automated systems in supply chain management (Selko, 2021). Companies are facing conventional demand and supply shocks as COVID-19 sweeps the globe, and while most companies have made their supply chains smarter and faster over time, they still lack ideas to de-risk their supply chains against pandemic-like disruptions. This indicates a gap between supply chain resilience strategies in the literature and their implementation in industry. In such a scenario, companies worldwide must urgently improve the resilience of their supply chains to deal with future shocks (Linton & Vakil, 2020). Effective supply chain risk management can mitigate the impact of COVID-19-induced supply chain disruptions on supply chain resilience and robustness (El Baz et al., 2021). Golan et al. (2020) conducted a literature review on new trends and applications of resilience analytics in supply chain modeling and discovered increasing trends in the literature on supply chain resilience. Chowdhury et al. (2020) investigate the impact of COVID-19 on the food and beverage industry, focusing on two types of implications: short term (product expiry, shortage of working capital, and so on) and medium to long term (product expiry, lack of working capital, and so on) (reduction in ROI, job cuts, and so on). To manage and control the disruption caused by the COVID-19 pandemic, Mahmoudi et al. (2021) developed a resilient supply chain

management framework; resilient supply chain refers to the integration of green and resilient supply chain aspects. Wen and Liao (2021) proposed an algorithm to improve supply chain resilience during the COVID-19 outbreak. Yadav et al. (2020) suggested an internet of things (IoT)-based framework to enhance agricultural supply chain performance during the COVID-19 pandemic.

Supply chain vulnerabilities have increased due to the frequent disruptions caused by the COVID-19 pandemic (Karwasra et al., 2021). It has impacted both the supply chain and the ability to generate revenue. The COVID-19 pandemic has caused supply and demand shocks, and most businesses have failed to develop a strategy to improve their resilience and recovery process (Remko, 2020). It has impacted 94% of Fortune 1000 companies (Sherman, 2020), and existing supply chain resilience mechanisms have failed to keep them afloat during the pandemic. Before the pandemic, most companies relied on company datasets rather than end-to-end supply chain data for demand and supply forecasting, illustrating the limited use of IT and automated systems in supply chain management (Selko, 2021). As a result, when the pandemic hit, businesses could not forecast demand and supply constraints, causing supply chain disruption. Companies are facing conventional demand and supply shocks as COVID-19 sweeps the globe. While most companies have made their supply chains more intelligent and faster over time, they still lack ideas to de-risk their supply chains against pandemic-like disruptions. This indicates a gap between supply chain resilience strategies in the literature and their implementation in industry.

Competitiveness Positioning in Supply Chain

Organizations must rethink their operations, alliances, partnerships, and strategies to deal with these and other changes. Supply chain resilience has emerged as a critical component of competitive strategy to improve organizational productivity, profitability, and competitive success. Competitive priorities have forced organizations to change dramatically because of rising customer expectations, globally increasing competition, time and quality-based competition, and mass customization. Supply chain competitiveness (SCC) is gaining importance because organizations will only survive in this globally competitive environment if they are competitive in supply chains and customer satisfaction.

For a long time, researchers have attempted to define supply chain competitiveness (SCC), and various strategies have been considered. According to Pine (1993), mass customization increases variety and customization without sacrificing efficiency, effectiveness, or low cost. His emphasis was on mass customization to improve supply chain competitiveness. On the other hand, information and communication were the most profound and influential changes to be adapted that affect both companies and supply chain competitiveness. He proposed that SCC uses the internet and other communication systems. The primary competitive tool is operations strategy, which focuses on two common themes: process and content. SCC recognizes the importance of operations management and operations strategy. The basic units of competitive advantage are operational activities. He contended that a company's operational effectiveness directly contributes to its competitiveness and market leadership.

In this interaction, they are concerned with providing the best services possible while interacting with each other in both forward and reverse flow, in order to maintain supply chain competitiveness. The ability of the supply chain as a whole to gain a competitive advantage over other competing supply chains is referred to as supply chain competitiveness (Bravo et al., 2007; Lambert & Cooper, 2000; Pace & Stephan, 1996; Sahay et al., 2006; Shang et al., 2010; Verma & Seth, 2011). The logic of service quality can explain the improved supply chain management and competitiveness (Mentzer et al., 1999; Kearney, 1994; Chow et al., 1994; Seth et al., 2006; Stanley & Wisner, 2002), proposed and conceptualized a model for assessing service quality at supply chain interfaces.

La Londe and Powers (1993) explain supply chain competitiveness in improved communication and information sharing. Fisher (1997), Fuller et al. (1993), and Simchi-Levi (2009) argued about supply chain competitiveness and regarded them as necessary ingredients from the standpoint of operations strategies and operational effectiveness. According to Vokurka and Fliedner (1998) and La Londe (1997), agility, flexibility, and responsiveness are required for supply chain competitiveness, which can be achieved through supply chain partner collaboration. Supply chain competitiveness is also addressed from a coordination standpoint (Cachon & Lariviere, 2005; Kanda & Deshmukh, 2008). It is also mentioned with the logic of supply chain members collaborating and synergizing through information sharing, joint decision making, and sharing incentives and benefits to gain supply chain competitive

advantage (Anbanandam et al., 2011; Barratt, 2004; Lehoux et al., 2010). Numerous studies are available that explain supply chain practices, competitiveness, and performance from the standpoint of quality management and assurance and its constructs such as customer satisfaction, leadership, management support, management commitment, customer focus, continuous improvement, supplier management, employee involvement, and so on. According to Mentzer (2004), it is not only the product that provides a competitive advantage but also how flow management is performed within the supply chain. Howgego (2002) discussed supply chain competitiveness using the logic of Product Management, Supply Chain Flow Management, Supply Chain Synergy, and Demand Management.

Supply chain competitiveness is an important tool for gaining a competitive advantage. Because of rapid technological advancements, globalization, and the widespread use of information technology, supply chain competitiveness is now required for firms to be the strategic focus. The strategic direction of the supply chain necessitates the formation of alliances, the reengineering, renovation, or refinement of operations, and developing strategies. Supply chain competitiveness is the actual solution to surviving in a hypercompetitive market environment. Supply chain competitiveness necessitates integrating and coordinating various supply chain components to form a joint alliance for a common goal. The global competitive environment, which includes socioeconomic forces, cultural forces, customer requirements, financial and capital forces, government policies, behavioral forces, and so on, is also thought to impact the overall phenomenon of supply chain competitiveness.

RESPOND, RECOVER, RENEW STRATEGY

These challenging circumstances have started a debate on the previously developed strategies and approaches for the robustness of supply chain networks. For instance, individual frameworks, such as lean and agile manufacturing, and resilience and sustainability, focused on maximizing market response rather than ensuring survivability. The field of sustainability and viability of operations in SC networks under different uncertain conditions is also being revisited according to current needs. However, the long-term sustainable solution lies with digitally supported technical help. The technical portfolio of industrial systems is being upgraded at the moment compared to systems in previous epidemic outbreaks. SC

disruptions, especially during epidemic outbreaks, before the twenty-first century, caused huge threats to economies' public well-being and industrial sustainability. Recent developments in decision science have helped to optimize sustainable operations in uncertain environments through the adoption of a new *3 Rs*—*Respond*, *Recover*, *Renew* elements.

RESPOND

The government initiated a lockdown and put the enterprise into the respond phase. The economy and societal activity, more or less, grind to a halt. At this point, executive leaders assessed the immediate impacts of the lockdown on the enterprise and responded with short-term decisions about the current business and operating models. Immediate negative impacts on the enterprise, requiring a shutdown or drastic reconfiguring of the enterprise. Immediate positive impacts on the enterprise where demand for the enterprise's services and products is rapidly growing.

RECOVER

The recovery phase was almost as chaotic as lockdown. When markets and public areas reopened, the need to scale back up to meet pent-up demand overwhelmed the supply chain and customer-facing operations. This phase challenged enterprises both operationally and financially. It was not a uniform phase but likely shaped several rapidly changing regulatory requirements. The recover phase strained enterprises operationally and economically (Fig. 22.1).

RENEW

This phase is when enterprises accelerate their plans to renew themselves. In the longer term, enterprises recommenced more strategic planning due to these factors:

- The competitive landscape was less chaotic and more transparent, and less driven by non-economic forces such as political and social forces.

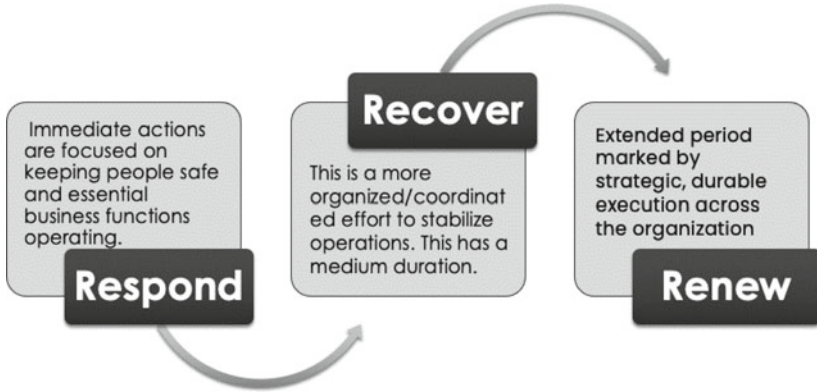


Fig. 22.1 Respond, recover, and renew framework (Adapted from Gartner's Framework, 2020) (*Source* Author(s))

- Supply and demand curves fluctuated less compared with the previous two phases. It was easier to confirm how customers, employees, and partners will want digital capabilities to be part of their interactions and operations.

METHODOLOGY

COVID-19 has proven to be a major social event that has created huge ramifications for our social system (Teti et al., 2020). A qualitative approach has enabled researchers to capture deeper meanings from the dataset (Braun & Clarke, 2006). The researchers, therefore, implemented qualitative analysis, a useful method for analyzing this social phenomenon. It is characterized by the systematic process of coding the data to understand the meaning and description of the social reality by identifying the inherent theme (Zhang & Wildemuth, 2009). To empirically investigate the emerging work process pattern of enterprises during COVID-19, this paper adopts a descriptive-analytical approach and relies on primary and secondary data. In the initial stage, group discussions with industry experts were carried out and an extensive literature review. The researchers reviewed the academic literature to gain insight into supply chain resilience and supply chain disruption theories. So, various articles, journals, books, websites, etc. The paper studied evolution,

conceptual framework, definitions, key players, present trends (relating to internet penetration, growth, prospects, modes of payments preferred, etc.), prospects, and barriers in the supply chain due to COVID-19. All the data included is secondary data, and proper references have been given wherever necessary.

