




Born global: antecedents and consequences of innovation capabilities

Suresh Malodia¹ · Amandeep Dhir^{2,3,4}  · Safiya Mukhtar Alshibani⁵ · Michael Christof⁶

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Abstract

Innovation capabilities are considered a key factor impacting the success and sustainability of born global firms across the world. These capabilities are even more significant for the born global firms from emerging markets. In this study, we propose an overarching conceptual framework called *ICONIC* to explain the factors that are critical for developing innovation capabilities in born global firms. Using grounded theory with a triangulation approach, we define innovation capabilities as a multi-dimensional construct with three sub-dimensions: *business model innovation*, *improvisation* abilities, and *personalized problem-solving*. Furthermore, we identify three antecedents (*firm-related factors*, *competition-related factors*, and *customer orientation*) leading to innovation capabilities and discuss the tangible and intangible outcomes of innovation capabilities. In this study, we also propose a set of propositions describing the nature of the relationship between different constructs in our framework. Finally, we discuss the theoretical contributions and implications for born global firms and policymakers to realize the strategic goals of internationalization.

Keywords Born global · Innovation · Innovation capabilities · Internationalization

Introduction

The entry of multinational companies (MNCs) into emerging markets not only changes the competitive dynamics in these markets but also pushes other firms in the market space—mostly small and medium enterprises (SMEs)—to adopt early internationalization as a growth strategy (Chen & Liu, 2021). Undoubtedly, these early adopters of internationalization, known as *born global firms*, benefit from internationalization with growth in sales, profitability, productivity, and diversification

Extended author information available on the last page of the article

of market risk (Mathews, 2006). However, the internationalization approach alone cannot deliver the desired outcomes because, unlike MNCs, born global firms are in a relatively disadvantageous position due to their newness and lack of experience in operating in the international markets (Chen & Liu, 2021; Yeung, 2002). Born global firms, therefore, are required to develop their innovation capabilities to establish successful inroads into international markets and create a sustainable competitive advantage by offering unique products to non-conventional market segments (Yi et al., 2013). These born global companies primarily depend on their distinct product offerings to focus on market segments that traditional MNCs cannot cater to due to the emerging nature of these segments, which require adaptability and flexibility to gain a significant market share (Knight & Cavusgil, 2004). This specific characteristic of born global enterprises has proven to be advantageous for smaller firms with innovative product offerings as they possess the ability to adapt and cater to these emerging segments effectively (Knight & Cavusgil, 2004).

Innovation has remained a topic of conversation among academic groups and practitioners associated with born global firms, and the literature recognizes innovation capabilities as a major driver of growth in the internationalization of firms (Teece et al., 1997). The extant literature reports a positive association between innovation and successful outcomes of internationalization (Eriksson et al., 2000; Filipescu et al., 2013; Ribau et al., 2017). Furthermore, prior research has indicated that born global companies exhibit high levels of innovation and are more inclined to participate in product and process innovation compared to conventional companies (Ribau et al., 2017). This is attributed to elements such as a global perspective, flexibility, quickness, and a willingness to take on risk (Nguyen, & Mort, 2021). Moreover, born global firms frequently place a strong emphasis on fulfilling customer needs and are skilled in utilizing technology to establish new value propositions (Weerawardena, 2007).

Despite the significant number of studies on born global firms and their innovation capabilities, there are still several open research gaps in the prior extended literature that require urgent attention. First, existing studies have argued a positive correlation between born global firms and innovation. However, the specific processes and characteristics that facilitate their ability to develop and sustain innovation are currently unknown. Furthermore, the prior literature on innovation capabilities in the realm of born global firms lacks clarity and coherence, with a fragmented perspective and a lack of consensus on the key factors that contribute to their innovation capabilities. Second, there is a notable gap in the conceptualization of the underlying dimensions of different innovation capabilities, specifically within the context of born global firms. This gap hinders a comprehensive understanding of the diverse facets of innovation capabilities exhibited by these firms. Third, there is a limited understanding of the antecedents of innovation capabilities in born global firms and the tangible and intangible outcomes that result from their development (Kafouros et al., 2008). The current study aims to bridge the aforementioned research gaps by investigating the following research questions (RQs): **RQ1.** What are the antecedents that foster a conducive environment for building innovation capabilities among born global firms? **RQ2.** What are the underlying dimensions that jointly constitute innovation capabili-

ties in born global firms? **RQ3.** What are the tangible and intangible outcomes that arise from the innovation capabilities of born global firms?

Drawing insights from 29 in-depth interviews conducted with founders and key decision-makers of born global firms from India and China, the current study proposes an overarching conceptual framework using a grounded theory approach. This study conceptualizes and defines the innovation capabilities of born global firms as a multi-dimensional construct. To support our conceptualization, we draw upon three different innovation theories: dynamic capabilities theory, organizational agility theory, and entrepreneurial bricolage theory. Within this framework, the study identifies three key underlying dimensions of innovation capabilities that are specific to born global firms: *business model innovation*, *improvisation abilities*, and *personalized problem-solving*. By exploring these dimensions, the study aims to elucidate the unique characteristics of innovation capabilities exhibited by born global firms. Furthermore, the study endeavors to identify the antecedents and outcomes associated with these innovation capabilities. By understanding the factors that contribute to the development of innovation capabilities and the tangible and intangible outcomes that result from them, this research aims to provide a comprehensive understanding of the innovation landscape within born global firms. Additionally, the study puts forth theoretical propositions that establish the relationships between the antecedents and outcomes of innovation capabilities in born global firms. These propositions not only contribute to theoretical knowledge but also offer practical implications for born global firms, providing valuable insights for their strategic decision-making and operational practices.

The rest of the paper is structured as follows: The paper begins by reviewing and summarizing prior literature on born global firms and innovation capabilities. This review helps identify the existing research gaps in the field. The next section explains the steps taken to conduct the qualitative inquiry. By triangulating insights from qualitative data and a critical review of the literature, the research team develops a comprehensive understanding of the topic. Drawing on the results of qualitative inquiry and a comprehensive review of existing literature, this paper puts forth a conceptual framework that provides insights into comprehending the innovation capabilities of born global firms. This framework includes key dimensions and relationships among the variables. The research propositions derived from the framework are also presented. In the subsequent section, the paper discusses both the theoretical and managerial implications of the study's findings. The implications are intended for various stakeholders, providing valuable insights and guidance for both researchers and practitioners. Lastly, the study concludes by summarizing the main findings and implications and highlighting the limitations of the research while proposing potential directions for future investigations in this field. By following this structured approach, the paper contributes to the existing knowledge on born global firms and innovation capabilities while offering practical guidance for researchers, practitioners, and the broader academic community.

Literature review

Born global firms

Foundational literature on born global firms and international ventures emerged in the 1990s. Oviatt and McDougall (1994) provide a framework to explain the early internationalization of firms by integrating accepted multinational enterprise and international business theories. Furthermore, the aforementioned study acknowledges the significance of knowledge and other distinctive organizational resources in the initial stages of internationalization. Subsequent research explored these phenomena using theories from international business such as the monopolistic advantage theory (Hymer, 1976), product cycle theory (Vernon, 1966), the stage theory of internationalization (e.g., Bilkey and Tesar, 1977), oligopolistic reaction theory (Knickerbocker, 1973), and internalization theory (Buckley & Casson, 1976; McDougall et al., 1994). Another set of literature explored the theoretical frameworks related to alliances and networks within the context of internationalization (Coviello & Munro, 1995, 1997; Welch et al., 1998). The role of the external environment, the liberalization of global markets, advancements in information technologies, and internet proliferation have been highlighted in the literature starting from the year 2000 (Etemad, 2004; Loane, 2006; Rialp et al., 2005). The literature further discusses additional factors that impact the growth of born global firms, including the size of the domestic market, international market conditions, and the existing competitive environment (Bell et al., 2003; Efrat & Shoham, 2012; Fan & Phan, 2007; Fernhaber et al., 2007; Kudina et al., 2008; McDougall et al., 2003; Mudambi & Zahra, 2007).

