# Sustainable Practices in Luxury Apparel Industry

Shams Rahman and Aswini Yadlapalli

Abstract Although the market share for the luxury apparel has increased considerably, the industry, however, is perceived to be lagging behind in sustainable practices. This chapter identifies sustainable practices within luxury apparel brands against Global Reporting Indicators (GRI) and extends the 'Greening Goliaths versus Emerging Davids' conceptual framework for classifying the luxury brands. Using the case study approach, this chapter analyzes sustainable practices of nine global luxury brands and classifies them into four clusters: Ecopreneurs, Greening Goliaths, Emerging Davids, and Sustainable Entrepreneurs. Results indicate that true artisanal brands with third party accreditation in sustainable reporting such as Prada and Gucci emerged as sustainable entrepreneurs. On the other hand, Ralph Lauren a ready-to-wear luxury brand with emphasis on economic values emerged as an ecopreneurs.

**Keywords** Global reporting indicators • Luxury apparel • Sustainable practices • Global brands

# **1** Introduction

Over the past 20 years, the number of luxury consumers worldwide has almost tripled from 90 million in 1995 to 330 million in 2013 [3]. It has been projected that in 2015 revenues for luxury goods worldwide will grow approximately 5-6% of annual average [3]. This phenomenal growth in this sector is due mainly to the creation of 'new rich' in South-East Asia and the increasing social relevance of

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owning luxury goods [2]. Among all categories of luxury products, fashion items manifest the prestige of the owner and communicate the identity of the user.

In the literature, it is argued that luxury and sustainability are incompatible terms—both cannot be achieved at the same time. Consumption of anything more than basic needs jeopardizes the life of next generations and is regarded as unsustainable. Luxury products are known for the waste of resources for the pleasure of few and symbolize social inequality. This could be one of the reasons why the industry has been under continuous scrutiny for unethical practices [23] and recently been targeted by the media for lagging behind in social and environmental sustainability aspects [26].

Luxury industry relies heavily on communications for branding and marketing. To build a sustainable brand image, luxury brands need to emphasize on social and environmental values while marketing. A common practice in advertising sustainable aspects of business is to use sustainable images and videos in media. The other form would be to disclose social and environmental aspects of businesses in corporate reports and websites following international standards. Unlike ready-to-wear garment brands, advertising sustainability through organizational disclosure is not a very common practice in the luxury apparel industry. Are these firms trying to hide their weaknesses when it comes to sustainability? Does this mean that the luxury apparel industry is lagging behind when it comes to the sustainable question? Using the case study approach, this chapter analyzes sustainable practices of nine global luxury brands (companies) and categorizes them using 'Davids and Goliaths' type matrix analysis.

Reminder of this chapter is organized as follows: Sect. 2 provides an overview of apparel industry. Concept of luxury and luxury apparel industry in global context is detailed in Sect. 3. Section 4 summarizes sustainable reporting practices in apparel industry and extends 'Emerging Davids versus Greening Goliaths' framework to luxury apparel industry. A case study on world's famous luxury apparel brands and their sustainability aspects is discussed in Sect. 5. Section 5 also examines the classification of case firms based on sustainable reporting practices. Lastly, Sect. 6 provides the summary of the chapter.

# **2** Apparel Industry

Apparel industry reshaped the Western economies during the industrial revolution and later contributed immensely to the economy of many East Asian nations. More recently, this industry is driving the economic growth of many South and South-East Asian nations. The main reason for the trade shifts from developed nations to developing nations is the adoption of low-cost country sourcing strategy, which transformed the global supply chains more complex. Hence, the industry is characterized by complex global supply chains, speed to market, shortened product life cycle, and increased number of fashion seasons [6]. Over the past 50 years, export of clothing and textiles globally has increased by 100-fold, i.e., in dollar term it has increased from under \$6 billion in 1962 to \$706 billion in 2011 and is expected to grow by 5 % each year [34]. Approximately, 70 % of these exports are from developing nations. Recently, the textile and garment industry has been rated as the single largest source of manufactured export goods from developing nations.

The global expansion of apparel industry raised issues related to transparency with complex and at times fragmented supplier networks. Low tech, labor intensive, and pressure for competitive prices have led to the human exploitation in the apparel industry. There are tens of millions of people working under sweat-shop conditions in developing nations. Several fatal incidents in the past, such as collapse of Rana plaza in 2013 that killed 1133 garment workers and fire in Ali garment factory with a death toll of 300 people, raised concerns about social and environmental aspect in garment industry. Likewise, most of the luxury fashion brands do not own production facilities and they are outsourced to the production facilities across the globe [12]. This has increased the luxury apparel supply chain complexity and raised concerns regarding social and environmental aspects of luxury fashion, it is important to understand the concept of luxury and characteristics of luxury fashion.

# **3** Luxury Apparel

# 3.1 Concept of Luxury

The concept of luxury can be traced back to the great civilizations as the products associated with wealth, exclusivity, and power. Luxury reflects social norms and aspirations of the society at a given time [12]. Heine [20, p. 2] highlights that "luxury is a relative term that could refer to almost anything or nothing depending on whom you ask." Likewise, Gardetti [15] proposes that luxury is an ambiguous concept and the definition depends upon the culture, economic, and legal aspects, whereas Chevalier and Mazzalovo [12, p. ii] states that "There is no single definitive meaning, but rather a large number of alternatives from which to choose" and "It is probably unrealistic to seek a universal definition of luxury" (p. 1).

The concept of luxury is viewed from either a consumption perspective or from product branding perspective. The opulent research on luxury fashion focused on explaining luxury consumption as a symbolic function at both individual and collective levels. Luxury is referred as seeing and being seen. From product perspective, luxury brands are defined in terms of high quality, transaction value, exclusivity, craftsmanship, authenticity, and uniqueness [14]. In the literature, luxury has been characterized and categorized in different ways. For example, Chevalier and Mazzalovo [12] broadly clustered luxury into two categories. The first category is related to the supply of products and services, and the second

category is related to the psychological and social implications of these products or services. Reddy and Terblanche [28] classified luxury into two broad categories based on technical features and customer perceptions. Silverstein and Fiske [30] referred 'old luxury' from product characteristics perspective and new luxury from the point of view of the customers [8]. The most common four dimensions that consumers perceive as luxury are elitism (distinction), product quality along with high prices, personal emotional elements, and power of the brand. Although there is no unique definition for luxury, it is largely perceived as a symbolic dimension reflecting values related to the culture of the society [8].