The methodology focuses on various methods used for collecting data, research design, and data collection. The data was collected through a semi-structured interview and a Focus Group Discussion (FGD). Respondents were 35 executives from various sectors practicing quality management systems. The respondents belonged to Micro, Small and Medium Enterprises (MSMEs) and Large Enterprises across the State of Gujarat, India. The questionnaire was designed and administered through Google forms, which were sent through WhatsApp and Email. The questions were tailored to the needs of this study, and the responses directly contributed to the purpose of the study. The collected data was subject to various tests to determine the study's results. Twelve months later, in March 2021, Focus Group Discussion (FGD) was held with 35 supply chain leaders of the surveyed enterprises. This time, respondents were asked to describe the steps they took in the previous year to strengthen their supply chains, how those changes differed from the plans they devised earlier in the crisis, and how they expect their supply chains to emerge further.

RESULTS AND DISCUSSION

Data Analysis

The pandemic may have wiped the strategy slate clean, but it has also garnered invaluable experience. This has given businesses the opportunity to reconfigure business and operating models for a new reality. Different parts of the same enterprise may veer off from one another. Some could reduce or retire specific activities. Others could rescale or reinvent themselves. Yet more could essentially return to their pre-pandemic baselines. As the shift from response to recovery, the key for senior leaders is to make strategic decisions that will lead them to a renewed future state, however paralyzing the uncertain outlook may seem.

SECTORAL REPRESENTATION OF SURVEYED RESPONDENTS

Figures 22.2 and 22.3 show that type of industry and sector of the surveyed respondents. The figure indicates that 28% of the enterprises were MSME and 72% are Large Enterprises. Because different industries have responded to the resilience challenge in significantly different ways, the enterprises surveyed were from the Chemical, Electrical, Engineering, Manufacturing, OEM, Petro Chem, and PI sectors. Some of the differences between sectors can be attributed to the structural characteristics of the industries involved: for example, a McKinsey 2020 survey revealed that chemicals and metals are asset-intensive industries with large, expensive production sites. New capacity investments can take years to complete.

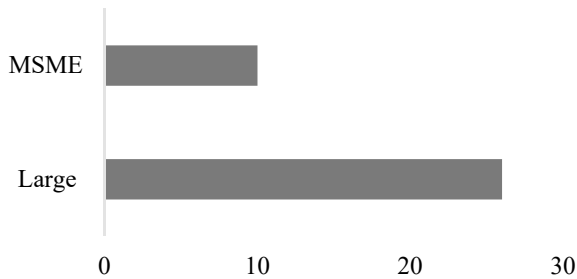


Fig. 22.2 Type of Industry

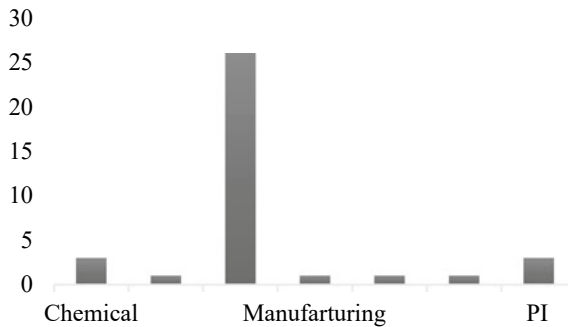


Fig. 22.3 Type of Sector

RESPOND RECOVER RENEW STRATEGY

The below section discusses the responses based on the 3R strategy and highlights the issues and opportunities faced by firms during the surveyed period.

Respond

Immediate actions aimed at keeping people safe and critical business functions running. This brief period is characterized by high effort and potentially chaotic activity.

Key activities:

- Temporary fixes to stop the bleeding

Some businesses are better prepared to deal with the consequences than others. When the nationwide lockdown occurred in March 2020, several businesses were prepared. These organizations have created and implemented supply chain risk management and business continuity plans (Figs. 22.4 and 22.5).

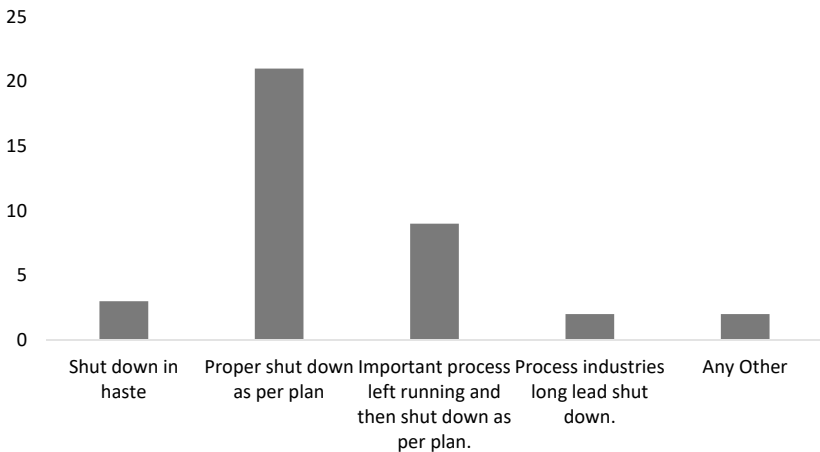


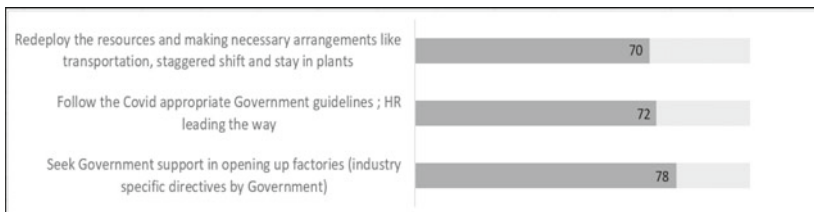
Fig. 22.4 Response to national wide lockdown on 23.03.2020



Fig. 22.5 Reorganizing of factory

Despite several other challenges, reorganizing the workplace remained a top priority for most of the company. If possible, the businesses considered increasing the number or size of on-site facilities. At the entrance to each facility, the capacity of each canteen or rest area was identified, and attendants were provided to supervise compliance with social distancing measures where necessary. Payments were accepted by contactless card whenever possible, and arrangements for monitoring compliance were considered (Fig. 22.6).

Due to the unique nature of the COVID-19 crisis, robust policy challenges were required to address the SCDs, which had to be different from previous experiences dealing with similar risks. Demand and supply have declined significantly due to the prolonged lockdown in almost all productive activities, which required substantial government support. In the current scenario, the COVID-19 pandemic could be the first global SCD, necessitating the robust management of global supply chains (GSCs) and the mitigation of associated risks.



* % of respondents who say their company have implemented each practice (n= 35)

Fig. 22.6 Business resumption from April 2020 to June 2020 (*Note* % of respondents who say their company have implemented each practice [n = 35])

Recover

More organized/coordinated effort to stabilize operations. Medium duration. Key activities:

- Create a plan to restore a scalable state.
- Identify capabilities you need to strengthen, refactor, reopen, rehire, re-budget, and resupply.

OVERCOMING SUPPLY CHAIN CHALLENGES

Most manufacturers have turned to suppliers and subcontractors who specialize in a single area, and those specialists, in turn, must rely on many others. A similar arrangement has the following advantages: Enterprises have much leeway in what goes into their products and can incorporate cutting-edge technology. However, when businesses rely on a single supplier, they become vulnerable (Fig. 22.7).

However, the surveyed enterprises have developed strong relationships with key suppliers and implemented systems to provide visibility across the extended supply network to better understand their risks and drive specific actions based on their priorities. They improved the agility of their production and distribution networks to quickly reconfigure and maintain supply in response to global demand. They invested in supply chain planning and control tower solutions to better sense, respond, and even predict supply chain issues.

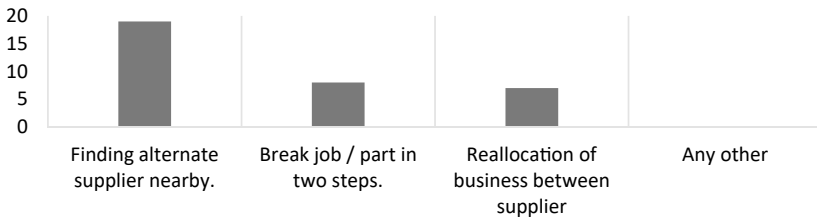


Fig. 22.7 Supply chain challenges

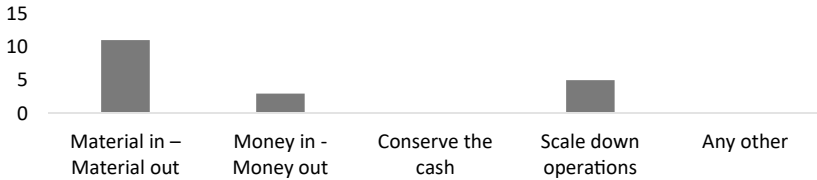


Fig. 22.8 Business Strategy to recover in COVID-19

BUSINESS STRATEGY TO RECOVER IN COVID-19

To reduce supply-side risks from any country or region, the enterprises have geographically diversified their supply chains. They have multisource essential commodities or strategic components to reduce their reliance on a single supplier, and they have considered inventory strategy to mitigate supply chain disruption (Fig. 22.8).

RECOVER—BUSINESS RECOVERY FROM JULY 2020 TO DECEMBER 2020

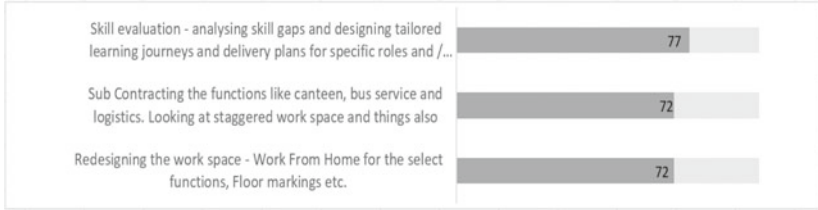
The survey revealed significant shifts in footprint strategy. Most companies planned to pull multiple levers to improve supply chain resilience last year, combining increases in critical product, component, and material inventory with efforts to diversify supply bases while localizing or regionalizing supply and production networks. In practice, firms were much more likely than expected to increase stocks while being less likely to diversify supply bases (with raw-material supply being a notable exception) or implement nearshoring or regionalization strategies (Fig. 22.9).

