Review of Managerial Science (2023) 17:2443–2470
https://doi.org/10.1007/s11846-022-00585-x

ORIGINAL PAPER

Internationalization of family business and its performance: examining the moderating role of digitalization and international networking capability

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Received: 3 January 2022 / Accepted: 12 August 2022 / Published online: 9 September 2022

Abstract

The purpose of this study is to identify different antecedents related to internationalization intention of family firms. The study also examines the moderating impact of digitalization of family firms and international networking capability of the management of the family firms. With the help of theories and a literature review, a conceptual framework model is developed, which is later validated using the partial least squares structural equation modeling with a sample of 429 respondents in India associated with family firms. The study identifies the antecedents for internationalization intention of family firms and shows the significant moderating impact of digitalization and international networking capability for their successful internationalization and performance.

Keywords Family firms · Digitalization · Performance · Internationalization · Family power · Family experience · Risk taking · Family culture

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1 Introduction

Researchers of several phenomenological fields are intensively engaged in investigating the aspects of internationalization of family firms using different empirical methods (Reuber 2016). Scholars of international business have been slow to investigate the context of family firm's internationalization (Pukall & Culabrò, 2014). However, in recent years, a broad consensus has emerged that governance features of the family firms are the important factors to shape their internationalization behavior (Arregle et al. 2019; Stieg et al. 2018). The intention of family firms to internationalize depends on many factors. The factors include their experience, risk-taking abilities, and proactiveness, and if they have a liberal culture. To ensure success in the internationalization process, family firms need to execute these qualities with good corporate governance (De Massis et al. 2018; Arregle et al. 2019; Alayo et al. 2020; Piccolo et al. 2021; Herath and Harrington 2022).

Despite such sincere efforts of family firm scholars, the existing studies in this context are found to be highly fragmented and heterogeneous, with contradictory perspectives supported by diverse and incompatible measures (Arregle et al. 2017; Ratten and Jones 2021). Studies on family firms' internationalization have predominantly addressed the family firm audience (Casillas and Moreno-Menéndez 2017; Kunz and Sonnenholzner 2022). Some studies have explored the family firm literature in the internationalization context (Debellis et al. 2020), and some of studies have focused on the family firms' internationalization process (Metsola et al. 2020). And some studies emphasized family-based small and medium enterprise (SME) internationalization (Lahiri et al. 2020; Tamilmani et al. 2021).

None of these studies have delved into how several basic abilities of the family firms could motivate them towards internationalization by expanding their international network capabilities and by strategizing their digitalization abilities to exhibit better international performance (Trischler and Li-Ying 2022). Many studies have analyzed the various factors which could impact the intention of family firms to expand internationally, but few have investigated how antecedents like experience, cultural beliefs, proactiveness, and risk-taking ability could impact the intention of family firms to do so and could impact firm internationalization performance under the moderating roles of digitalization and international networking abilities (Heck et al. 2008; Zellweger and Sieger 2010; Majumdar et al. 2019). Again, in this background, the aim of this study is to address the following research questions.

RQ1: What are the antecedents that impact the internationalization intention of the family firms, influencing their international performance?

RQ2: Can digitalization capability and international networking capability moderate the relationship between internationalization intention and international performance of a family firm?

The above two research questions have been addressed by statistically analyzing the inputs of 429 respondents. From this perspective, a conceptual framework model has been developed, which has then been verified with the factor-based partial least squares-structural equation modeling technique. In order to theoretically establish the empirical findings, the present study has integrated dynamic capability view (DCV) theory (Teece et al. 1997) and agency theory (Eisenhardt 1989). The researchers have

used these theories to explain how different characteristics of the owners of family firms could impact their intention to internationalize their companies, which could eventually impact their business performance.

In the remaining parts of the article, we continue with the literature review in Sect. 2, and then present the theoretical background and develop the hypotheses in Sect. 3. Thereafter, in Sect. 4, we present the details of the research methodology, and then we analyze the data in Sect. 5. In Sect. 6, we discuss the results, the implications, and the limitations of this study, and conclude with the scope for future researchers.

2 Literature review

Extant literature documents that unique features of family firms are deemed to be the main predictors of internationalization, though there is no consensus about which of these features –singly or in tandem – could facilitate or impede internationalization (Arregle et al. 2017). Studies have concluded that family firms are more oriented towards internationalization (Carr and Bateman 2009; Calabrò and Mussolino 2013; Chatterjee 2015; Sreenivasulu 2019; Chaudhuri et al. 2021), though in other studies, the opposite conclusion was reached (Gomez-Mejia et al. 2010). Studies have demonstrated that success of internationalization in the family firms is characterized by the attitudes of the managers and owners of the family firms in the context of their culture, proactiveness, power, risk-taking behavioral ability, and so on (McDougall and Oviatt 2000; Matsuno et al. 2002; Zahra 2005; Chatterjee 2019a; Calabrò et al. 2019; Forte and Sá 2021). A few studies have shown that, on pain of losing some control over the family firm, some owners do not like to internationalize their businesses (Churchill and Hatten 1987; Carney et al. 2015). Nevertheless, to internationalize the business, a family firm must be able to balance the opportunities against the risks, as no risk, no reward (Zhou et al. 2016). Therefore, family firms need to develop risk-taking abilities to facilitate their internationalization (Zahra 2005). Prior knowledge of and experience with foreign markets is considered to count much for a family firm to quickly internationalize (Sapienza et al. 2006; Cesinger et al. 2016; Hennart et al. 2019; Xu et al. 2020). Since the family's culture influences the business processes and practices of their company and exhibits if the family is liberal or conservative, it can be said that the culture of the family firm impacts the family's intention to internationalize their business (Yeoh 2000; Thornton 2004; Lafuente et al. 2017; Liu et al. 2019; Krishnan 2020). Most of the research from the perspective of family firms' internationalization is carried out from the angle of general management (Kano and Verbeke 2018; Pongelli et al. 2019; Ferreira and Franco 2020; Ghosh et al. 2021a, b; Calabrò et al. 2021). Studies have documented that some determinants like family firms' abilities to withstand risk, existing family culture, and other characteristics help the towards cross-border acquisition of businesses (Ossorio 2019; Chaudhuri and Vrontis 2020; Mahto et al. 2021).