Over the last half a century, the luxury market has undergone dramatic changes. Globalization led to an increase in competition and low entry barriers. This has led to an expansion of consumer markets not only from high worth individuals but also the middle-class [19]. The broad customer base created a concept of luxury for the masses [10]. Following the trend, less luxury brands shifted from "mass" to "premium" brands offering luxury products at better price-value [19]. To satisfy the demands of the broad customer base, true artisanal brands also started to offer mass produced items. As the family and artisanal luxury companies are competing against large conglomerates the true luxury is losing its charm. True luxury is the luxury that only few people can afford [12]. When luxury products are produced in volume, they are classified as an intermediate luxury. Mass luxury is where the luxury products are mass produced and communicated rigorously. To sum up, luxury is defined on a continuum with increasing of intensity from mass luxury to unaffordable luxury. Irrespective of the brands position, success in luxury is defined based on the brand equity, which is measured through brand's strength, description, and its ability to survive in the market in the future [19]. Among all groups of luxury products, fashion products expand to all categories of luxury with ease of creating brand equity.

There are two schools of thoughts regarding luxury and fashion: first group debates on distinction between luxury and fashion. They perceive fashion as short lived and fast. On the other hand, luxury represents long-lasting, maturity, and exceptional product quality. Second group argues that fashion industry is closely associated with the artistic world. They believe luxury fashion leads the fashion industry with fashion shows, creating a trend with new colors, new shapes, and designs. Through the fashion shows and constant renewals, luxury fashion stood at the forefront in media. In fashion industry, a brand can claim the status of luxury when only it achieves the objective of stability and a quality of being timeless [12]. A new fashion brand can only acclaim the status of luxury when it develops the classical best-seller models with a signature style. There is a growing demand for the luxury products, so when the brands expand their product range to luxury segment it creates sustainable business for the future.

#### 3.2 Luxury Fashion: Global Scenario

The turnover of corporations manufacturing luxury products is valued at 300 billion euros in 2011 [12]. Luxury fashion is playing an important role in shaping economies and governments. It is the fourth largest revenue generator in France and a dominant sector in Italy, United States, and emerging economies like China and India. This sector provides highest employment rate in both Italy and France [25]. Historically luxury market is geographically centralized industry operating from France and Italy. Due to limited growth opportunities, the companies originated from these countries expanded their operations to other nations to reach a larger consumer database. The present-day luxury fashion originates from different designers and produced in several other countries and distributed all over the world. The global presence of the luxury industry increased the customer base from diversified groups. Today, brand image has become one of the most relevant aspects of the luxury market.

Traditionally fashion industry is clustered into two categories: firms selling low-cost products to large number of consumers and companies that provide exclusive and expensive products to selective customers. Consumer everywhere at every income level wants more luxury [13]. As a result, clusters of companies with low-cost products and exclusive products started offering ready-to-wear product range to target wide group of customers. Thus, couture, ready-to-wear, and accessories are the categories of luxury fashion goods [14].

In 2011, ready-to-wear and leather goods contribute a share of 45 billion euros of luxury business. The ready-to-wear category, Italy and France contribute to 60 and 20 % of the market share. In mid 1970s and 1980s, Italian brands started to create interesting and creative ladies ready-to-wear lines. The craftsmanship helped Italian brands to diversify their business. The advantage of Italian brand to gain the market share is that they are perceived as new, being creative with their global presence. Although Italian brands participated in fashion shows with haute couture range, they gave prominence to sell ready-to-wear products at stores. On the other hand, French were in luxury fashion since World War II. They emphasized more on creating haute couture range. American brands have been successful in creating luxury product range along with other ready-to-wear line. Britain, Germany, and Spain are the other nations with the international fashion luxury brands [12].

Fionda and Moore [14] studied the characteristics of successful luxury fashion brands. Based on the case study analysis of twelve international luxury fashion brands, they concluded that there are nine interrelated characteristics of successful luxury fashion brands such as clear brand identity, marketing communications, product integrity, design signature, premium price, exclusivity, heritage, environment and service, and culture. Interesting to note that even under serious pressure from not-for-profit organization, sustainability aspects that are not yet integrated with the luxury apparel industry. Chetty [11] stated that along with product characteristics organizational physical characteristics are crucial for success of a luxury apparel brand.

# 3.3 Apparel Luxury—Characteristics

Three major factors that differentiate luxury from non-luxury segment are company size, financial characteristics, and the time factor [12]. A brief discussion on each of these factors is provided below.

**Company size** Luxury brands are small to medium-sized enterprises with strong brand awareness and advertising presence all over the world [12]. It is common to see that luxury enterprises operate in small studio that designs and monitors the trend of the products and subcontracts or licenses all the other activities. Most of the luxury fashion brands outsource their production process to countries like China and India. Another possible reason for luxury businesses to be small is that they are developed through licenses that account for only 2-3 % of their sales. However, consolidation of smaller brands to form larger fashion conglomerates is an immersing trend in the luxury brand market segment [7].

Financial Characteristics Compared to a non-luxury brand, a luxury brand needs to invest a huge amount of resources to develop a positive strong image and credibility even before the production starts. The global presence of brand retail outlets, operating a flagship store in the home town of the brand, and conducting an expensive fashion shows to launch the products are some of the main activities that require huge investments. The major hurdle for any luxury brand is to reach the high break even. Once the brand sales meets the breakeven, margins are very high and are translated to profits. The luxury fashion is a pleasant ride for the successful businesses otherwise it is an ordeal for the survival. Luxury business is referred to as a jackpot business and recapitulated as win-all or lose-all. Researchers suggest that if a luxury brand is successful it leads brand extension and can become a life style brand [12]. Another important characteristic of a luxury brand is its survival capacity despite continues losses. There are evidences which suggest that a significant number of luxury brands survived despite of loses for five or even ten years. The reason for the acceptance of losses is due to the strong brand value and earlier profit that compensates loses.

