

Entrepreneurial Barriers in Achieving Sustainable Business and Cultivation of Innovation: A Resource-Based View Theory Perspective

Abstract

Purpose: The study highlights the barriers faced by the entrepreneurs toward achieving sustainability in business and innovation cultivation by offering solutions for academicians, practitioners, and policymakers. The study uses the resource-based view (RBV) theory to discuss how an organisation's resources and capabilities influence the competitive ambience and barriers faced by entrepreneurs.

Design/methodology/approach: The present research uses grey-causal modelling (GSC) to analyse the barriers against successful entrepreneurship.

Findings: The research focuses on the usefulness of dynamic capabilities, managing, and cooperating resources in the entrepreneurship setting. The paper highlights the importance of resource gathering and nurturing as a method to combat scarcity. This research further identifies that financial limitations, regulatory obstacles, challenges to sourcing qualified labor, poor infrastructure and technology, limited mentorship opportunities, lack of scalability, low initial cost barriers in product development, and risk-averse attitudes are the major factors hindering entrepreneurs from obtaining sustainable business and innovation.

Originality: The contribution of this research to the literature is that it assesses RBV theory within the realm of entrepreneurship, providing a different perspective on resources and capabilities as well as the challenges faced by entrepreneurs. The systematic approach to the analysis and prioritization of various barriers is innovative, and it adds knowledge in this area.

Keywords: Resource-Based View Theory, Entrepreneurial Barriers, Sustainable Business, Innovation, Grey Causal Modelling

1. Introduction

Entrepreneurship plays an important role in stimulating innovation, economic growth, and job creation worldwide (Klofsten et al., 2019). Innovation is the driving force behind business sustainability, as it fosters a culture of risk and resourcefulness (Lumpkin and Pidduck, 2021). Entrepreneurship has also attracted the attention of experts and policymakers, realising its impact on the development of the country and the economy (Wickert et al., 2021). In recent

years, entrepreneurship research has moved away from the traditional boundaries between expected business and new business (Williams and Round, 2009), now covering commercial activities in organisations to commercial activities aimed at solving social problems (Bacq and Janssen, 2011).

In today's conditions, the development of the business world is important for economic growth and prosperity. It varies from a small business to include the development of the need to focus on innovation, the ability to seize opportunities, and the ability to manage complex businesses (Allioui and Mourdi, 2023). This behaviour can be compared with the way people turn new content into relevant business. Entrepreneurs, as contemporary pioneers, transform the bounds of conventional observation, imagining the world not solely for its present state but for its potential evolution (Allioui and Mourdi, 2023).

Entrepreneurship, often considered as essential for economic progress and innovation, typically includes various obstacles that hinder the journey toward success (Al-Qahtani et al., 2022; Yasin et al., 2021). These challenges, varying in type and complexity, require thoughtful deliberation and perceptive navigation.

While the field of entrepreneurship has gained substantial attention in academic practice, a comprehensive examination of the entrepreneurial barriers restricting the achievement of sustainable business practices and the cultivation of innovation reveals notable gaps in the existing body of knowledge. The literature on entrepreneurial barriers, for example, frequently considered only generic challenges faced by start-ups and small businesses (Muhammad et al., 2017; Cho et al., 2019). However, there is considerable variation in the in-depth analysis of specific cases regarding the integration of practices to achieve business success. To better understand the business environment, it is important to conduct a comprehensive analysis of the impact of sustainability and innovation. Sustainable business models present specific challenges that require deeper understanding of theoretical and profitable strategies. Despite the fact that several studies have examined the effects of growth or individual innovation (Hoogendoorn et al., 2019), there are significant differences in their exploration of interactions. Given the complexity of performance, it is important to control for aforementioned side effects via detailed analysis.

The aim of this study is to conduct a thorough examination of the obstacles that hinder entrepreneurs from achieving success. These hindrances encompass varied factors such as limited access to capital, handling business unpredictability, and tackling bureaucratic regulations coupled with cultural nuances. The identification and analysis of these impediments

hold significant importance for policymakers, practitioners, and researchers committed to fostering entrepreneurial expansion. This research endeavours to shed light on these difficulties in order to support entrepreneurs in devising effective strategies, enabling them not only to steer through but excel within innovation-driven markets. Moreover, it is imperative to acknowledge the nature and intensity of these barriers, which exhibit variance across distinct contexts, including regions, industries, and stages of venture development. In this regard, the present study aims to address the following research questions:

RQ1. What are the barriers to the success of entrepreneurship in terms of sustainable and innovative business?

RQ2. How could these barriers be analysed to identify the most critical among them?

To address the above research questions, the primary objective of the present study is to investigate and elucidate the barriers impeding the success of entrepreneurship, particularly concerning the realms of sustainable and innovative business practices. The research endeavours to shed light on the multifaceted challenges faced by entrepreneurs and seeks to provide valuable insights into the intricate dynamics that influence the sustainable and innovative dimensions of their ventures.

The remainder of this article is as follows: Section 2 offers the literature review of the study, followed by a methodology in Section 3. The analysis is presented in Section 4 followed by the results discussion in Section 5 along with the research implications. Finally, the conclusions and the future research directions of the study is presented in Sections 6.

2. Literature review

2.1 Theoretical underpinning

The purpose of this study is to explore the obstacles that prevent entrepreneurs from achieving sustainability and innovation. RBV theory serves as the framework for this paper. It is from that perspective that this study explores how entrepreneurs combine resources to break through barriers, act for sustainable development, and encourage innovation (Bharadwaj, 2008). Originally proposed by Jay Barney in the early 1990s, RBV theory claims that a company's competitive advantage lies in its resources, recombined capabilities, and enhancing its position. In the RBV, capital is made up of many assets, both tangible and intangible, such as financial and physical, human capital, and leadership.

The most formidable task for any manager is finding and managing the most essential resources (Gupta et al., 2020). RBV theory demonstrates that, if a company's resources are the result of amassing tangible and intangible assets, it could become a mother lode of competitive

advantages (Chadwick and Flinchbaugh, 2021). Entrepreneurs may overcome resource gap barriers by leveraging their extant resources (Khairy et al., 2023; Wang et al., 2023). A reminder of why strategic management is so important, entrepreneurs could be restricted by a finite number of resources, a difficulty that often surfaces for businesses (Etemad, 2020). RBV theory also insists that the products a firm needs to prioritize include “value, rarity, inimitability, and nonsubstitutability” (VRIN) (Sahoo et al., 2023). If an employee has access to and can manipulate all of these resources, they will have enhanced performance and more probability to bridge the resource-availability gap (Busch and Barkema, 2021).