Studies also highlighted that, for successful internationalization, a family firm must adopt digitalization (Gurbaxani and Dunkle 2019; Thrassou et al. 2021b; Rana et al. 2021a, b). Other studies (Sciascia et al. 2015; Kraus et al. 2016) found that family firms need to strengthen their networking ability to spread their business internation-

ally. Zellweger et al. (2013) said that family influence is the dominant ingredient that distinguishes family firms from non-family firms, and Sharma (2004) and Minichilli et al. (2016) considered that the family's influence and impact is intangible through their ownership. Other researchers (Zahra 2003; Singh and Gaur 2013; Cesinger et al. 2014; Stieg et al. 2017) found that stewardship is a positive influencer on family ownership and management towards internationalization intention of a family firm. Another challenge of internationalization is associated with the concept that owners of the family firms will have to relinquish their control over their firms if they internationalize (Faccio et al. 2001; Rana and Dwivedi 2021; Thrassou et al. 2021a). This is because internationalization operations often need to delegate some authority to others, which might reduce the owners' control of the firms (Alessendri et al., 2018; Singla et al. 2014; Chatterjee 2019b; Ghosh and Chaudhuri 2019; Chatterjee and Kar 2020; Basile et al. 2021).

Studies have documented that prior international experience impacts on the intention of family firms to internationalize (see, Majocchi et al. 2018). A survey by Marinova and Marinov (2017) highlighted that digitalization and innovation are two critical ingredients of a family firm to successfully internationalized. However, we observe that these studies have caused confusion about the various factors that could impact how family firms could exhibit better performance in their internationalization in the digitalized era by expanding their network capabilities.

In the foregoing literature review, we presented studies that demonstrate different aspects of family firms that can impact their internationalization. However, we found no study which exhaustively nurtured how the family-oriented factors like power, experience, culture, proactiveness, and risk-taking capabilities could motivate family firms to internationalize their businesses under the moderating influence of digitalization as well as their networking abilities. This is a gap in the extant literature that needs to be addressed.

Also, some studies have observed that family firms are more aligned towards internationalization (Calabro & Mussolino, 2013), but another study made the opposite inference (Gomez-Mejia et al. 2010). A recent study demonstrated that internationalization of a family firm depends on the managers' attitude (Forte & Sa, 2021).

However, our review of the extant literature revealed that there is a gap in our understanding of how family firm owners' individual traits impact their intention to internationalize their business, which could be perceived to influence the firms' internationalization performance under some suitable boundary conditions. So there is a gap in the extant literature which needs to be filled.

3 Theoretical background and development of conceptual model

3.1 Theoretical background

In the functioning of a family firm, the management of power is considered a contentious issue. Stewardship literature suggests that owner-managers' strong identification with the family firms, along with their own commitments towards their firms' long-term welfare and their subordinates, influences them to act accordingly to

achieve best performance of their firms even when facing risks and challenges (Davis et al. 1997). Contrary to this concept, scholars of agency theory (Eisenhardt 1989; Santulli et al. 2019) argued that family owners have many private benefits which motivate them to prioritize control over their firms. International operations require the family firms to delegate some powers and activities to others, which reduces family owners' control over the firms and which the owners of the family firms do not like (Alessandri et al. 2018). Agency concept crops up between the majority of family shareholders who want to reap the private tangible and intangible benefits from the firms and the minority shareholders intending to benefit from internationalizing the family firms and reducing family control (Van Essen et al. 2015). Loss of power impedes the harnessing of private benefits, causing agency conflict to arise and hinder internationalization of the family firms (Singla et al. 2014). DCV has been defined as a "high-level routine (or collection of routines) that, together with its implementing input flows, confers upon an organization's management a set of decision options for producing significant outputs of a particular type" (Winter, 2003, p. 991).

In the dynamic international markets, the business landscape has undergone rapid change. In order for a family firm to internationalize and achieve better international performance, it must have the ability to react and respond to changes. This concept is in consonance with dynamic capability view (DCV) theory (Teece et al. 1997). As opined by Teece (2014), there are three main dimensions of dynamic capability: sensing, seizing, and reconfiguring. The sensing capability helps a firm to develop, codevelop, identify, and assess business opportunities. With seizing capability, a family firm can aptly mobilize the necessary resources to avail the best business opportunities to achieve better performance. The reconfiguring capability means activities which "recombine bundle of resources and ordinary capabilities" (Fainshmidt et al. 2016, p.2) to "innovate and respond to (or bring about) changes in the market and in the business environment more generally" (Teece 2014, p.332). In terms of DCV theory, these three capabilities help a firm to identify the best opportunities by appropriately responding to the changes in the international markets (Mikalef and Pateli 2017) to generate knowledge, new processes, and products in order to compete (Wamba et al. 2019; Ghosh et al. 2021a, b). DCV seeks to explain how, as well as why, firms successfully adapt to the changes in the dynamic situation. DCV helps firms develop the abilities to identify new business opportunities, integrating them with those already available (Krzakiewicz, 2013).

Thus, in the context of DCV theory and in terms of the present study aiming to identify the salient capability of family firms towards intending to internationalize, the capability to sense threats by developing risk taking abilities and seizing the best opportunities with proactiveness are perceived to be crucial. In the context of the present study, digitalization ability (Berman 2012; Kotlar et al. 2013; Vrontis et al. 2021; Al Issa 2021) and networking capability are also construed to be dynamic capabilities. With the arguments of Teece (2007, 2014), we are expanding the definitions and the ideas of risk-taking abilities, proactiveness, digitalization, and networking abilities and considering them as sub-capabilities of sensing, seizing, and reconfiguring capabilities. We also argue that family culture and experience provide impetus to family firms' internationalization intention.

3.2 Development of hypotheses and conceptual model

With the inputs from the theories and studies of literature, it has been possible to identify the exogenous, endogenous, and moderating variables which could impact family firms' intention to internationalize for the betterment of their international performance. In this section, these variables will be explained, and attempts will be taken to formulate the hypotheses to develop the conceptual model.

3.2.1 Family power (FP)

Internationalization is construed as an important factor for a family firm's success (Carr and Bateman 2009). It is perceived to be an important element towards the family firm's survival, as it creates wealth for the family members (Dressler and Tauer 2015). However, deciding to internationalize a family firm is perceived not to be a simple task for it. Churchill and Hatten (1987) demonstrated that family power and control impose capital constraints that inhibit family firms from partaking in internationalization activities. Carney et al. (2015) found that family firm power imposes an immense impediment to internationalization.

In terms of agency theory (Eisenhardt 1989), it has been argued that many family firm owners do not want to reduce their power by sharing authority with others whose skills are needed for internationalization (Alessendri et al., 2018; Santulli et al. 2019). Owners of family firms enjoy private benefits which incentivize them to prioritize their power and control over their firms. Accordingly, it is hypothesized as follows.

H1: Family power (FP) has a negative impact on family firms to exhibit internationalization intention (IN).

3.2.2 Risk-taking ability (RI)

When a firm considers internationalization, it needs to balance risks against opportunities (Zhou et al. 2016). Firms calculate exactly what risky opportunities they could tolerate. In global markets, risk-taking ability is considered as a prerequisite towards internationalization to realize growth opportunities (Zahra 2005). During internationalization, a firm will enter an unfamiliar market which is potentially more challenging (Agnihotri and Bhattacharya 2021; Luo and Tung 2007) have argued that family firms need to be more aggressive and willing to take more risks to compensate for their competitive weakness. Sapienza et al. (2005) found that without taking strong steps in the context of foreign operations, it is difficult for a family firm to gain access to international markets, as they will be very much limited in their ability to upgrade their value-creating resources in those domains.