**Time frame** The fashion cycle of a luxury product is lengthy. First stage of the cycle starts when the fabric manufacturer presents their new collection to designers. Designers commit to purchase a minimum order of fabric and start to develop prototypes for the season year ahead. The next stage is conducting fashion shows with the prototypes that differentiate the luxury brands from others. Fashion luxury industry follows make-to-order strategy where in the manufacturing process takes place once the orders are received from the department stores and multibrand retailers. In fashion, the major challenge is to make sure that the inventory

is available everywhere in the world. The excess inventories after the season will be sold at a discounted price. The fashion cycle lasts for eighteen months and until the very end the cycle sales at bargain price then the results will be known. Due to lengthy fashion cycle, the brands need to plan and invest for long terms. If the deadline for the launch cannot be met, the launch will be delayed until the next season, which means that the brands will continue to lose money before it started to enjoy the gains. Unlike a fashion brand, luxury brands had lengthy turnaround times because of the strong image in the customers. This explains the lack of interests from private equity investments and also the brand ownership by families. The extensive lead-time for the product launch can be translated into the time frame required to enjoy the returns on investment [12].

Along with the above-mentioned characteristics, creative talent and worldwide presence are unique to the luxury apparel industry. Luxury is a most visible sector that is associated with high profile consumers and celebrates [23]. The success of a luxury brand depends on the strategies to create an identifiable brand along with the ability to expand the brand range. Responding to changing social and cultural trends creates legitimacy for a luxury brand [12]. 'Sustainability development is on the agenda of the planet' [23]. There is a need to integrate sustainability into the business model of a luxury brand to justify their existence in future.

#### **4** Sustainable Luxury

Since the introduction by the Brundtland Commission in 1987, the concept of sustainable development gained attention in businesses. With increase in number of challenges faced by the organizations, sustainable development became a primary concern [21]. The most often used definition of sustainable development is referred to as meeting "the [human] needs of the present without compromising the ability of future generations to meet their own needs" [33, p. 16]. This definition creates ambiguity and vagueness in implementing sustainability practices in organizations. In the past, sustainability referred to as green initiatives but now a broader perspective of triple bottom line (social, environmental and economic) is adopted. For example, Seidman [31] stated "Sustainability is about much more than our relationship with the environment; it's about our relationship with ourselves, our communities, and our institutions" (p. 58). Businesses adopted triple bottom line of sustainability and defined sustainable business as "the creation of resilient organizations through integrated economic, social and environmental systems" [22].

"We are living in an ethic era"; more and more corporations are implementing social responsible activities [1]. Since the evolution of the fashion, apparel production is associated with exploitation of both resources and people. It is only in last thirty years that there is an increase in concerns from consumers on their impact on people and environment [26]. Gradually, the fashion industry has realized that the time has come for them to be responsible to the society [4]. In comparison

to food or cosmetics sector, fashion industry is less concerned about environmental and human impact on society. One of the major reasons for the negligence of ethical issues is that consumers never raised questions on the practices in garment industry. Unlike the food industry, it is very rear to see fashion brands using labels in their products to indicate the sources of raw materials used. Complexity and lack of transparency among fashion supply chains may perhaps explain the difficulty of ensuring that the components are ethically secured.

In the recent times, the luxury manufacturers are increasingly focusing on environmental and human aspects along with the product characteristics such as brand name, rarity, and quality of products [1]. Studies suggest that luxury consumers are becoming increasingly more aware about social and environmental issues. For example, a survey by the Luxury Institute in 2009 concluded that 57 % wealthy Americans are willing to pay a premium price for sustainable brands. Also, luxury brands are constantly being pressurized by 'not-for-profit' organizations and media to implement sustainability [10]. Thus, sustainable development offers brand differentiation and increases the brand image for luxury products. From the customer perspective, sustainable luxury is perceived based on the value systems such as socio-cultural value, ego-centered value, and eco-centered value. The customer value systems are explained as follows:

- Socio-cultural values: conspicuousness, sense of belonging, and national identity are the elements of socio-cultural value.
- Ego-centered values: These values are more intrinsic in nature and related to product characteristics.
- Eco-centered values: not doing harm and doing good are some of the eco-centered values [10].

Nevertheless, there are a number of divergence points between sustainability and luxury [1]. For long, sustainable luxury was considered as an oxymoron [10, p. 91]. Luxury refers to personal pleasure and superficiality, while sustainability is associated with moderation, ethics, and sobriety [1]. However, time has changed and consumers perceive that sustainability and luxury are complementary models. This has been appropriately captured in the words of Griskevicius et al. [18, p. 397]: "We used to spend money showing people how much money we have got; now we are spending our money on supporting our moral concerns': going green to be seen."

### 4.1 Luxury Apparel and Sustainability

In the period between 2006 and 2008, Eco fashion has transformed from philanthropic niche to commercial reality. During this period, fashion brands were under constant pressure to be transparent in their practices [4]. This resulted in two different scenarios. New businesses build their brand image as ethical firms in their all operations. Existing businesses on the other hand revisited their operations and incorporated principals of eco fashion. In sustainable fashion, the individuals who are responsible to implement sustainable aspects should ensure that the message is carried out in a transparent way. In the fashion industry, when a business supports sustainable practices all the associated firms in supply chain are also driven to maintain sustainable standards [10]. Sustainable fashion brands need to ensure that they go beyond esthetics, and sustainability should be integrated in all aspects of their firm. Business leaders can use corporate responsibility reporting to communicate the identified social and environmental risks associated with their suppliers and established systems to manage these risks [29].