We observe that at the firm level, the research has also started focusing on the examination of the attributes and characteristics of born global firms, including their founders and the tangible/intangible resources they bring to internationalization (Bahl et al., 2021; Luostarinen & Gabrielsson, 2006; McDougall et al., 2003). The literature reports a proclivity for risk-taking and proactively undertaking internationalization among the founders of born global firms (Acedo & Jones, 2007; Lahiri et al., 2020; Zhou, 2007). The role of prior experience in international business has been reported as an important factor in the emergence of born global firms (e.g., Acedo and Jones, 2007; Aspelund et al., 2007; Luostarinen and Gabrielsson, 2006; McDougall et al., 2003). Similarly, dynamic capabilities built and nurtured by internationally entrepreneurial founders are also reported as a key factor that supports early internationalization (McGaughy, 2007; Prange & Verdier, 2011; Weerawardena et al., 2007). However, the theoretical foundations and research on born global firms are still in the early stages and lack comprehensive development and cohesion (Clercq et al., 2012; Jones et al., 2011; Keupp & Gassmann, 2009). Most existing studies, consistent with the initial exploration of new phenomena, have been primarily exploratory and descriptive, with limited attention given to the innovation capabilities of born global firms (Shams, 2021). Only a relatively small number of research endeavors have aimed to advance theoretical perspectives on born global firms (Combs et al., 2011; Keupp & Gassmann, 2009). Moreover, there has been a lack of consistency in building upon previous studies (e.g., Jones and Coviello, 2005), and knowledge

remains limited in various aspects. Specifically, there is a dearth of research focusing on the innovation capabilities of born global firms.

Innovation capabilities

Innovation capabilities refer to a company's ability to generate, develop, and commercialize new products, services, or processes (Zheng et al., 2010). Companies with strong innovation capabilities are able to adapt to market changes, meet customer demands, and stay ahead of competitors (Rajapathirana, & Hui, 2018). Prior literature on innovation capabilities has focused on three approaches, namely the knowledge-based approach, resource-based approach, and process-based approach, to drive innovation and gain a competitive edge (Mendoza-Silva, 2021). Knowledge, in conjunction with organizational competence, plays a crucial role in fueling innovation. Within the realm of knowledge management literature, knowledge forms the core of the innovation process, involving the utilization of ideas and resources within an organization to generate fresh and innovative solutions (Quintane et al., 2011). On the other hand, the resource-based perspective regards organizations as a collection of resources and capabilities. It is through the formulation of strategies aligned with these resources that a firm can attain a competitive advantage (Lawson & Samson, 2001; Saunila, 2017). This can include factors such as the availability of financial and human resources (Cahen, & Borini, 2020). Lastly, process-based innovation is commonly categorized into technical and administrative innovations, encompassing both radical and incremental forms (Damanpour & Gopalakrishnan, 2001; Teece et al., 1997). Technical innovation pertains to core work activities, such as advancements in products and processes (Frishammar et al., 2012), while administrative innovation involves the implementation of new organizational structures or procedures (Weber, & Heidenreich, 2018).

In the context of born global firms, innovation capabilities refer to the specific traits, skills, and resources that enable these firms to internationalize their operations rapidly and effectively (Knight & Cavusgil, 2004). Born global firms are companies that pursue global expansion from the early stages of their establishment, even before they have fully established themselves in their domestic market (Monferrer et al., 2021). Their innovation capabilities are shaped by a unique set of factors such as a proclivity for risk-taking, an entrepreneurial spirit among founders, prior international business experience, and dynamic capabilities such as flexibility and the ability to quickly respond to market changes (Monferrer et al., 2021; Nguyen & Mort, 2021).

Compared to other firms, born global firms may have different innovation capabilities due to their distinctive approach to internationalization (Knight & Liesch, 2016; Nguyen & Mort, 2021). They may focus more on acquiring and utilizing specific knowledge relevant to their global operations, such as cultural and market understanding. Additionally, their organizational structure may be more decentralized and flexible, allowing for quick responses to opportunities and challenges in different international markets (Ambrosini, & Bowman, C., 2009). In conclusion, born global firms' innovation capabilities are a result of a combination of their entrepreneurial spirit, dynamic capabilities, and unique approach to internationalization. Although the importance of these capabilities has been emphasized in the literature, there is still

a need for more research to understand how firms acquire them (Knight & Liesch, 2016).

Prior literature on innovation capabilities focuses on the potential of an organization to produce or adopt innovations. Table 1 summarizes the prior literature on born global firms, including conceptual and empirical research that explores the concepts, characteristics, and factors affecting their innovation capabilities and performance. Moreover, the existing research on innovation capabilities has primarily concentrated on constructing a theoretical model that identifies the key dimensions and exploring the factors that influence them, along with their resulting outcomes. Consequently, there is a need for further investigation to fill significant gaps and address deficiencies in the current body of literature. Hence, in the proposed research, we intend to extend existing theories to explain how born global firms achieve precocious innovation capabilities. The aim of the research is to develop a comprehensive conceptual framework that summarizes the extant literature, identifies the antecedents of the innovation capabilities of born global firms in the light of various boundary conditions, and, finally, examines the consequences of innovation capabilities on the performance of born global firms.

Methodology

This study adopted a qualitative method to achieve two main objectives, namely (a) to conceptualize and define the innovation capabilities of born global firms as a multi-dimensional construct with three underlying dimensions, and (b) to identify the antecedents, consequences, and boundary conditions. A qualitative approach was appropriate in the context of the current study since there is a limited availability of literature on the innovation capabilities of born global firms. We found grounded theory to be a suitable method as it provides a practical as well as flexible approach to achieving the broad objectives aimed for in this research (Malodia et al., 2020). Furthermore, prior literature has used grounded theory to investigate and theorize complex phenomena such as innovation capabilities (Malodia et al., 2023).

Data collection

Due to the increasing presence of born global firms emerging from countries like India and China, we decided to concentrate on the innovation capabilities demonstrated by firms originating from these two countries. In-depth interviews were conducted with top officials and founders of 12 born global firms from China and 17 born global firms from India. We also interviewed industry experts in the subject matter of international business representing export promotion agencies and government export promotion departments, as well as senior academicians with expertise in the internationalization of business ventures. The interviewees were selected based on belonging to one of the following categories: (a) founders and decision-makers involved in the internationalization, design of products or services, identification of markets, and establishment of the organizational structure of born global firms (b) experts in the field of international business having extensive knowledge and experi-

Table 1 Overview of prior literature on born global innovation capabilities

Studies	Study Type	Focus	Definition of Innovation Capabilities	Conceptualization of Innovation Capabilities
Rennie, 1993	Conceptual Research	Introduces the concept of born global firms based upon a study conducted on Australian exporting firms	No	No
Oviatt and McDougall, 1994	Conceptual Research	Presents a framework to explain the phenomenon of international new ventures by integrating international business, entrepreneurship, and strategic management theory	No	No
Knight and Cavusgil, 2004	Conceptual Research	Highlights the role of innovation culture, knowledge, and capabilities to succeed in born global firms globally	No	No
Coviello and Munro, 1995	Case Methodology	Investigates how entrepreneurial high-technology firms engage in international market development by specifically examining their utilization of network relationships in their international marketing endeavors	No	No
Madsen and Servais, 1997	Empirical Research	Explores some of the main characteristics reported about born global firms and compares them empirically to provide a theoretical conceptualization	No	No
Kim et al., 2011	Empirical Research	Explores how born global firms' customer orientation effectively enables their innovativeness, the effects of which are mediated by customer relationship management capabilities and external customer information management	No	No
Efrat and Soham, 2012	Empirical Research	Explores the external and internal factors impacting the short-term and long-term performance of born global firms, respectively	No	No
Knight and Liesch, 2016	Conceptual Research	Outlines the evolution of research on early internationalization and born global firms and also examines further prospects for advancing scholarship on born global firms	No	No
Efrat et al., 2017	Empirical Research	Addresses innovation-related core capabilities that drive innovation and presents a linkage between born global firms' organizational culture and innovativeness	No	No
Mudambi and Zahra, 2007	Empirical Research	Explores factors that help INVs survive against two potential liabilities: newness and foreignness	No	No
The current study	Qualitative Research	Conceptualizes the innovation capabilities of born global firms, identifies antecedents, and provides theoretical propositions of innovation capabilities and their outcomes for born global firms	Yes	Yes

ence in dealing with born global firms, and (c) academicians with a deep understanding of the phenomenon of internationalization of new ventures who have published substantially in reputable academic journals.