Firms should be cautious to assess that any uncalculated risk-taking might invite costly mistakes that lead to inferior international performance (Falahat et al. 2021). It is posited that family firms entering foreign markets must take cogent measures to rapidly acquire and upgrade their knowledge capacity to enhance their risk-taking ability in the international context (Zhou et al. 2010). Accordingly, it is hypothesized as follows.

H2: Risk-taking ability (RI) of a family firm positively impacts its internationalization intention (IN).

3.2.3 Family experience (FE)

A family firm intending to internationalize its businesses must gain market knowledge regarding the administrative structure of the foreign market and it needs to be agile in exploring, with out-of-box thinking, the opportunities to develop experience (Slater and Narver 1995). For example, they must acquire knowledge about newer firms' cognitive and structural advantages befitting the targeted foreign market structure. Gaining such experience is perceived to help family firms surpass their competitors in grappling with foreign market more effectively (Sapienza et al. 2006). Family firms aspiring to internationalize must understand the pros and cons of the international marketplace by regularly visiting international markets, seeking international contacts, attending relevant trade shows, and exploring appropriate business opportunities (Zhou et al. 2010). Unless the owner-managers of the family firms generate international market intelligence and experience through all the above-mentioned activities, it is perceived that they will not be successful in international business. Accordingly, it is hypothesized as follows.

H3: Family experience (FE) of a family firm positively impacts its internationalization intention (IN).

3.2.4 Family culture (FC)

Family firm culture is considered an internal group-oriented culture (Zhou et al. 2016; Falahat et al. 2021). This culture is based on personalized and emotional values. The family firm culture depends on the role that was played by the founder while establishing a family firm. Zahra et al. (2008) argued that the family's culture is reflected in commitment and stewardship with strategic flexibility. Dheer et al. (2015) said that family firm culture was an intervening systematic mechanism at the intersection of leadership behavior and strategic flexibility. Thus, the role of the founder is critical in shaping the family firm culture, which is inherited by the successors of the founder (Schein 1995).

The culture of a family firm is a set of values, standards, and norms which have influenced how the professionals and members work to achieve their vision and mission (Krishnan 2020). Thus, family firm culture influences the processes and practices of the family firms. In the context of the present dynamic market, if the culture of the family firms appears to be conservative, it is difficult for them to plan to internationalize because the firms' culture must be liberal, which helps them to expand networks necessary for internationalization (Thornton 2004). Accordingly, it is hypothesized as follows.

H4: A liberal family culture (FC) of the family firms has a positive impact on internationalization intention (IN).

3.2.5 Proactiveness (PA)

Acquisition of international marketing knowledge is considered an essential element for a family firm's rapid growth towards internationalization (Autio et al. 2000). Family firms must upgrade their knowledge repository so that they can proactively apply situation-specific, up-to-date knowledge when required during their internationalization process (Yeoh 2000). A firm is said to be proactive if it places emphasis on evaluation, discovery, and best exploitation of growth opportunities. The firm must become knowledgeable on how to effectively deploy the available resources to fetch the best results and on where to go to obtain accurate and non-misleading international information (Slater and Narver 1995; Matsuno et al. 2002).

Proactiveness is judged as offering a forward-looking perspective, which is associated with a family firm's tendency to take appropriate initiatives to develop knowledge about international markets (Lunpkin & Dess, 1996). In the context of internationalization, family firms that have fewer network contacts should develop capabilities that help one to identify new market opportunities for easing the internationalization process (Oviatt and McDougall 1994; Zahra 2005). Accordingly, the following hypothesis is formulated.

H5: Proactiveness (PA) of a family firm positively impacts its internationalization intention (IN).

3.2.6 Internationalization intention (IN) and international performance (IP)

Intention is generally explained as something one plans to do. In this context, it is evident that when a family firm wants and plans to expand its businesses in foreign countries, the firm has the intention to internationalize its business (Floris et al. 2021). This intention can be assessed conceptually by estimating some salient capabilities of that firm. A company can successfully internationalize if it is ready to abdicate some of its power to its international partners required for internationalization, if it possesses appropriate risk-taking capability, if it has some experience in foreign markets, if the existing culture of the firm supports internationalization, and if it possesses proper proactiveness (Braga et al. 2017).

Besides, there is a universal consensus that innovative firms can enhance their competitiveness, which enhances their competitive advantages in foreign markets (Cassiman and Golovko 2011). Studies subscribe to the idea that increasing a family firm's networking ability is essential if it intends to internationalize its businesses (Baines et al. 2017). Katikeas et al. (2019) also considered that digitalization ability may be a unique route for a family firm towards internationalization. In order to internationalize, Malhotra et al. (2003) suggested that family firms must consider articulating the entry-mode strategy, because they are often dominated by conservative family members who are afraid of losing power.

Successful family firms must have the abilities to search for appropriate managers and partners and make contact with specialist knowledge-based business service firms to remove obstacles as they enter into foreign markets (Lafuente et al. 2017; Liu et al. 2019). Family firms intending to internationalize their businesses must be concerned with quality product development, as it has been observed that it is crucial to

successfully enter into the global market (Dubiel et al. 2018). The above-mentioned qualities must be acquired by the family firms to exhibit better international performance. Accordingly, it is hypothesized as follows.

H6: Internationalization intention (IN) of the family firms positively impacts internal performance (IP).

3.2.7 Moderating role of digitalization capability (DC) and international networking capability (IC)

A moderating variable may be involved if the relationship between the two constructs is not fixed. This is a third variable, which may impact on the relationship and either accelerate or retard the relationship. It may even alter the direction of the relationship. Also, the digital world, in the context of business success, is interpreted as the intersection of digital technologies and successful business values. Firms need agility as well as responsiveness (Kraus et al. 2019) to ensure their sustainability and survival in the international market (Nambisan 2017). International markets are covered by healthy as well as unhealthy competition, and in such an environment, digitalization of a firm, regardless of its nature, has become a necessity rather than a choice (Leong et al. 2016). If a family firm already operates with some technology-based activities, it is likely that it will be aligned to digitalization. But traditional family firms are found to possess contradictory tendencies when the question of digitalization arises (Leong et al. 2016).

Digitalization is considered as a dynamic capability of a family firm that addresses the dynamic challenges of the overarching international markets, which is the main theme of DCV theory (Teece et al. 1997). Again, Chrisman et al. (2015) opined that a family firm might have high ability, but if it has low willingness, its digitalization is hindered. Digital technologies include social media, cloud computing solutions, artificial intelligence, blockchain technology, big data technology, deep learning technology, and so on. These technologies give rise to new ways of development, and they are perceived necessary for successfully staying in the international markets (Markus and Loebbecke 2013). Accordingly, it is hypothesized as follows.

