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Phenomenology of Entrepreneurs' Experiences in a Special Economic Zone Under Constraints Based on Strategic Agility (Giorgi's Analytical Approach)

Hamid. Zolghadr[1], Mashallah. Valikhani Dehaghani[2*], Ali Reza. Shirvani Jozdani[3]

1 International Entrepreneurship Department, Deh.C., Islamic Azad University, Isfahan, Iran
2 Department of Public Administration, ST.C., Islamic Azad University, Tehran, Iran
3 Department of Public Administration, Deh.C., Islamic Azad University, Isfahan, Iran

Corresponding author email address:
valikhani@dehaghan.ac.ir

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ABSTRACT

The present study aims to analyze the phenomenological experiences of entrepreneurs in the Kaveh Special Economic Zone under conditions of constraints. The research employed Giorgi's descriptive phenomenological analytical method, which seeks to explore how the lived experiences of entrepreneurs under constraints can lead to the optimization of performance through strategic agility in different regions. The study followed a qualitative phenomenological approach, and data analysis was conducted using Giorgi's five-step method. The study population consisted of individuals who are active as entrepreneurs in the Kaveh Special Economic Zone and who described their experiences. Through purposive sampling, 12 participants were selected. The required data were collected through semi-structured individual interviews and then analyzed. Meaning units were identified from the interviews, transformed into core thematic units, and then converted into insightful themes. From this process, six main concepts and 31 components were extracted, all grounded in productivity development and strategic agility. The results of the study were categorized into six core concepts. Strategic agility encompassed three components: customer agility, operational system agility, and collaborative agility. Entrepreneurship encompassed characteristics such as personality traits, entrepreneurial motivation, and knowledge and awareness. Each of these components included several subcomponents.

Keywords: Entrepreneurs; Strategic Agility; Special Economic Zone; Giorgi's Approach

Introduction

In the contemporary business landscape, strategic agility has emerged as a vital organizational capability that enables firms to effectively respond to rapid environmental changes and competitive pressures. Especially in dynamic contexts such as Kaveh Special Economic Zone, where entrepreneurs operate under multiple constraints, the ability to anticipate shifts, adapt quickly, and realign resources is critical for sustaining competitiveness and ensuring long-term performance. Strategic agility refers to the firm's capacity to sense opportunities and threats, rapidly make decisions, and reconfigure internal and external competencies to address these challenges in a timely manner [1-3]. The necessity of agility becomes particularly evident when firms face volatile markets, technological disruptions, or political and economic instabilities, which are prevalent features of special economic zones.

Entrepreneurship, as the driving engine of innovation and regional development, relies heavily on the agility of both individuals and organizations. The personal qualities and managerial skills of entrepreneurs exert a direct influence on venture performance and the ability to navigate environmental turbulence [4]. Scholars argue that entrepreneurial teams

that display strategic agility are more capable of simultaneously pursuing exploration and exploitation activities, thus overcoming the paradox of organizational ambidexterity and achieving sustainable competitive advantage [5, 6]. This is because agility allows them to flexibly allocate resources, pivot strategies, and quickly implement innovative solutions as opportunities or threats emerge [7, 8]. In the context of rapidly globalizing markets, the integration of agility within entrepreneurial strategies also enhances firms' resilience against external shocks and accelerates their internationalization process [1, 3, 9].

Special economic zones (SEZs), designed to attract investment and stimulate regional economic growth, provide a unique ecosystem for entrepreneurship. By offering regulatory incentives and infrastructural support, they create competitive yet uncertain environments that demand agile responses from resident firms [10]. Within such settings, entrepreneurs must not only navigate intense competition for resources and markets but also contend with shifting policies, trade regulations, and technological trends. The ability to maintain operational continuity while innovating under pressure underscores the strategic role of agility. Firms in SEZs that exhibit high levels of agility in human resources, financial management, and production systems are better positioned to capitalize on emerging opportunities and sustain growth [11, 12].

A growing body of research links entrepreneurial orientation with competitive advantage through the moderating effect of strategic agility [13]. Entrepreneurial orientation—comprising innovativeness, proactiveness, and risk-taking—can drive firms toward breakthrough innovations and market leadership, but without agility, these strategic postures may fail to translate into tangible performance outcomes [14, 15]. Agility enables firms to bridge the gap between entrepreneurial intent and operational execution, allowing them to swiftly adjust strategies based on market feedback and competitive moves [8, 16]. Furthermore, studies have shown that firms with high agility are more adept at adopting new technologies and leveraging digital transformation to sustain their competitive advantage [17, 18].

Leadership also plays a central role in embedding agility within entrepreneurial firms. Agile leaders encourage innovative behaviors among employees, nurture an organizational climate that supports experimentation, and foster the mental agility needed to adapt to rapidly evolving challenges [19]. Such leadership not only strengthens the internal innovation climate but also enhances employees' willingness to embrace change and contribute to organizational learning. Similarly, leadership agility has been found to positively influence innovation ambidexterity—simultaneous pursuit of exploitative and explorative innovation—and, in turn, strengthen competitive advantage [20]. In knowledge-intensive settings, entrepreneurial leadership stimulates opportunity recognition, facilitates rapid decision-making, and aligns cross-functional teams to implement innovative ideas under time constraints [21, 22].

At the organizational level, strategic agility has been conceptualized as comprising sensing, decision-making, and resource reconfiguration capabilities [2]. These dynamic capabilities enable firms to continuously scan their environments, interpret market signals, and realign their structures, processes, and resources accordingly. Research in knowledge-based and high-tech companies highlights the positive relationship between organizational entrepreneurship and organizational agility, showing that entrepreneurial initiatives can enhance firms' ability to adapt structures and processes to changing conditions [12, 22]. Moreover, organizational agility has been identified as a crucial mediating factor between intellectual capital and organizational entrepreneurship, amplifying the impact of knowledge assets on entrepreneurial outcomes [23]. This interplay suggests that the combination of entrepreneurial drive and agility-oriented structures forms the foundation of innovative performance.