RENEW

The extended period was marked by strategic, durable execution across the organization. Key activities:

- Learn to conduct operations processes and workflows in new, repeatable, scalable ways.
- Use lessons learned and emergent patterns from prior phases to coalesce around a new foundation and way forward.

Supply chain stress tests have become the new norm in the post-COVID-19 world. The distributed global business model has been



*% of respondents who say their company has implemented each practice (n= 35)

Fig. 22.9 Business resumption from July 2020 to December 2020 (*Note* % of respondents who say their company has implemented each practice [n = 35])

completed and optimized for low cost. The model of tomorrow necessitates new optimization priorities (Farahani & Elahipanah, 2008; Scholten & Schilder, 2015). The supply chain has evolved from a “behind the scenes” organizational role to a primary driver of the company’s business (Hale & Mober, 2005). Previously, volume stability enabled the supply chain to provide a high level of service while lowering costs while maintaining acceptable quality. However, as the struggle to meet demand has been revealed, supply chains and manufacturing plants allow for little volume flexibility.

Supply chains have become more adaptable as volumes have become more variable, especially if, as forecasts indicate, large suppliers and logistics operators in the supply chain industry must prepare for major catastrophic events such as weather events (fires, floods, tsunamis), lethal pandemic outbreaks, strikes, social unrest, and associated disruptions (Fig. 22.10).

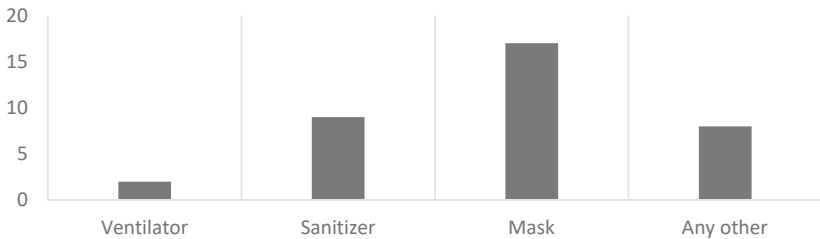


Fig. 22.10 New business opportunities

NEW BUSINESS DEVELOPMENT OPPORTUNITIES

Based on their intensity, SCD risks have had a significant impact on firms' operational and financial performance (Hendricks & Singhal, 2003), which plays an essential role in building resilience against SCDs (Bode et al., 2011) (Table 22.1).

Many businesses are feeling the effects of COVID-19 supply chain disruptions. Companies that can move faster than their competitors may be able to capture a larger share of the pent-up demand, strengthen their relationships with their most important customers, and possibly gain some new ones (Veselovská, 2020). Pricing strategy will be an important consideration as business gradually returns to normalcy—both to address normal supply–demand considerations and to maintain profitability while logistics costs, and possibly other costs, will be volatile (Majumdar et al., 2020). During this pandemic, businesses have seen a significant increase in online shopping demand for everything, including fresh food and groceries. Many businesses have benefited from this unexpected shift in channel (Table 22.2).

Table 22.1 Business performance of MSME enterprises during COVID-19

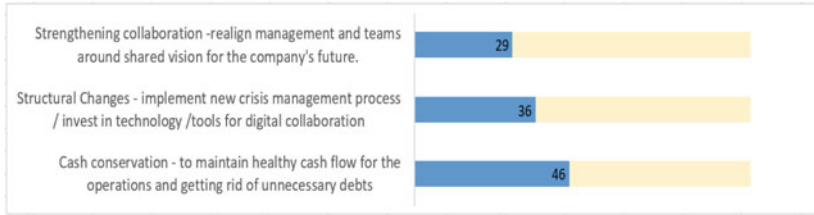
<i>Industry Type</i>	<i>April 2020 to Oct 2020</i>	<i>Oct 2020 to Mar 2021</i>	<i>Business Type</i>
MSME	>10% growth	>25% growth	Export
MSME	>10% growth	>25% growth	Domestic
MSME	>10% growth	>25% growth	Domestic
MSME	>10% growth	>10% growth	Domestic
MSME	>10% growth	>10% growth	Domestic
MSME	>10% growth	>10% growth	Export
MSME	>10% growth	0–10% growth	Export
MSME	>10% growth	0–10% growth	Domestic
MSME	0–10% growth	0–10% growth	Domestic
MSME	0–10% growth	0–10% growth	Domestic

Table 22.2 Business Performance of Large Enterprises during COVID-19

<i>Industry Type</i>	<i>April 2020 to Oct 2020</i>	<i>Oct 2020 to Mar 2021</i>	<i>Business Type</i>
Large	Negative growth	Negative growth	Domestic
Large	Negative growth	>10% growth	Domestic
Large	Negative growth	>10% growth	Domestic
Large	0–10% growth	>10% growth	Export
Large	0–10% growth	>10% growth	Export
Large	0–10% growth	>10% growth	Domestic
Large	0–10% growth	>10% growth	Domestic
Large	0–10% growth	>10% growth	Export
Large	0–10% growth	>25% growth	Export
Large	0–10% growth	>25% growth	Domestic
Large	0–10% growth	>25% growth	Domestic
Large	0–10% growth	>25% growth	Domestic
Large	0–10% growth	>25% growth	Domestic
Large	>25% growth	>25% growth	Export
Large	>10% growth	0–10% growth	Domestic
Large	>10% growth	0–10% growth	Domestic
Large	>10% growth	0–10% growth	Domestic
Large	>10% growth	0–10% growth	Export
Large	>10% growth	0–10% growth	Domestic
Large	>10% growth	0–10% growth	Domestic
Large	>10% growth	0–10% growth	Domestic
Large	>10% growth	0–10% growth	Domestic
Large	>10% growth	0–10% growth	Domestic
Large	>10% growth	0–10% growth	Domestic
Large	>10% growth	0–10% growth	Domestic
Large	>10% growth	0–10% growth	Domestic

RENEW—BUSINESS GROWTH FROM JANUARY 2021 TO AUGUST 2021

Businesses' responses varied depending on the competence of their supply chain risk-management capabilities prior to the crisis. Businesses with little or no risk-management experience tended to invest in new software tools, whereas enterprises with greater maturity focused primarily on implementing new practices (Fig. 22.11).



* % of respondents who say their company have implemented each practice (n= 35)

Fig. 22.11 Business resumption from January 2021 to August 2021 (*Note* *% of respondents who say their company has implemented each practice [n= 35])

FOCUS GROUP DISCUSSION

According to the FGD, the pandemic has pushed risk to the top of virtually every corporate agenda. Most respondents (95 percent) state that they have formal supply chain risk-management processes in place. A further % of businesses say they have implemented new supply chain risk-management practices in the last year. A small percentage (4%) created a new risk-management function from scratch, but the majority of respondents say they have strengthened existing capabilities.

Prior to the pandemic, respondents emphasize that cost reduction and productivity enhancement were driving the supply chain process, digitization, and investment. These drivers continue to be necessary, but the unprecedented chaos caused by COVID-19 threatened the competitive position—and even the survival—of many businesses that discovered they could no longer meet customer expectations. The pandemic's existential crisis has forced businesses to refocus their innovation and restructuring efforts on ensuring business continuity through resilience and flexibility.

However, talent remains a significant barrier to accelerated disruption, and the skills gap is widening. Enterprise leaders report a variety of ongoing efforts to close the digital skills gap, including reskilling or redeploying existing employees, hiring new talent from the labor market, and hiring specialist contract staff for specific projects. Skill development is more common, followed by cash conservation on the road to resurgence, new business development, collaboration, and structural changes required to maintain momentum. Fortunately, new supply chain technologies are emerging that can dramatically improve visibility across the end-to-end supply chain and support significantly increased supply chain

agility and resiliency without the traditional "overhead" associated with risk-management techniques.

During the pandemic, businesses are increasingly relying on technology to predict, monitor, record, measure, and report on supply chain disruptions. With supply chains becoming more dynamic and interconnected, particularly during the pandemic, digital tools have become the norm in many businesses. As a result, there has been a significant increase in the number of enterprises using technology to help with disruptions. Although COVID-19 has been a catalyst for technological change in some enterprises, the discussion revealed that many enterprises were already planning to implement technologies as their solutions became more accessible and cost effective for their respective organizations.

When businesses pursue more key practices, the likelihood of a successful resurgence increases dramatically. The number of practices successfully implemented determines the success rate of resurgence (from respond to renew).

Increased use of technology and digital collaboration along with improved processes in all functions remain the most common topic on the management agenda following RRR—though corporate resilience rose in the ranks and became an almost equally important topic (Fig. 22.12).

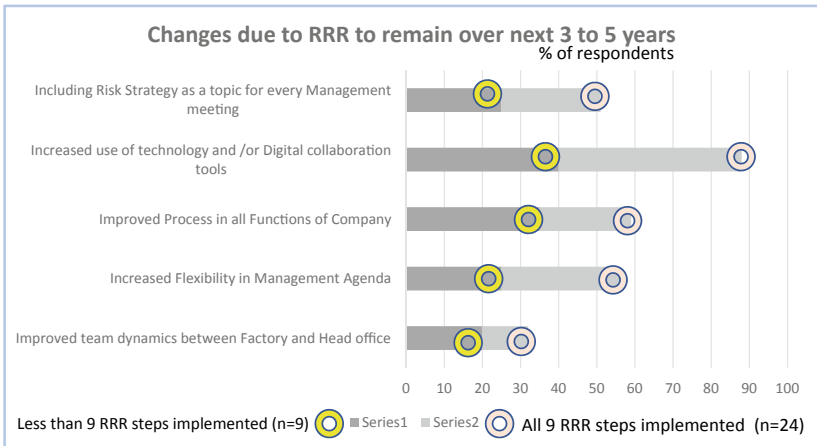


Fig. 22.12 Changes due to RRR over next 3 to 5 years

A new way forward. Finally, most companies who have adopted RRR as a resurgence are more likely to stick with the newer ways of working in the long term, see Fig. 22.12. Of the 9 ways to the RRR strategy works, much larger share of the respondents said that they will continue with 5 of them; most notably, they will continue with the changes that signal increased value enhancing involvement (48%). 90% of the respondents at all 9 RRR implemented companies—say their collaboration with senior management was very effective during a crisis. In other ways, the adaptable companies are aligned on how the RRR will continue to evolve. Both groups of respondents on the most likely change, the meetings (Work from Home) will be conducted remotely (62% of all respondents say so), and their use of technology and digital tool to collaborate will increase (50%).