H7: Digitalization capability (DC) moderates the relationship between a family firm's international preparedness (IN) and its international performance (IP).

The successful tricks of entry in the international market include searching of proper partners, identifying the best opportunities, and understanding the system of the target international market (Liu et al. 2019). For this, proper networking abilities are perceived to help a family firm in their international entry process (Baines et al. 2017). Family firms intending to internationalize their businesses need to build new strategy befitting the international target markets. Zaki (2019) found that they must develop value chains and new networks, which in turn will improve their wealth of information (Nambisan et al. 2019). Networking abilities are also perceived to help a family firm's internationalization by impacting its international performance. Accordingly, it is hypothesized as follows.

H8: International networking capability (IC) moderates the relationship between a family firm's international preparedness (IN) and its international performance (IP).

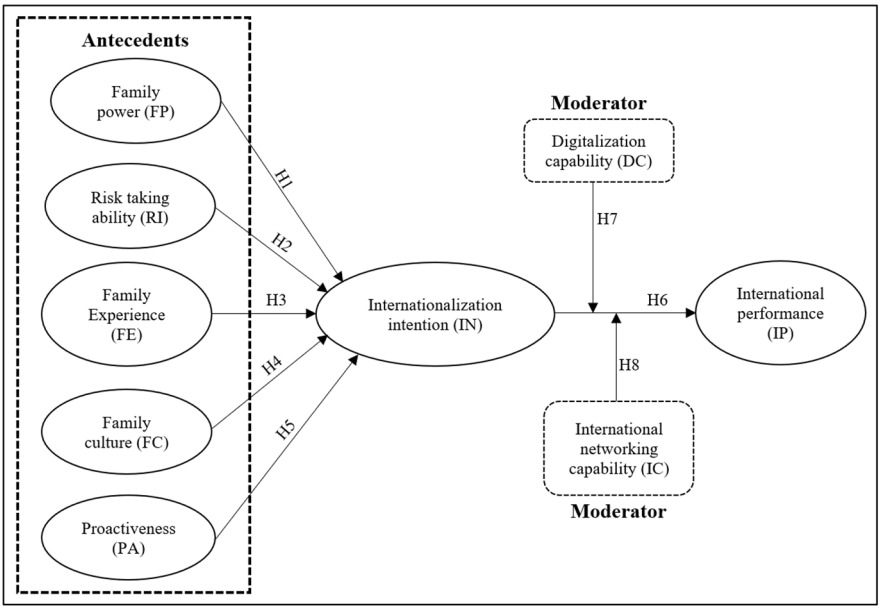


Fig. 1 Conceptual model

With all these inputs, a conceptual model is developed and is shown in Fig. 1.

4 Research methodology

The study has statistically analyzed the inputs from the respondents who participated in the survey and provided their feedback against a set of instruments (questionnaire). There were two steps to the survey. One was to prepare the measurement instruments, and the second step was to target some usable respondents whose responses against the structured questionnaire were collected. Then the responses are quantified on a standard, 5-point Likert scale and analyzed with a standard convenient statistical procedure. The researchers used a 5-point Likert scale, because it is simple to use and the respondents have an opportunity to choose a neutral stance by ticking the "neither disagree nor agree" option.

4.1 Measurement instrument

The questionnaire was developed by adopting relevant measures from extant literature. The scale on which the dimensions were measured ranged from "Strongly Disagree" (SD), marked as 1, to "Strongly Agree" (SA), marked as 5. The questionnaire was prepared in the form of statements. The instruments were pretested and based on the outcomes of that, we rectified the wordings formats of some of the instruments to enhance their understandability. We simplified the wordings of the instruments so

that the prospective respondents would not encounter any difficulty understanding them. This would also enhance the quality of the responses.

After the pretest stage, the questionnaire was piloted. This was done to understand the response rate. With the results of the pilot test, we dropped some instruments to enhance the content validity. Also, five experts who have knowledge in the domain of this study were consulted, and their suggestions enhanced the comprehensiveness of the questionnaire. Out of these five experts, three were from industry and had more than 15 years of work experience. The remaining two experts were from academia, had a PhD degree in family firm studies, and were professors. In this way, 32 instruments were prepared. The details of the instruments with their sources have been provided in Appendix 2.

4.2 Collection of data

To target the respondents, the purposive sampling technique was preferred, and India was selected, because the study's authors have contacts with family firms there. As such, it was convenient to recruit respondents from family firms in India.

Another reason to collect data from Indian family firms is that India is considered a growing, emerging economy. Moreover, it is one of the BRICS countries, where many family-run businesses are growing due to the accelerated economic growth. India has at least eight family firms, which were established more than 100 years ago. The data for this study were collected from the employees of these eight family firms. The list of these firms with the year they were established is provided in Appendix 1. Hence, both purposive and convenience sampling techniques were adopted for this study (Apostolopoulos and Liargovas 2016; Garg 2019).

Most of these family firms have flourished in foreign markets (Shanmugasundaram 2020). Thus, interviews with the respondents who work at these family firms are considered to be generalizable. Top executives of these eight family firms were contacted through telephone and email with a request to allow managers of different ranks to participate in this survey. The top executives, who are mostly owner-managers, were intimated that the study was purely academic and that the confidentiality as well as anonymity of the participants in the survey would be strictly preserved. After a few rounds of telephone discussions, the top executives of these family firms allowed different ranked managers to take part in the survey. In this way, a list of 754 managers (junior, mid-level, and senior managers) was obtained.

All the managers were provided with a response sheet for their responses. The response sheet contains 32 instruments with five options for each instrument. A guideline was also provided with each response sheet explaining how to fill it in. The managers were requested to return the completed response sheet within the two months (from the beginning of January until the end of February 2021). Within the scheduled time, we obtained responses from 443 participants. The response rate was 58.7%. We followed Armstrong's and Overton's (1977) recommendation to conduct the non-response bias test. Therefore, we used the independent t-test and chi-square test to analyze the inputs of the first and the last 100 responses. The results highlighted that there is no mentionable difference, confirming that non-response bias did not pose a major concern in the present study. Scrutiny of the response sheets high-

Table 1 Demographic information (N=429)

Category	Particulars	Number	Percentage (%)
Gender	Male	316	73.6
	Female	113	26.4
Education	Graduate	279	65.0
	Postgraduate	150	35.0
Age	25–40 years	299	69.6
	Above 40 years	130	30.4
Hierarchy of position	Senior managers	128	29.8
	Mid-level managers	257	59.9
	Junior managers	44	10.3

lighted that 14 were incomplete. Moreover, 10 respondents put tick marks in more than one option out of five against each question, and the remaining four respondents did not complete the questionnaire at all. Therefore, those 14 responses were not considered. Therefore, statistical analysis was conducted on 429 usable respondents against 32 instruments. The details of those respondents are provided in Table 1.