The digital era has intensified the need for agility, particularly among small and medium-sized enterprises (SMEs). As digital disruptions reshape industries, firms must integrate entrepreneurial agility into their business models to create value and maintain competitiveness [18]. The capacity to leverage digital, network, and innovation capabilities contributes significantly to organizational agility and performance, especially when supported by adequate financial resources for entrepreneurs [24]. Digital entrepreneurship requires firms to act on emerging opportunities quickly and adjust value creation logics in real time, which is only feasible when entrepreneurial teams possess high levels of strategic agility [2, 6]. Likewise, e-commerce adoption and online marketing initiatives have shown stronger effects on firm performance when coupled with agile operational practices [16, 25].

Another critical dimension is workforce agility, which refers to the ability of employees to adapt roles, learn new skills rapidly, and operate effectively in changing contexts [26]. In knowledge-intensive and engineering-based organizations, workforce agility has been identified as a key enabler of organizational responsiveness and innovation capability. When employees are equipped with mental agility and cross-functional skills, they can contribute to organizational learning cycles and accelerate the implementation of strategic changes [19, 20]. Building such agile workforces requires deliberate investments in training, knowledge sharing, and empowerment—elements that also strengthen organizational resilience in uncertain environments [7].

The relationship between strategic agility and firm performance is further shaped by external factors such as environmental dynamism and uncertainty. Studies have shown that firms with high levels of strategic agility are better able to sustain performance in turbulent markets by rapidly reconfiguring resources and processes [1, 3]. Agility helps mitigate risks associated with market volatility, technological disruptions, and global competition, thus fostering organizational sustainability [5, 9]. This is particularly relevant in special economic zones, where firms operate in highly competitive clusters exposed to sudden regulatory or economic shifts [10]. In such environments, agility serves as a strategic buffer that allows entrepreneurs to maintain competitiveness and seize new market opportunities despite resource constraints or institutional uncertainty [27, 28].

In sum, prior literature consistently underscores the critical role of strategic agility as a mediating and enabling capability that links entrepreneurship, innovation, and firm performance. It enhances the capacity of entrepreneurs to transform ideas into marketable offerings, navigate dynamic environments, and build sustainable competitive advantages [8, 14, 15]. By integrating agility into their strategic logic, firms can move beyond static planning models and adopt real-time adaptive strategies that align with environmental shifts [2, 7]. This body of evidence suggests that understanding how entrepreneurs in SEZs develop and apply strategic agility in constrained contexts is essential for advancing both theory and practice.

Therefore, this study seeks to analyze the phenomenological experiences of entrepreneurs operating in the Kaveh Special Economic Zone to uncover how they deploy strategic agility under constraints to enhance productivity and competitiveness.

Methodology

The study is qualitative in nature and employs a descriptive phenomenological method. This method emphasizes the depth of experiences and enhances our understanding of lived work and personal experiences. Phenomenology is a qualitative research method. It is a systematic and rigorous approach that aims to reveal and illuminate human perceptions of various phenomena. Phenomenology seeks to uncover meanings as they are lived in everyday life. In phenomenological research,

the goal is to become aware of one's own biases and presuppositions in order to bracket or set them aside, enabling the researcher to enter the experience without preconceived notions about what the research will yield. This awareness prevents the influence of the researcher's assumptions or biases on the study.

In such studies, the criteria for selecting participants differ from those used in research aiming to obtain statistical data. The goal in descriptive phenomenological studies is to select participants who have lived experiences relevant to the phenomenon of interest and who are willing to talk about their experiences. Moreover, these participants should be as diverse as possible to enable access to rich and unique narratives about a specific experience.

Giorgi's method for data analysis provides a powerful framework for researchers. This method, rooted in the tradition of Edmund Husserl, approaches phenomenology as a research method with four defining characteristics: description, reduction, identification of structure or essence, and intentionality of consciousness. The first characteristic emphasizes that analysis and interpretation must follow the participants' objective descriptions, not the researcher's theoretical perspective. According to Giorgi, description is an operational term.

The second characteristic, reduction, involves considering the meaning and essence of experience as it is crystallized in consciousness. The researcher must avoid altering participants' experiences into what they personally prefer. The third characteristic is identifying the essence or nature of the phenomenon, meaning the researcher seeks the invariant characteristics of the studied phenomenon. Finally, the fourth characteristic is the intentionality of consciousness, referring to the conscious and deliberate activity by which each individual relates to the world and surrounding objects.

Some authors introduce Giorgi's method as consisting of two parts: individual analysis and composite analysis.

Step One: One of the most important steps in Giorgi's analytical approach is adopting a phenomenological attitude. In this attitude, the researcher sets aside theoretical, cultural, experiential, and other presuppositions. This attitude must be maintained throughout the data analysis process.

Step Two: The second step is gaining a holistic sense of the description to achieve an overall understanding of the interview text. This is achieved by familiarizing oneself with the information and transcribing the raw interview data verbatim. The researcher must read the interviews several times to gain a sense of the whole and attempt to understand the meaning of the phenomenon from the participants' perspectives. To this end, researchers must complete Giorgi's familiarization phase by transcribing the raw data verbatim, rereading the transcripts while listening to the recordings, and studying each interview text multiple times.

Step Three: This stage is called the delineation of meaning units. The ultimate outcome of phenomenological analysis is to identify the meaning(s) of the experience. Once the researcher has studied the interview text and developed a holistic sense of it, the text is transformed into what Giorgi calls meaning units or meaning distinctions so that the data can be treated as manageable units. The researcher reads the transcripts several times and identifies meaning units. The goal is to determine the initial or natural meaning units based on the participants' descriptions. In fact, objective meaning units do not inherently exist in the interview text; rather, the researcher seeks to break down the interview text into meaning units.