Moreover, the RBV framework adds another level of acuity to the pivotal relationship between resources and capabilities interaction (Nayak et al., 2023). Entrepreneurs may be hindered by integrating complementary combinations of resources (Williams et al., 2021). Deeper knowledge of resource management is similarly essential in facing these challenges. It further underscores the strategic role of resources (Suri and Lakhnopal, 2022). RBV theory emphasizes that businesses need to be able to adapt and scale up their resources in response to changing environmental conditions (Mao and Lu, 2023). Enterprises must also have the ability to adapt their products and strategies according to the continuous emerging challenges in this mutable, unsettled environment (Daradkeh and Mansoor, 2023; Messina et al., 2022). Entrepreneurs, in turn, aiming to give their firm a competitive advantage, see that the greater propensity is for unique and valuable products (Knoppen and Knight, 2022). The RBV framework thus emphasizes that a company’s products can provide a competitive advantage if they are rare, valuable, and unique (Nayak et al., 2023). Regardless of the competition, saturation, or changing tastes, entrepreneurs have to see how their assets can deliver this advantage (Al Haraji et al., 2023). This shows the pressing importance of using resources strategically and creatively in business enterprises.

The largest barriers are often capital, human resources, and technical capacity; further, entrepreneurs tend to struggle with these resource constraints (Weigel Hiebl, 2022). The RBV framework is a useful tool for entrepreneurs to examine what resources are vital to their business, how they can employ them effectively, and why they must persevere in the face of trouble. Most business operations require a gradual and extensive accumulation of resources (Breivik-Meyer et al., 2020). While conception of the framework incorporates the organization and competitive environment, RBV puts stress on resource development and implementation. The ability to oversee and optimize is what enables entrepreneurs who were previously stymied by sourcing constraints to triumph (Di Vaio et al., 2022). This points to the growing importance of strategic skills in resource management.

2.2 Literature review on entrepreneurship intentions

Mehtap et al. (2017) examined the entrepreneurial intentions among young women in the Arab world, with specific focus on Jordan, by highlighting the societal-, economic-, and confidence-related barriers that globally hinder women's inclination toward entrepreneurship. Ahadi and Kasraie (2020) delved into the contextual factors that influence entrepreneurial intentions in Iran's manufacturing SMEs. The study pinpointed resource constraints, financial challenges, and economic conditions as major barriers and discussed the pivotal role of organizational structure, public policies, and education in influencing entrepreneurship. Rayna and Striukova (2021) shifted the focus to the transformative potential of 3D printing on entrepreneurship by underscoring its ability to overcome key entrepreneurial challenges. Importantly, they noted the degree of integration in the production process as a critical factor influencing benefits.

Various research was conducted to provide insight into different business environments and the challenges that entrepreneurial groups typically face. Rahman et al. (2023) illuminated the challenges faced by rural women entrepreneurs in Bangladesh, for example, by emphasizing the critical importance of targeted interventions and skill-building initiatives to overcome social-, cultural-, financial-, and skill-related hurdles. Bernardino and Santos (2020) delved into crowdfunding as an alternative funding avenue for young entrepreneurs in Portugal by highlighting knowledge gaps that hinder their exploration of business models, despite recognizing benefits such as heightening project visibility and valuable customer feedback. Ferraris et al. (2020) drew attention to the essential role of open innovation practices in smart cities by underscoring the need for public governments to enhance their capabilities for effective collaboration with external stakeholders, amidst a backdrop of multifaceted barriers ranging from administrative styles to technological capabilities.

2.3 Literature review on barriers to successful entrepreneurship

Studies have discussed various barriers in the successful establishment of entrepreneurship. Similar calls to action can be found in contexts as varied as those that examine the complex interplay between cultural heritage and gender roles as motivators and barriers for Latina entrepreneurs (Cho et al., 2019) as well as the various barriers specific to the rural entrepreneurship of Pakistani widows, including religious, socioeconomic, and structural barriers operating in local contexts (Muhammad et al., 2017). O'Reilly (2022) contributed a novel understanding of the direct and indirect impact of entry regulations for entrepreneurship and income inequality in the United States, revealing complex interactions among regulation,

entrepreneurship and economic disparities. Others offered equally broad insights. Roy et al. (2016), for example, articulated key challenges for the international expansion of Indian small and medium enterprises (SMEs), including segregation of barriers into “internal and external,” with procedural- and currency-related challenges emerging as particularly significant. Sharma (2018) interrogated the multiple roles of gender and regional culture in entrepreneurial intentions and perceived barriers in Uttarakhand, India, offering novel understandings of the potential for such research contexts to further our understandings of cross-cultural and regional dynamics. Smith et al. (2020), similarly, examined how support and access might be tailored to computing students in Australian and UK universities and thus transform the precarity of their otherwise marginalised entrepreneurial intentions.

The conceptual framework provided by Neumeyer et al. (2021) in the context of low-income entrepreneurs provided illumination as to how technology adoption is a critical consideration for entrepreneurs in impoverished conditions. The research revealed a conceptual framework in which the researchers demonstrated that, through examination of technology adoption, an entrepreneur creates a set of introductory foundational elements that contribute to entrepreneurial activity in impoverished conditions. Additionally, the research proved useful for sustainable and female entrepreneurs in that it cleared a pathway for the unique challenges they face and the critical need for institutional support, particularly in terms of financial resources, administrative resources, and information resources, which Hoogendoorn et al. (2019) claimed these entrepreneurs rely on.

Similarly, Wu et al. (2019) used a post-structural feminist lens to investigate the intersection of motherhood and entrepreneurship to identify and analyse obstacles to gender equality in entrepreneurship with an examination of the weight motherhood, entrepreneurial awareness, gendered norms, and financial aspects. Their research suggests the entrepreneurs need to reduce start-up capital requirements to stimulate female entrepreneurship. Similarly, allied entrepreneurship literature is further enriched, as the authors investigated an environment for nascent entrepreneurs in Pakistan, identifying an array of impediments blocking the progress of primarily young entrepreneurs and trust issues, family-related obstacles, financial constraints, gender-related challenges, educational barriers, corruption, and legal impediments. The identification of these challenges and the thought for a support ecosystem and the sustainability of entrepreneurship initiatives are valuable to those in the areas of low-income entrepreneurship, women-owned business, international entrepreneurship, family entrepreneurship, and sustainability. In this way, Table 1 addresses the barriers to successful

entrepreneurship that was drawn from and extends the critical RBV theory while also summarising the intersection of research of all areas of entrepreneurship.