5 Analysis and results

To validate the model and to test the hypotheses, we used the partial least squares-structural equation modeling technique, as it is helpful to analyze an exploratory study like this (Peng and Lai 2012). This technique can be applied with no sample restriction (Goodhue et al., 2012; Hair et al. 2018). It also allows data which are not normally distributed (Kock and Hadaya 2018), which cannot be done with the covariance based structural equation modeling technique (Sarstedt et al. 2016; Rigdon et al. 2017). Moreover, the PLS-SEM approach differs from the CB-SEM approach since PLS-SEM does not fit a common factor model to the data. Rather, it fits with a composite model (Henseler et al. 2014). The partial least squares-structural modeling method is widely used in this type of study (Wamba et al. 2019).

5.1 Measurement properties

To verify the content validity, the loading factor (LF) for each instrument has been estimated. To check the validity of each construct, we estimated the average variance extracted (AVE); to examine the reliability of each construct, we estimated composite reliability (CR); and to examine the internal consistency of each construct, we estimated Cronbach's alpha (α). All the estimated values were found to be within the allowable range, as the lowest value of composite reliability (CR) is 0.70, and the lowest value of average variance extracted (AVE) is 0.50 (Rana et al. 2021a, b). The results are shown in Table 2.

We observed that all the square roots of AVEs are greater than the corresponding bifactor correlation coefficients, thus confirming Fornell and Larcker criteria (Fornell

Table 2 Measurement properties

Constructs / Items	Mean	SD	LF	AVE	CR	A	t-value
FP				0.73	0.79	0.83	
FP1	3.7	1.9	0.89				22.24
FP2	3.5	1.7	0.84				26.72
FP3	3.2	1.6	0.76				23.11
FP4	2.9	1.4	0.92				29.17
RI				0.78	0.83	0.88	
RI1	3.1	1.7	0.87				26.18
RI2	3.7	1.9	0.94				20.12
RI3	3.6	1.3	0.87				21.01
RI4	2.9	1.1	0.85				26.42
FE				0.80	0.85	0.91	
FE1	2.2	1.2	0.89				27.18
FE2	3.8	1.6	0.85				30.32
FE3	3.0	1.8	0.93				26.11
FE4	3.6	1.4	0.96				36.17
FC				0.87	0.92	0.96	
FC1	3.7	1.7	0.96				39.11
FC2	2.4	1.1	0.95				30.12
FC3	3.9	1.6	0.90				16.11
FC4	2.8	1.3	0.92				29.27
PA				0.88	0.92	0.95	
PA1	3.8	1.2	0.96				28.20
PA2	3.6	1.1	0.92				36.55
PA3	2.9	1.6	0.97				30.11
PA4	2.7	1.9	0.90				21.61
IN				0.84	0.88	0.91	
IN1	2.7	1.7	0.90				22.11
IN2	2.9	1.9	0.94				21.17
IN3	3.5	1.4	0.96				23.29
IN4	2.5	1.8	0.91				24.17
IN5	3.2	1.1	0.85				21.12
IN6	3.0	1.3	0.85				28.17
IP				0.87	0.92	0.97	
IP1	2.1	1.5	0.90				29.12
IP2	3.9	1.6	0.95				30.11
IP3	2.6	1.9	0.97				26.04
IP4	3.4	1.7	0.95				23.09
IP5	3.2	1.1	0.89				29.14
IP6	2.5	1.4	0.94				25.47

and Larcker 1981). This confirms discriminant validity. The results are shown in Table 3.

To supplement Fornell and Larcker criteria, the Heterotrait-Monotrait (HTMT) test was performed. This correlation ratio test verified discriminant validity (Henseler et al. 2014). On analysis, it appears that all the estimated values of the constructs are

Table 3 Discriminant validity test (Fornell and Larcker criteria)

Construct	FP	RI	FE	FC	PA	IN	IP	AVE
IP	0.85							0.73
RI	0.16	0.88						0.78
FE	0.18	0.32	0.89					0.80
FC	0.29	0.17	0.28	0.93				0.87
PA	0.26	0.26	0.33	0.27	0.94			0.88
IN	0.31	0.33	0.17	0.26	0.21	0.92		0.84
IP	0.35	0.19	0.21	0.19	0.27	0.18	0.93	0.87

Table 4 Heterotrait-Monotrait (HTMT) test

Construct	FP	RI	FE	FC	PA	IN	IP
FP							
RI	0.36						
FE	0.43	0.22					
FC	0.52	0.32	0.29				
PA	0.41	0.49	0.32	0.43			
IN	0.19	0.44	0.39	0.29	0.32		
IP	0.27	0.17	0.47	0.19	0.28	0.17	

Table 5 Moderator analysis (MGA)

Linkages	Hypotheses	p-value differences	Remarks
(IN→IP) × DC	H7	0.04	Significant
(IN→IP) × IC	H8	0.01	Significant

less than the highest threshold value of 0.85 (Voorhees et al. 2016). This also confirms the Fornell and Larcker test. The results are provided in Table 4.

5.2 Moderator analysis

In the present study, the effects of the moderators, digitalization capability (DC), and international marketing capability (IC) on the linkage IN→IP (H6) have been analyzed using multigroup analysis (MGA) with the bootstrapping procedure considering 5000 resamples. Effects of the moderators on the linkage H6 have been analyzed by dividing each moderator into two groups, Strong DC and Weak DC, as well as Strong IC and Weak IC. The p-value difference of each moderator comes out to the less than 0.05. This confirms that the two moderators have significant impacts on the relationship H6. The results are shown in Table 5.

5.3 Common method variance (CMV)

In the present study, data were collected from the respondents during the survey. These data have been analyzed, but there is a chance that the replies were biased. To eliminate the chance of bias, we adopted some preemptive measures. The wordings and some of the formats of the questions were corrected to enhance the readability and understandability. Also, the respondents were assured that their anonymity and

confidentiality would be preserved. Despite these efforts, there may still be a chance of bias. Therefore, common method variance (CMV) was tested with Harman's Single Factor Test (SFT). The results highlight that bias accounts for 27.39% of the variance. It is less than the recommended highest value of 50% (Podsakoff et al. 2003). To confirm Harman's SFT, marker-based correlation test was also conducted (Lindell and Whitney 2001). The correlational difference between the original model and marker-based model was found to be 0.022 (<0.06) (Mishra et al. 2018). Hence, the CMV could not be considered as a major concern.

5.4 Effect size f^2 test

To test if there is any effective contribution of the exogenous latent variables to endogenous latent variables, the effect size f^2 test was conducted. According to Cohen (1988), f^2 is said to be weak (W) if it lies between 0.020 and 0.150, it is said to be medium (M) if it lies between 0.150 and 0.350, and it is said to be large (L) if its values are greater than 0.350. The findings of this study show that the effect size f^2 for FP→IN is 0.268 (M), RI→IN is 0.175 (M), FE→IN is 0.392 (L), FC→IN is 0.222 (M), PA→IN is 0.131 (W), and IN→IP is 0.411 (L).