Step Four: This step involves transforming the meaning units into descriptive statements through data reduction, also referred to as transforming the meaning units into psychologically significant statements. This stage forms the core of the analytical method and is, according to Giorgi, the most challenging part, as it represents the first transformation of the data during the analysis process. This stage focuses solely on describing how the phenomenon was experienced and understood

by the participant, according to their perspective, without explaining "why" it occurred. Transforming meaning units into scientific language is essentially done in two substeps: first, the researcher describes the meaning of each meaning unit in their own words as simply as possible; then the researcher attempts to relate each meaning unit to the phenomenon under study and rewrite its meaning in more scientific language.

Step Five: In the final stage of data analysis, the researcher reflects on the specific structures identified in the previous stage. Individual differences in experiences are removed, and the focus shifts to the shared dimensions across all participants' experiences—in other words, composite analysis is conducted. Here, the researcher must determine which characteristics of a specific structure represent a universal truth and which do not. Each specific structure is compared to the others to identify convergences and divergences.

Findings and Results

To collect the required data, library research, document review, and interviews with individuals influential in entrepreneurship, productivity, and strategic agility were used. The statistical population included a large number of entrepreneurs, strategic managers, and consultants in the Kaveh Special Economic Zone, from whom 12 individuals were purposively selected. To facilitate analysis, each participant was assigned a code (letter P). The table below presents the descriptive statistics:

Table 1.

Description of the Demographic Characteristics of Participants in the Qualitative Section

Interview Duration	Academic Degree	ID	Gender	R
35 minutes	Master's Degree	P1	Male	1
38 minutes	Doctorate	P2	Male	2
53 minutes	PhD Student	P3	Male	3
50 minutes	Master's Degree	P4	Female	4
41 minutes	Master's Degree	P5	Male	5
55 minutes	Doctorate	P6	Male	6
50 minutes	PhD Student	P7	Male	7
39 minutes	Master's Degree	P8	Female	8
51 minutes	Doctorate	P9	Male	9
40 minutes	Master's Degree	P10	Female	10
45 minutes	Master's Degree	P11	Male	11
48 minutes	Doctorate	P12	Male	12

To analyze the data using Giorgi's method, all recorded interviews were first transcribed into written text, and then all field notes and implemented innovations were re-reviewed. At this stage, the researchers repeatedly reviewed the data to obtain a general sense of the collected information. In the next stage, using sentence-by-sentence analysis, statements important and relevant to the research topic were identified.

In the first phase of the analysis, the initial data obtained from the interview texts were used to label and code statements by combining and linking them, thereby reaching a shared understanding among them. There was no limitation on the number of extracted codes. In this study, at each stage, the content was considered from a more general level to a more detailed level until completely precise and detailed content related to the six main categories of the study was selected.

Due to the lengthy process of analyzing each interview individually, and to familiarize the audience with how the stages of analysis and transformation were conducted, one interview (Interview No. 9), which had the highest overlap with other

interviewees, was selected and presented in the following tables. Furthermore, the final results of the analysis of all 12 interviews are presented separately by codes in the form of insightful themes in Table 2.

Table 2.

Initial Meaning Units Derived from a Part of Interviewee 9's (P9) Interview and Their Transformation into Scientific Language

Meaning Units	Transformation 1	Transformation 2 (Main Topic of Each Meaning Unit)
In our region (Kaveh Special Economic Zone), due to the nature of the zone, we are always facing intense competition, especially under sanctions and amid political, economic, and commercial changes, so we need strategic planning in our management. We face challenges such as skilled human resources in various sectors (finance, administration, production, etc.) and are forced to send them to multiple training courses. Of course, I, as an entrepreneur, am always seeking to enhance my knowledge in various fields. I believe we must be so prepared that with or without sanctions we can face constraints and remain competitive, and this is only possible with flexibility in business. This flexibility is achievable through the agility of human resources, production, finance, planning, etc. Therefore, through training and proper experience, efficiency and effectiveness in business can be enhanced. Certainly, the experiences of others and collecting them can help resolve the challenges of new businesses.	1- The interviewee says that to have a good business, one must acquire knowledge to achieve efficiency and effectiveness. 2- Also refers to the agility of businesses, plans, and human resources in all areas. 3- Mentions political, economic, and commercial changes and sanctions, which should not hinder entrepreneurs from reaching their goals. 4- Refers to business flexibility and notes that if businesses are not flexible, they will fail under constraints.	1- Continuous knowledge acquisition and learning in business 2- Learning lessons from others' experiences during work 3- Continuous agility at all business levels 4- Continuous attention to political, economic, and commercial changes 5- Having skilled and agile human resources in all areas 6- Attention to efficiency and effectiveness at different levels 7- Having a strategic perspective and planning in all business areas

After identifying the meaning units from the interviews, the insightful themes of Interview No. 9 were determined as shown in Table 3:

Table 3.

Meaning Units, Main Topic of Each Meaning Unit, and Insightful Themes of Interviewee 9 (P9)

Meaning Units	Main Topic of Each Meaning Unit	Insightful Themes
In our region (Kaveh Special Economic Zone), due to the nature of the zone, we are always facing intense competition, especially under sanctions and amid political, economic, and commercial changes, so we need strategic planning in our management. We face challenges such as skilled human resources in various sectors (finance, administration, production, etc.) and are forced to send them to multiple training courses. Of course, I, as an entrepreneur, am always seeking to enhance my knowledge in various fields. I believe we must be so prepared that with or without sanctions we can face constraints and remain competitive, and this is only possible with flexibility in business. This flexibility is achievable through the agility of human resources, production, finance, planning, etc. Therefore, through training and proper experience, efficiency and effectiveness in business can be enhanced. Certainly, the experiences of others and collecting them can help resolve the challenges of new businesses.	1- Continuous knowledge acquisition and learning in business 2- Learning lessons from others' experiences during work 3- Continuous agility at all business levels 4- Continuous attention to political, economic, and commercial changes 5- Having skilled and agile human resources in all areas 6- Attention to efficiency and effectiveness at different levels 7- Having a strategic perspective and planning in all business areas	1- Continuous knowledge and awareness 2- Gaining experience 3- Strategic agility 4- Exploration and collection of environmental information 5- Specialized human resources 6- Productivity development 7- Strategic planning 8- Business flexibility

Following this same approach, the text of Interviewee 9's interview was analyzed, the commonalities and differences among the interviews were identified, and ultimately 31 insightful theme codes were extracted, which are presented in Table 4.