Companies with RRR following leadership teams significantly outperformed their peers in their ability to build top-performing endowments. The time is now for the companies to take steps suggested in RRR strategy to help develop the capabilities that will equip their business to outperform others. The corporate recovery from the COVID-19 crisis will involve permanent changes to many dimensions of the origination, and the talent and capabilities of leadership will play a key role in that (70% of respondents). 88% of the respondents at all 9 key activities of RRR implemented companies; say their leadership was very effective during a crisis. The survey results confirm that not only RRR strategies followed by leadership is critical, but also some companies are far ahead in building competitive advantage. For everyone else, the time is now to follow the RRR strategy fully—which will equip their business to outperform others in an ever-changing landscape.

CONCLUSION AND WAY FORWARD

The COVID-19 crisis brought supply chains to the forefront. Over the past year, supply chain leaders have taken decisive action in response to the pandemic's challenges, such as effectively adapting to new ways of working, increasing inventories, and bolstering their digital and risk-management capabilities. Nonetheless, recent events have demonstrated that supply chains remain vulnerable to shocks and disruptions, with many sectors grappling with supply-side shortages and logistics-capacity constraints. Worryingly, these new issues are emerging just as senior leaders' attention is shifting away from supply chain issues. Enterprises must therefore create resilience and risk-management systems within

these parameters while considering that various risks may erupt and fade. Because not all disruptions are predictable in terms of scale or time, internal strategies are critical to ensuring that supply chain disruptions do not result in widespread business failures. The RRR framework proposed below is well established and has served several businesses well over the last two years. From respond to renew, the nine key practices support three distinct phases of resurgence. This framework is expected to be highly beneficial to organizations in leveraging the efficiency of supply chain management and achieving supply chain competitiveness (Fig. 22.13).

The RRR strategy is a significant tool for gaining a competitive advantage. Supply chain competitiveness is now required for firms due to rapid technological innovations, globalization, and widely used information technology. Survival in a pandemic-driven market environment requires the revival of business models and operations. It takes the integration and coordination of various supply chain components to form a joint alliance for a common goal. Given the highly disrupted environment, it is critical to develop a minimum viable strategy and to use adaptive strategy tools and techniques to iterate as your new normal emerges, as well as

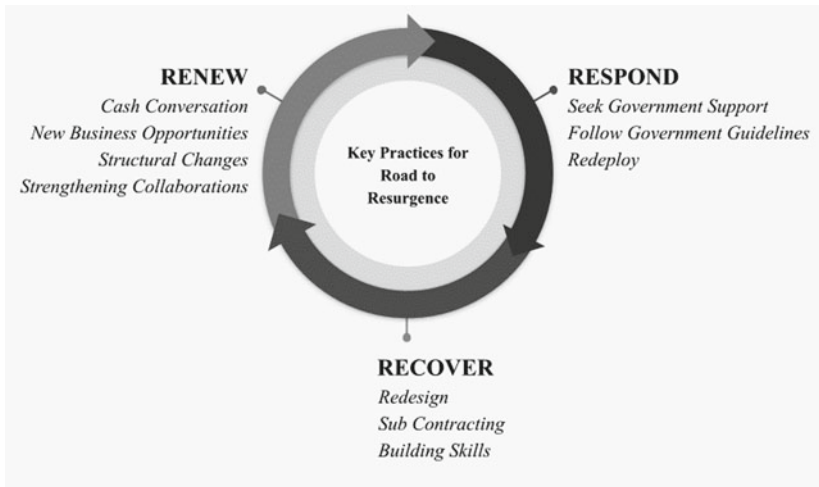


Fig. 22.13 Key practices—respond, recover, renew framework (Authors Compilation through Data collection)

to make strategic planning a continuous activity so that it can respond quickly to the inevitable changes in the business context. Some businesses have capitalized on the momentum gained during the pandemic by taking decisive action to adapt their supply chain footprint, modernize their technologies, and expand their capabilities. Others may revert to old working methods, leaving them unable to compete on cost or service with more agile competitors and still vulnerable to shocks and disruptions. Notably, the COVID-19 pandemic could last long, necessitating a new supply chain management model. Building supply chain resilience in the short and long term is critical and can improve business continuity plans.

IMPLICATIONS OF THE STUDY

Because COVID-19 has severely disrupted the entire global supply chain, the current study is critical for all stakeholders involved in supply chain management. The study's findings are intended to assist legislators in developing a resilient framework that can not only absorb external shocks like COVID-19 but also improve the supply chain network's performance and operational capability. Given the magnitude of losses since COVID-19 implementation, our analysis may persuade businesses to implement the RRR framework and to strengthen resilience in the face of COVID-like disruptions. Since the start of the COVID-19 pandemic, research and awareness about supply chain management have grown significantly. Businesses have realized the importance of a timely and sustainable risk-management plan that can build operational resilience and protect operations in the aftermath of a growing health crisis. Innumerable guidelines and procedures on health strategy, technology, and policy have been developed throughout the pandemic to combat the socioeconomic impact of COVID-19. In this study, domain experts and a literature review were used to identify the most important critical factors that could be used in building a resilient supply chain to improve logistical and operational efficiency. As a result, it is recommended that decision-makers focus on these aspects in order to achieve the stated goal of supply chain resilience.

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REFERENCES

- Asbjørnslett, B. E. (2009). Assessing the vulnerability of supply chains. In *Supply chain risk* (pp. 15–33). Springer.
- Anbanandam, R., Banwet, D. K., & Shankar, R. (2011). Evaluation of supply chain collaboration: A case of apparel retail industry in India. *International Journal of Productivity and Performance Management*.
- Bartik, A. W., Bertrand, M., Cullen, Z. B., Glaeser, E. L., Luca, M., & Stanton, C. T. (2020). *How are small businesses adjusting to COVID-19? Early evidence from a survey* (No. w26989). National Bureau of Economic Research.
- Barratt, M. (2004). Understanding the meaning of collaboration in the supply chain. *Supply Chain Management: An International Journal*, 9(1), 30–42.
- Barbieri, P., Boffelli, A., Elia, S., Fratocchi, L., Kalchschmidt, M., & Samson, D. (2020). What can we learn about reshoring after Covid-19? *Operations Management Research*, 13(3), 131–136.
- Barroso, A. P. et al. (2015). Quantifying the supply chain resilience. In H. Tozan & A. Erturk (eds.), *Applications of contemporary management approaches in supply chains*.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Bravo, B., Cortes, K., Aguilar, M., Granados, S., & Amaya-Leal, J. (2007). Competitiveness in the supply chain management: An overview in an oils' and greases' manufacturer. *Ingeniería y Desarrollo*, 22, 38–53.
- Bruneau, M., Chang, S. E., Eguchi, R. T., Lee, G. C., O'Rourke, T. D., Reinhorn, A. M., ... & Von Winterfeldt, D. (2003). A framework to quantitatively assess and enhance the seismic resilience of communities. *Earthquake Spectra*, 19(4), 733–752.
- Bode, C., Wagner, S. M., Petersen, K. J., & Ellram, L. M. (2011). Understanding responses to supply chain disruptions: Insights from information processing and resource dependence perspectives. *Academy of Management Journal*, 54(4), 833–856.
- Cachon, G. P., & Lariviere, M. A. (2005). Supply chain coordination with revenue-sharing contracts: Strengths and limitations. *Management Science*, 51(1), 30–44.
- Chowdhury, M. S., Rathod, J., & Gernsheimer, J. (2020). A rapid systematic review of clinical trials utilizing chloroquine and hydroxychloroquine as a treatment for COVID-19. *Academic Emergency Medicine*, 27(6), 493–504.
- Chow, G., Heaver, T. D., & Henriksson, L. E. (1994). Logistics performance: Definition and measurement. *International Journal of Physical Distribution & Logistics Management*, 24(1).
- Christopher, M., & Peck, H. (2004). *Building the resilient supply chain*.

- Christopher, M., & Lee, H. (2004). Mitigating supply chain risk through improved confidence. *International Journal of Physical Distribution & Logistics Management*, 34(5).
- Craighead, C. W., Blackhurst, J., Rungtusanatham, M. J., & Handfield, R. B. (2007). The severity of supply chain disruptions: Design characteristics and mitigation capabilities. *Decision Sciences*, 38(1), 131–156.
- Das, D., Datta, A., Kumar, P., Kazancoglu, Y., & Ram, M. (2021). Building supply chain resilience in the era of COVID-19: An AHP-DEMATEL approach. *Operations Management Research*, 1–19.
- El Baz, J., & Ruel, S. (2021). Can supply chain risk management practices mitigate the disruption impacts on supply chains' resilience and robustness? Evidence from an empirical survey in a COVID-19 outbreak era. *International Journal of Production Economics*, 233, 107972.
- Farahani, R. Z., & Elahipanah, M. (2008). A genetic algorithm to optimize the total cost and service level for just-in-time distribution in a supply chain. *International Journal of Production Economics*, 111(2), 229–243.
- Fisher, M. L. (1997). What is the right supply chain for your product? *Harvard Business Review*, 75, 105–117.
- Fuller, J. B., O'Connor, J., & Rawlinson, R. (1993). Tailored logistics: The next advantage. *Harvard Business Review*, 71(3), 87–98.
- Ghavamifar, A., Makui, A., & Taleizadeh, A. A. (2018). Designing a resilient competitive supply chain network under disruption risks: A real-world application. *Transportation Research Part e: Logistics and Transportation Review*, 115, 87–109.
- Golan, M. S., Jernegan, L. H., & Linkov, I. (2020). Trends and applications of resilience analytics in supply chain modeling: Systematic literature review in the context of the COVID-19 pandemic. *Environment Systems and Decisions*, 40(2), 222–243.
- Hale, T., & Moberg, C. R. (2005). Improving supply chain disaster preparedness: A decision process for secure site location. *International Journal of Physical Distribution & Logistics Management*, 35(3), 195–207.
- Hendricks, K. B., & Singhal, V. R. (2003). The effect of supply chain glitches on shareholder wealth. *Journal of Operations Management*, 21(5), 501–522.
- Howgego, C. (2002). Maximising competitiveness through the supply chain. *International Journal of Retail & Distribution Management*, 30(1).
- Ivanov, D. (2020). Predicting the impacts of epidemic outbreaks on global supply chains: A simulation-based analysis on the coronavirus outbreak (COVID-19/SARS-CoV-2) case. *Transportation Research Part e: Logistics and Transportation Review*, 136, 101922.
- Ivanov, D., & Das, A. (2020). Coronavirus (COVID-19/SARS-CoV-2) and supply chain resilience: A research note. *International Journal of Integrated Supply Management*, 13(1), 90–102.