Corporate responsibility or sustainability reporting is a process of gathering and analyzing data to understand the exposure to risks associated with social and environmental changes and to create a long-term value. It helps organizations to bring in sustainability as a core business strategy and to educate all the stakeholders including shareholders on sustainable practices. With the recent global initiatives such as Global Reporting Initiative's (GRI) G4 sustainability reporting guidelines and ISO 26000 standards, sustainable reporting has become a main stream business activity for companies. Sustainability reporting consists of both qualitative and quantitative information. Websites, Stand-alone reports, and other documents such as annual reports are the channels of sustainable reporting [24]. It is recorded that although over half of the firms report on corporate responsibility, however only 10 % of them have an integrated reporting system [29].

In apparel industry, social reporting has become a common practice to address stakeholders' pressure. In response to the industry demands, GRI developed Apparel and Footwear Sector Supplement (AFSS) to address the specific needs of the apparel industry [16]. AFSS clustered performance indicators into four categories: Supply chain standards, social, environmental, and economic to communicate the organizations progress [16]. It is observed that increasingly more and more apparel brands are reporting sustainable practices using GRI guidelines. The 28 indicators of supply chain, social, and environmental specific to AFSS guidelines along with 9 GRI G4 economic indicators are listed in Table 1.

The standard provides guidance to understand to what extent the fashion companies are implementing sustainability in their business activities. Irrespective of the industry, economic, social, and environmental are considered as the conventional criteria of sustainable practices. However, apparel supply chains are globally dispersed with complex relationships raising issues related to transparency. So apparel brands have to undertake sustainable initiatives to cover entire supply chain, including the process of sourcing, production, distribution, retail, marketing, use, re-cycle, and final disposal. In line with the industry practices, AFSS integrated supply chain standards in their supplement along with conventional economic, social, and environmental GRI indicators. Turker and Altuntas [32] and Caniato et al. [9] examined on how apparel brands disclose sustainable aspects based on GRI indicators [24]. These studies concluded that GRI provides a basis to compare organizations against the sustainability initiatives. In recent times, there is a growing demand on luxury brands to implement sustainability aspects. However, no prior studies have examined that how luxury brands report sustainability initiatives using GRI. Bendell and Kleanthous [5] proposed that luxury brands in collaboration with stakeholders need to measure and report their

Category	Aspect	Indicator		
Supply chain standards and practices	Code of conduct	AF7. Number and location of workplaces covered by code of conduct		
	Audit process	AF8. Number of audits conducted and percentage of workplaces audited		
	Non-compliance findings	AF9. Incidents of non-compliance with legal requirements or collective bargaining agreements on wages		
		AF10. Incidents of non-compliance with overtime standards		
		AF11. Incidents of non-compliance with standards on pregnancy and maternity rights		
		AF12. Incidents of the use of child labor		
		AF13. Incidents of non-compliance with standards on gender discrimination		
		AF14. Incidents of non-compliance with code of conduct		
		AF 15. Analysis of data from code compliance audits		
	Remediation	AF16. Remediation practices to address non-compliance findings		
	Business integration	AF17. Actions to identify and mitigate business practices that affect code compliance		
Economic	Economic performance	EC1. Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments		
		<ul> <li>EC2. Financial implications and other risks and opportunities for the organization's activities due to climate change</li> <li>EC3. Coverage of the organization's defined benefit plan obligations</li> </ul>		
		EC4. Significant financial assistance received from government		
	Market presence	EC5. Range of ratios of standard entry-level wage compared to local minimum wage at significant locations of operation		
		EC6. Policy, practices, and proportion of spending on locally based suppliers at significant locations of operation (continued)		

 Table 1
 Performance indicators of apparel industry

(continued)

Category	Aspect	Indicator		
	Indirect economic impacts	<ul> <li>EC7. Development and impact of infrastructure investments and service: provided primarily for public benefit through commercial, in kind, or pro bono engagement</li> <li>EC8. Understanding and describing significant indirect economic impacts, including the extent of impacts</li> </ul>		
	Procurement practices	EC9. Proportion of spending on local suppliers at significant locations of operation		
Environmental	Materials	AF18. Programs to replace organic-based adhesives and primers with water-based adhesives and primers		
		AF19. Practices to source safer alternative substances to those on the restricted substances list, including description of associated management systems		
		AF20. List of environmentally preferable materials used in apparel and footwear products		
		EN1. Materials used by weight or volume		
	Energy	AF21. Amount of energy consumed and percentage of the energy that is from renewable sources		
	Emissions, effluents, and waste	EN21. Total water discharge by quality and destination EN22. Total weight of waste by type and disposal method		
	Products and services	and disposal method EN26. Initiatives to mitigate environ- mental impacts of products and ser- vices, and extent of impact mitigation		
Social	Employment	AF28. Percentage of foreign migrant workers as a portion of total workforce, broken down by region		
	Labor/management	AF29. Percentage of workplaces where there is one or more independ- ent trade union(s)		
		AF30. Percentage of workplaces where, in the absence of a trade union there are worker-management commit tees, broken down by country		

#### Table 1 (continued)

(continued)

Aspect	Indicator
Occupational health and safety	LA7. Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region
	AF31. Initiatives and programs to respond to, reduce, and prevent the occurrence of musculoskeletal disorders
Diversity and equal opportunity	AF32. Actions to address gender discrimination and to provide opportunities for the advancement of women workers
Community investment	AF33. Priorities in community invest- ment strategy
	AF34. Amount of investment in worker communities broken down by location
Public policy	SO5. Public policy positions and participation in public policy development and lobbying

#### Table 1 (continued)

Source Adapted from GRI [8, 17]

sustainable performance using international guidelines such as GRI. The following case study illustrates on how luxury brands are implementing GRI standards.