Table 4.

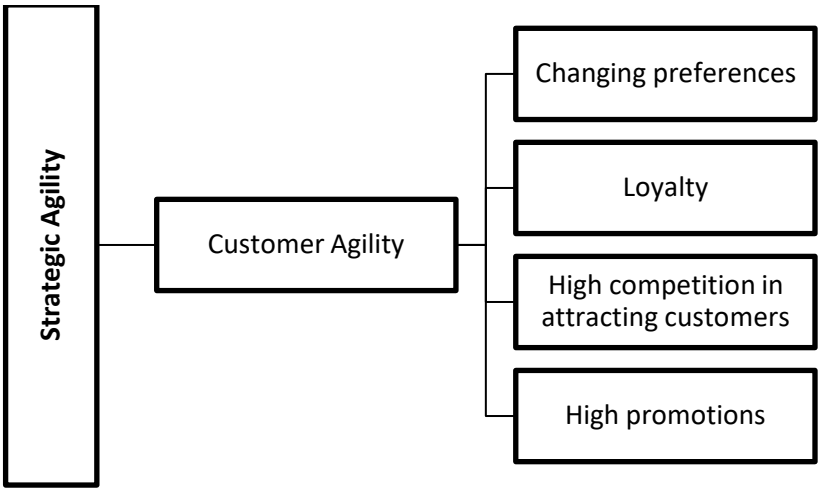
Insightful Themes Extracted from the 12 Conducted Interviews by Code and ID

Transformation 3: Insightful Themes	IDs
1- Customer preferences are constantly changing	P4, P6, P7, P9, P10, P12
2- Customer loyalty varies	P1, P2, P6, P7, P9, P10, P12
3- High competition in attracting customers	P1, P4, P5, P6, P7, P9, P10, P12
4- Offering high promotions	P1, P2, P4, P5, P6, P7, P9, P10, P12
5- Agile human resources	P1, P2, P4, P5, P6, P7, P9, P10, P12
6- Agile financial resource management	P1, P2, P4, P5, P6, P7, P9, P10, P12
7- Rapid internal decision-making	P3, P5, P8, P11, P12
8- Flexible planning	P3, P4, P5, P8, P11, P12
9- Agile and just-in-time production	P1, P3, P4, P5, P8, P10, P11, P12
10- High decentralization	P3, P12
11- High agility and flexibility of stakeholders	P1, P3, P4, P5, P8, P10, P11, P12
12- Rapid participation and technology sharing	P3, P12
13- Participation in flexible investment	P2, P3, P4, P5, P8, P11
14- Participation in environmental monitoring	P2, P3, P4, P5, P8, P11
15- Interaction with environmental factors	P1, P7, P10
16- Creating coordination among all activities	P2, P4, P9, P10, P12
17- Having internal control and self-confidence	P1, P2, P4, P6, P7, P9, P11
18- Productivity development (efficiency and effectiveness)	P1, P2, P4, P5, P7, P8, P9, P10, P11
19- Ability to create or discover ideas and opportunities	P3, P4, P10, P11, P12
20- Being active and persistent follow-up	P1, P3, P5, P7, P8
21- Tendency toward independence	P2, P4, P5, P7, P12
22- Benefiting from business advantages and having a better financial future	P11, P12
23- Choosing how to perform work	P5, P11, P12
24- Flexible time scheduling	P5, P11, P12
25- Having authority and decision-making power	P1, P3, P6, P7, P8, P10
26- Being an employer and hiring workforce	P1, P12
27- Knowledge enhancement in decision-making and providing strategic solutions	P2, P3, P4, P5, P10
28- Knowledge enhancement in financial resource management and accounting	P1, P2, P6, P8, P9, P10, P12
29- Increasing entrepreneurial and business knowledge and awareness	P1, P2, P3, P6, P7, P9, P11, P12
30- Knowledge enhancement in human resource management and welfare	P1, P2, P3, P6, P7, P9, P11, P12
31- Knowledge enhancement in strengthening creativity and ideation	P1, P2, P3, P4, P6, P7, P9, P11, P12

In the next stage, the extracted statements were grouped into six clusters. The researchers attempted to identify statements with similar thematic nature and place them within the same cluster. These clusters are: customer agility, internal operational system agility, partnership agility, personality traits, entrepreneurial motivation, and knowledge and awareness. Each of these concepts is explained below:

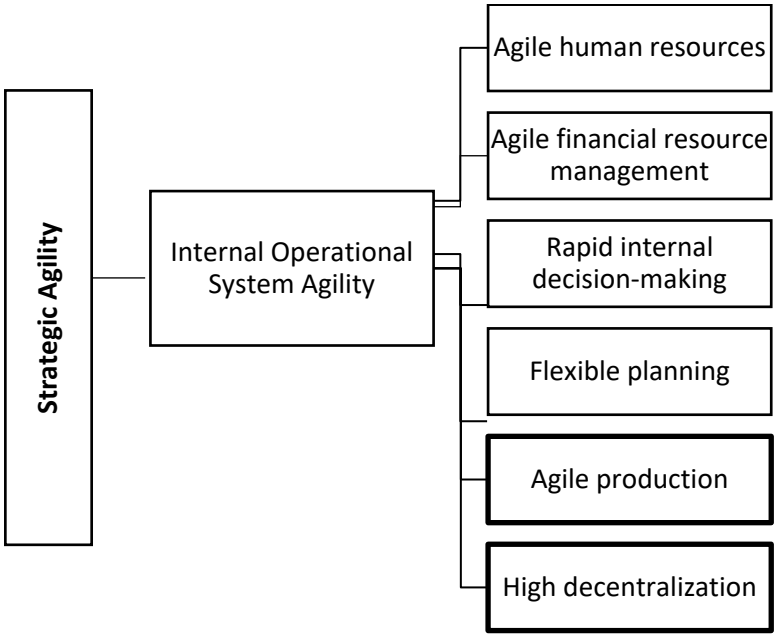
Cluster 1 – Customer Agility

Based on the findings from previous stages and the alignment of components and variables, strategic agility consists of three components: customer agility, operational system agility, and partnership agility. Customer agility and productivity include changing preferences, loyalty, high competition in attracting customers, and high promotions. The diagram below shows the relationships among these variables.



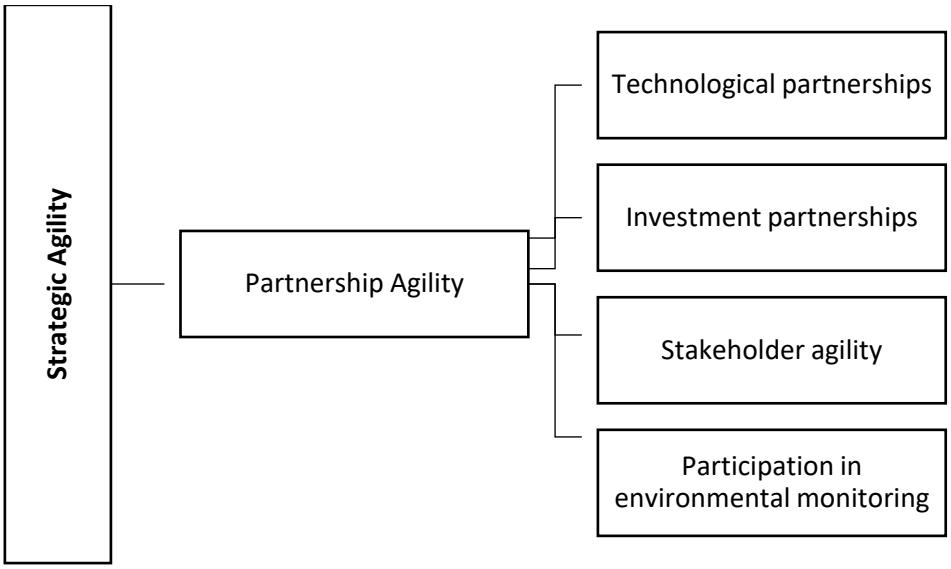
Cluster 2 – Internal Operational System Agility

Based on the findings from previous stages and the alignment of components and variables, operational system agility includes: agile human resources, agile financial and resource management, rapid internal decision-making, flexible planning, agile production, and high decentralization. The diagram below shows the relationships among these variables.



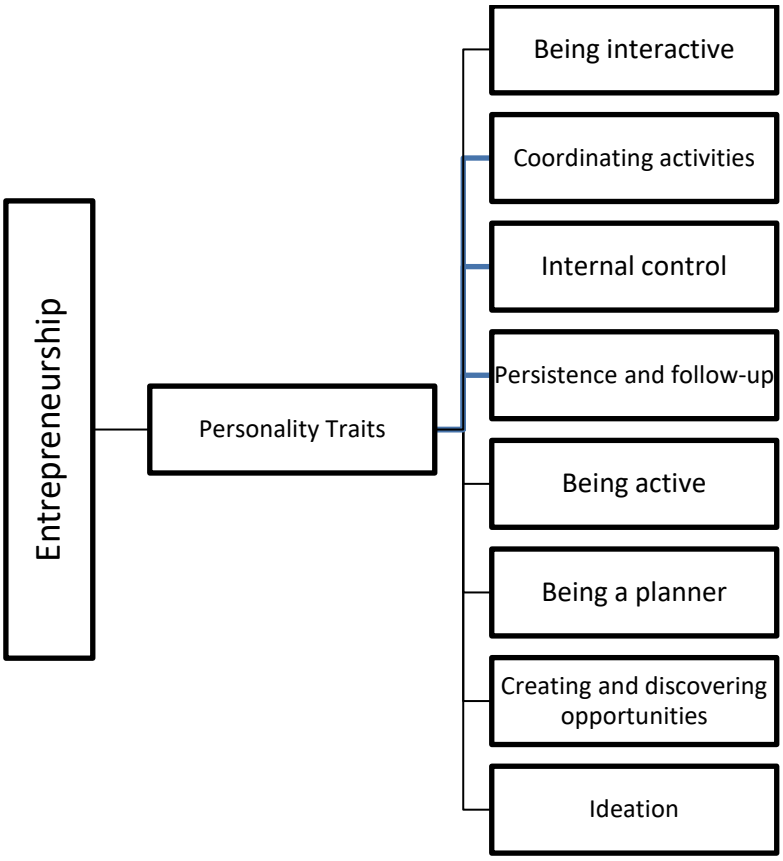
Cluster 3 – Partnership Agility

Based on the findings from previous stages and the alignment of components and variables, partnership agility includes: stakeholder agility, technological participation, investment participation, and participation in environmental monitoring. The diagram below shows the relationships among these variables.