Data analysis

The interviews were useful in providing insights related to macro and micro issues impacting the innovation capabilities of born global firms from an institutional lens. The interviews were recorded, transcribed, and coded for thematic analysis. On average, the interview duration ranged between 60 and 75 min. The interviews yielded insights on various aspects, including identifying consumer segment needs, personalized problem-solving, dynamic capabilities, organizational agility, niche market selection, collaboration with multinational corporations, market knowledge development, servitization capabilities, and business model innovations. The in-depth interviews were informative, offering significant insights and evidence to support the study's conceptual framework and explain the underlying dimensions of the innovation capabilities of born global firms.

Validity and reliability

To ensure the validity and reliability of the findings, rigorous data collection and analysis procedures were followed. The interviews were conducted with relevant stakeholders who possessed firsthand knowledge and expertise in the subject matter. The data obtained from the interviews were systematically analyzed using thematic coding, allowing for the identification of common patterns and themes across the dataset. A panel consisting of two professors, two Ph.D. scholars, and one research associate was established to identify and extract consistent themes from the interview transcripts. The panel members then classified the transcripts into relevant dimensions and identified both first-order and second-order factors. A second panel was formed to independently examine the coded categories, and inter-rater reliability was established using Fleiss Kappa=0.79 (Kim & Kumar, 2018). By triangulating the qualitative data with existing literature, the study aimed to establish a robust understanding of the research topic. The transparency and consistency of the research process enhanced the validity and reliability of the study's findings.

Study findings

In order to conceptualize and define innovation capabilities in the context of born global firms, we adopted thematic coding to systematically code and categorize the textual data transcribed from the interview recordings. This approach was useful for identifying the underlying dimensions of the innovation capabilities and extracting the antecedents of the innovation capabilities critical for born global firms.

The analysis process and findings were shared with researchers in the domain of international business and innovation who have expertise in qualitative methods. The researchers reviewed the findings, interpretations, and methodology, and their feed-

back was incorporated into our framework. Finally, through this process, we identified three underlying dimensions of innovation capabilities, namely business model innovation, improvisation abilities, and personalized problem-solving. Furthermore, we identified three antecedents of innovation capabilities, namely *firm-related factors*, *competition-related factors*, and *customer orientation*. We also identified two outcomes of innovation capabilities: *tangible outcomes* and *intangible outcomes*. In this section, we discuss these in detail and share evidence from our interviews.

Innovation capabilities of born global firms

Based on our qualitative coding, we define innovation capabilities for born global firms as their capacity to engage in business model innovation, improvisation abilities, and personalized problem-solving. The summary of the coding is presented in Fig. 1. This capacity involves the ability to modify organizational processes and designs quickly, have flexible business processes, adapt to market conditions, make use of open-source technologies, and collaborate with research organizations. It also includes the capability to modify existing solutions, add new features and functions to create superior value, and engage in incremental innovation. Furthermore, it encompasses the capacity to understand and address customer needs by preparing designs accordingly, custom-building solutions from scratch, and modifying components and parts to meet specific customer requirements.

Business model innovation

We define *business model innovation* in the context of born global firms as a conscious change in the organizational structure or processes as well as market segmentation to enhance value creation, drive profitability, and build a sustainable competitive advantage (Cavallo et al., 2019). The prior literature suggests that replicating the

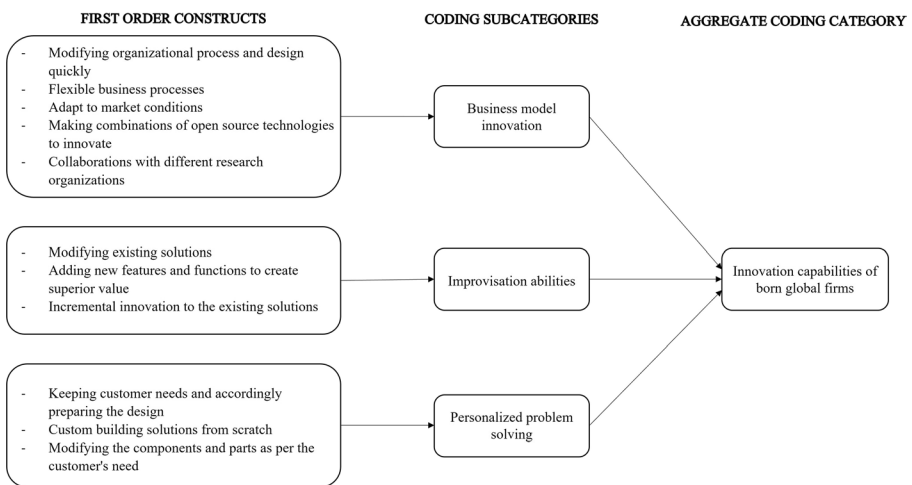


Fig. 1 Data structure on innovation capabilities of born global firms

business model of MNCs may help born global firms in their internationalization (Dunford et al., 2010). However, there is a contrasting viewpoint proposed by Teece (2007, 2010), which suggests that replicating the MNC business model may not be sufficient for successful internationalization (Cavallo et al., 2019; Child et al., 2017). During our interactions with representatives of born global firms, we observed that successful born global firms continuously experiment with the established business models, and, rather than replicating them, they tend to further adapt, evolve, modify, and innovate the proven models (Vrontis et al., 2009). As one of our respondents mentioned,

It is good to observe the business model used by MNCs, but we lack resources that are available to the MNCs, and hence their business models may not make direct sense to our business. We rather try to figure out improvements that we can make due to our agility, size, and flexibility. Our business has thrived because we could innovate our business model better as compared to the MNCs. [P7, Male, 41, Automotive, China]

Based on the qualitative interviews, we identify three broad categories of business model innovations that add to the innovation capabilities of the born global firms, and we name them as (a) adaptation, (b) exploitation, and (c) exploration. First, born global firms in traditional product-based businesses such as garments, gems, jewelry, handicrafts, and organic products tend to innovate their business model by demonstrating higher adaptability (Vrontis et al., 2009; Vrontis et al., 2016). Born global firms in this category mostly deal with products that have shorter product life cycles, tight delivery timelines, and shorter lead times. Therefore, such born global firms must work towards process innovations to demonstrate higher adaptability skills and innovate to become more flexible and reliable. Prior literature in the context of the internationalization of SMEs has identified flexibility and reliability as important determinants of competitiveness in international markets (Child et al., 2017; Möller & Törrönen, 2003). Second, the born global firms operating in technology sector domains, such as software and knowledge process outsourcing, can succeed in internationalization and gain a competitive advantage by identifying unique technological possibilities and solutions to the problems that remain unattended by the global giants (Guo et al., 2019). The business model innovation for such born global firms is rooted in the ability of the firms to create unique solutions to the technical possibilities by exploiting platform technologies (i.e., open-source technologies) and combining them innovatively to offer suitable solutions to the target customers. One of the respondents shared as follows:

The key to innovation for large MNCs is developing proprietary tools and technologies indigenously for large-scale clients. We do not try to compete with them in this market. Rather our focus is to identify small-scale problems and design customized software with the help of open-source technologies and provide a quick-fix solution. In China, we always encourage exploiting one technology to its fullest and applying it to multiple contexts. [P3, Male, 29, IT services, China]

Chetty and Stangal (2010) made similar observations and found that governments in open economies must encourage small firms with fewer employees to innovate by building newer applications from the freely available technologies. Therefore, based on the qualitative insights and the prior literature, we argue that exploiting platform technologies is an important driver of business model innovation. Lastly, the born global firms operating in the domain of scientific research, such as bio-medical, chemical, and pharmaceutical companies, are constrained by patents and copyright laws. Additionally, the license fees in this domain can be very high, and, at the same time, the application of the technology/formulations is limited. Therefore, born global firms in this category are required to compete on their ability to develop new and innovative scientific formulations and must develop ambidextrous capabilities to innovate proprietary formulations (Vrontis, 2003; Vrontis et al., 2017). One of the respondents recalled the following:

We started our journey with the objective of solving the problem of milk adulteration in India. We wanted to develop a solution that could conduct tests at the collection point, but the only solution was to collect the sample and send it to the laboratory, which would take at least 24 hours. We collaborated with a University in Denmark by funding a Ph.D. position. We wanted to develop milk testing equipment that can be accurate, portable, and provide instant results in the field. We were successful in designing the first-ever milk testing technology that carried out multiple tests and provided results on parameters that earlier required testing in a sophisticated laboratory. We have successfully licensed our product globally, and now we have ongoing collaborations with research centers in universities and research institutes to compensate for in-house capacity constraints and resource constraints. [P21, Male, 39, Instrumentation, India]

Born global firms demonstrate ambidexterity in their business model innovations by discovering business problems, exploiting existing knowledge, and forging partnerships with external research organizations such as universities and research centers that are not their competitors (Bresciani et al., 2013; Lahiri et al., 2012). The research networks can not only help born global firms in creating solutions to business problems but can also provide market linkages and enhance the credibility of their formulations. To conclude, we propose that these three strategies collectively make business model innovation an important underlying dimension of the overall innovation capabilities of the born global firms.