Table 1. Barriers to successful entrepreneurship

| Code | Barriers for entrepreneurial business | Description | References |
|-------------|--|--|---|
| B1 | Financial constraints | Limited access to capital and funding can hinder growth and expansion | (Amouri et al., 2021; Liang et al., 2022; Prieger, 2023) |
| B2 | Regulatory hurdles | Complex and ever-changing regulations can be burdensome for startups to navigate | (Mosig et al., 2021; Sharma et al., 2022; Brown et al., 2022) |
| B3 | Limited access to skilled labor | Finding and retaining skilled employees can be a challenge for small businesses | (Hobbs et al., 2023; Sukrat and Leeraphong, 2023) |
| B4 | Inadequate infrastructure | Poor infrastructure can hinder logistics and operations | (Ahmed and Ahmed, 2021; Yao and Li, 2023) |
| B5 | Limited access to technology | Not having access to the latest technology can put a firm at a disadvantage | (Ahmed and Ahmed, 2021; Kamat et al., 2022; Jacob et al., 2023) |
| B6 | Lack of mentorship and support | Not having experienced mentors or a supportive network can be challenging | (Kumar et al., 2020; Prado, 2023) |
| B7 | Scalability issues | Difficulty in scaling the business model can limit growth prospects | (Haldar, 2019; Hoffmann, 2021) |
| B8 | High initial costs | The upfront investment needed to start a business can be prohibitive | (Huang et al., 2022; Yilmaz et al., 2023; Soares et al., 2022) |
| B9 | Product development obstacles | Developing a viable and innovative product can be a long and costly process | (Duran et al., 2022; Farrell et al., 2022) |
| B10 | Risk aversion | Fear of failure can deter entrepreneurs from taking necessary risks | (Gimenez-Jimenez et al., 2022; Riepe et al., 2022) |

3. Methodology

This study employed a comprehensive methodology to analyse the critical barriers influencing the success of entrepreneurial initiatives, as presented in Figure 1. Initially, a thorough literature review on entrepreneurial initiatives was conducted to establish a foundation for the study. Subsequently, critical barriers were identified through an extensive analysis, resulting in the identification of 19 barriers crucial for entrepreneurial success. Through collaborative brainstorming with the research team, a final selection of 10 barriers was agreed upon for in-

depth examination. Further, the data-collection process was executed in two stages. In Stage 1, insights were gathered from entrepreneurial experts to gain understanding of the identified barriers. The authors of this study reached out to experts who have successful start-ups and explained our aim and objectives; further, the authors provided them with a list of 10 shortlisted barriers and asked them to provide data in terms of a pairwise comparison matrix. The authors obtained responses from eight entrepreneurs, which were further analysed using decision-making trial and evaluation laboratory (DEMATEL) methodology. These barriers were then meticulously categorized into cause-and-effect groups utilizing DEMATEL analysis.

The literature demonstrates the extensive applications of grey DEMATEL in a wider range of applications, such as remanufacturing of automotive parts (Xia et al., 2015), green and sustainable supply chain management (Govindan, Muduli et al., 2016; Su et al., 2016), circularity in supply chains (Khan et al., 2020), traceability in food supply chains (Haleem et al., 2019), business process management (Bai and Sarkis, 2013), third-party logistics (Govindan, Khodaverdi, et al., 2016), thermal energy sectors (Muduli et al., 2021), and e-waste mitigation strategies (Garg, 2021). The researchers also use grey causal modelling (GCM) along with DEMATEL to prioritize the barriers, keeping objectives in mind. For example, Rajesh (2023) used grey causal modelling in supply chains, keeping sustainability and resilience as objectives.

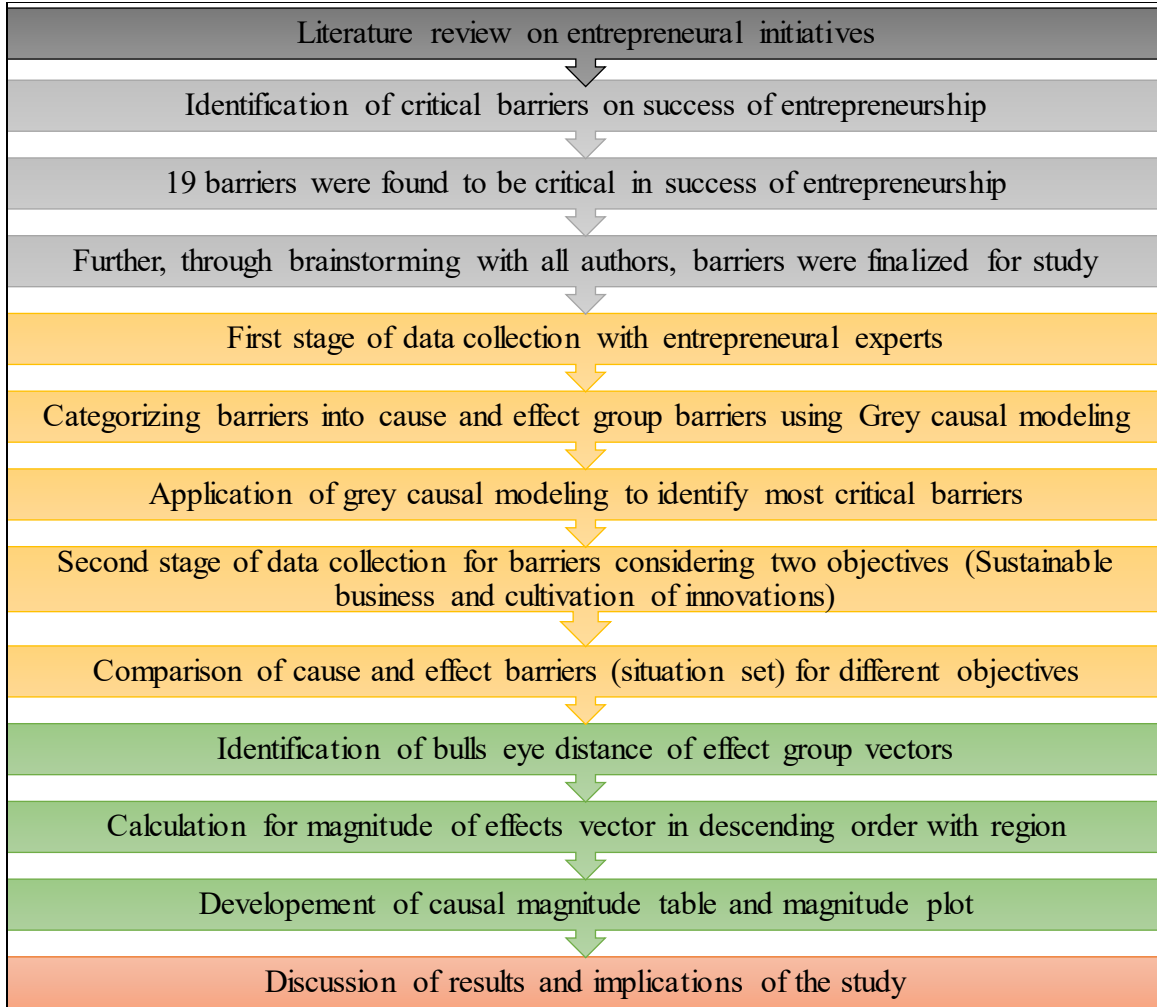


Figure 1. Study flowchart

Grey theory finds extensive application in scenarios involving uncertain decision-making, particularly in cases where the available information is ambiguous or only partially accessible (Julong, 1989). It is widely utilised in decision-making contexts within various domains, including manufacturing, supply chains, marketing, retailing, and disaster forecasting (Akter et al., 2022; Rajesh, 2022; Samvedi and Jain, 2013; Heidary Dahooie, 2020).