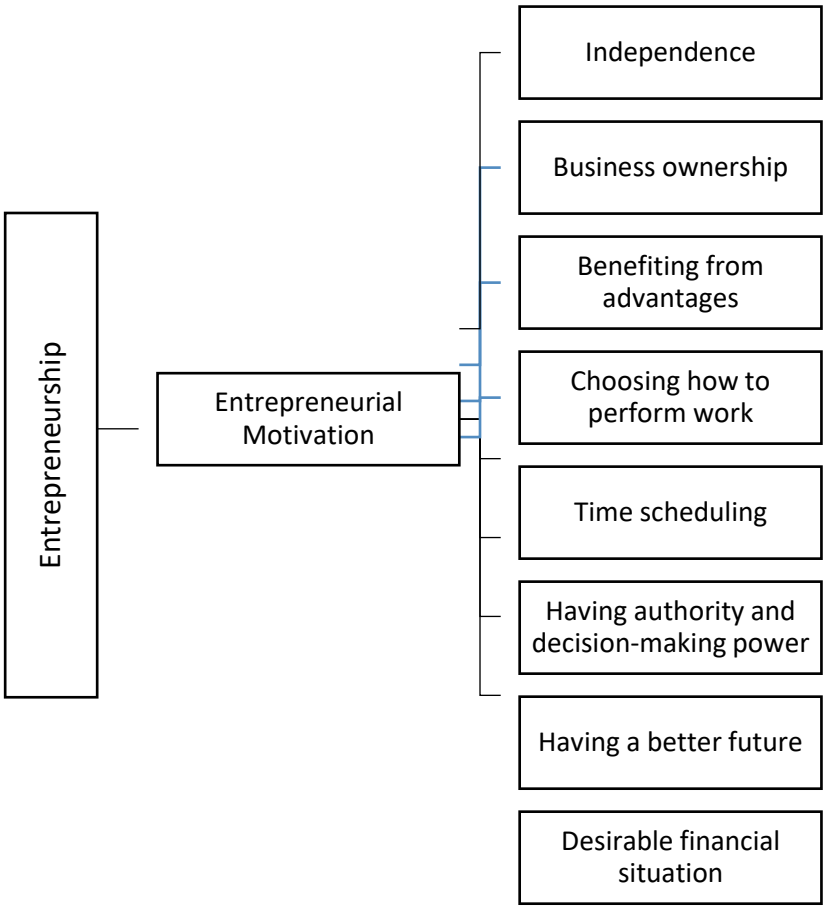
Cluster 4 – Personality Traits

Cluster 4 is one of the components of the entrepreneurship dimension and includes: personality traits, entrepreneurial motivation, and knowledge and awareness. Personality traits themselves include having interaction, coordinating activities, having internal control, persistence and follow-up, being active, being a planner, the ability to create and discover opportunities, and ideation. The diagram below shows the relationships among these variables.



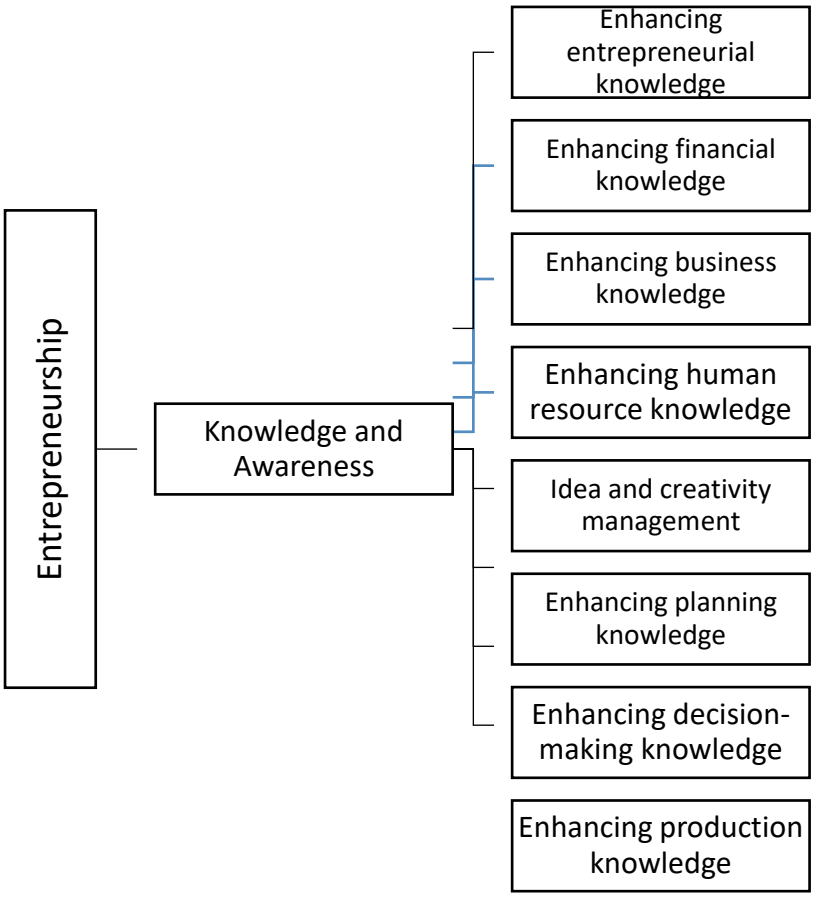
Cluster 5 – Entrepreneurial Motivation

Cluster 5 is one of the components of the entrepreneurship dimension and includes: personality traits, entrepreneurial motivation, and knowledge and awareness. Entrepreneurial motivation itself includes: tendency toward independence, having a business, benefiting from advantages, choosing how to perform work, flexible scheduling, having authority, decision-making, achieving a desirable financial situation, and having a better future. The diagram below shows the relationships among these variables.