Sustainability reporting forms the basis for ranking the organizations and developing indices. World's most comprehensive index Dow Jones Sustainability Indices (DJSI) is based on the economic, social, and environmental indicators. In apparel sector, social dimension is considered as an important dimension and given a weight of 41 % in [29] assessment framework. Irrespective of reporting guidelines or assessment frameworks, luxury apparel brands are emphasizing on the implementation of sustainability dimensions. Although luxury brands realized the importance of the social and environmental efforts, they are failing to accept sustainability as a business strategy. Instead, to satisfy the current requirements of the social aspect, they had a fragmented approach to social responsibility. Organization response to social and environmental changes depends upon the performance and it forms the basis for classification. Based on several theories, frameworks are proposed for organizations to tackle the problems of our time [27]. "Greening Goliaths versus Emerging Davids" is a model that promotes the sustainable transformation of any industry [21].

Category

### 4.2 Greening Goliaths Versus Emerging Davids

Organizations have an opportunity to gain economic benefits when they implement social and environmental aspects into their existing business processes. Sustainable entrepreneurship is regarded is an innovative process to discover and exploit economic opportunities through sustainable development. The term sustainable entrepreneurship is recent and still emerging [21]. Literature suggests that based on the level of participation in sustainable entrepreneurship, organizations are classified into Davids and Goliaths. Metaphorically these terms refer to the two different types of organizations with respect to size, age, and objective function. Wüstenhagen [35] was one of the earlier researchers referred to this framework. Majority of sustainable entrepreneurship literature covers either Goliaths or Davids.

Hockerts and Wüstenhagen [21] explained the interplay between Davids and Goliaths to drive industry towards sustainable development. Caniato et al. [9] contextualized framework to luxury industry and classified firms (supply chain orchestrators) into three clusters: fashion Goliaths, quality Davids, and Techstige. Gardetti [15] grouped few case companies into Goliaths and Davids. However, the exemplifiers in sustainable development and companies with no or limited initiation of sustainability are still missing in the framework. This research expands on

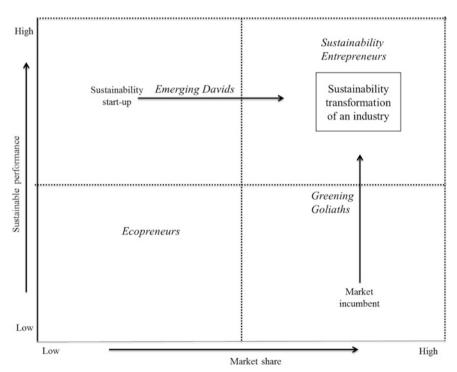


Fig. 1 SGED framework (Source Developed by authors based on Hockerts and Wustenhagen [21]

Table 2 Characteri	Table 2         Characteristics of 'Greening Goliaths versus Emerging Davids' in luxury apparel industry	merging Davids' in luxury appare	el industry	
Criteria	Ecopreneurs	Davids	Goliaths	Sustainable entrepreneurs
Age	Rather new	Rather new	Old, incumbent	Old, incumbent
Size	Small	Small	Large	Large
Objective function	Economic objectives dominating. Social and/or environmental social/environmental objectives objectives at least as importan	Social and/or environmental objectives at least as important	<ul> <li>Economic objectives dominating, Social and/or environmental</li> <li>Economic objectives dominating, Social and/or environmental objectives at least as important</li> <li>social/environmental objectives at least as important</li> </ul>	Social and/or environmental objectives at least as important
	complementary	as economic	complementary	as economic
Source Adapted from Caniat	n Caniato et al. [9]			

conventional the quadrant Goliaths and Davids framework. Figure 1 illustrates the extended Goliaths versus Davids framework.

Sustainable entrepreneurs, Greening Goliaths, Emerging Davids, and Ecoprenuers are the four groups of organizations in framework. Sustainable entrepreneurs make the impossible to possible by developing new markets and drive towards sustainable development. "Greening Goliaths" and "Emerging Davids" have different visions towards sustainable entrepreneurship. Ecoprenuers, in this study, refer to the organizations with no or little emphasis on social and environmental activities. This classification framework conceptualizes the notion of mature, startups and incumbents, and their contribution towards sustainability.

During earlier phases of sustainable transformation in a particular industry, it is the small and emerging firms with less market share that contribute to sustainable development through radical innovation. These firms are referred to "Emerging Davids." Davids do not only aim for economic value creation but also address the aspects of social and environmental value creation [21]. At the same time, there is resistance from some small firms towards sustainability due to the lack of investment and innovative capabilities in non-economic activities. These relatively new firms with less market share are referred to as Ecoprenuers (Economic-entrepreneurs). Typically these firms emphasize on financial benefits of an economic activity.

Following the Emerging Davids, "Greening Goliaths" take initiatives towards sustainability. Goliaths are relatively old firms with large market share and are less innovative towards sustainability. These firms had a reactive approach towards sustainability. Overtime, Davids and Goliaths interact and impact each other and drive industry towards sustainability [21]. Sustainable entrepreneurs are relatively large and old firms with an objective of maintaining its position as a sustainable exemplifier in the industry. These companies are successful in new radical forms of implementation. From sustainable entrepreneurs, Davids and Goliaths can learn how to redesign the strategies to better serve the purpose of both people and nature [27].

Age of the firm, firm size, and aim of the firm are the characteristics that differentiate Davids and Goliaths [21]. These characteristics are also used to cluster Ecopreneurs and Sustainable entrepreneurs. In addition to these characteristics, Caniato et al. [9] proposed product fashionableness, product complexity, selling volumes, and brand reputation as the other differentiating dimensions. The characteristics of the clusters have been summarized in Table 2. The characteristics of this framework are further illustrated by case study.