Improvisation abilities

We define *improvisation abilities* in the context of born global firms as the conception of new product ideas that are built on existing designs by adding, modifying, or deleting certain attributes and/or re-purposing the original design. The concept of improvisation is rooted in the literature of theatre, music, and performance arts (Weick, 1998). In the context of business management, Vera and Crossan (2005) define improvisation as solving problems spontaneously and creatively in response to unexpected environmental and market changes (Liu et al., 2018). Similarly, Ley-

bourne and Sadler-Smith (2006) refer to improvisation as an act of creativity in response to time pressure, personal consciousness, and the integrated use of existing resources. Based on the prior literature and qualitative insights from our interviews, we identify two key components of organizational improvisation, namely: (a) integrating resources on hand and (b) developing new capabilities. During our qualitative interviews, we found that born global firms were using improvisation as an organizational strategy to build their overall innovation capabilities. One of the respondents shared as follows:

In our country, we have design centers across all industrial zones that freely provide core product design for any product that is manufactured in that industrial zone. We have been referring to those product designs and continuously trying to improvise the available designs. Everyone in our organization is on a constant lookout for ideas to improvise newly launched products in a certain category. [P2, Male, 33, Engineering goods, China]

The prior literature on the contribution of improvisation toward the overall innovation capabilities of an organization has remained divided (Liu et al., 2018). For instance, Moorman and Miner (1998) find that improvisation may reduce the effectiveness of the new product whereas other studies have found opposite results wherein it is argued that improvisation is positively associated with the success of new products (Akgun et al., 2007; Eisenhardt and Brown, 1998). While the literature has found mixed results in the context of born global firms, our study's findings clearly indicate that improvisation positively contributes to the innovation capabilities of born global firms.

Personalized problem solving

We refer to *personalized problem-solving* as one of the key underlying dimensions of innovation capabilities in the context of born global firms and define it as the ability to innovate a product as a reaction to the personalized needs of the users. The prior literature recognizes customization as an innovation strategy and argues that new product innovation should follow a cognitive design approach to map the needs of different users and accordingly carry out personalization (Chen & Liu, 2005; Ko, 2017; Peng et al., 2018). Peng et al. (2018) propose that product personalization can be done by using an integral or a modular structure in the product design. According to the authors, an integral structure refers to a design that allows function sharing and geometric nesting to offer high-quality compact products whereas a modular structure refers to a product design that allows plugin features, also called modules or interfaces, and such plugins help in product personalization by significantly improving product flexibility (Peng et al., 2014).

Building on the prior literature on product personalization and using the insights from our qualitative interviews, we find that in the context of born global firms, personalized problem-solving can be used as an innovation strategy in three different ways. First, it may refer to extending the functional attributes of the product as per the client's needs. Second, personalized problem-solving may require up-gradation of

the existing modules or parts, and, finally, born global firms can create a competitive advantage in custom building various components. For example, one of the respondents in our qualitative interviews shared this perspective:

While all multinationals in our sector manufacture standard product designs, we specialize in custom building the machines and equipment that fit the size and design of the customer's premises. It all started when we received an inquiry from a customer who wanted to set up a plant in a location that was a hillside. There was no standard equipment that could fit into the structural design of the client's premises, and moreover, the order was from a foreign land. We had no experience in product development as we had only done installations in the past, but we took the challenge and started looking for fabricators, tool manufacturers, and other component suppliers, and in less than five months, we not only custom-designed the entire plant but also successfully commissioned the project for our client. [P23, Male, 51, Industrial Equipment, India]

In summary, we argue that personalized problem-solving can significantly enhance the value for the customer in multiple ways. For example, personalization can increase the functionality of the product by equipping it with customized components and modules; it can also improve the quality of the product while keeping costs low. Finally, born global firms can have a strategic advantage in terms of delivery times. Therefore, we propose personalized problem-solving as an important underlying dimension of the overall innovation capabilities of born global firms.

The three underlying dimensions, namely business model innovation, improvisation abilities, and personalized problem-solving, as discussed above, jointly define and characterize the innovation capabilities of born global firms. Though firms with similar capabilities but without any global or international presence may exist, in our opinion, the collective presence of all three sub-dimensions together presents a comprehensive picture of the innovation capabilities of born global firms. Nonetheless, each dimension discussed above may be present in different proportions and degrees of intensity across different types of born global firms working in a variety of sectors and international markets.

Antecedents of innovation capabilities

While innovative capabilities are the key contributing factor to the successful internationalization of born global firms, the major antecedents that help them develop these innovation capabilities remain unknown. Therefore, in this study, we identify the factors that determine the innovation capabilities of born global firms using grounded theory. The proposed model not only identifies antecedents but also explains the consequences of innovation capabilities. Additionally, we offer several research propositions. In our framework, we identify antecedents such as building dynamic capabilities to overcome resource constraints, organizational agility to swiftly respond to the changing needs of market and industry, forming niche markets that are usually ignored by MNCs, developing complementary relationships rather than competing with MNCs, generating unique market knowledge, embracing the

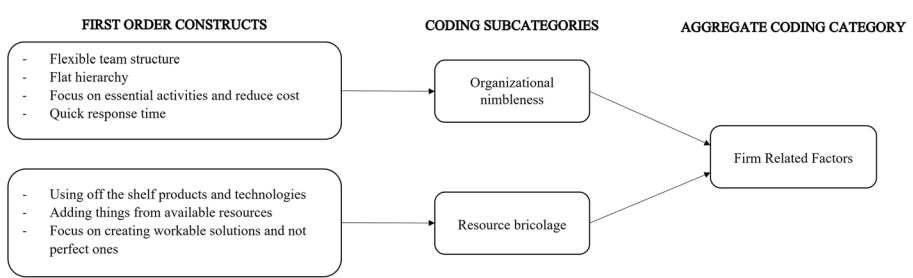


Fig. 2 Data structure on firm-related factors

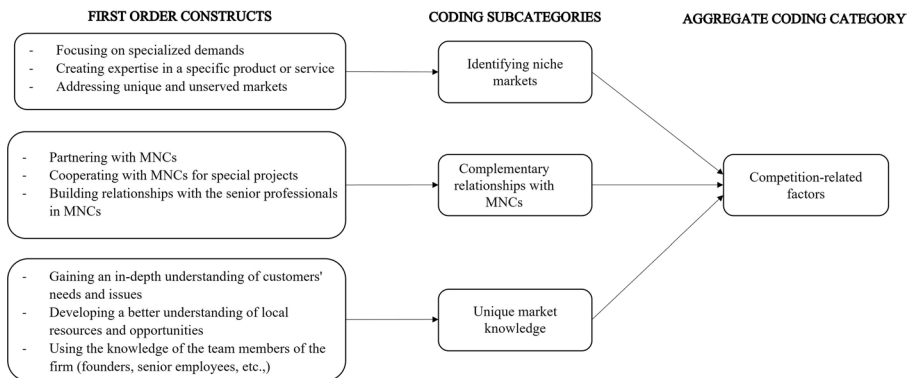


Fig. 3 Data structure on competition-related factors

strategy of servitization to create superior value for the customers, building unique collaboration capabilities with different stakeholders in the value chain, and adopting entrepreneurial bricolage (Kafouros et al., 2015).