Cluster 6 – Knowledge and Awareness

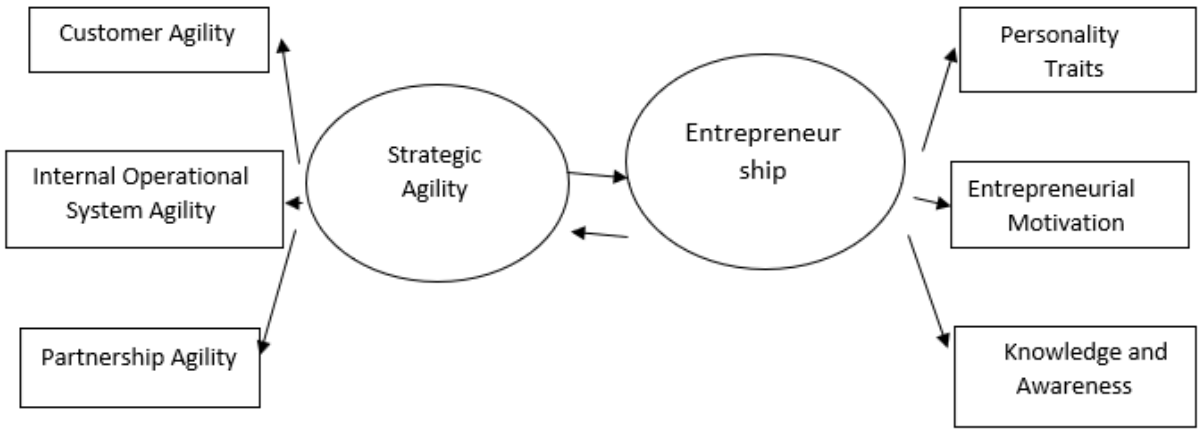
Cluster 6 is one of the components of the entrepreneurship dimension and includes: personality traits, entrepreneurial motivation, and knowledge and awareness. Knowledge and awareness themselves include: enhancing knowledge about entrepreneurship, finance, business, management, human resources, idea and creativity management, planning, decision-making principles, and production. The diagram below shows the relationships among these variables.



Given that this study sought to analyze the experiences of entrepreneurs in the Kaveh Special Economic Zone and that the interviews and discussed theories emphasized agility from a strategic perspective, the relationships between entrepreneurship and strategic agility can therefore be shown in the following model:

Figure 1.

The Relationships between Entrepreneurship and Strategic Agility from the Perspective of Entrepreneurs' Experiences



Discussion and Conclusion

The findings of this study shed light on how entrepreneurs operating in the Kaveh Special Economic Zone deploy strategic agility as a critical capability to sustain and enhance their performance under conditions of severe constraints. The phenomenological analysis revealed that the entrepreneurs exhibited high levels of customer agility, operational system agility, and partnership agility, alongside strong personal traits, entrepreneurial motivation, and continuous efforts to build knowledge and awareness. This multidimensional framework of strategic agility demonstrates how these entrepreneurs simultaneously manage environmental turbulence, intense competition, and resource limitations by dynamically adjusting their strategies and structures.

One of the most striking results was the emphasis on customer agility, which included rapid responsiveness to changing customer preferences, building customer loyalty, and managing high competition for market share. Entrepreneurs described how they constantly monitor shifts in customer demands and swiftly adjust product offerings, marketing tactics, and customer engagement practices. This aligns with the findings of [17], who emphasized that small and medium enterprises (SMEs) that develop marketing agility are more successful in adopting new technologies and responding to global customer trends. Similarly, [16] showed that social media agility significantly enhances SMEs' performance, especially when firm size and environmental dynamism are considered. The entrepreneurs in the current study viewed customer agility not as a one-time adjustment but as an ongoing strategic practice, echoing the perspective of [8] that entrepreneurial agility allows firms to leverage strategic intuition to anticipate and meet evolving customer needs.

Another key finding pertains to operational system agility, where participants highlighted the agility of human resources, agile financial management, rapid internal decision-making, flexible planning, just-in-time production, and high decentralization. This operational responsiveness enabled them to quickly reallocate resources and restructure internal workflows to address emerging challenges. Such findings are consistent with [26], who identified workforce agility as an essential enabler of organizational responsiveness and adaptability in educational institutions, and with [12], who demonstrated that organizational entrepreneurship enhances organizational agility in knowledge-based companies. The entrepreneurs also stressed the importance of developing multi-skilled and cross-functional human resources to support agility, which supports the argument by [19] that entrepreneurial leadership fosters employees' mental agility and innovative behavior.

Furthermore, partnership agility emerged as a salient theme, with entrepreneurs describing rapid collaboration, technological partnerships, flexible investment arrangements, and joint environmental monitoring as critical strategies. This resonates with the findings of [3], who reported that strategic agility accelerates internationalization speed and success, partly by enabling firms to manage inter-organizational partnerships more effectively. Similarly, [9] found that firms that are more efficient and integrated in global markets are better positioned to adapt their foreign subsidiary portfolios, highlighting the role of agile partnerships. The emphasis of the entrepreneurs on collaborative adaptability underlines the argument of [7], who showed how bricolage and agility in partnerships enabled Chinese social enterprises to respond effectively to the challenges of the COVID-19 crisis.

Beyond structural and relational agility, the study found strong evidence of entrepreneurial personal traits and motivation as foundational elements of agility. The entrepreneurs displayed persistence, self-confidence, proactiveness, and a strong desire for independence. They reported being deeply committed to continuous learning, seeking knowledge in business,

finance, human resources, and innovation management. This is consistent with [4], who demonstrated that the personal qualities and managerial skills of entrepreneurs strongly influence venture performance, and with [18], who highlighted entrepreneurial agility as a key factor in creating value in digital entrepreneurship settings. Likewise, [20] found that leadership agility and entrepreneurial orientation enhance innovation ambidexterity, which in turn drives competitive advantage. The participants' insistence on ongoing knowledge-building also confirms the results of [23], who identified organizational agility and innovation as mediators linking intellectual capital to organizational entrepreneurship.