- Ivanov, D., & Dolgui, A. (2020). Viability of intertwined supply networks: Extending the supply chain resilience angles towards survivability. A position paper motivated by COVID-19 outbreak. *International Journal of Production Research*, 58(10), 2904–2915.
- Jüttner, U., & Maklan, S. (2011). Supply chain resilience in the global financial crisis: An empirical study. *Supply Chain Management: An International Journal*.
- Karwasra, K., Soni, G., Mangla, S. K., & Kazancoglu, Y. (2021). Assessing dairy supply chain vulnerability during the Covid-19 pandemic. *International Journal of Logistics Research and Applications*, 1–19.
- Kanda, A., & Deshmukh, S. G. (2008). Supply chain coordination: Perspectives, empirical studies and research directions. *International Journal of Production Economics*, 115(2), 316–335.
- Kearney, A. T. (1994). *Partnership or power play?* Consultancy Report in conjunction with UMIST School of Management.
- La Londe, B. J., & Powers, R. F. (1993). Disintegration and re-integration: logistics of the twenty-first century. *The International Journal of Logistics Management*.
- La Londe, R. J., & Topel, R. H. (1997). Economic impact of international migration and the economic performance of migrants. *Handbook of Population and Family Economics*, 1, 799–850.
- Lambert, D. M., & Cooper, M. C. (2000). Issues in supply chain management. *Industrial Marketing Management*, 29(1), 65–83.
- Lehoux, N., D'Amours, S., & Langevin, A. (2010). A win-win collaboration approach for a two-echelon supply chain: A case study in the pulp and paper industry. *European Journal of Industrial Engineering*, 4(4), 493–514.
- Linton, T., & Vakil, B. (2020, March 5). Coronavirus is proving we need more resilient supply chains. *Harvard Business Review*.
- Majumdar, P., Biswas, A., & Sahu, S. (2020). COVID-19 pandemic and lockdown: Cause of sleep disruption, depression, somatic pain, and increased screen exposure of office workers and students of India. *Chronobiology International*, 37(8), 1191–1200.
- Margolis, J. T., Sullivan, K. M., Mason, S. J., & Magagnotti, M. (2018). A multi-objective optimization model for designing resilient supply chain networks. *International Journal of Production Economics*, 204, 174–185.
- Mahmoudi, A., Javed, S. A., & Mardani, A. (2021). Gresilient supplier selection through fuzzy ordinal priority approach: decision-making in post-COVID era. *Operations Management Research*, 1–25.
- Martinez-de-Albeniz, V., & Simchi-Levi, D. (2009). Competition in the supply option market. *Operations Research*, 57(5), 1082–1097.
- Mentzer, J. T. (2004). *Fundamentals of supply chain management: Twelve drivers of competitive advantage*. Sage.

- Mentzer, J. T., Flint, D. J., & Kent, J. L. (1999). Developing a logistics service quality scale. *Journal of Business Logistics*, 20.
- Ouabouch, L., & Paché, G. (2014). Risk management in the supply chain: Characterization and empirical analysis. *Journal of Applied Business Research (JABR)*, 30(2), 329–340.
- Pace, R. W., & Stephan, E. G. (1996). Paradigms of competitiveness. *Competitiveness Review: An International Business Journal*.
- Perry, M., & Sohal, A. (1999). Improving service quality within the supply chain: An Australian study. *Total Quality Management*, 10(4–5), 673–678.
- Pine, B. J. (1993). Mass customizing products and services. *Planning Review*, 21(4), 6–55.
- Ponis, S. T., & Koronis, E. (2012). Supply chain resilience? Definition of concept and its formative elements. *The Journal of Applied Business Research*, 28(5), 921–935.
- Ponomarov, S. Y., & Holcomb, M. C. (2009). Understanding the concept of supply chain resilience. *The International Journal of Logistics Management*.
- Remko, V. H. (2020). Research opportunities for a more resilient post-COVID-19 supply chain—closing the gap between research findings and industry practice. *International Journal of Operations & Production Management*, 40(4), 341–355.
- Rose, A., & Liao, S. Y. (2005). Modeling regional economic resilience to disasters: A computable general equilibrium analysis of water service disruptions. *Journal of Regional Science*, 45(1), 75–112.
- Verma, A., & Seth, N. (2011). A conceptual framework for supply chain competitiveness. *International Journal of Human and Social Sciences*, 6(1), 5–10.
- Sahay, B. S., Gupta, J. N., & Mohan, R. (2006). Managing supply chains for competitiveness: The Indian scenario. *Supply Chain Management: An International Journal*.
- Sawik, T. (2013). Integrated selection of suppliers and scheduling of customer orders in the presence of supply chain disruption risks. *International Journal of Production Research*, 51(23–24), 7006–7022.
- Scholten, K., & Schilder, S. (2015). The role of collaboration in supply chain resilience. *Supply Chain Management: An International Journal*, 20(4), 471–484.
- Seth, N., Deshmukh, S. G., & Vrat, P. (2006). A conceptual model for quality of service in the supply chain. *International Journal of Physical Distribution & Logistics Management*.
- Selko, A. (2021). *Pandemic reaction: What supply chains did right and where they can improve*.

- Shang, K. H., Zhou, S. X., & Van Houtum, G. J. (2010). Improving supply chain performance: Real-time demand information and flexible deliveries. *Manufacturing & Service Operations Management*, 12(3), 430–448.
- Sherman, E. (2020). *94% of the Fortune 1000 are seeing coronavirus supply chain disruptions.*
- Sheffi, Y. (2015). *The power of resilience: How the best companies manage the unexpected.* MIT Press.
- Sheffi, Y., & Rice, J. B., Jr. (2005). A supply chain view of the resilient enterprise. *MIT Sloan Management Review*, 47(1), 41.
- Simchi-Levi, D. (2009). Competition in the supply option market. *Operations Research*, 57(5), 1082–1097.
- Stanley, L. L., & Wisner, J. D. (2002). The determinants of service quality: Issues for purchasing. *European Journal of Purchasing & Supply Management*, 8(2), 97–109.
- Teti, M., Schatz, E., & Liebenberg, L. (2020). Methods in the time of COVID-19: The vital role of qualitative inquiries. *International Journal of Qualitative Methods*, 19, 1609406920920962.
- Tomlin, B. (2006). On the value of mitigation and contingency strategies for managing supply chain disruption risks. *Management Science*, 52(5), 639–657.
- Veselovská, L. (2020). Supply chain disruptions in the context of early stages of the global COVID-19 outbreak. *Problems and Perspectives in Management*, 18(2), 490–500.
- Vokurka, R. J., & Fliedner, G. (1998). The journey toward agility. *Industrial Management & Data Systems*, 98(4).
- Wagner, S. M., & Bode, C. (2008). An empirical examination of supply chain performance along several dimensions of risk. *Journal of Business Logistics*, 29(1), 307–325.
- Waters, D. (2011). *Supply chain risk management: Vulnerability and resilience in logistics.* Kogan Page Publishers.
- Wen, Z., & Liao, H. (2021). Capturing attitudinal characteristics of decision-makers in group decision making: application to select policy recommendations to enhance supply chain resilience under COVID-19 outbreak. *Operations Management Research*, 1–16.
- WTO. (2020). *Trade set to plunge as COVID-19 pandemic upends global economy.*
- Yadav, S., Luthra, S., & Garg, D. (2020). Internet of things (IoT) based coordination system in Agri-food supply chain: Development of an efficient framework using DEMATEL-ISM. *Operations Management Research*, 1–27.
- Zhang, Y., & Wildemuth, B. M. (2009). Unstructured interviews. *Applications of social research methods to questions in information and library science*, 2 (pp. 222–231).

PART VII

Epilogue



Agility in Business: Emerging CART Dimensions

Rajagopal

NEW PERSPECTIVES IN BUSINESS

The philosophy of business agility has emerged as an important strategic tool for firms to beat the increasing competition in the emerging businesses in the twenty-first century. The competitive performance of the firm is significantly driven by the changing customer needs. Agility in business influences the performance of a firm with increasing complexities in governance, innovation, and competitiveness strategies. Effective implementation of strategies with business agility needs firms to develop abilities on business sensing, flexibility, speed, and responsiveness. These attributes allow firms to co-create and coevolve with customer-centric strategies in a changing environment and respond rapidly to the complexities by reconfiguring their business tactics (Zhou et al., 2019). Managers working with agile business strategies need to be quick in responding to challenging business situations. Agile business processes involve easy

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adjustment of plans and strategies for responding swiftly to new opportunities and the emerging challenges. While doing business with the social media channels, companies work in the interactive digital environment, which demands implementation of flexible business strategies in view of the crowd behavior and social consciousness of customers. Agile methodology is an alternative to Waterfall methodology—the rigid, top-down approach to project management that most firms follow. The agile business strategies focus on the following management perspectives to increase the process speed and quality of deliverables to create value:

- Flexibility to meet business challenges.
- Social and interactive business campaigns of products and services
- Proactiveness to crowd opinions, collective intelligence, and changing social conventions.
- Numerous small experiments to explore new business and increase consumer outreach in existing business.
- Encouraging group community behavior within target business.
- Driving co-creation, coevolution, and reverse accountability in managing customer-centric innovations.
- Engagement of stakeholders and transparency in business process.