Firm-related factors

The insights from our qualitative interviews helped us identify two key firm-related factors that significantly contribute to the innovation capabilities of born global firms: *organizational nimbleness* and *resource bricolage* (See Fig. 2). Firms have different abilities to innovate; this can be attributed to organizational theories such as dynamic capabilities theory, organizational agility theory, and entrepreneurial bricolage theory (Malodia et al., 2020; Teece, 2016). Teece et al. (1997, pp 516) define dynamic capability as a firm's ability to “*integrate, build and reconfigure internal and external competencies to address rapidly changing environment.*” Similarly, Shams et al., (2021, pp 16) defined organizational agility is defined as the “*capacity of an organization to efficiently and effectively redeploy/redirect its resources to value-creating and value-protecting higher-yield activities as internal and external circumstances warrant*”. Finally, the entrepreneurial bricolage theory postulates that resource-constrained organizations can construct or create workable solutions from widely available off-the-shelf resources and/or open-source technologies that

can be adapted to multiple situations (Malodia et al., 2020; Senyard et al., 2014). Both the dynamic capabilities theory and organizational agility theory are founded on the resource-based view, whereas born global firms are most often characterized as resource-constrained. Therefore, we draw relevant tenets from both theories and propose organizational dexterity as a critical firm-level factor that contributes to the overall innovation capabilities of born global firms. Furthermore, the entrepreneurial bricolage theory suggests that firms can develop innovation capabilities by constructing a higher value by deploying the existing resources at hand; we propose resource bricolage as the second important firm-level factor that is critical for developing innovation capabilities.

Organizational nimbleness in the context of born global firms refers to an organizational structure with a fluid team structure, zero hierarchy, and empowered employees. Successful born global firms are not only nimble; they are also masters of the art of exploiting their resources to the fullest by swiftly rolling out their business models and optimizing their business operations to reduce their costs. One of the born global firm founders commented:

Being a small firm, nimbleness is our core strength; we have to have a clear sense of how we can create value in the shortest possible lead time, what are the essential activities, what activities are draining the value and adding to costs, and how we can streamline them without compromising on the customer value.
[P19, Male, 38, Mechatronics, India]

The prior literature on innovation capabilities has differing views on nimbleness. Proponents of the resource-based view argue that larger MNCs are likely to have higher managerial capabilities, which are advantageous and may result in higher growth (Moorman & Miner, 1998). On the contrary, advocates of nimbleness argue that small and medium enterprises can respond more swiftly to the changing business environment and hence, can gain the upper hand in creating value in the shortest possible lead time (Miller & Toulouse, 1986; Uhlaner et al., 2013).

Resource bricolage in the context of born global firms refers to constructing new resources by integrating existing resources at hand or by combining them in innovative ways to make workable solutions (Baker & Nelson, 2005; Gundry et al., 2011). In this definition, we identify three key components of resource bricolage: combining/integrating resources, exploiting already available resources, and developing workable solutions. Combining resources promotes the creation of synergies by bringing together scarce resources from different sources (Moultreie et al., 2009; Witell et al., 2017). The second component highlights the importance of using available resources at hand (Moultreie et al., 2009). Finally, the third element—creating workable solutions—underscores the significance of an action-oriented approach as a crucial dimension of bricolage. This dimension emphasizes the encouragement of experimentation and trials, rather than waiting for the optimal solution (Baker & Nelson, 2005). Prior literature extensively employs the concept of entrepreneurial bricolage to elucidate various entrepreneurial activities (Garud & Karnøe, 2003). Baker

and Nelson (2005) explain how SMEs can utilize bricolage as a resource construction strategy to create something out of nothing. The prior literature on entrepreneurship has widely advocated bricolage as a powerful strategy for small enterprises (Gundry et al., 2011). Based on the above theoretical arguments, we propose that resource bricolage is a critical firm-related strategy that can significantly boost the overall innovation capabilities of born global firms.

Based on the above discussions, we advance the following proposition:

Proposition 1 *Firm-related factors, namely nimbleness and resource bricolage, positively impact the innovation capabilities of born global firms.*

Competition-related factors

Firms adopt the strategy of internationalization to seek growth; however, entering foreign markets requires firms to engage in global competition with both the MNCs and the domestic players in the market that they plan to enter (Chen et al., 2020). Unlike MNCs, born global firms not only lack the experience of operating in international markets but also are constrained in terms of brand value and international management capabilities (Wang et al., 2018). Prior literature has adopted several theories to examine the competitiveness of born global firms, including the resource-based theory (Knight & Cavusgil, 2004), the dynamic capabilities theory (Weerawardena et al., 2007), the knowledge-based perspective (Gassmann & Keupp, 2007), the network theory (Chetty & Campbell-Hunt, 2004), and the organizational learning theory (Autio et al., 2000). Based on the prior literature and findings from our qualitative interviews, in this study, we adopt the knowledge-based perspective and the network theory to propose three key factors that shape the competitiveness of born global firms and contribute to their innovation capabilities. We identify these factors as *identifying niche markets*, *complementary relationships with MNCs*, and *unique market knowledge*. Figure 3 presents the first-order constructs and coding sub-categories for competition-related factors.

Identifying niche markets in the context of born global firms refers to a business strategy wherein firms focus on a niche market, which equates to fewer competitors, allowing the firm to leverage its core strength. According to one of our respondents,

By focusing on a niche customer segment, we are able to serve our international customers much more effectively as compared to our MNC competitors. We have a simple marketing mix, we have zero administrative expenses in the foreign country as we do not have any service branch there, and we are able to achieve significantly higher profits than our competitors who focus on mass markets. [P6, Male, 53, Renewables, China]

Findings from our qualitative insights corroborate the findings of Hennart et al. (2021), who found a significant association between the global niche business model

and the speed of internationalization. The prior literature also argues that niche products are more distinctive and focus on a highly specialized need or a very specific problem and hence are often overlooked by large MNCs that focus on mass markets. This provides a unique opportunity for born global firms to fly under the radar and silently build their innovation capabilities to serve such specialized markets. Therefore, we propose *identifying niche markets* as one of the critical elements of competition-related factors that impact the overall innovation capabilities of the born global firms.

Complementary relationships with MNCs in the context of born global firms refers to the cooperative relationships between born global firms and MNCs and their interdependence in the process of internationalization. The early literature on competition and internationalization focused on the theory of competitive advantage (Porter, 1985). However, neither the competitive advantage theory nor subsequent resource-based theories were able to explain inter-firm interaction. This void was filled by the co-opetitive theory proposed by Brandenburger and Nalebuff (1996). The co-opetition concept refers to “*simultaneous cooperative and competitive behavior*” (Tsai, 2002). According to the co-opetitive theory, firms enter into co-opetitive partnerships to respond to the threats and opportunities posed by a fast-changing environment (Zineldin, 2004). Similarly, the recent literature on internationalization has identified the need for creating eco-system-based business models with multiple stakeholders and millions of beneficiaries (Prashantham & Floyd, 2012). The eco-system-based business model is rooted in the belief in cooperative competition, wherein the MNCs are looking for symbiotic relationships and partnerships with small enterprises and forming strategic alliances. During our qualitative interviews, one respondent shared as follows:

We are a tech-based startup, and we don't see the large MNCs as our competitors, nor do they treat us as their competitors. In fact, you will be surprised that many of our clients were referred to us by the large players. In today's world, we have to co-exist with each other and complement each other. Not only that, but many times a lot of our innovative ideas are incubated and mentored by our so-called competitors because we may have the idea, but they have the resources. So we arrive at a formula for cooperation. [P13, Male, 38, Software and IT services, India].

The extant literature postulates that cooperation between large MNCs and small firms such as startups can result in a strategic advantage for both when the parties can complement each other in co-creating value, and they can negotiate for value appropriation (Brandenburger & Nalebuff, 1996). This is also referred to as a value net when all parties collectively add value to the opportunity. Based on our qualitative study insights and the insights drawn from the prior literature, we conclude that cooperation between born global firms and MNCs can significantly contribute to the overall innovation capabilities of the born global firms.