Another important pattern in the findings was the strategic use of knowledge and awareness as a foundation for agility. Entrepreneurs actively sought out environmental information, learned from competitors and peers, and applied this knowledge to enhance their responsiveness and decision-making. This aligns with the argument of [2] that strategic agility rests on the continuous sensing of environmental shifts, swift decision-making, and rapid resource reconfiguration. Similarly, [6] emphasized that entrepreneurial teams that integrate strategic agility into their routines are more capable of anticipating market shifts and aligning their resources dynamically. The entrepreneurs' integration of learning with agility also supports the conclusions of [25], who showed that entrepreneurship and e-commerce exert stronger positive effects on marketing performance when mediated by agility.

The participants' focus on agility as a dynamic capability also resonates with broader theoretical frameworks. Several entrepreneurs described how they continually restructured their operations in response to sanctions, political instability, and fluctuating trade policies. This echoes [1], who argued that strategic agility enables firms to sustain international performance under environmental uncertainty, and [5], who showed that agility mediates the relationship between organizational ambidexterity and competitive advantage. Moreover, the entrepreneurs' willingness to pivot and explore new opportunities while maintaining operational efficiency parallels the exploration–exploitation balance described by [7] and [3].

The study also found evidence that financial and network capabilities play a reinforcing role in agility. Entrepreneurs with better access to financial resources and wider networks were more capable of implementing rapid strategic shifts and innovation initiatives. This observation is in line with [24], who reported that digital, network, and innovation capabilities enhance agility and performance in SMEs, especially when moderated by financial resource availability. Similarly, [15] emphasized that social capital and absorptive capacity reinforce strategic renewal and agility in SMEs. Such capabilities provide the flexibility and resource buffers necessary to enact agile strategies in constrained environments such as special economic zones.

Overall, the findings underscore that strategic agility serves as a unifying capability that links entrepreneurial orientation, innovation, and performance, enabling entrepreneurs in constrained environments to thrive despite uncertainty. This supports the broader conceptual argument by [2] that agility functions as a meta-capability enabling multinational and entrepreneurial firms to realign rapidly in volatile contexts. It also echoes the evidence from [13], who found that strategic agility moderates the relationship between entrepreneurial orientation and competitive advantage, and from [14], who confirmed that agility, entrepreneurial leadership, and innovation capability jointly enhance SME performance. Finally, the competitive intensity and dynamism described by the participants are consistent with the pressures observed in other special economic zones, where firms must combine agility with entrepreneurial drive to maintain competitiveness [10, 27, 28].

Collectively, these findings highlight the centrality of strategic agility as both an outcome of entrepreneurial cognition and behavior and as a mechanism that converts entrepreneurial resources into sustained competitive advantage. Entrepreneurs

in the Kaveh Special Economic Zone demonstrated how strategic agility allows them to reconcile competing demands—such as efficiency and flexibility, stability and innovation, or local adaptation and global integration—and thus maintain their strategic positioning in highly uncertain environments.

Despite the valuable insights it provides, this study is not without limitations. First, the research relied on a relatively small sample of 12 entrepreneurs selected purposively from the Kaveh Special Economic Zone. While this sampling strategy allowed for deep phenomenological exploration of lived experiences, it limits the generalizability of the findings to broader entrepreneurial populations or other geographic contexts. Future research should consider expanding the sample size and incorporating entrepreneurs from multiple special economic zones to strengthen external validity.

Second, the data were collected exclusively through semi-structured interviews, which, although rich and detailed, are inherently subjective and may be influenced by memory bias or self-presentation effects. The reliance on self-reported experiences means that some aspects of agility practices might have been overstated or underreported by participants. Incorporating observational data, document analysis, or longitudinal tracking of firm performance could provide more objective and triangulated evidence of strategic agility in action.

Third, the study examined entrepreneurs' experiences at a single point in time. Strategic agility, however, is inherently dynamic and evolves as firms face new challenges and opportunities. A cross-sectional design cannot capture the temporal processes through which agility develops, stabilizes, or declines. Longitudinal designs would allow researchers to observe how entrepreneurs build and sustain agility capabilities over time and how these capabilities influence long-term organizational performance and resilience.

Future research could build on this study in several meaningful ways. First, scholars should investigate the causal mechanisms linking personal entrepreneurial traits, organizational structures, and strategic agility outcomes using mixed-method or quantitative approaches. Structural equation modeling or longitudinal panel studies could help unpack the directionality and strength of these relationships.

Second, it would be valuable to explore how institutional and contextual factors—such as regulatory frameworks, infrastructure quality, or access to finance—shape the development of strategic agility in special economic zones. Comparative studies across countries or types of zones could provide insights into how context moderates the agility–performance relationship.

Third, future research could examine the role of digital transformation and emerging technologies in fostering agility. Given the increasing digitalization of markets, investigating how entrepreneurs leverage digital tools, platforms, and data analytics to enhance customer agility, operational flexibility, and partnership responsiveness would be timely and relevant.

Finally, researchers could explore the microfoundations of strategic agility by analyzing the cognitive, emotional, and behavioral processes through which entrepreneurs sense opportunities, make rapid decisions, and reconfigure resources. Such studies could illuminate the human side of agility, complementing structural and strategic perspectives.

The findings of this study offer several practical implications for entrepreneurs and policymakers. Entrepreneurs should prioritize building agility capabilities in their firms by investing in workforce development, fostering cross-functional skills, and cultivating adaptive cultures that embrace change and experimentation.

They should also strengthen their networks and partnerships, as collaborative agility enables firms to access complementary resources, share risks, and respond more effectively to external shocks. Policymakers managing special

economic zones can support entrepreneurial agility by providing training programs, financial incentives, and innovation infrastructure that encourage experimentation and rapid adaptation.

Finally, both entrepreneurs and policymakers should recognize strategic agility not merely as a reactive posture but as a proactive strategic orientation. By embedding agility into their strategic planning processes, firms can anticipate and shape environmental changes rather than merely respond to them, thereby achieving sustained competitiveness in volatile markets.

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Authors' Contributions

All authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. Written consent was obtained from all participants in the study.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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