The broad goals of agile business include improving the speed, predictability, transparency, and adaptability to changing business scenarios. Managers working with agile business strategies benefit from continuous feedback on products and services by the customers and stakeholders that allow the managers flexibility in developing strategies to adapt to changing business scenarios. Working in an agile business environment is a team approach within the firm. The basic manifesto of agile business encompasses core values and principles that are crucial for achieving performance through co-created and coevolved business strategies. These values and principles are managed and delivered by the teams, through various agile approaches such as standups, sprints, and *Kanban* boards. *Kanban* is a Japanese approach for an agile project management tool designed to visualize execution of strategies and maximize efficiency for delivering desired outcome. *Kanban* boards use cards, columns, and continuous improvement to help technology and service teams commit to the right amount of work, and get it done. This method has six core practices:

- Visualize workflows.
- Narrowing the work-in-progress spread.
- Manage workflows.
- Make processes explicit and streamlined to optimize cost and time and reduce the incidence of risk.
- Establish feedback loops, and
- Ensure continuous improvement.

Companies engaged in agile business practices grow as learning organizations and develop abilities to learn behavioral perspectives of consumers and exploit business knowledge to respond to changing business scenario (consumer preferences, competition effects, disruptive innovations, etc.) promptly and efficiently. In implementing agile business strategies, firms need to effectively deliver value and inculcate loyalty among stakeholders. Most studies on agility focus on the agile business approach involving co-created and coevolved supply chains and production systems. Agile business represents a lean and flexible business management approach based on an array of customer-centric practices aimed at developing compliant and acquiescent business approaches. Notably, agile business encourages a firm's inclusive teams (inducting customers and stakeholders) to work together on common objectives centered on the problems, needs, and desired solutions of customers and stakeholders. Periodical update on the customer needs, preferences, and opinions on various business touch points (business-mix elements and value perspectives) help companies optimize their agile business operations. Accordingly, effective customer engagement, sustainable value, and higher business demand can be achieved by the firms (Xu et al., 2018).

Organizational context, in which the 5T elements are managed, determines the business management approach based on an array of practices over the traditional business. Commonly, agile business practices encourage team culture on common objectives centered around the customers' needs. In the agile business process, teams periodically evaluate the efficiency of the process and eliminate redundancy to align and optimize business operations accordingly. Accordingly, companies practicing agile business strategies can achieve higher customer engagement and value and an increased ability to adapt to business uncertainties, and change stimulate speed toward business demand (Gera et al., 2019). Consequently, agile business strategies need to focus on quick response to customer-centric innovation and competitive action. Business agility

is thus focused on the changing customers' needs and expectations, and flexibly coordinating business objectives by employing resources appropriately. Broadly, it is the ability of a firm to develop business strategies tactically at short notice and to adapt to changing business conditions to sustain the business competition effectively (Hagen et al., 2019).

To evolve and practice agile business in business-to-business or customer-centric business segments, companies need to understand the agile ambience, core management perspective, methodology, core areas to be attended, and the selected value-based moves. The ambience for agile business consists of team-based operations with flexible decision to manage the changing consumer preferences within a predetermined period and stay proactive and responsive to the business. The specific attributes of agile business are inclusivity and reverse accountability (customer engagement and role in agile governance), which help companies to encourage agile teams to participate in co-creation of products, services, brands, and business strategies along with the customers and stakeholders. The co-creation will be meaningful for the companies if the problems, needs, and probable solutions are meticulously explored by the agile teams, customers, and stakeholders. In addition, a systematic approach to integrate 5Ts comprising task, time, target, thrust (force), and trust (among the stakeholders and team members) empowers the agile teams to work with the agile methodologies including Scrum, Sprint, Kaizen, and Kanban. Companies also use the current agile technologies and software to analyze the data and conduct qualitative analysis of consumer perceptions, emotions, and the degree of satisfaction. Companies adapting to agile business practices need to ensure the effective implementation of change management in the organization and encourage continuous learning as an organizational tool to gain competitive leverage.

Most companies use tactical approaches to explore opportunities by conducting rapid business appraisal (RBA) and participatory business appraisal (PBA). The RBA and PBA analysis helps companies make value-based decisions instead of usual data-driven decisions. The agile business decisions are also benefitted by the crowd behavior and collective intelligence. Besides the stakeholder engagement, such crowd and stakeholder engagement in agile business helps companies to launch effective agile campaigns based on the user-generated contents and collective intelligence. The implementation of agile business approaches is managed in

a project environment with effective monitoring and periodical evaluations. One of the major challenges in managing agile business projects is controlling the scope creep with a flexible business philosophy. The core areas in the agile business include finance and human resource management. Some key indicators such as cost, time, risk, investment, and profit constitute the financial matrix, which helps in managing value-based moves such as customer touch points and Go-to-Business strategy.

The agile business is largely team based and can be designed, developed, and implemented with technology applications and interactions with the customers and stakeholders. Agility principles suggest removing all work silos and hierarchies and setting flexible collaboration across a team along with the stakeholders. In this process, team members should exhibit inclusiveness in the project and stay involved in working with the various stages of developing and implementing agile business strategies. Team meetings, and corporate and social communication channels are used to encourage collaboration during the strategy development and implementation process. Large companies with data-driven approach set effective agile business campaigns. Agile business firms encourage new experiments for boosting the team's performance and rely on data for measuring and adjusting their efforts. Agile business teams use sprints cycle which allows teams to tackle smaller amounts of work within the sprint timeframe and produce continuous release of work. A sprint is a short, predetermined period followed by the scrum teams to complete a set of planned tasks. Sprints are used as popular agile methodologies supported by software to carry out planned tasks.

It has been observed over several experiments across different companies and business ecosystems that agile business practices have leveraged the speed of delivering value among the stakeholders and other business players. This is achieved through transformations in organizational structure, horizontal work culture (teams administration), and collective implementation of agile business activities. Agile organizations prefer to empower small, cross-functional teams and provide autonomy to explore creativity, flexibility, and applied thinking in business activities and overcome conventional working practices. This allows the teams to complete tasks without delays caused by dependencies. Flexibility is one of the explicit benefits of agile business. It manifests most strongly in the way agile business teams use iterative planning to deliver viable work instead of blindly following a predetermined business plan. Agile business is, thus, a situation-based business planning, and in this approach, continuous

learning and tactical strategies account for larger success than a meticulous strategic plan. Agility in business can be better understood by the companies through rapid business appraisal (RBA), which gives an overview of the stakeholder needs, competitive strengths, weaknesses, opportunities, and threats. In addition, RBA also provides a map of tactical moves of competitors, disruptions, and temporal growth perspectives to support critical thinking, integration, and decision orientation of the firms. Based on the RBA analysis, the agile business companies may develop participatory business action (PBA) blueprint by constituting teams and tasks. Agile business teams should explore KPIs from low-risk experiments, which influence each task in the tactical grid of cost, time, risk, and performance. Agile business teams are built around small tests to prove or disprove assumptions, measure results, and improve campaigns over time. Such a linear path of agile business helps teams make analytical decisions on the taxonomy of campaigns to be planned and delivered.

Business agility allows the firm to identify and understand latent needs and motivates managers to adapt a business program at the grassroots in each geodemographic arrangement. The business-sensing elements of agility stimulate firms to identify opportunities and threats in a given business situation and redesign existing business programs to suit business needs by taking into confidence the stakeholders and key partners. Accordingly, business programs can be developed to enhance flexibility and speed of business operations. It is also necessary for the firms to build motivated and responsive corporate teams to engage stakeholders and key business partners in implementing agile business programs. Agile business practices have proved to be successful for many firms in deriving high business performance and growth in a competitive business ecosystem (Khan, 2020). Agile business capability of a firm aligns with turbulent business environments to simultaneously influence performance against competitors. It is a proactive, responsive, and flexible way to manage business programs with agility. In addition, agility involves both proactively creating changes and rapidly sensing and responding to the available and hidden opportunities and threats. Nonetheless, agility is a domain-specific concept and firms may largely rely on customer-based processes to manage products and services in a competitive business ecosystem (Zhou et al., 2020).

SOCIAL LEARNING

Social learning has major implications on behavioral transformation and alignment in view of the social, technological, and business interventions, which reveals that social learning is a conscious effort between society and individuals. The learning portfolios and approaches vary across global and local communities. Crowd-driven diffusion of knowledge based on the experiences (user-generated contents) within the community and corporate efforts delivers collective intelligence as a major source of social learning. The learning platforms have been evolving with the advancement of information technology. Consequently, digital social media channels have become popular since the early twenty-first century with the growing support of video and photo interactive tools. The user participation in the various technology-driven communication tools has caused high advanced network propagation over the conventional communication workstations such as radio, television, and print media channels. The broad effect of social learning reveals that social learning promotes co-creation and coevolution of business and society relationship by generating common value system and social intelligence. In addition, social learning disseminates new trends of ethnicity and helps in developing community brand development.

Social learning is nurtured with individual and group cognition and develops perceptual semantics on thematic learning through various access points to the learning tools. The thematic learning is built on the perceived and shared experiences on innovation and technology, sustainability, circular economy (inducing reusability and latent economic value), utilitarian and hedonic perspectives, and compatibility with social values and lifestyle. The cognition and perceptions contribute significantly to the perceived and acquired emotions like arousal, merriment, and melancholy. Most consumers tend to develop self-image congruence and perceptual semantics to express their emotions and explore solutions for the implicit needs through participating on the social media channels inquisitively. The social institutions manage diffusion of knowledge under various categories including acquired, pooled, and interrelated information.

The exponential growth in the number of social media users has led businesses to explore efficient ways of managing network business and stay omnipresent in the digital business space. Businesses have adapted to this new normal and focused on digital business models that provided competitive opportunities to create customer value through the social

media business channels. Combined with the increasing access to Internet in the emerging business and the popularity of social media business, the relationship business has gained traction rapidly and most customer-centric companies could enhance their business share. The power of the social media ecosystem has been amplified due to the leverage of convenience business against the traditional business practices. This is evident in the case of Facebook (FB), which turned to be a popular platform for business products, promoting brands, managing relationships, sharing experiences, and diffusing corporate communications with the customers. A company can post varied business contents on their FB page to inform customers about upcoming innovations, products, and current promotional offers. Social media serves as a bidirectional communication channel, which enables firms to obtain direct feedback from existing and prospective customers. In a cross-communication drive, FB Fan pages are also used to disseminate special discount coupons, share information about promotions, and organize competitions with prizes for customers, which have been found to be effective and supportive to the growth of business of a company (Chawla & Chodak, 2021).