Brand	Headquarter	Ownership	Year of establishment	Brand value 2014 \$M	Dow Jones sustainability invitation
Louis Vuitton	Paris, France	LVMH	1854	25,873	Yes
Hermes	Paris, France	Listed (EPA)	1837	21,844	Yes
Gucci	Florence, Italy	Kering	1921	16,131	No
Prada	Milan, Italy	Listed (HKG)	1913	9985	Yes
Burberry	London, England	Listed (LON)	1856	5940	Yes
Fendi	Rome, Italy	LVMH	1925	3023	Yes
Ralph Lauren	New York, USA	Listed (NYSE)	1967	6323	Yes
Hugo Boss	Metzingen, Germany	Listed (XETRA)	1924	4526	Yes
Tommy Hilfiger	New York, USA	PVH	1985	2004	Yes

 Table 3
 Information regarding case companies

Source Adapted from BrandZ [7]

# 5 Case Study

# 5.1 Case Selection

Drawing from the 'Greening Goliaths versus Emerging Davids' framework, case study approach is a way to provide conceptual mapping of current sustainable supply chain management practices in luxury apparel industry. Case firms were chosen based on the top most valuable global luxury brands. BrandZ [7] study identified top 100 most valuable global brands from different categories. Since the introduction of global top 100 BrandZ report in 2006, the share of the portfolio companies has increased by 81 %. BrandZ report identifies top 10 brands from different categories. Among all the categories, apparel led the trend with a 29 % brand value increase. BrandZ report listed top 9 global luxury brands. Global apparel brands exhibiting a tremendous performance along with the top value luxury brands from the BrandZ report are considered for case study analysis.

The selection of cases is restricted to the luxury brands that had apparel products. Among 10 top luxury brands, there are only six companies with apparel and among them two belong to the same parent company (see Table 3). The inclusion of luxury brands from luxury category results in the exclusion of critical apparel group of companies with luxury product range. Therefore, four companies with luxury product range from apparel category that is included in the study. This

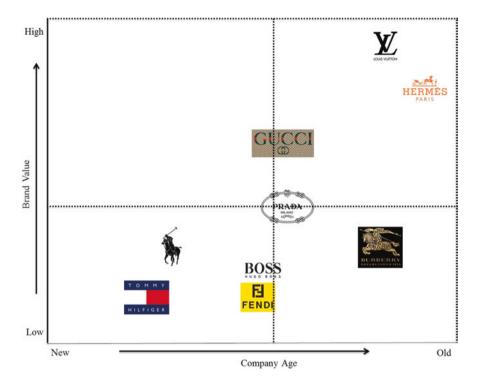


Fig. 2 Classification of case companies against age versus brand value (*Source* Developed by authors)

resulted in a total of nine brands and detailed information about these brands is shown in Table 3.

#### 5.2 Analysis

#### 5.2.1 Industry Characteristics

The characteristics of case study firms are analyzed and compared with the characteristics of luxury apparel brands explained in Sect. 3. The assumption of luxury brands as a relatively old is valid. True luxury brands like Hermes and Louis Vuitton have a history of more than 175 years and 160 years, respectively. On the other hand, ready-to-wear luxury brands like Tommy Hilfiger are relatively new (about 30 years old). This demonstrates that the artesian luxury brands that offer true luxury products are relatively older than the brands that are offering ready-towear luxury. Figure 2 illustrates the classification of case firms against company age and brand value. It can be seen in Table 3 that two French brands (Hermes and Louis Vuitton) have relatively high brand value (more than \$47,700 million together), followed by three Italian brands. Three American brands are relatively new and have relatively less brand values. It clearly demonstrates that brands from France and Italy are perceived as a luxury brands. Among 9 cases, 3 large conglomerates own 4 brands. Despite being a part of the larger conglomerate, some brands still had family ownership. For example, Fendi family holds 10 % of stake in Fendi brand. The assumption of luxury brands as a family run businesses or a part of larger conglomerates is valid to a certain extent.

Table 4 Case compan	les sustamable report characterístics				
Brand	Title of the report	Period	Total pages	GRI	
				reporting	
LVMH-Moet Vuitton	Environmental report	2013	59	Yes	
Kering Group	Pano-rama: a year of sustainability	2013	28	Yes (A+)	
Prada SpA	Social responsibility	2013	49	Others	
Burberry Group	Corporate responsibility	2014	35	No	
Ralph Lauren Corp	Citizenship report	2013	31	No	
Hugo Boss AG	Sustainability report	2013	60	Yes (B+)	
PVH Corp	Corporate social responsibility	2013	55	Yes (C)	

 Table 4
 Case companies sustainable report characteristics

Source Compiled by authors

 Table 5
 Summary of AFSS and GRI disclosed indicators in the study

		1		1	· ·	1	
Supply	Number	Economic	Number	Environmental	Number	Social	Number
chain	of brands	indicator	of brands	indicator	of brands	indicator	of brands
indicator	reporting		reporting		reporting		reporting
AF7	6	EC1	4	AF18	0	AF28	5
AF8	5	EC2	3	AF19	4	AF29	4
AF9	4	EC3	2	AF20	1	AF30	4
AF10	3	EC4	2	EN1	4	LA7	2
AF11	3	EC5	3	AF21	5	AF31	4
AF12	3	EC6	3	EN21	3	AF32	5
AF13	3	EC7	3	EN22	5	AF33	5
AF14	4	EC8	1	EN26	4	AF34	3
AF15	6	EC9	1			SO5	2
AF16	5						
AF17	3						
Average	4.09		2.44		3.25		3.77

Source Authors

#### 5.2.2 Sustainable Reporting

Corporate reports provide intentions of organizations towards sustainability, so these were analyzed and interpreted. Today, there is an increased trend for organizations to disclose sustainability practices in annual or integrated reports. Several brands use different nomenclatures for the integrated reports. Titles of reports and total number of pages dedicated to these reports in 9 case firms are seen in Table 4. Louis Vuitton and Fendi belong to the LVMH, so there is only one group report for both organizations. On the other hand, Hermes does not have an integrated sustainability report. A total of 7 sustainability reports are considered for the analysis with a number of pages varying between 28 and 60. Among 7 sustainability reports, 4 of them were reported based on GRI reporting guidelines. External independent organizations are appointed to provide ranking and assurance of the performance data reported. Ranking of the GRI reporting is disclosed in Table 4.