5.5 Hypotheses testing

To test the hypotheses, the bootstrapping procedure was adopted with consideration of 5000 resamples (Mishra et al. 2018). Considering separation distance 7, cross-validated redundancy was estimated for the endogenous variables. The Q^2 value emerged as 0.066 (positive). The result confirms that the model has predictive relevance.

Also, for ascertaining the model fit, the Standardized Root Mean Square Residual Error (SRMR) was considered as a standard index. Its values emerged as 0.065 and 0.031 for PLS and for PLSc. Both values are less than 0.08 (Hu and Bentler 1999), confirming that the model is in order. This process helps to compute the path coefficients, R^2 values, and p-values. The results are shown in Table 6.

With all these inputs, the validated model is shown in Fig. 2.

6 Results

The research study has formulated eight hypotheses, out of which two are concerned with the effects of the moderators DC on H6 and IC on H6. The results demonstrate that FP, RI, FE, FC, and PA impact IN significantly and positively, since the concerned path coefficients are 0.22, 0.24, 0.29, 0.26, and 0.31, with respective levels of significance as $p<0.001$(***), $p<0.01$(**), $p<0.01$(**), $p<0.001$(***), $p<0.001$(***) (H1, H2, H3, H4, and H5). Again, the results highlight that IN impacts IP significantly and positively since the concerned path coefficient is 0.44 with level of significance $p<0.001$(***). Then, the results show that DC, as a moderator, impacts IN→IP significantly and positively, since the concerned path coefficient is 0.19 with level of significance $p<0.01$(**), and the moderator IC impacts IN→IP significantly and positively, since the concerned path coefficient is 0.17 with level of significance

Table 6 Path coefficients, R^2 values, p-values, and remarks

Linkages	Hypotheses	R^2 values / path coefficients	p-values	Remarks
Effects on IN		$R^2=0.46$		
By FP	H1	−0.22	P<0.001(***)	Supported
By RI	H2	0.24	P<0.01(**)	Supported
By FE	H3	0.29	P<0.01(**)	Supported
By FC	H4	0.26	P<0.001(***)	Supported
By PA	H5	0.31	P<0.001(***)	Supported
Effects on IP		$R^2=0.73$		
By IN	H6	0.44	P<0.001(***)	Supported
(IN→IP) × DC	H7	0.19	P<0.01(**)	Supported
(IN→IP) × IC	H8	0.17	P<0.05(*)	Supported

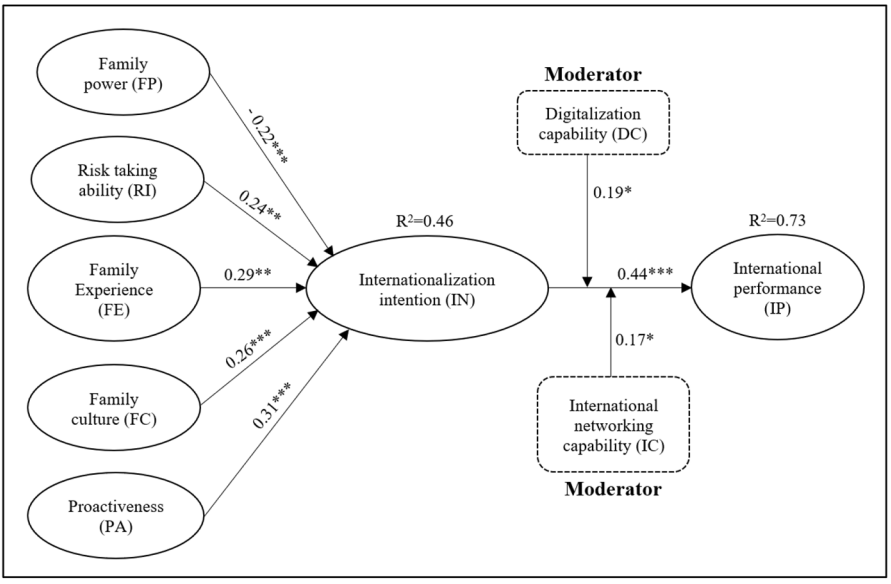


Fig. 2 Validated model

p<0.05(*). So far as coefficients of determination (R^2) are concerned, FP, RI, FE, FC, and PA could explain IN to the tune of 46% ($R^2=0.46$), whereas IN could impact IP to the extent of 73% ($R^2=0.73$), which is the predictive power of the model.

7 Discussion

There are many challenges to family firms' efforts towards internationalization. This issue seems to be resolved at the intersection of the international business and family firm-centric perspective (De Massis et al. 2018). In this context, the present study has taken a holistic attempt to identify the antecedents which could facilitate or impede internationalization intention, which in turn impacts international performance under the simultaneous influence of the two moderators, digitalization capability (DC) and international marketing capability (IC). The present study has shown that family firm owners are reluctant to lose their power when their firms are internationalized. As a result, they often hinder the internationalization initiatives (H1), which is a concept supported by agency theory. Also, this hypothesis has received support from other studies (Faccio et al. 2001; Singla et al. 2014; Van Essen et al. 2015; Santulli et al. 2019).

The authors hypothesized that risk-taking ability and proactiveness of a family firm can help them in their efforts towards internationalization (H2 and H5). This idea has received support from other studies (Matsuno et al. 2002; Zahra 2005). Moreover, this study has ascertained that experience and culture of the family firms significantly and positively impact internationalization (H3 and H4). These hypotheses have received support from other studies (Schein, 1983; Slater and Narver 1995). The present study shows that internationalization of a family firm improves its international performance (H6). This concept has been supplemented by another study (Liu et al. 2019). The present study has also documented that influence of digitalization capability (DC) and international marketing capability (IC) strengthen the relationship between internationalization of the family firms and international performance. This concept has been supported in other studies, though in different contexts (Kraus et al. 2019; Zaki 2019).

Now, attempts will be taken to graphically analyze the effects of the two moderators DC and IC on the linkage H6. These have been shown in two figures (Figs. 3 and 4).

Figure 3 shows the effects of Strong DC and Weak DC on H6. From the graph, it appears that with the increase of IN, the rate of increase of IP is more from the effects of Strong DC compared to the effects of Weak DC on H6 since the gradient of the continuous line, representing the effects of Strong DC, is more than the gradient of the dotted line, representing the effects of the Weak DC. Figure 4 represents the effects of Strong IC and Weak IC on H6.