The increasing usage of digital social networks has encouraged societies to evolve with purpose-led growth in the fields of entrepreneurship, empowerment, socio-economic upliftment, health, housing, and consumption to augment the value and lifestyle. Global interactions have evolved on a commonplace to explore business opportunities through co-creation. Over time, there have been many firms that have benefited from the social intelligence, collaboration, and co-creation of frugal and social innovations to leverage businesses in competitive marketplace. In this process, knowledge sharing among networked individuals has significantly helped in value-based decision-making involving customers and stakeholders. The shared and pooled knowledge is viewed as the open flow of information between individuals or groups, which expands to crowd as the interactions among people of common interests agglomerate beyond the social niche. Knowledge sharing in a crowd environment is considered as collective intelligence. It is a key component in organizational development for most firms following the inclusive business philosophy and engaged in co-creating new knowledge to achieve common goals. Such open, distributed, and largely voluntary knowledge sharing provides benefits to the consumer communities and niche communities in terms of democratized dissemination of knowledge. Social intelligence, thus, addresses co-creating social strategies, maneuvering complicated social

settings, interacting with others, and connecting business practices to various social situations. Social intelligence is a multifaceted construct reflecting the ability to analyze explicit and implicit social cognitions and respond appropriately to social behavior. While these fundamental cognitive and behavioral traits address the core social intelligence perspectives, there exists a paucity of research in wide variety of associated factors that contribute to conventional and digital social intelligence (Nguyen et al., 2019; Rahim, 2018).

Social intelligence analysts in large companies often report exclusively to a single department such as communications, business, or strategy. That can make analysts settle toward the approved pattern of thinking within their function, potentially limiting the span of insight toward making appropriate strategies on the consumers' relationship with the company. Analysts should also evaluate a variety of underlying perspectives from social media to establish internal checks and balances for keeping the integrity with such public involvement. In some cases, leniency in the information checks across social networks and may lead adversely to whistleblowing against the company. General Electric employed a social media approach to gather ideas about what it called a "social" airplane, offering prizes with Virgin Airlines for the best insights. The company enlisted a community with several followers of its eco-imagination Twitter account and organized conversations around key topics using hashtags.¹ This global network had produced thousands of ideas that had not been discussed or published elsewhere. Some focused on green topics, such as the use of solar panels and electric vehicles in engine-manufacturing operations and of LED lighting on aircraft. Participants also suggested giving each flight its own hashtag for conversations or allowing airlines to send messages directly to passengers when their rows were boarding.

In addition to social intelligence and collective intelligence, competitive intelligence also significantly affects the business decisions of firms. Competitive intelligence is a systematic and ethical process of data management, which encompasses collection and polling of information, arraying and analyzing of information, and validating external business information that impacts and affects corporate plans, decision-making, and processes of manufacturing and operations. Though competitive

¹ A word or phrase used in micro-blogging and social-networking services, such as Twitter, that is preceded by a hash mark (#) and identifies a category of interest and facilitates a search for it.

intelligence embeds several phases of information management, it evolves broadly within the four phases comprising planning, collection, analysis, and dissemination of information. In the planning phase, firms tend to establish the collection and analysis of information on a predetermined charter by distributing information categorically. Accordingly, the firms in planning phase define the attributes of information to be acquired, its reference period, and the quality of data. Firms ensure the quality of data through a rigorous formal process, which includes identification of data variables, selection of spatial and temporal indicators, and validation of competitive information, to learn about the competitor strategies and various perspectives of consumer behavior. However, social institutions play significant role in nurturing the cultural heritage, which is reflected in the individual behavior. Such institutions include family, education, and political structures, and the media affects the ways in which people relate to one another, organize their activities to live in harmony with one another, teach acceptable behavior to succeeding generations, and govern themselves.

Most enterprises rely on social intelligence and business analytics for developing appropriate strategies for risk management and toward building a base for decision support. A large numbers of customer-generated product reviews often contain information about competitors and have become a new source of mining competitive intelligence. Firms engaged in developing social and sustainable technologies learn the relative weaknesses and strengths of their own products, and design competitive products and campaigns (Xu et al., 2011). Comparison of stakeholder opinions is a precious information source for the enterprises to identify the relative strengths and weaknesses of their products and services. The risk and threats of competitors to the enterprise need to be analyzed by the small and medium enterprises to develop design-to-business business strategies for their products and services. Mining such comparative opinions needs qualitative analysis due to the large amount of customer reviews and their informal style of opinion documentation. Most firms in the global business place tend to adopt a more focused business strategy and focus on realizing how the effect of interplay between premium and low-cost rivals on achieving business share and profit can be minimized. Companies today must learn how to take on low-cost competitors in the large consumer segments, develop inimitable business tools, develop organizational leadership, and build sustainable stakeholders (Ryans, 2010).

Broadly, the shift from conventional- to new-generation socio-technological structure and development modeling can be delineated as the helix effect in business. The core of the helix lies in disaggregating the traditional management hierarchy into two separate, parallel lines of accountability—equal in power and authority, but philosophically holding a new perspective. Successfully adopting the helix requires a transformational leadership, customer-centric business philosophy, and co-designing business models. Convergence of a talent infrastructure and the shifts in management mind-sets lay the foundation of helix, which emerges out of entrepreneurship education and bottom-up business economy that many businesses do not currently possess. The helix concept has been managed discreetly in some social technology enterprises, which serve as feeder companies to the large industries. It is often challenging for small companies to adapt to a structural business model over the traditional family-based organizational structure. Relatively larger companies also tend to replace complex matrix structures and redesign organizations and their decision-making processes. The helix effect helps the enterprises move ahead quickly to exploit new business opportunities. In the helix process, transformative leadership drives value creation and augments objectives, discusses business priorities, and improves performance against the goals and targets (Smet et al., 2019). The clear distinction of enterprise management and leadership helps in constructing the helix with agile structures. However, organizational and business transformations in small companies are more challenging as compared to the large corporations due to *command and culture* disintegration. Moreover, the complex nature of the transformational necessitates in an organization often increases its overhead costs and administration process.

As the firms become tensile against the business uncertainties and predicable risks, their abilities stem out of collective intelligence (Boder, 2006) and customer engagement in categorical business processes of product development, manufacturing, business, advertising, and customer communication. In the largest companies, customer values are largely determined by shared customer perceptions, experience, and potential business ideas. The analysis of collective intelligence not only opens a new range of business opportunities for companies, but also helps in exploring reverse innovations (evolved in niche or remote destinations) that have the potential for commercialization. Commercializing a reverse innovation is a disruptive leap to hit a commercially established product in the target business. Reverse innovations demand organizational insights

into how a new product could drive an impact in emerging businesses (Rajagopal, 2016b). Customer engagement in the emerging firms today is instrumental to value-based business modeling and exploring customer-centric business opportunities. Consequently, customers, stakeholders, and leaders hold the power to respond to major business shifts and let firms grow with the collective intelligence and necessary social interventions (Christensen & Overdorf, 2000).

CART ATTRIBUTES

A firm has to overcome many challenges, such as conventional social and cultural environment and inculcate institutional consciousness among the employees, stakeholders, and customers, in adapting to the agile business approaches. Generating institutional consciousness must focus on co-creating new *Concepts*, develop customer-centric *Application* (user value) of business strategies, support *Research* at the grassroots of business on existing problems, needs, and possible solutions (PNS factors), and ensure *Transformation* in business practice (CART). Driving agility in business through CART attributes face several challenges in carrying out innovations. These challenges include managing the resources efficiently, handling operations risk, marketability, and cost and time overrun. Entrepreneurs often face market failures and piling-up of sunk cost due to radical and experimental innovation approach. Such endeavors cause risk rollouts throughout the project leading to abort the innovation untimely, which develops serious cognitive dissonances among entrepreneurs (Rajagopal, 2016a, 2016b). The role of CART drivers in inculcating agility in business organizations is illustrated in Fig. 23.1.

The CART attributes and push and pull factors are jointly led by the firm, society, stakeholders, collaborators (firm with strategic partners), and customers (including the crowd canvas) as illustrated in Fig. 23.1. Progressive firms with an agile business philosophy invest time and resources in developing new concepts on business proximity with focus on changing social, cultural, and behavior perspectives of customer, stakeholders, employees, and business partners. The changing concept of corporate social responsibility (CSR) of firms has been adapted to the radically changing matrix of problems, needs, and probable solutions (PNS). Consequently, firms today are engaged with consumers and communities to identify the minimum viable segments (MVS) to nurture their business as hubs in competition. To stay customer centric, most

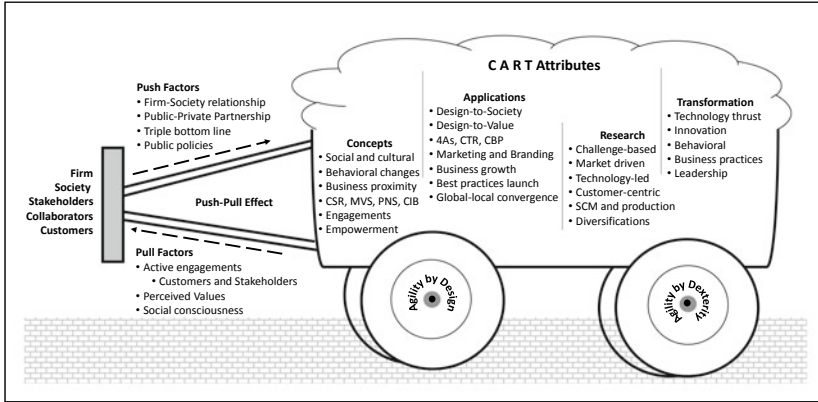


Fig. 23.1 Attributes of CART Factors (Source Author)

successful multinational companies are exploring crowd behavior to gain creative inputs through collective intelligence and develop competitive leap over the rivals in the business environment. Such disposition of business firms tends to integrate crowd, innovation, and benefits (CIB) in the corporate policies. Such strategies of global firms share lessons within the industry and business ecosystem of customer and employee engagement by empowering them in decision-making.