Unique market knowledge in the context of born global firms refers to new knowledge that the firms gain about customer needs, market dynamics, suppliers, and technological interventions that can be used to create superior performance and generate competitive advantage. The *Uppsala internationalization process model* (Johanson & Vahlne, 2009) and academic research on the *export development process* (Leonidou & Katsikeas, 1996) postulate that generating business in the international markets is much more challenging in terms of costs, risks, and lead times as compared to domestic markets. The key reason for this is the lack of specialized knowledge about the international market and strategies to adapt to the needs of the market (Andersson et al., 2004; Autio, 2017; Hull et al., 2020). The prior literature assumes that the source of market knowledge is experiential, which can be gained only by participating in the market and remaining present physically. Therefore, theoretically, firms must start their operations first in the domestic markets, gain experience and knowledge about the customers and other market forces, and then gradually extrapolate their knowledge from domestic markets to the foreign markets (Johanson & Vahlne, 1977; Nummela et al., 2004). As the co-founder of one born global firm whom we interviewed recalled,

When we started our operations directly in the United States, I only had expertise in coding and digital marketing, but my co-founder had completed his master's in the USA, and he had a fair idea of the market and the expectations of the customers. He also had some firsthand experience with our product category as a customer in the USA, and hence he could immediately relate to the pain points our partner in the USA was referring to. I believe this small piece of information that we had in our firm was a game-changer for us. [P28, Male, 29, Retail Solutions, India]

The consensus in the prior literature on the internationalization of born global firms is that the internationalization process is significantly affected by the level of international knowledge acquired by the firm (Madsen & Servais, 1997; McDougall et al., 1994, 2003). Owing to the inherent newness of born global firms, the key source of international market knowledge is the expertise of the founding members, key employees, or partners (Ahmed & Brennan, 2019). Therefore, organizational knowledge is always equal to or less than individual knowledge (Nordman & Melén, 2008; Oviatt & McDougall, 2005). Based on the findings from our qualitative interviews and our review of prior literature, we conclude that, in addition to technical knowledge, international knowledge acquired by the leaders or key managers of born global firms is a critical aspect of their ability to innovate.

In conclusion, we propose that the innovation capabilities of born global firms are significantly influenced by how they address the competition in the international markets, and their ability to address competition is further determined by three underlying factors: identifying niche markets, complementary relationships with MNCs, and unique market knowledge. Therefore, we advance the following proposition:

Proposition 2 *competition-related factors, namely identifying niche markets, complementary relationships with MNCs, and unique market knowledge, positively influence the innovation capabilities of born global firms.*

Customer-orientation

The internationalization literature has identified “*the liability of foreignness*” as a critical challenge faced by firms in international markets (Johanson & Vahlne, 2009; De Marchi et al., 2020; Zaheer, 1995). Studies suggest that companies must not only have a firm-specific advantage to offset this barrier but must also have increased attention to customer needs (Johanson & Vahlne, 2009; Kim et al., 2011;). Hence, it is crucial for born global firms to understand customer-related factors in order to gain a profound understanding of customer needs and cultivate long-lasting relationships (Kim et al., 2011). In the context of born global firms, Zhang and Tansuhaj (2007) find that market orientation (Kohli & Jaworski, 1990) positively impacts firm performance. Building on the market orientation theory and based on the qualitative insights from our in-depth interviews, we propose customer orientation as a significant predictor of the innovation capabilities of born global firms. Furthermore, in the analysis of axial coding, we identify two sub-categories of customer orientation, namely *servitization* and *value co-creation*, as critical building blocks of customer orientation for born global firms. Figure 4 further presents the first-order constructs of the subcategories.

Servitization refers to born global firms’ ability to transition towards outcome-based business models wherein the products are used as a service. Visnjic and Van Looy (2012) found that a product-service-based business model centered on the integration of manufactured goods with amenities or services results in additional value creation beyond the product as a single offering. The prior literature has also found that servitization has been increasingly used to generate competitive advantage (Baines et al., 2009; Wise & Baumgartner, 1999). In line with the above arguments found in the prior literature, one interviewee shared the following:

One way we add value to our customers is through constant service support. The MNCs we compete with can never provide the end-to-end support we offer,

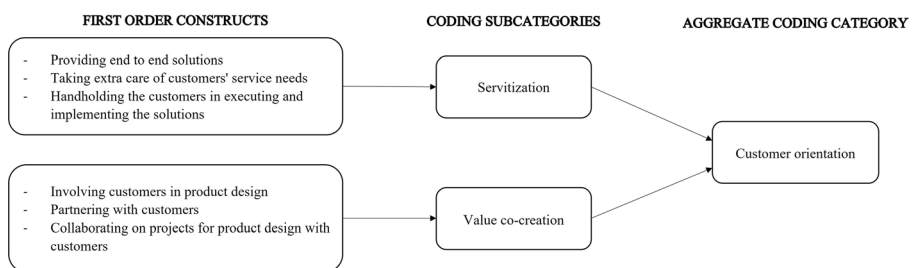


Fig. 4 Data structure on customer orientation

and hence we know our customers like no one else. Our relationship with our customers is beyond transactions; it's more about trust and mutual respect for each other's work. [P20, Male, 50, IT services, India]

Similarly, Löfberg et al. (2016) argued that servitization can be used to build dynamic capabilities as well as to create service innovations. Based on our qualitative insights and support from the prior literature, we conclude that *servitization* is an important building block of customer orientation among born global firms.

Value co-creation refers to how born global firms, in consultation with their consumers, co-create value using internal and external resources, processes, and partners to construct the final products or services. In the current international business environment, firms must continuously innovate by designing new offerings and transforming their business model and innovation processes not only to sustain their markets but also to generate growth in the dynamically changing market conditions. Recently, firms operating in international markets have realized that they need to look beyond their internal capabilities and firm boundaries to generate new ideas and innovate (Apostolidis et al., 2021; Hagedoorn & Duysters, 2002; Su et al., 2009). International marketing literature has recently recognized the need for developing strategies for collaborative innovations such as entering into alliances, creating open innovation events, and involving subsidiaries in the innovation process. (Almeida & Phene, 2004; Boehe, 2007; Kafouros & Forsans, 2012). Though the literature has overlooked the possible participation of customers in the innovation process and the co-creation of value (Leonidas & Katsikeas 2003; Shams & Kaufmann, 2021), in practice, we found that successful born global firms are actively engaging their customers in the innovation process and treating them as co-strategists in the overall value process (i.e., value identification, value creation, and value delivery). One of the respondents stated that

We treat our customers as our partners when it comes to value creation. Whether it is customization or new product creation, we always get the buy-in from our customers, and this is what makes us different from our competitors. [P3, Male, 33, Electronics, China]

Prange and Ates (2010) argue that the higher the participation of customers in the value-creation processes, the more innovative and successful the final outcomes. Based on the propositions advanced in the prior literature and the insights from our qualitative interviews, we conclude that born global firms need to involve their customers as value chain actors to strategically co-create value, which will strengthen their customer orientation and, in turn, enhance their overall innovation capabilities.

Discussion and framework

Born global firms have the potential to carve out a niche in the international markets. With the right set of innovation capabilities, born global firms can not only compete with MNCs but can also make competition irrelevant and create their own niche markets. Identifying and understanding the factors that impact innovation capabilities is therefore of interest to both academia and born global firms trying to attain a sustainable competitive advantage. Our findings may also interest young startups desirous of internationalizing their business ideas. Hence, this study proposes a comprehensive theoretical framework for the innovation capabilities of born global firms titled ICONIC, which stands for Integrated Conceptual framework for Innovation Capabilities in born global firms: antecedents and outcomes (see Fig. 5). The conceptual framework presents the antecedents and outcomes of innovation capabilities. We use the framework to advance various theoretical propositions based on the interrelations between the constructs identified in our study. Due to the scarcity of literature on the innovation capabilities of born global firms, we have built our arguments supporting our propositions from the qualitative study insights.

To understand the factors that impact the innovation capabilities of born global firms, it is important to identify their antecedents. This study proposes a comprehensive theoretical framework for the innovation capabilities of born global firms, which includes firm-related factors (organizational nimbleness, resource bricolage), competition-related factors (identifying niche markets, complementary relationships with MNCs, unique market knowledge), and customer orientation (servitization, value co-creation). These antecedents create a conducive environment for building innovation capabilities among born global firms.