Continuous and dotted lines represent the effects of Strong IC and the effects of Weak IC on H6. From the graphs, it appears that with increase of IN, the rate of increase of IP is more from the effects of Strong IC compared to the effects of Weak IC, since the gradient of the continuous line is more than the gradient of the dotted line. The gradient of a straight line is interpreted as the trigonometric tangent of the angle which the straight line makes with the positive direction of the horizontal axis.

Fig. 3 Effects of DC on H6

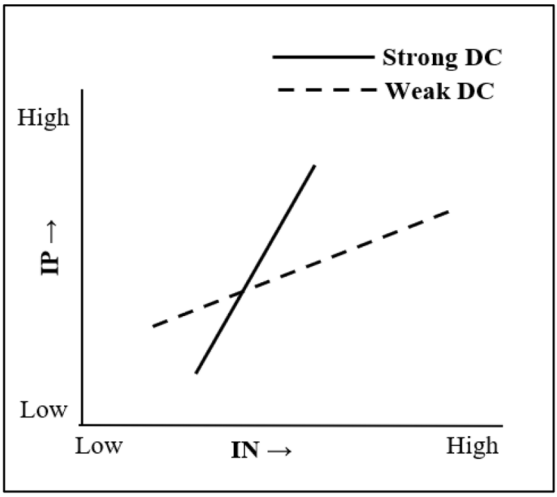
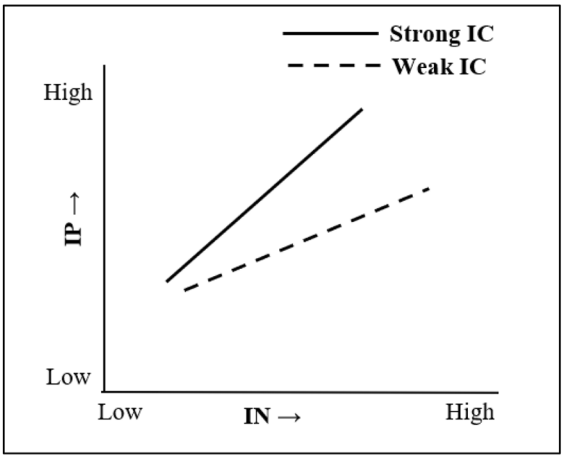


Fig. 4 Effects of IC on H6



7.1 Theoretical contribution

The present study is claimed to have provided several theoretical contributions. No study in the extant literature was found to have investigated how the different characteristics of family firms could facilitate or impede them towards international performance by improving their international preparedness under the moderating influence of digitalization and networking capabilities. This has been accomplished in this study. It is claimed that this research has been able to enrich the body of literature, which is a successful theoretical contribution of the present study.

The present study has used the concept of agency theory to explain and resolve issues in the context of relationships between business principles and their agents. The applicability of this theory has been extended in the present study to explain

that family firms are less internationally oriented because of agency conflict between most of the family shareholders, who have used their power to harness private benefits from the family firms, and minority shareholders, who want to extract benefits from internationalization. This concept of agency theory has been extended to provide clear evidence on how the agency conflicts in the family firms could impede international expansion (Singla et al. 2014).

The present research has also used DCV theory to explain different abilities of a family firm that impact internationalization. Here, the concept of DCV theory is extended by conferring dynamic capabilities to the risk-taking abilities and proactiveness of the family firms in the context of internationalization. These two abilities are perceived to include sensing, seizing, and reconfiguring abilities to take advantage of any opportunity conducive for internationalization. The risk-taking abilities and proactiveness have been ascribed with dynamic capabilities, because these two competencies are perceived to be able to appropriately seize the sensed opportunities and to integrate them with the existing resources to address environmental dynamism. This is claimed as a special theoretical contribution of this study. Moreover, by considering the other two abilities of a family firm, which are experience and culture, the present study has been able to propose a successful conceptual framework model with high explanative power. Consideration of these family firm abilities (experience and culture) is claimed to have added value to the body of knowledge on family firms in the international context.

Kellermanns and Eddleston (2006) investigated how different factors of a family firm could influence corporate entrepreneurship under the moderating influence of strategic planning. Their idea has been extended in the present study to investigate family firms' different capabilities that impact internationalization. A study by Zahra et al. (2004) investigated how the culture of different family firms could impact their entrepreneurship, and this idea has been extended in the present study to investigate how culture and experience of a family firm could impact international preparedness. This is claimed as a special theoretical contribution of the present study.

7.2 Implication to practice

The present study has been able to provide several practical implications. This study has documented that out of fear of losing power, the family firms' owners can hinder internationalization (H1) (Singla et al. 2014). In this context, it is to note that for the betterment of family firms, the owners must realize that internationalizing their firms will benefits them more than they are currently enjoying. They should note that, by internationalization, different family firms, like Ferrero and Michelin (Europe), Walmart (America), Tata group (India), and so on have benefited immensely. These famous family firms should be the role models of other small family firms.

The present study has hypothesized that risk-taking ability and proactiveness significantly and positively impact internationalization intention of the family firms (H2 and H5). It implies that, in order to successfully internationalize the family firms, the owner-managers have to take on more risk to surpass their competitors in the international markets (Luo and Tung 2007). The owner-managers of the family firms should

be more proactive by acquiring international marketing knowledge to apply to any situation when required for internationalization (Yeoh 2000).

The present study has highlighted that family firms' experience and culture have a significant and positive impact on internationalization intention (H3 and H4). Therefore, the owners of the family firms must develop their knowledge of international marketing activities by seeking international contacts, by regularly attending international trade shows, and by gaining knowledge about newer firms' cognitive and structural advantages in their targeted foreign markets (Sapienza et al. 2006). By acquiring cultural knowledge from bigger international family firms, smaller family firms should try to liberalize their cultural beliefs to be conducive to expanding their businesses in foreign markets in a better way. The present study has documented that internationalization will help family firms to improve their performance (H6), which implies that the family firm owners must realize the boon of internationalization to ensure better profitability and that they must align to expand their businesses beyond their national borders. For this, they need to develop their dynamic capabilities as far as possible to react and respond to the ever-changing international challenges.

The present study has highlighted that for improving their international performance, family firms need to utilize digital technologies and to develop their networking capabilities (H7 and H8). This implies that the family firm owners must be aligned to digitalization by appropriately allocating budgets and arranging for their employees' proper training on how to use the digital and emerging technologies to reap their best potential. The family firm owners must develop their networking capabilities, which will help them to identify the best partners, the best institutional opportunities, and other conducive advantages of their targeted foreign markets. This will help the family firms achieve a successful entry in foreign markets.