In the CART attributes, discussion on concepts is followed by the implementation of conceptual pioneering strategies (Applications), which are largely experimented at the grassroots level by integrating design-to-society (social proximity of firms) and design-to-value (perceptual values of consumers and stakeholders). Most firms pilot test their strategies that are developed conceptually through the 4As factors comprising awareness, attributes, affordability, and adaptability among consumers. However, firms must analyze meticulously the impact of cost-time-risk and cost-benefit-performance matrices to support profitability in marketing and branding. Success of such experiments with new concepts enhances business growth and develops local-global convergence or vice versa as illustrated in Fig. 23.1. Consequently, emerging firms can derive best practices out of the experiments such as the lean strategy of Toyota, or faster cycle product development of General Electric Company.

To convert concepts into implementable projects (applied concepts), it is necessary for firms to engage in challenge-based research. The

rising challenges can be identified in PNS factors, socialization of brands, frugal or reverse innovation, and co-creation of designs, products, and marketing strategies. Collaborative research with academics, entrepreneurs, and industry would be useful in developing market-oriented, technology-led, and co-created innovative supply-chain management strategies. The challenge-based research significantly supports exploring and experimenting the new diversification strategies for marketing and business. A linear integration of new concepts, applications, and research leads to transform the design thinking, manufacturing, marketing, and consumption trends through shifts in innovation, technology, and behavioral perspectives of consumers over time. Such commitment to change management needs agile leadership and business practices.

The CART attributes broadly support the agility in business practices both by design (convergence of C4 factors including crowd, consumer, community, and company) and by dexterity (employee skills, corporate practices, and engagement in strategic thinking). Besides the factors associated with agility by design and dexterity, the push-pull factors also significantly affect agility in business. Relationship between firm and the society, public private partnership in social and sustainable perspectives, and managing the triple bottom line (people, planet, and profit) are the vital push factors for agility in business. However, public policies on environment, social benefits, and national economic contributions of firms also push the CART attributes to achieve agility in business among firms. The pull factors that affect agility in business are driven by active customer and stakeholders' engagement, perceived values, and social consciousness.

Empowering the stakeholders and employees helps in exploring creativity and attraction toward new technologies, which boosts market competitiveness, business performance, and power economic growth. Successful firms empower these people and entrust them the creative lead, innovation, and business growth. However, accommodating the complex and chaotic nature of the competition with creativity and innovation is a complex phenomenon, while increasing the efficiency, improving quality, and raising productivity largely depend on the organizational work-culture and employee relationship.

Agility and agile transformation are the two facets of business, and both are correlated with business performance. Besides design-driven and technology-oriented business strategies, the business competition of the twenty-first century is largely driven by social stimuli, behavioral shifts

in consumption, and crowd intervention. Therefore, the cutting-edge of business strategies across the geodemographic segments is widely influenced by the individual and group behavior, collective intelligence, and neuro-centric emotions. People (crowd) tend to disseminate persuasive messages, which aim to alter the attitude of consumers and the overall consumption behavior. Besides many operational elements, agility in business is primarily linked to the social and economic postulates of consumer behavior. The change of mind among consumers is induced by self- and social concepts that govern the business strategies, technologies, and end-user values to leverage business competition. In addition to customer satisfaction, the majority of business operating models are mainly driven by corporate values by *putting the people first* and agility to adopt the revised norms quickly.

INNOVATION AND TECHNOLOGY

Innovation and its commercialization are the top priorities for every emerging enterprise, and to achieve success through frugal and radical innovations, firms must put as high energy and investment into business new offerings as they do in generating them. Commercializing innovation and business innovative products and services are central to strategic decisions and sustainable approaches rather than merely tactical functions of acquiring and retaining customers, as many firms tend to practice today. The full, business-growing power of the business strategies for both frugal and radical (disruptive) innovations are penetrated ambidextrously in the upstream and downstream markets through social media and collective intelligence. Nonetheless, the major focus in commercializing innovation is to co-create and coevolve businesses by engaging customers and stakeholders. Such a business strategy would help firms in developing value-based stakeholder-led decisions to gain benefits over the competitors. Understanding the PNS factors and consumption drivers, identifying customers, and working with the go-to-business approach offer several competitive benefits to the firms to business innovative products irrespective of their scale of business. It is also important to explore and analyze the consumption ecosystem congruent to the innovations, especially those that support the breakthroughs. Therefore, firms need to be included in development discussions earlier in the innovation process and must be engaged in implementing the tasks of project charter (Yohn, 2019).

The technology business grid has several factors that pose conflicts and challenges to the innovation and technology development firms during different levels of process. The complexity grid comprises twelve commonly observed points of conflicts, which has independent effects of each point as well as in a matrix form. The conflict points in the grid include ideation, resources management, process management, capabilities and competencies, technology business, growth and next generation innovation and technology issues, involvement, organizational policies, operational efficiency, competitive decision, business environment, and organizational culture, all of which nurture the innovation and technology development projects in the firm. Firms face many conflicts during the innovation process on business of the technology-led products and the existing business environment. Moving innovation and technology to next generation is also not an easy step-up, as firms often get snared in the unwise competitive decisions to push the innovation and technology-led products in business.

The frugal innovation with focus on PNS factors and achieving economies of scale has significantly contributed to the social and economic development within the niche. Consequently, disruptive innovation has increasingly become a core attraction to the large firms to collaborate, converge, and commercialize (3Cs) not only to motivate business alliances, but also to build the business strategy cube. The business strategy cube has triadic business strategies comprising design-to-business, design-to-society, and design-to-value perspectives. Such micro-macro business alliances within various social development sectors including health, housing, energy, transportation, and machinery and robotics across sectors have bridged economics to engineering and technology. This change is occurring as most firms in the world are facing contemporary challenges such as intense global competition, increased business volatility, the constantly changing consumer demand, and shortened product lifecycles. Such socio-economic and business conditions have driven disruptive innovation and disruptive innovation-based entrepreneurship to resolve social challenges, which are increasingly becoming a strategic means for achieving sustainable company growth and competitiveness. The concept of disruptive technology can be either necessarily radical, frugal, or superior to the existing technology. A challenge-based research design is generated through a process of social, economic, and political negotiation and value-based stakeholder focus. Accordingly, low-cost technologies with high perceived use value and ease

of use perception become to serve the social and economic needs, survive, and prosper. However, penetration of social innovation and technology is slow, which causes delay in adoption and jeopardizes their success (Si & Chen, 2020).

REFERENCES

- Boder, A. (2006). Collective intelligence: A keystone in knowledge management. *Journal of Knowledge Management*, 10(1), 81–93.
- Chawla, Y., & Chodak, G. (2021). Social media business for businesses: Organic promotions of web-links on Facebook. *Journal of Business Research*, 135, 49–65.
- Christensen, C. M., & Overdorf, M. (2000). Meeting the challenge of disruptive change. *Harvard Business Review*, 78(2), 65–76.
- Gera, G., Gera, B., & Mishra, A. (2019). Role of Agile business in the present era. *International Journal of Technical Research & Science*, 4(5), 40–44.
- Hagen, B., Zucchella, A., & Ghauri, P. N. (2019). From fragile to agile: Business as a key driver of entrepreneurial internationalization. *International Business Review*, 36, 260–288.
- Harrysson, M., Metayer, E., & Sarrazin, H. (2012). *How social intelligence can guide decisions*. McKinsey & Co.
- Khan, H. (2020). Is business agility important for emerging market firms in advanced markets? *International Business Review*, 29(5), in press <https://doi.org/10.1016/j.ibusrev.2020.101733>.
- Larson, D., & Chang, V. (2016). A review and future direction of agile, business intelligence, analytics and data science. *International Journal of Information Management*, 36, 700–710.
- Nath, U. K., Jagadev, A. K., & Pattnaik, P. K. (2021). Agile transformation for better business values using orchestration model. *Materials Today: Proceedings* (in Press). <https://doi.org/10.1016/j.matpr.2021.02.177>
- Nguyen, T. M., Nham, T. P., Froese, F. J., & Malik, A. (2019). Motivation and knowledge sharing: A meta-analysis of main and moderating effects. *Journal of Knowledge Management*, 23, 998–1016.
- Rahim, M. A. (2018). A process model of social intelligence and problem-solving style for conflict management. *International Journal of Conflict Management*, 29, 487–499.
- Rajagopal. (2016a). *Innovative business projects: Breaking complexities, building performance (Vol.2)-financials*, New Insights, and Project Sustainability, Business Expert Press.
- Rajagopal. (2016b). *Innovative business projects: Breaking complexities, building performance (Vol. 1)-fundamentals and project environment*. Business Expert Press.

- Ryans, A. (2010). The high stakes of low-cost competition. *IESE-Insight Magazine*, 4, 21–28.
- Smet, A. D., Kleinman, S., & Weerda, K. (2019). *The helix organization*. McKinsey & Co.
- Si, S., Zahra, S. A., Wu, X., & Jeng, D. J. F. (2020). Disruptive innovation and entrepreneurship in emerging economics, *Journal of Engineering and Technology Management*, 58 (in Press). <https://doi.org/10.1016/j.jengtecman.2020.101601>.
- Si, S., & Chen, H. (2020). A literature review of disruptive innovation: what it is, how it works and where it goes. *Journal of Engineering and Technology Management*, 56 (In Press) <https://doi.org/10.1016/j.jengtecman.2020.101568>.
- Xu, H., Guo, H., Zhang, J., & Dang, A. (2018). Facilitating dynamic business capabilities development for domestic and foreign firms in an emerging economy. *Journal of Business Research*, 86, 141–152.
- Xu, K., Liao, S. S., Li, J., & Song, Y. (2011). Mining comparative opinions from customer reviews for Competitive Intelligence. *Decision Support Systems*, 50(4), 743–754.
- Yohn, D. L. (2019). *Why great innovations need great business*. Harvard Business School Press.
- Zhou, J., Mavondo, F. T., & Saunders, S. G. (2019). The relationship between business agility and financial performance under different levels of market turbulence. *Industrial Business Management*, 83, 31–41.
- Zhou, j., Mavondo, F. T., & Saunders, S. G. (2020). The relationship between business agility and financial performance under different levels of market turbulence. *Industrial Business Management*, 83, 31–41.

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