Sustainable reports of case firms are examined to analyze the acceptance of GRI performance indicators. Table 5 summarizes the acceptance of GRI indicators. Among all the performance indicators, it is evident that 'code of conduct' implementation in supply chain (AF7) and the remediation practices to address non-compliance (AF15) appeared in 6 brand reports. Social indicators such as community investments (AF33), employee breakdown structure (AF28), and diversity of workforce (AF32) are also often reported by the 5 brands. On the other hand, economic indicators such as organizations defined benefits plans (EC3), financial assistance received from governments (EC4), and indirect impacts (EC8) are presented in two brands. No brand has disclosed information on how

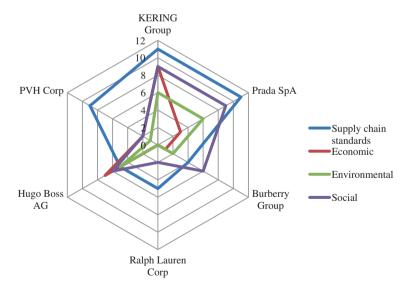


Fig. 3 Number of reported indicators per brand (excluding LVMH) (Source Authors)

they are replacing organic adhesives with water-based adhesives (AF18). Overall, on an average, there are at least four brands disclosing supply chain performance indicators (can be seen in Table 5). It is evident that supply chain indicators dominate the reports while economic indicators are sparingly appeared in reports.

There was a great range of variability in terms of the number and types of indicators represented by the case study companies. For instance, Kering group reported the greatest number of indicators [35] compared to LVMH with only environmental indicators [7]. Figure 3 details on the performance indicators of each brand against each category. As LVMH has only environmental indicators, it is excluded from the Fig. 2. Kering, Prada, Ralph Lauren, and PVH each reported the greatest number of supply chain standards followed by social. On the other hand, Burberry and Hugo Boss reports are dominated by social indicators. Next to LVMH, Ralph Lauren report presents only supply chain and social indicators. The degree of variance in the number of indicators can form the basis on how sustainability is progressed in the industry. Further to understand the content of the report a content analysis is performed.

Word	Weighted percentage (%)								
	Overall	LVMH-	Kering	Prada	Burberry	Ralph	Hugo	PVH	
		Moet	Group	SpA	Group	Lauren	Boss AG	Corp	
		Vuitton				Corp			
Sustainab <sup>a</sup>	0.52	0.39	2.23	0.07	0.3	0.2	1.1	0.29	
CSR	0.17							0.85	
Responsibility	0.21	0.08	0.25	0.65	0.6	0.12	0.08	0.12	
Ethic <sup>a</sup>	0.18		0.82	0.83	0.99	0.08			
Economic	0.06		0.08	0.13			0.15		
Quality	0.18	0.16	0.12	0.46		0.24	0.14	0.08	
Performance	0.18	0.14	0.2	0.2	0.17	0.1	0.27	0.18	
Supply	0.22	0.11	0.16		0.68	0.13	0.22	0.46	
Chain	0.19	0.08	0.12	0.09	0.55		0.27	0.39	
Suppliers	0.3	0.27	0.2	0.48	0.26	0.23	0.34	0.27	
Production	0.21	0.29	0.35	0.34	0.13		0.24	0.08	
Sourcing	0.12	0.04	0.08		0.64	0.25		0.14	
Code	0.18	0.05	0.39	0.75	0.21	0.07	0.19		
Compliance	0.23	0.11		0.41	0.09	0.39	0.4	0.07	
Standards	0.18	0.17	0.08	0.15	0.3	0.21	0.26	0.1	
Audits	0.09	0.14			0.3		0.16		
Training	0.21	0.22	0.2	0.26	0.43	0.14	0.18	0.18	
Environmental	0.55	0.95	0.59	0.32	0.72	0.29	0.46	0.32	
Resources	0.15	0.16	0.16	0.26		0.09		0.19	

 Table 6
 Percentage of most frequently appeared sustainable words

(continued)

Word	Weighte	Weighted percentage (%)								
	Overall	LVMH- Moet Vuitton	Kering Group	Prada SpA	Burberry Group	Ralph Lauren Corp	Hugo Boss AG	PVH Corp		
Energy	0.3	0.58	0.12	0.12	0.26	0.23	0.27	0.11		
Water	0.25	0.49	0.16				0.11	0.37		
Materials	0.21	0.21	0.27	0.3	0.21	0.12	0.2	0.19		
Chemicals	0.06				0.09			0.22		
Emissions	0.25	0.36	0.27	0.07		0.34	0.23	0.18		
Waste	0.22	0.51	0.08	0.18	0.09		0.1	0.14		
Co <sub>2</sub>	0.12	0.27	0.16	0.08	0.17					
Carbon	0.08	0.07	0.2		0.13	0.13		0.17		
Footprint	0.07	0.07	0.08			0.09		0.1		
Recycl <sup>a</sup>	0.13		0.2	0.16		0.27	0.11			
Packaging	0.11	0.24		0.08		0.09				
Social	0.25	0.13	0.35	0.7	0.13	0.18	0.31	0.15		
Rights	0.14		0.16	0.07	0.34	0.11	0.22	0.3		
Foundation	0.17		0.47	0.11	0.43	0.54		0.14		
Society	0.08		0.2			0.19	0.15			
Human	0.2		0.23	0.28	0.3	0.11	0.24	0.41		
Employees	0.49	0.1	0.59	0.71	1.11	0.79	1.01			
Labor	0.08						0.11			
Communit <sup>a</sup>	0.23		0.08	0.29	0.13	0.3		0.23		
Customers	0.09			0.16	0.21			0.09		
Children	0.12			0.18		0.15		0.34		
Health	0.12			0.18	0.09	0.11	0.22	0.16		
Diversity	0.1		0.2			0.31	0.11	0.1		
Content percentage	8.02	6.39	9.85	9.07	10.32	6.51	7.85	7.12		

Table 6 (continued)

Source Compiled by authors

<sup>a</sup>Expands the word for example, ethic<sup>a</sup>-ethics and ethically

#### 5.2.3 Content Analysis

Through the content analysis of the reports, categories and sub coding relevant to sustainability aspects are identified. The most frequently appearing sustainable words among all the reports were used to evaluate the performance on sustainable reporting practices. A software tool NVivo is used to find words and their relative content percentage in reports. There are few thousands of words in each report, so the words related to the sustainability themes with a content percentage of greater than 0.07 are included. More specifically, the themes related to sustainability reporting practices in apparel industry as discussed in Sect. 4.1: (1) environmental, (2) social, (3) economic, and (4) supply chain aspects are analyzed.