Through in-depth interviews with representatives of born global firms, this study adopts grounded theory to identify the underlying dimensions of innovation capabilities. Our study conceptualizes the innovation capabilities of the born global firms for

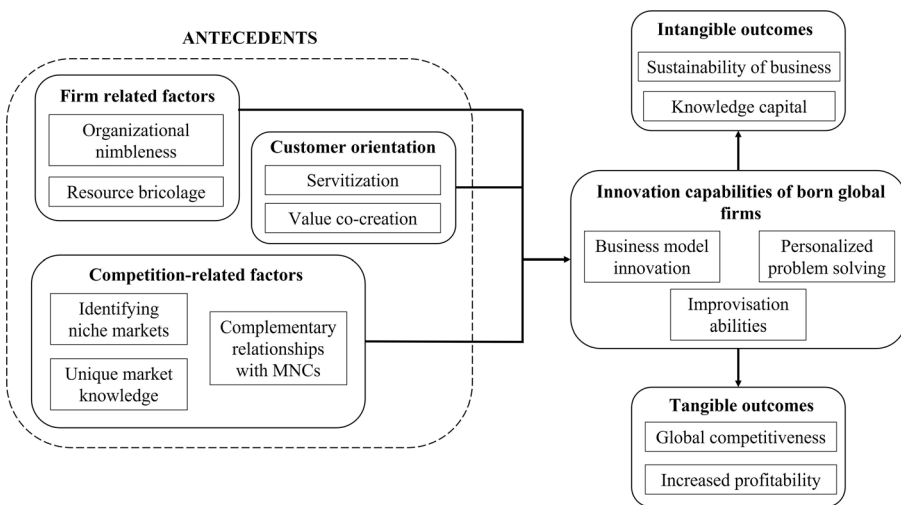


Fig. 5 An overview of ICONIC

the first time and defines them as a multi-dimensional construct. The analysis reveals three key dimensions: business model innovation, improvisation abilities, and personalized problem-solving. These dimensions jointly define and characterize the innovation capabilities of born global firms. However, the proportion and intensity of each dimension may vary across different types of born global firms operating in various sectors and international markets.

The theories of internationalization suggest that firms adopt the path of globalization to achieve multiple objectives that include attaining better firm performance, building innovation capabilities, and accumulating organizational learning (Knight & Cavusgil, 2004). The innovation capabilities of born global firms provide both tangible and intangible benefits in international markets. Innovative born global firms develop a deep understanding of target markets and demonstrate agility and dynamism in responding to market changes. These capabilities serve as drivers of competitive advantage and financial performance.

Tangible outcomes

Using the insights from qualitative interviews, we identify *global competitiveness* and *increased profitability* as the tangible outcomes and *sustainability of business* and *knowledge capital* as intangible outcomes of innovation capabilities in the context of born global firms.

Global competitiveness in the context of the born global firm is defined as “*the ability of the born global firm to create superior value and meet their customer needs better as compared to their competitors in the international markets*”. Though the internationalization literature has acknowledged the significance of innovation in the global business environment, it is even more critical for born global firms to focus on building superior innovation capabilities to design and deliver superior value propositions to their customers in order to attain a sustainable competitive advantage (Chan Kim & Mauborgne, 2005). The marketplace evidence from the current study suggests that the underlying dimensions of innovations capabilities that we discuss in the study have resulted in a sustainable competitive advantage for born global firms and, hence, have increased their global competitiveness. We found that the identified innovation capabilities have helped born global firms not only satisfy their customers but have resulted in strong customer loyalty, repeat purchases, and referrals into new and untapped markets.

Customers in international markets are always on the lookout for firms that can provide them with customized and personalized value with a service attitude. However, large MNCs usually work with a fixed marketing mix framework and, due to their size, are constrained in customizing beyond a certain point. Born global firms can take advantage of the constraints of MNCs by developing their ability to improvise on existing products and create personalized solutions for customers in international markets. Therefore, the innovation capabilities based on business model innovations, improvisation abilities, and personalized problem-solving capabilities provide born global firms with a competitive advantage in the global marketplace.

Firm performance refers to the business goals that are measured in terms of top-line, bottom-line, market-share, and firm valuation (Hult et al., 2004). Firm perfor-

mance and innovation share a positive association (Damanpour, 1991; Hult et al., 2004). The innovation capabilities we discuss in our study are aimed at addressing unique customer needs in a personalized way and transforming the product-based business model into a service-based model, resulting in higher revenue generation, cross-selling opportunities, and enhanced customer lifetime value. Additionally, by building the innovation capabilities discussed in our conceptual framework, born global firms can boost their dynamic capabilities, which in turn helps them to restructure their organizational resources, processes, and competencies, resulting in tangible outcomes in terms of enhanced economic growth (Helfat & Raubitschek, 2000). Therefore, the innovation capabilities of born global firms positively influence firm performance by empowering them to deal with stiff competition in the international markets.

Intangible outcomes

Intangible performance indicators such as the sustainability of the business and accumulated knowledge capital are equally critical for born global firms as they further impact the tangible performance indicators in the long run (Malodia et al., 2020). The innovation capabilities of born global firms have a direct impact on intangible outcomes, particularly the *sustainability of the business* and the accumulation of *knowledge capital*.

Sustainability of business refers to the ability of a firm to maintain its operations, competitive advantage, and profitability over the long term while considering environmental, social, and economic factors. It encompasses practices that enable a firm to endure and thrive in dynamic market conditions and contribute to long-term value creation. The sustainability of a business is closely linked to its ability to innovate and adapt to changing market demands. By continually improving their innovation capabilities, born global firms can foster a culture of sustainable practices, promote resource efficiency, and align their business strategies with environmental and societal goals. This holistic approach enhances the firm's resilience and long-term viability.

Knowledge capital refers to the intellectual assets, expertise, know-how, and collective knowledge within a firm. It represents the organization's ability to leverage and apply knowledge effectively to drive innovation, improve processes, make informed decisions, and create value. In today's knowledge economy, global businesses increasingly compete based on their knowledge capital (Subramaniam & Venkatraman, 2001). Born global firms that possess strong innovation capabilities are better positioned to develop and enhance their knowledge capital, leverage their ability to innovate business models, optimize available technology and resources, and adapt to dynamic international markets. This, in turn, contributes to the firms' sustainability in the long run. Moreover, the accumulation of knowledge capital is crucial for born global firms to stay competitive in international markets. By nurturing their intellectual assets, sharing knowledge across the organization, and developing a learning-oriented culture, these firms can effectively respond to market challenges, seize opportunities, and drive continuous improvement. Knowledge capital contributes to the firm's ability to generate unique insights, develop innovative solutions, and sustain a competitive edge.

In conclusion, we argue that by embracing innovation capabilities, born global firms can achieve global competitiveness and increase their profitability. Furthermore, the innovation capabilities of born global firms result in intangible outcomes, specifically the sustainability of business and the accumulation of knowledge capital. These outcomes are vital for the long-term success, growth, and competitiveness of born global firms in dynamic and increasingly knowledge-driven international markets. Based on the above discussion, we make the following proposition:

Proposition 3 Building innovation capabilities in born global firms will deliver both tangible and intangible outcomes.

Study implications

The current study argues that it is important for born global firms to revisit their internationalization goals and embrace innovation capabilities to achieve a sustainable competitive advantage. We propose that born global firms can further build their innovation capabilities through strategic tools for attaining high growth and building competitive advantage in unknown foreign markets characterized by intense competition. The current study has both theoretical and managerial implications that are discussed below.

Theoretical implications

This study further expands the understanding of the innovation capabilities of born global firms. While the prior literature has emphasized born global firms' innovativeness as a critical factor in their competitiveness, the conceptualization of innovation capabilities underlying born global firms' innovativeness remained elusive (Efrat et al., 2017). Therefore, this study makes an important contribution to the existing literature on born global firms' ability to innovate and compete in international markets. Previous studies have identified the innovation capabilities of born global firms as a critical factor for successful internationalization and firm performance; however, they have failed to provide a comprehensive definition of innovation capabilities or explain how innovation capabilities are built. This study significantly contributes to the literature on born global firms and internationalization by providing a clear definition of innovation capabilities and identifying three underlying dimensions: business model innovation, improvisation abilities, and personalized problem-solving.

Next, in the current study, we reviewed multiple theories that have been discussed in the context of internationalization and born global firms to strengthen our propositional statements and find support for theories such as the internationalization theory, dynamic capabilities theory, organizational agility theory, entrepreneurial bricolage theory, resource-based view, network theory, organizational learning theory, co-operative theory, and market orientation theory. Having validated these theories in the context of born global firms, we make a strong contribution by widening the horizon and applicability of these theories.

The third important contribution of our study is the identification of critical firm-related factors, competition-related factors, and customer orientation drivers that impact innovation capabilities. The findings can be of significant interest to both academia and future research scholars.

Finally, we provide clear research propositions that can benefit researchers in the domain of born global firms and internationalization as they can operationalize these propositions and modify them into testable hypotheses or adapt them for scale development.

Practical implications

The findings of our current study offer multiple practical implications for entrepreneurs, startups, and policymakers. The clear definition and underlying elements of innovation capabilities can be used as a roadmap by entrepreneurs and startup founders interested in internationalizing their businesses to build innovation capabilities. The conceptual framework can further be used to draw five major managerial implications.