7.3 Limitations of this study and future research scope

The present research has provided several theoretical contributions and practical implications. Still the present study is not free from all limitations. First, the study results depend on cross-sectional data, which gives rise to defects of causality in the relationship between the constructs and to endogeneity problems. Second, this study has utilized DCV theory (Teece et al. 1997) to interpret the dynamic capabilities of some of the exogeneous constructs. However, DCV theory is known to suffer from the defects of context-insensitivity (Ling-Yee, 2007; Wamba et al. 2019). It is construed that DCV is unable to appropriately identify the conditions in which the capabilities of a family firm will be most valuable (Dubey et al. 2019). Third, the present study depends on the inputs of the respondents of Indian family firms. Hence, the results obtained in this study should be construed as being affected by the defects of external validity. Fourth, the explanative power of the proposed conceptual framework model is 73%, which means there is still scope for strengthening the explanative power of the proposed model. Fifth, the present study results are based on the inputs of respondents of eight Indian family firms. To project more generalizability in the results, more family firms ought to be considered. This is left for the future researchers to nurture.

In this context, there are several openings for future researchers to conduct more studies. To remove the defects of causality relationship and endogeneity, it is suggested that future researchers conduct a longitudinal study with econometric analysis. To remove the defects of context insensitivity of the DCV theory, future researchers may explore the optimum conditions under which DCV theory can explain best international performance of the family firms. To remove the defects of external validity, it is suggested that future researchers may consider inputs of respondents from several family firms dispersed across the globe to project generalizable findings. To explore the scope to further strengthen the explanative power of the proposed model, future researchers may consider other constructs and other boundary conditions.

8 Appendix 1: A list of Indian family firms

Name of family firms	Founder	Year of establishment	Head-quarter
Aditya Birla Group	Seth Shivnarayan Birla	1857	Mumbai
Shapoorji Pallonji	Pallanji Mistry	1865	Mumbai
Tata Group	Jamsetji Tata	1868	Mumbai
Godrej Group	Ardeshir Godrej and Pirojsha Burjorji Godrej	1897	Mumbai
Murugappa Group	A.M. Murugappa Chettiar	1900	Chennai
Khoday Group	Khoday Eshwara	1906	Bengaluru
Kirloskar Group	Laxmanrao Kirloskar	1911	Pune
TVS Group	T.V. Sundaramiyengar	1911	Madurai

Source: www.buddymantra.com.

9 Appendix 2: Details of research instruments

Items	Source	Statements	Response [SD][D][N][A][SA]
FP1	Dressler and Tauer 2015	Family influence is an important factor towards expanding the family firms internationally.	[1][2][3][4][5]
FP2	Carr and Bateman 2009; Carney et al. 2015	I believe that it is essential to have a powerful family at the top of the family firms.	[1][2][3][4][5]
FP3	Churchill and Hatten 1987; Eisenhardt 1989	I believe family influence plays a vital tole towards internationalization of family firms.	[1][2][3][4][5]
FP4	Alessendri et al., 2018; Santulli et al. 2019	Family influence plays a vital role towards the digitalization process of the family firms.	[1][2][3][4][5]
RI1	Zhou et al. 2016;	I believe that the international expansion of any firm is associated with high risks.	[1][2][3][4][5]
RI2	Zahra 2005; Luo and Tung 2007	I believe that it is essential to take some risks towards expansion of family firms internationally.	[1][2][3][4][5]

Items	Source	Statements	Response [SD][D][N][A][SA]
RI3	Agnihotri and Bhattacharya 2021	Without taking any risk, I think that the family firms cannot grow internationally.	[1][2][3][4][5]
RI4	Zhou et al. 2010; Falahat et al. 2021;	There could be a possibility of failure if the family firm wants to expand internationally without a proper strategy.	[1][2][3][4][5]
FE1	Slater and Narver 1995	Experience of the family plays a vital role towards expanding the business in a foreign country.	[1][2][3][4][5]
FE2	Sapienza et al. 2006	I believe that prior international exposure of the family is an important advantage.	[1][2][3][4][5]
FE3	Zhou et al. 2010	Diversified business interests of a family can help them to grow rapidly in the international market.	[1][2][3][4][5]
FE4	Sapienza et al. 2006	Without having any international experience of the family, it is difficult to hire appropriate foreign managers.	[1][2][3][4][5]
FC1	Zhou et al. 2016; Falahat et al. 2021	I believe that family firm culture is considered an internal group-oriented culture.	[1][2][3][4][5]
FC2	Thornton 2004; Zahra et al. 2008	I think that culture of a family is based on personalized and emotional values.	[1][2][3][4][5]
FC3	Dheer et al. 2015	The family firm culture depends on the role that was played by the founder while establishing family firm.	[1][2][3][4][5]
FC4	Schein 1995; Krishnan 2020	I believe that family culture has an influence on how professional managers and employees perform their tasks in family firms.	[1][2][3][4][5]
PA1	Yeoh 2000; Autio et al. 2000	International marketing knowledge is considered an essential element for a family firm's rapid growth towards internationalization.	[1][2][3][4][5]
PA2	Slater and Narver 1995; Matsuno et al. 2002	Family firms must upgrade their knowledge repository on a regular basis for expanding their business internationally.	[1][2][3][4][5]
PA3	Lunpkin & Dess, 1996	The firm must become knowledgeable on how to effectively deploy the available resources to fetch the best results.	[1][2][3][4][5]
PA4	Oviatt and McDougall 1994; Zahra 2005	Family firms should take appropriate initiatives to develop knowledge about international markets.	[1][2][3][4][5]
IN1	Floris et al. 2021	I believe that innovation capability of the family firms helps them to internationalize their businesses.	[1][2][3][4][5]
IN2	Braga et al. 2017	Family firms must possess appropriate competitiveness to enter the foreign markets.	[1][2][3][4][5]
IN3	Cassiman and Golovko 2011	The family firms need to have appropriate expert managers to enter in the foreign market.	[1][2][3][4][5]
IN4	Baines et al. 2017	The family firms must possess proactiveness to enter the foreign markets.	[1][2][3][4][5]
IN5	Katikeas et al., 2019	To enter the foreign markets, the family firms need to assess its risk-taking appetite.	[1][2][3][4][5]
IN6	Malhotra et al. 2003	I believe that digitalization initiatives can help family firms to rapidly internationalize their businesses.	[1][2][3][4][5]
IP1	Lafuente et al. 2017	Through Internationalization process, family firms can improve their revenue growth.	[1][2][3][4][5]

Items	Source	Statements	Response [SD][D][N][A][SA]
IP2	Liu et al. 2019	Internationalization process can help family firms getting more expert employees from foreign markets.	[1][2][3][4][5]
IP3	Dubiel et al. 2018	Internationalization process can help to optimize knowledge management process.	[1][2][3][4][5]
IP4	Katikeas et al., 2019	Internationalization of family firms can help more profitability.	[1][2][3][4][5]
IP5	Braga et al. 2017	Entering the foreign markets can help family firms capture more customers.	[1][2][3][4][5]
IP6	Malhotra et al. 2003	Internationalization process can help to optimize supply chain management process.	[1][2][3][4][5]

SD = Strongly Disagree; D = Disagree; N = Neither agree nor disagree; A = Agree; SA = Strongly Agree.

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