To facilitate comparison between reports a content percentage of each word is recorded. Content percentage is the relative percentage of the words to the overall word count of the report. Table 6 lists the frequently used sustainable words with a content percentage of greater than 0.07. The content percentage of sustainability issues varies between 6.39 and 10.32 % (see Table 6). CSR, sustainability, responsibility, and ethics terms cannot be a part of pre identified themes, rather all these words are related to all the themes. Among all the brands, LVMH and Ralph Lauren have the lowest content percentage of 6.39 and 6.51, respectively, and Kering group, Prada, and Burberry with the highest percentage of 9.85, 9.07, and 10.32, respectively.

Overall among all the reports, the word environmental is frequently used (0.55 %), followed by the terms sustainability and sustainable together (0.54 %), whereas CSR is relatively less frequently used (0.17 %) as only PVH report referred to this term. Against the prominence given to social aspects in non-luxury apparels, in luxury segment, social aspects are given equal consideration with other categories (2.16 %). It is observed that LVMH gave prominence to all environmental aspects in comparison to other organizations. Similarly, supply chain aspects such as code of conduct, compliance, and audit terms are relatively more important for Prada than other dimensions. On the contrary, Kering group reports all the sustainability aspects in an equal proportion. In summary, content of the report matches with the title of the report. Finally, it is evident that the results from the content analysis are consistent with the total number of performance indicators disclosed by the brands in Sect. 5.2.2.

#### 5.3 Greening Goliaths Versus Emerging Davids

Hockerts and Wüstenhagen's [21] notion of "Greening Goliaths versus Emerging Davids" can expand the investigation of case studies. Case studies are organized into cluster depending on their position relative to brand value and content percentage. Classification of companies outlines the role of companies in transforming industry towards sustainability. In luxury fashion, brand value exhibits the value perceived by the consumers which generates the revenue. It is a critical measure for the existence and future survival of the brand. Quantitative content analysis through word count and number of performance indicators disclosed could provide guideline on the sustainable performance through reporting. In addition to "Goliaths and Davids," case companies also belong to the other two coordinates. The attributes discussed in the Sect. 4.2 are considered to cluster the case study companies. Figure 4 exhibits the classification of case companies.

It is observed that LVMH is a Greening Goliath with high brand value, but less content percentage related to the sustainability aspects. LVMH is following GRI guidelines to report environmental performance leaving social, economic, and supply chain aspects unaddressed. This could be one of the reasons for less content percentage and its position as Goliath. Hugo Boss and PVH are under Emerging

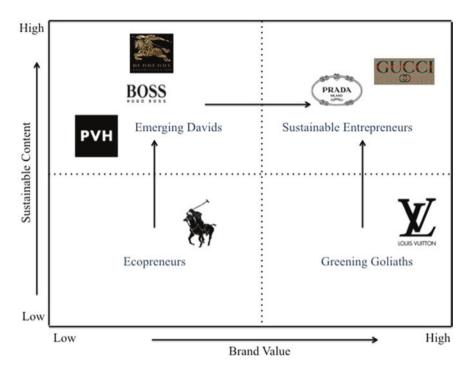


Fig. 4 Framework on Sustainable entrepreneurs, Greening Goliaths, Emerging Davids, and Ecoprenuers (*Source* Authors)

Davids cluster with less brand value and high content percentage reports following GRI guidelines. On the other hand, Burberry is not following GRI guidelines but the group's report is prepared under the assertion of full independent party. Thus, Burberry with high content percentage is also an emerging David. Furthermore, Ralph Lauren citizenship report emphasized all the aspects of sustainability without the routine of GRI guidelines or third party assertion. Thus, Ralph Lauren is considered as an Ecopreneur with emphasis on economic value. Ralph Lauren should emphasize on reporting sustainable practices according to guidelines to move to the Emerging David cluster. Prada's "social responsibility report" is a comprehensive report with an emphasis on all aspects of GRI guidelines, a summary of future projects along with code of ethics. In the same way, Kering group earned A+ for GRI reporting and was also listed in Dow Jones sustainability indices. So Kering group along with Prada is considered as Sustainable Entrepreneurs. It demonstrates that 7 companies are distributed across the entire quadrants matrix. Overall, case firms that belong to the Davids, Goliaths, and Ecopreneurs should aim to move to Sustainable Entrepreneurs. All in all, the case study analysis demonstrates that the initial concern that 'the luxury apparel industry is lagging behind when it comes to the sustainable question' is no longer valid.

## 6 Conclusion

Globalization along with emerging new rich has accelerated the growth in the number of luxury fashion consumers. At the same time, the increased awareness of social and environmental values amongst luxury consumers has exerted immense pressure on firms to implement social responsibility in their business practices. This chapter provides an overview of luxury apparel industry and its sustainability practices. The discussion from literature restates that pleasure and superficiality of luxury and moderation and sobriety of sustainability as the diverging points of the two concepts. It raises the concerns that the luxury apparel industry is lagging behind when it comes to the sustainable question. Based on the sustainable reporting and brand value, this chapter develops a framework for assessing sustainable performance of luxury brands. Sustainable Entrepreneurs, Greening Goliaths, Emerging Davids, and Ecoprenuers are the elements of the framework used to classify the case firms. The proposed characteristics of luxury apparel brands and adoptability of framework was applied to top most valuable luxury apparel brands. Based on the BrandZ report, nine case firms with luxury apparel products were chosen for the analysis. The results indicate that the brands with comprehensive reports prepared under the guidelines of international standards and third party auditions are emerged as Sustainable Entrepreneurs whereas firm reports with no international guidelines are classified under Ecopreneurs. This proposed framework can be employed to assess the current state of firms and formulate strategies to emerge as Sustainable Entrepreneurs.

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