The shortlisted barriers can be represented in cartesian form, as presented in Equation 1.

$$B = \{b_i\} = \{b_1, b_2 \dots \dots b_n\} \quad (1)$$

The influence of barrier b_i over b_j is represented by a direct influence matrix, as presented in Equation 2.

$$D = \{d_{ij}\} = \begin{pmatrix} d_{11} & d_{21} & \dots & d_{n1} \\ d_{12} & d_{22} & \dots & d_{n2} \\ \vdots & \vdots & \ddots & \vdots \\ d_{1n} & d_{2n} & \dots & d_{nn} \end{pmatrix} \quad (2)$$

The direct relation matrix is constructed by collecting data from entrepreneurial experts.

$$m = \min \left[\frac{1}{\max \sum_{j=1}^n d_{ij}}, \frac{1}{\max \sum_{i=1}^n d_{ij}} \right] \quad (3)$$

$$N = D \times m \quad (4)$$

$$T = N(I - N)^{-1} \quad (5)$$

where I is the identity matrix

After collecting the data from each expert, the DEMATEL methodology was adopted, and an average relationship matrix was developed by taking the average of data collected from all experts. Further, normalization was performed on average data using Equation 4 and the total relation matrix using Equation 5; further, barriers are classified as cause-and-effect group barriers.

Following this, GCM was applied to identify the most critical barriers. GCM is a methodological approach employed for rigorous causal analysis, encompassing a thorough examination of causative factors and resultant effects based on defined objectives and observed outcomes (Singh et al., 2023). GCM also provides more accurate results in analysing cause-and-effect barriers by considering defined objectives and situational sets.

For Stage 2, data collection was designed with two specific objectives in mind. This phase focused on assessing and comparing cause-and-effect barriers under distinct situational sets. The situation set consisting of the cause-and-effect group represents the event and outcome groups, as presented in Equation 6.

$$S_{ij} = \{event, outcome\} = \{a_i, a_j\} \quad (6)$$

Further, the situation set is dependent on a set of objectives. Therefore, the situation set for any k^{th} objective is presented as shown in Equation 7.

$$S_{ij}^k = \{a_i^k, a_j^k\} \quad (7)$$

Additionally, the study delved into the identification of the bullseye distance of effect group vectors by using Equation 8.

$$|u_{ij} - r_0| = \left[(u_{ij}^1 - r_0^1)^2 - (u_{ij}^2 - r_0^2)^2 \right]^{1/2} \quad (8)$$

To further refine the analysis, a calculation for the magnitude of effect vectors was carried out, prioritized in descending order with respect to region. The effects were organized in descending order of bullseye distances, and the corresponding situations have been noted. Furthermore, for the construction of magnitude plots, the magnitudes of the effects (referred to as m_{ij} values) were computed in adherence to Equation 9.

$$m_{ij} = \left(\frac{1}{|u_{ij}-r_0|} \times 10 \right); |u_{ij} - r_0| \geq 0, \text{ and } m_{ij} = \delta; |u_{ij} - r_0| = 0 \quad (9)$$

The culmination of these steps led to the development of a causal magnitude table and a magnitude plot, providing visual representation of the critical barriers' impact. The situation sets are further stratified into four distinct quarters (regions) based on their respective impacts, and the upper bound value (i_{UB}) of m_{ij} is computed for each region according to Equation 10.

$$i_{UB} = |u_{ij} - r_0|_{min} + i \times \left(\frac{|u_{ij}-r_0|_{max} - |u_{ij}-r_0|_{min}}{4} \right); i = 1,2,3,4 \quad (10)$$

The results were then meticulously discussed, highlighting their implications for entrepreneurial endeavours.

4. Analysis and results

In this study, the authors took great care in planning the data-collection procedure to guarantee thorough insights into the identified barriers. To start with the first stage, a thoughtfully compiled list of 10 chosen barriers was shared with experienced entrepreneurial professionals. Their assignment was to assess these barriers through a matrix where each barrier was compared against every other barrier. The matrix, designed for pairwise comparisons, proved to be a robust tool. It mandated that experts evaluate and weigh each barrier against all others on the list. This methodical approach not only facilitated a nuanced comprehension of individual barriers but also enabled us to uncover the intricate relationships and impacts they had on each other.

To capture the richness of expert opinions, a 1–7 Likert scale was employed for data collection. Respondents were prompted to rate each barrier based on a scale, where 1 denoted the least influence and 7 signified the highest degree of influence. This scale not only quantified the perceived impact of each barrier but also provided a continuum of responses, allowing for a more nuanced and granular analysis of the data.

From the DEMATEL approach, the total relationship matrix has been identified using Equation 5, as presented in Table 2, and the barriers are classified into cause-and-effect group barriers, as shown in Table 3.

Table 2. Total relation matrix of the barriers to successful entrepreneurship

| | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | B9 | B10 |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| B1 | 0.48 | 0.46 | 0.45 | 0.53 | 0.50 | 0.57 | 0.57 | 0.53 | 0.50 | 0.50 |
| B2 | 0.35 | 0.23 | 0.33 | 0.30 | 0.30 | 0.39 | 0.33 | 0.32 | 0.32 | 0.30 |
| B3 | 0.45 | 0.39 | 0.31 | 0.41 | 0.39 | 0.46 | 0.43 | 0.41 | 0.39 | 0.39 |
| B4 | 0.53 | 0.36 | 0.41 | 0.37 | 0.43 | 0.49 | 0.50 | 0.47 | 0.42 | 0.42 |

| | | | | | | | | | | |
|------------|------|------|------|------|------|------|------|------|------|------|
| B5 | 0.48 | 0.37 | 0.38 | 0.40 | 0.31 | 0.45 | 0.43 | 0.41 | 0.39 | 0.37 |
| B6 | 0.53 | 0.43 | 0.44 | 0.46 | 0.44 | 0.42 | 0.50 | 0.48 | 0.45 | 0.46 |
| B7 | 0.54 | 0.37 | 0.42 | 0.48 | 0.44 | 0.51 | 0.40 | 0.48 | 0.44 | 0.45 |
| B8 | 0.51 | 0.34 | 0.39 | 0.45 | 0.41 | 0.48 | 0.47 | 0.36 | 0.41 | 0.42 |
| B9 | 0.46 | 0.34 | 0.37 | 0.38 | 0.39 | 0.44 | 0.42 | 0.41 | 0.31 | 0.39 |
| B10 | 0.47 | 0.32 | 0.36 | 0.39 | 0.36 | 0.46 | 0.43 | 0.42 | 0.39 | 0.31 |