First, the conceptual framework can guide born global firms toward developing a global mindset, which is essential for internationalization. This involves a shift in thinking away from a domestic market focus towards a global orientation. Managers need to be aware of global business environments, market trends, cultural differences, and regulatory issues. They must also develop networks, relationships, and partnerships with local firms and stakeholders to overcome knowledge and resource barriers.

Second, the framework provides a roadmap for building the strategic capabilities that born global firms must possess to compete in a global market. This includes the ability to innovate, adapt to changing market conditions, and create value for customers. Firms must also be able to manage risks associated with international business, such as exchange rate fluctuations, political instability, and legal complications. Developing strategic capabilities requires investment in R&D, human resources, and organizational processes.

The third major implication of this study is its guidance on leveraging technology. Technology can help born global firms overcome the barriers to entry associated with international business. Technology can facilitate communication, collaboration, and knowledge sharing between partners and stakeholders. Firms can use technology to gather market intelligence, analyze data, and develop new products and services. Technology can also help firms manage supply chains, logistics, and customer relationships. Our theoretical framework can be used as a roadmap for developing strong customer orientation by strengthening the servitization approach in the business model and engaging customers in value co-creation.

The fourth implication of the proposed framework for born global firms is highlighting the significance of developing international networks. This critical task involves building relationships with customers, suppliers, partners, and other stakeholders in international markets. Firms can leverage their networks to gain access to knowledge, resources, and expertise. Networks can also provide opportunities for joint ventures, strategic alliances, and other forms of collaboration. the conceptual

framework may guide born global firms to further strengthen their dynamic capabilities, making them nimbler and boosting divergent thinking among resource-constrained born global firms to adopt a bricolage strategy as their well-thought-out firm strategy.

Lastly, the conceptual framework offers insights into overcoming barriers to internationalization. Born global firms face several barriers to internationalization. These barriers include a lack of financial resources, limited access to information, and regulatory obstacles. To overcome these barriers, firms must be innovative and resourceful. They must be willing to take risks and learn from failure. The competition-related factors discussed in our model have the potential to guide born global firms on how to co-exist with the MNCs and build a deeper understanding of the markets and customers. They must also be willing to collaborate with other firms and stakeholders to overcome common challenges.

Overall, our research framework provides guiding principles for policymakers in constructing creative policies that may further boost export orientation and internationalization intentions among domestic firms as well as startups.

Limitations and future research directions

It is important to note that this study is not without its limitations. Firstly, the study was conducted in only two geographic locations and one industry sector, which may limit the cross-cultural applicability and generalizability of the results to other settings. Additionally, the study relied on cross-sectional data, which prevents us from making causal inferences. The limitations of this study also include its small sample size, as interviews were conducted with representatives from only 12 born global firms from China and 17 born global firms from India. This may restrict the generalizability of the findings to a broader population of born global firms. Furthermore, the study relied solely on qualitative data from in-depth interviews. While this approach provides rich insights, complementing the findings with quantitative data may help to validate and strengthen the conclusions. Future research could address these limitations by examining the determinants of born global firms in other contexts and using longitudinal data to explore the causal relationships between the identified determinants and born global status.

Future research directions could include an expansion of the sample size and diversification of the geographic scope. Conducting interviews with a larger and more diverse set of born global firms from different regions and countries could enhance the generalizability of the findings and provide a broader understanding of innovation capabilities in born global firms. This comparative analysis would provide valuable insights into the context-specific nature of innovation capabilities among born global firms.

Future scholars may also conduct longitudinal studies to observe the evolution of innovation capabilities in born global firms over time, offering insights into the dynamic nature of these capabilities and their impact on the firms' performance and internationalization success. Finally, future studies can also be conducted to explore additional factors that may moderate or mediate the relationship between the ante-

cedents, dimensions, and outcomes of innovation capabilities, which would provide a more nuanced understanding of the mechanisms at play.

Conclusion

In conclusion, this study examined the determinants of born global firms and found that while certain factors such as entrepreneurial orientation, network ties, and firm resources were positively associated with the born global label, other factors such as institutional distance and complexity of regulatory environments were negatively associated with born global status. The results of this study have important implications for entrepreneurs and policy-makers alike. Entrepreneurs who aspire to internationalize their businesses should focus on developing an entrepreneurial orientation, building network ties, and acquiring sufficient firm resources in order to increase their chances of succeeding as a born global firm. Meanwhile, policymakers could help to reduce institutional distance and simplify regulatory environments, which may lower the barriers to internationalization and facilitate the emergence of more born global firms.

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Suresh Malodia (PhD) is an Associate Professor in Strategic Marketing at MICA, India. His research appears in the *Journal of the Academy of Marketing Science*, *Journal of Business Research*, *Psychology and Marketing*, *European Journal of Marketing*, *IEEE Transactions in engineering management*, *Journal of cleaner production*, *Journal of Marketing Communications*, *Journal of Transportation Planning and Technology*, *Technological Forecasting and Social Change*, among others.

Amandeep Dhir (DSc, PhD) is a Professor of Research Methods at the University of Agder, Norway. He is also a visiting professor at the Norwegian School of Hotel Management, University of Stavanger, Norway. His research appears in the *Journal of Business Ethics*, *Human Relations*, *Tourism Management*, *Asia Pacific Journal of Management*, *Journal of Sustainable Tourism*, *International Marketing Review*, *Psychology and Marketing*, *Technology Forecasting and Social Change*, *Journal of Business Research*, *Technovation*, *Business Strategy and Environment*, *IEEE Transactions on Engineering Management*, *Computers in Human behavior*, *Computers in Industry*, *International Journal of Hospitality Management*, *Information Technology & People* among others.

Safiya Mukhtar Alshibani is an assistant professor at Princess Nourah bint Abdulrahman University (PNU). She is the program director of the BSc business administration at PNU. She holds an MSc in strategic management and innovation and Ph.D. in Entrepreneurship from The University of Western Australia. Safiya's research focus is on the area of entrepreneurial intentions, entrepreneurial well-being, work-life balance, and performance. She participated in many regional and international conferences in the area of entrepreneurship and new venture creation. She is a member in The European Council for Small Business and Entrepreneurship (ECSB) and European Academy of Management (EURAM). (ORCID: 0000-0001-5868-8053).

Michael Christofi is a Lecturer in Innovation and Entrepreneurship at the School of Management and Economics at Cyprus University of Technology. He serves as Senior Editor of Information Technology & People and Associate Editor of International Marketing Review. His research interests lie on the interface of innovation, marketing, and entrepreneurship, with a particular focus on marketing innovation, technological innovations and well-being, entrepreneurial marketing, strategic agility, and organizational ambidexterity. His research work has been published in premier publication outlets, such as in British Journal of Management, Journal of World Business, Small Business Economics, Journal of Business Research, Technological Forecasting & Social Change, International Journal of Human Resource Management, International Business Review, European Management Review, and International Marketing Review, among others. He has also co-authored several book chapters and won various awards for his research work and academic service. Dr. Christofi has served and serves as a guest-editor for several special issues at leading journals such as, British Journal of Management, Technovation, European Journal of Marketing, Journal of Business Research, Journal of Business Ethics, Technological Forecasting & Social Change, and International Marketing Review, among others.

Authors and Affiliations

Suresh Malodia¹ · Amandeep Dhir^{2,3,4} · Safiya Mukhtar Alshibani⁵ · Michael Christofi⁶

✉ Amandeep Dhir
amandeeep.dhir@uia.no

Suresh Malodia
suresh.malodia@micamail.in

Safiya Mukhtar Alshibani
SMAshibani@pnu.edu.sa

Michael Christofi
michael.christofi@cut.ac.cy

- ¹ Strategic Marketing Area, MICA, Ahmedabad 380058, India
- ² Department of Management, School of Business & Law, University of Agder, Kristiansand, Norway
- ³ Jaipuria Institute of Management, Noida, India
- ⁴ Optentia Research Focus Area, North-West University, Vanderbijlpark, South Africa
- ⁵ Department of Business Administration, College of Business & Administration, Princess Nourah bint Abdulrahman University, Riyadh, Saudi Arabia
- ⁶ School of Management and Economics, Cyprus University of Technology, 30 Archbishop Kyprianos Street, Limassol 3036, Cyprus