Table 3. Cause and effect group of barriers to successful entrepreneurship

| Barrier | R | C | R+C | R-C | Group |
|----------------|----------|----------|------------|------------|--------------|
| B1 | 5.09 | 4.80 | 9.89 | 0.29 | Cause |
| B2 | 3.17 | 3.60 | 6.77 | -0.43 | Effect |
| B3 | 4.02 | 3.85 | 7.87 | 0.17 | Cause |
| B4 | 4.39 | 4.17 | 8.56 | 0.22 | Cause |
| B5 | 3.98 | 3.95 | 7.93 | 0.03 | Cause |
| B6 | 4.61 | 4.66 | 9.27 | -0.05 | Effect |
| B7 | 4.52 | 4.46 | 8.98 | 0.06 | Cause |
| B8 | 4.23 | 4.30 | 8.52 | -0.07 | Cause |
| B9 | 3.90 | 4.01 | 7.92 | -0.11 | Effect |
| B10 | 3.90 | 4.00 | 7.90 | -0.11 | Cause |

The GCM methodology was adopted from Rajesh (2023). In the GCM, these cause-and-effect group barriers are represented as a situation set. The study encompasses two primary objectives: the establishment of a sustainable business (referred to as Objective 1, denoted by $k = 1$) and the cultivation of innovation within the business framework (referred to as Objective 2, denoted by $k = 2$). To this end, a total of 50 unique situation sets were generated, resulting from the combination of five distinct events, five potential outcomes, and two specified objectives, as calculated by $5(\text{events}) \times 5(\text{outcomes}) \times 2(\text{objectives})$. These sets encapsulate the relationship between an event and its respective outcome for each stated objective. The events are delineated along the row elements, while the outcomes are tabulated in the column elements. Notably, the causal directionality is inferred from the event to the outcome. In the subsequent phase of this investigation, experts were asked to rank the cause-consequence (event-outcome) relationships pertaining to the various objectives under scrutiny. Given the consideration of five events and five outcomes, the outcomes will be assessed and ranked based on their influence relative to each objective and event combination. With a total of five potential outcomes, the resulting rankings will range from 1 to 5, wherein 1 signifies the highest rank and 5 denotes the lowest. Additionally, these rankings may be derived by aggregating the average influence ratings via a Likert scale, followed by their arrangement in descending order across all situations sets. Table 4 provides an exposition of the rankings of situations for diverse objectives.

Table 4. Ranking of situations with respect to specified objectives

| Sustainable business (k=1) | B2 | B6 | B8 | B9 | B10 |
|-----------------------------------|-----------|-----------|-----------|-----------|------------|
| B1 | 4 | 5 | 1 | 3 | 2 |
| B3 | 4 | 1 | 5 | 2 | 3 |
| B4 | 5 | 4 | 2 | 1 | 3 |
| B5 | 5 | 2 | 3 | 1 | 4 |
| B7 | 3 | 5 | 1 | 4 | 2 |
| Innovative business (k=2) | | | | | |
| B1 | 4 | 5 | 3 | 1 | 2 |
| B3 | 4 | 3 | 5 | 1 | 2 |
| B4 | 4 | 5 | 1 | 2 | 3 |
| B5 | 5 | 4 | 1 | 2 | 3 |
| B7 | 2 | 5 | 3 | 1 | 4 |

Subsequently, effect vectors corresponding to each situation will be formulated, and the corresponding bullseye distances for these vectors will be computed by using Equation 8. The computed bullseye distance is shown in Table 5.

Table 5. Bulls eye distance of effect vector

| Effect | u (1) | u (2) | mod (u-r) |
|-------------------------|--------------|--------------|------------------|
| u_{1,2} | 4 | 4 | 4.24 |
| u_{1,6} | 5 | 5 | 5.66 |
| u_{1,8} | 1 | 3 | 2.00 |
| u_{1,9} | 3 | 1 | 2.00 |
| u_{1,10} | 2 | 2 | 1.41 |
| u_{3,2} | 4 | 4 | 4.24 |
| u_{3,6} | 1 | 3 | 2.00 |
| u_{3,8} | 5 | 5 | 5.66 |
| u_{3,9} | 2 | 1 | 1.00 |
| u_{3,10} | 3 | 2 | 2.24 |
| u_{4,2} | 5 | 4 | 5.00 |
| u_{4,6} | 4 | 5 | 5.00 |
| u_{4,8} | 2 | 1 | 1.00 |
| u_{4,9} | 1 | 2 | 1.00 |
| u_{4,10} | 3 | 3 | 2.83 |
| u_{5,2} | 5 | 5 | 5.66 |
| u_{5,6} | 2 | 4 | 3.16 |
| u_{5,8} | 3 | 1 | 2.00 |
| u_{5,9} | 1 | 2 | 1.00 |
| u_{5,10} | 4 | 3 | 3.61 |
| u_{7,2} | 3 | 2 | 2.24 |
| u_{7,6} | 5 | 5 | 5.66 |
| u_{7,8} | 1 | 3 | 2.00 |
| u_{7,9} | 4 | 1 | 3.00 |
| u_{7,10} | 2 | 4 | 3.16 |

The effect vectors are arranged in descending order of bullseye distances. Equation 9 is being used to calculate the magnitudes of the effects (referred to as m_{ij} values) as presented in Table 6 for the construction of magnitude plots.

Table 6. Magnitude of effects in descending order with region

| Effect | u (1) | u (2) | mod (u-r) | Magnitude | Situation | Region |
|-------------------------|-------|-------|-----------|-----------|-------------------------------------|----------------|
| u_{3,9} | 2 | 1 | 1.00 | 10.00 | (B ₃ , B ₉) | R ₁ |
| u_{4,8} | 2 | 1 | 1.00 | 10.00 | (B ₄ , B ₈) | |
| u_{4,9} | 1 | 2 | 1.00 | 10.00 | (B ₄ , B ₉) | |
| u_{5,9} | 1 | 2 | 1.00 | 10.00 | (B ₅ , B ₉) | |
| u_{1,10} | 2 | 2 | 1.41 | 7.07 | (B ₁ , B ₁₀) | |
| u_{1,8} | 1 | 3 | 2.00 | 5.00 | (B ₁ , B ₈) | |
| u_{1,9} | 3 | 1 | 2.00 | 5.00 | (B ₁ , B ₉) | |
| u_{3,6} | 1 | 3 | 2.00 | 5.00 | (B ₃ , B ₆) | |
| u_{5,8} | 3 | 1 | 2.00 | 5.00 | (B ₅ , B ₈) | |
| u_{7,8} | 1 | 3 | 2.00 | 5.00 | (B ₇ , B ₈) | |
| u_{3,10} | 3 | 2 | 2.24 | 4.47 | (B ₃ , B ₁₀) | R ₂ |
| u_{7,2} | 3 | 2 | 2.24 | 4.47 | (B ₇ , B ₂) | |
| u_{4,10} | 3 | 3 | 2.83 | 3.54 | (B ₄ , B ₁₀) | |
| u_{7,9} | 4 | 1 | 3.00 | 3.33 | (B ₇ , B ₉) | |
| u_{5,6} | 2 | 4 | 3.16 | 3.16 | (B ₅ , B ₆) | |
| u_{7,10} | 2 | 4 | 3.16 | 3.16 | (B ₇ , B ₁₀) | |
| u_{5,10} | 4 | 3 | 3.61 | 2.77 | (B ₅ , B ₁₀) | R ₃ |
| u_{1,2} | 4 | 4 | 4.24 | 2.36 | (B ₁ , B ₂) | |
| u_{3,2} | 4 | 4 | 4.24 | 2.36 | (B ₃ , B ₂) | |
| u_{4,2} | 5 | 4 | 5.00 | 2.00 | (B ₄ , B ₂) | R ₄ |
| u_{4,6} | 4 | 5 | 5.00 | 2.00 | (B ₄ , B ₆) | |
| u_{1,6} | 5 | 5 | 5.66 | 1.77 | (B ₁ , B ₆) | |
| u_{3,8} | 5 | 5 | 5.66 | 1.77 | (B ₃ , B ₈) | |
| u_{5,2} | 5 | 5 | 5.66 | 1.77 | (B ₅ , B ₂) | |
| u_{7,6} | 5 | 5 | 5.66 | 1.77 | (B ₇ , B ₆) | |

Further, Equation 10 is used to categorize the situation sets into four regions based on their respective impacts, and the upper bound value. In this study, the upper bounds for regions 1, 2, 3, and 4 are determined to be 2.164, 3.328, 4.492, and 5.656, respectively. Figure 2 graphically delineates the scenario sets alongside their associated event-outcome combinations predicated on the magnitude of their effects. These graphical representations serve as effective depictions of the pertinent situations and their corresponding impacts, with the size of each circle denoting the extent of their effects.

Subsequently, a causal magnitude table is generated based on these magnitude plots, as delineated in Table 7. Within this table, events in the first region are accorded a weighting of

4, events in the second region are assigned a weighting of 3, and those in the third and fourth regions are allocated weightings of 2 and 1, respectively.

Table 7. Causal magnitude table

| | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | B9 | B10 | Sum |
|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|
| B1 | | 2 | | | | 1 | | 4 | 4 | 4 | 15 |
| B2 | | | | | | | | | | | |
| B3 | | 2 | | | | 4 | | 1 | 4 | 3 | 14 |
| B4 | | 1 | | | | 1 | | 4 | 4 | 3 | 13 |
| B5 | | 1 | | | | 3 | | 4 | 4 | 2 | 14 |
| B6 | | | | | | | | | | | |
| B7 | | 3 | | | | 1 | | 4 | 3 | 3 | 14 |
| B8 | | | | | | | | | | | |
| B9 | | | | | | | | | | | |
| B10 | | | | | | | | | | | |

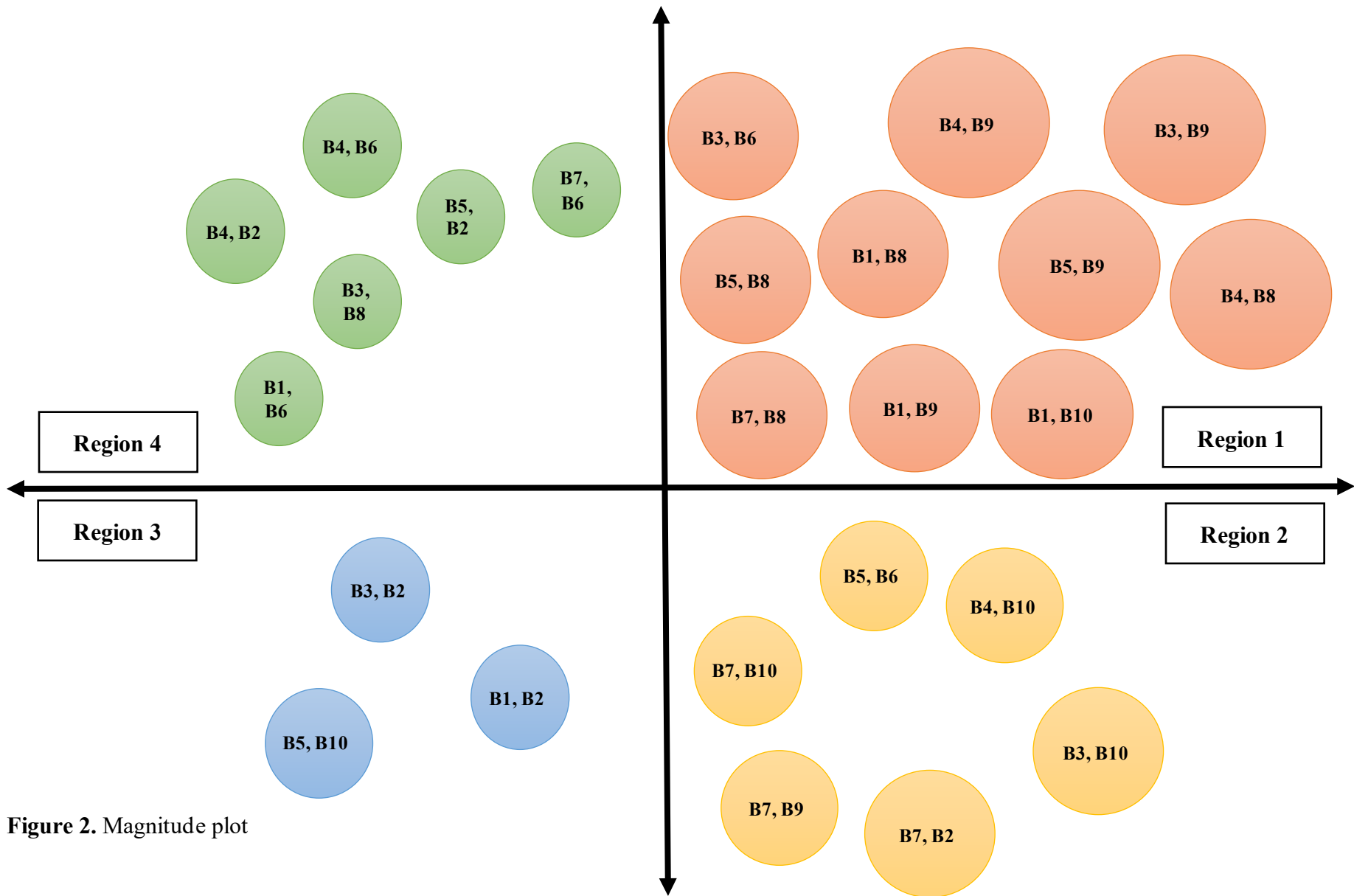


Figure 2. Magnitude plot

The summation of row elements in the causal magnitude table is then computed. In the context of this study, which encompasses 10 barriers, the top causal barriers are ascertained as pivotal events. According to the outcomes derived from the GCM technique, the decisive causal barriers for this study are identified as financial constraints (B1).

From the analysis of the research study, it is found that financial constraints (B1), limited access to skilled labor (B3), inadequate infrastructure (B4), limited access to technology (B5), and scalability issues (B7) are identified as causal factors; regulatory hurdles (B2), lack of mentorship and support (B6), high initial costs (B8), product development obstacles (B9), and risk aversion (B10) are identified as the effect factors. The results of the causal magnitude table identified that the prime or decisive causal factor for creating the hurdle in achieving dual objectives establishment of a sustainable business and the cultivation of innovation is financial constraint (B1); second in rank belongs to limited access to skilled labor (B3), limited access to technology (B5), and scalability issues (B7), with a causal magnitude of 14. The third position is obtained by inadequate infrastructure (B4), with a causal magnitude of 13.

5. Discussion

The study used a GCM to analyse complex causal modelling scenarios taking into account two different characteristics representing the cause-and-effect groups. An integration of multiple cause-and-effect relationships is the outcome of scenarios within a GCM. Determining outcomes has been accomplished by analysing situation sets related to two different goals: building a sustainable business and growing innovation. The experts' responses are collected in two different time windows for increasing the reliability and flexibility of the data collected. In the first stage, data were collected to identify the elements that contribute to cause-and-effect relationships. In the second stage, data were collected to prioritise the discovered cause-and-effect combinations based on different objectives, with the goal of determining the findings of the research.

From the RBV's point of view, "financial constraints" (B1) are a major obstacle for entrepreneurs who want to build a long-term company while also driving innovation (Raghuvanshi et al., 2022). The RBV theory reveals that "financial resources" are the foundation of an organization because they enable it to invest in and use human capital and technology as well as strategic competencies (Kellermanns et al., 2016). The firm's long-term survival is jeopardized when allocation decisions prioritise short-term survival over strategic accumulation of precious, rare, irreplaceable, or nonsubstantiated resources due to financial constraints (Knoppen and Knight, 2022). Further, limits degrade dynamic capacities, which

diminishes a firm's responsiveness to constantly changing entrepreneurial contexts and impeding resource complementarity, hence restricting the synergistic connections essential for generating innovation (Gawer, 2021; Schilke, 2014). Therefore, because the entrepreneur's ability to meet sustainability and innovation goals simultaneously depends on a resource base, financial restrictions limit that foundation.

Additionally, in the RBV setting, entrepreneurs face significant challenges in achieving their goals of creating a sustainable business and encouraging innovation due to limited access to skilled labor (B3), limited access to technology (B5), and scalability issues (B7). The RBV framework acknowledges the importance of indispensable resources such as skilled labour and cutting-edge technology in gaining a competitive edge (Le et al., 2023). The capacity to build a team with the knowledge and experience to propel innovation and operational excellence is hampered by the scarcity of available talented workers (Wee and Chua, 2013). Implementing training programs to enhance the skills of existing employees by involving technical and soft skills will ensure the workforce to be more adaptable to the dynamic needs of the business. Collaboration with universities and vocational training centers to establish partnerships can help in creating a pipeline of skilled workers and provide entrepreneurs with access to a pool of potential talent. Embracing remote work options and flexible schedules to attract skilled professionals who may not be geographically close to the business will expand the talent pool and allow for a more diverse and skilled workforce.

A similar situation occurs when business owners lack the resources to develop and compete in today's technology-driven environment because of limited access to technology. Forming partnerships with technology companies to gain access to cutting-edge tools and resources can facilitate knowledge transfer and provide entrepreneurs with insights into the latest technological advancements. Allocating resources to an internal R&D department or collaborating with external research organizations will ensure continuous innovation and keep the business at the forefront of technological developments. It is encouraged that business executives develop implementation programs that teach staff how to use new technologies. Doing so will minimize learning curves and resistance to change, foster an innovative culture, and empower employees to become proficient with technology. Problems with scalability worsen these difficulties since they slow business model growth (Pal and Gander, 2018). Assessing current processes for areas where operations can be optimised and increased in a way that resources are used efficiently will help scalability.

Moreover, it is recommended to utilise cloud computing to rapidly scale operations as needed, without large upfront investments to ensure that infrastructure can keep pace with the

growing demands of the business as well as to develop a clear and flexible growth strategy that anticipates future scalability needs such as investing in scalable technologies, hiring with scalability in mind, and having their business model be one that is responsive to changes in the market. Both sustainability and innovation are difficult outcomes to achieve within the RBV framework, and these barriers only further indicate why it is so difficult for entrepreneurs to access these fundamental resources (Bocken and Geradts, 2020). Finally, inadequate infrastructure (B4) is identified as a major challenge to the attainment of double goals. Again, infrastructure is an essential resource to meet the principles of RBV, as it may provide a competitive advantage combining tangible and intangible aspects such as does (Yew Wong and Karia, 2010).

5.1 Implications

5.1.1 Theoretical implications

The results help to reinforce RBV theory by marshalling empirical findings in support of it. These findings underscore how strategic resources, including financial capital, skilled labor, technological, and infrastructural resources, might significantly affect an entrepreneur's ability to pursue sustainability and innovation. Such validation certainly bolsters the theoretical foundations of the RBV in the context of business ownership. This supports the notion that a dearth of resources, particularly financial resources, by enterprise, potentially hinders an entrepreneur's potential to engender dynamic capacities. Indeed, the results help to explain how thwarted resources might impede a firm's ability to adapt to shifting entrepreneurial circumstances and thus stifle innovation in the process. In so doing, it outlines just how resource constraints might influence a firm's dynamic underpinnings, within the framework of the RBV. This provides a foil for future research to further interrogate the relationships and interactions that have been uncovered among the core antecedent group barriers (e.g., resource constraints, labor shortages, dated facilities). Additionally, more research into the interaction of these variables, and their cumulative effect upon entrepreneurship, should certainly be welcomed. Further, the findings suggest that, culturally and professionally, entrepreneurs encounter different barriers.

5.1.2 Practical implications

Entrepreneurs and corporate leaders can thus adopt strategies that anticipate and mitigate financial constraints, which may range from careful evaluation of numerous financing

alternatives and the integration of cost-reduction strategies and money-saving practices or the application of state-of-the-art financial management methods. Firms can also channel funding toward methodologies of talent acquisition and the technological infrastructure that these financial limitations may impose. Organisations can consider the formation of partnerships or participation in various collaborations that will secure them an efficient or advanced technological resource and specialised expertise. Finally, and in the entrepreneurial context, firms may undertake upfront scalability planning during the start-up phases of their enterprises.

These strategic decisions may include the design and evaluation of alternative business models, the imposition of a change of operational methods or the exploitation of the organisational form or other external growth ventures. Physical and technological infrastructure may be useful to entrepreneurs and company owners, as they seek to make the sustainable and innovative changes that the outcomes of their efforts suggest. This evolving infrastructure is at the core of the process of facility upgrade. This may lessen the constraint that entrepreneurs face in carrying out potential enhancements as they expand their logistics or production facilities. Entrepreneurs and firms can also use this infrastructure planning to update facilities to a more efficient and cost-efficient technology. Another important step for a firm is the adoption of a long-term mindset that influences the *ex-ante* commitment of its resources, which is a strategic allocation for the accumulation of assets that are rare and have value.

6. Conclusion and future research

Entrepreneurship is a dynamic and complicated process that is of significant importance to innovation, economic development, and employment at the global level. The concepts of entrepreneurship extend well beyond the traditional ownership of a firm and encompass a wide variety of activities such as corporate entrepreneurship within existing organisations and social entrepreneurship directed at addressing social challenges. A critical examination of barriers to successful entrepreneurship was the main focus of this study, and the importance of understanding these barriers and of finding successful means of overcoming them cannot be overstated for policymakers, practitioners, and academics.

The RBV offered useful theoretical foundation for understanding the influence of a firm's resources and capabilities on a firm's competitive advantages and thus the challenges encountered by entrepreneurs. The examination of the findings revealed that some of the important implications of RBV for entrepreneurs, such as, according to the resource-based view, the four common aspects of resources, i.e., valuable, rare, imperfectly imitable, and nonsubstitutable; further, the implication of the theoretical framework is that hardly any firm

possesses the resources or capabilities that meet the four specific unless there are possible imitable recourses.

The other common realization under the statement falls into the resource value chain, i.e., identification of intrapreneurial resources is crucial for resource-scarce organizations and leveraging family social capital to raise innovation in family enterprises and social value in social entrepreneurial organizations. The other part of the examined findings had been the management of resources and complementarity of resources and dynamic capabilities. The resource cultivation theory's practical implication is that resource cultivation and accumulation is a valid strategy for ameliorating resource restraints. Previous searches provided information for the theoretical framework. The literature review revealed some of the further challenges faced by entrepreneurs: financial constraints; regulatory hurdles; difficulties in accessing skilled labour; inadequate infrastructure and technology; lack of mentorship opportunities; challenges in achieving scalability; substantial initial costs; obstacles in product development; and aversion to risk, which are all examples of the factors that contribute to these barriers. The research also sheds light on the ways in which cultural, religious, social, structural, gender, and regional forces play a role in shaping entrepreneurs' hopes and fears. In addition, this study compiled a list of open research questions (ORQs) that might guide future scholars into the right direction. The proposed open research questions are as follows:

ORQ1: In what ways do the complexity of regulation and bureaucratic hurdles pose an obstacle for entrepreneurial efforts to foster innovation and sustainability, and how can policy interventions effectively address these obstacles?

ORQ2: How can extraneous variables such as the economy, new regulations, or world events affect the strengths of causal links, and what can business owners do to adjust to these changes?

ORQ3: What are the limitations of current infrastructure and technologies that present barriers for new entrepreneurs and their efforts at implementing sustainable solutions, and what new technological and built environment developments will enable these solutions to overcome these barriers?

ORQ4: How does the collaborative environment between public and private initiatives work to address entrepreneurial barriers to sustainability and drive a culture of innovation and how do these public-private partnerships get designed and launched?

ORQ5: How do issues surrounding organizational inertia and resistance to change impede the entrepreneurial effort to drive sustainability and innovation and what strategies of change management are effective in overcoming these barriers to success?

ORQ6: What role do financial constraints and capital access play as obstacles for entrepreneurs as they strive to achieve sustainability and spur innovation, and what strategies can overcome these challenges?

ORQ7: To what extent do regulatory hurdles hinder entrepreneurial ventures, and what policy interventions or regulatory frameworks can be designed to foster a more supportive environment for start-ups?

ORQ8: How do workforce skill and capability issues limit the ability to drive innovation and sustainability and what current training and development programs can be launched to overcome these skill barriers?

ORQ9: How does inadequate infrastructure impede entrepreneurial growth, and what role can public-private partnerships play in addressing infrastructure challenges to create a conducive environment for start-ups?

ORQ10: Can a typology of entrepreneurial barriers be developed to understand and organize the diverse challenges entrepreneurs face in driving sustainability and being in constant innovation and what are the paths to such solutions between sector and organization size?

ORQ11: How does the absence of mentorship and support networks impact the success rate of entrepreneurial ventures, and what scalable models can be established to provide effective mentorship for diverse entrepreneurs?

ORQ12: What factors contribute to scalability challenges for start-ups, and how can entrepreneurs develop scalable business models while adapting to the evolving demands of the market and industry?

ORQ13: How are supply chain challenges and the demand to get sustainable materials and services impacting the effort to drive sustainability and innovation and what strategies can be developed to make supply chains more sustainable and resilient in the face of such challenges and opportunities generated by innovation?

ORQ14: How are cultural and social forces shaping our view of sustainability and innovation and how can entrepreneurs navigate these barriers in order to promote sustainability?

ORQ15: To what degree do concerns about public opinion and expectations by stakeholders act as a motivation or barrier for entrepreneurs seeking to bring sustainability and innovation into their business practices?

These ORQs may serve for forthcoming investigations aimed at enhancing our comprehension of the obstacles faced in entrepreneurship while also offering pragmatic insights for entrepreneurs, policymakers, and academics.

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