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## ORIGINAL RESEARCH ARTICLE

### Designing a Spirituality-Oriented Resilience Model in Startups with Emphasis on Knowledge Processing: A Grounded Theory Approach

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#### ABSTRACT

This research aimed to design and explain a model of spiritual resilience in start-ups, using a data-driven theoretical approach and highlighting the role of knowledge processing. The present study employed a qualitative approach grounded in a data-driven theory strategy. Data were collected through semi-structured interviews with 15 managers, consultants, and activists in the fields of innovation and startups, and were analyzed using ATLAS.ti software. A total of 173 initial codes were identified, which were subsequently organized into 21 core categories, ultimately resulting in 6 selected categories. The research findings were categorized into five areas: causal conditions, context, intervention, strategy, and outcome. A model consisting of six categories and 21 core codes was developed based on 173 open codes. This model has identified one of the most comprehensive approaches to fostering spiritual resilience in start-ups. The role of knowledge processing—particularly through the analysis of past experiences, ethical decision-making, and tacit knowledge management—is crucial in fostering spiritual resilience. The spiritual resilience model can assist businesses in effectively adapting to technological and environmental developments by fostering flexibility and readiness for change. This approach enables organizations to capitalize on new opportunities and mitigate risks that may arise in a resilient business environment. As a result, the spiritual resilience model can assist start-ups in the ICT sector in achieving success and sustainable growth by fostering positive relationships with spiritual values, promoting flexibility, and enhancing resistance to financial pressures as well as technological and environmental changes. ©authors.

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## 1. Introduction

In recent years, one of the key yet often underappreciated components of resilience in startups has been the fundamental role of knowledge (Hollands et al., 2024; Erika et al., 2025). What distinguishes startups from other economic structures is not merely their access to financial resources or physical infrastructure, but their capacity to generate, process, and apply knowledge in order to respond to uncertain conditions, design innovative business models, and capitalize on emerging opportunities. Knowledge processing in this context is a dynamic process that involves the collection, analysis, interpretation, and application of information and experiences to enhance decision-making. This process plays a vital role (Kaiser, 2023).

This process not only enhances the decision-making mechanism but also paves the way for the creation of spiritual and value-based insights in the face of challenges—insights that assist managers in addressing environmental pressures with a human and transcendent approach (Sharma et al., 2024). Conversely, startups have garnered increased attention as key players in digital transformation, innovation, and economic dynamism in both developing and developed countries. Features such as informal structures, limited resources, reliance on human capital, and high-risk environments have rendered them vulnerable to environmental fluctuations, economic pressures, and unpredictable crises. Among these factors, one of the most crucial capabilities that can support the sustainability and growth of businesses in challenging conditions is organizational resilience. However, the concept of resilience in the context of startups must be redefined to align with their dynamic nature and the socio-cultural realities of their environment.

Meanwhile, focusing on the human, value-based, and internal aspects of managers and employees, such as spirituality, can offer a fresh perspective for a deeper understanding of resilience (Pervan et al., 2023). Despite the dual importance of spirituality and knowledge processing in fostering resilience,

a review of the existing research literature indicates that the interaction between these two components in the context of start-up businesses has not yet been adequately explored (Wang et al., 2024). Most studies have either focused on traditional concepts of resilience within large, formal organizations or have examined spirituality exclusively at the individual and psychological level. Additionally, the concept of knowledge processing has primarily emerged in studies of knowledge management and innovation, without a clear connection to spiritual concepts or the phenomenon of resilience. This conceptual and theoretical gap underscores the necessity for a comprehensive model that elucidates the interaction between spirituality, knowledge processing, and resilience in startups, particularly within a dynamic context informed by local realities (Klapper et al., 2023).

Spirituality is regarded as a fundamental aspect of human nature that enhances purpose and mental strength, motivating individuals to contribute to the betterment of society. It is often associated with theology and other divine disciplines (Obregon et al., 2022, p. 580). Recently, spirituality has emerged as a significant topic in management and economics, particularly in the field of entrepreneurship (Raco et al., 2021, p. 22). It serves as a driving force and a vital principle that inspires entrepreneurs to operate businesses that prioritize social impact over mere profit (Fitcher & Tiemann, 2021, p. 128). This focus on spirituality enables them to deliver improved services to the community.

Entrepreneurship and business creation are crucial concepts in discussions about economic growth and the development of countries. The desire for entrepreneurship is a key prerequisite for fostering entrepreneurial activities and is influenced by various psychological factors (Zipf, 1949; Rashid & Ratten, 2021).

The desire for entrepreneurship in Iran is particularly significant, considering the country's economic challenges and the high unemployment rate, especially among students and the educated class. Early

research on entrepreneurship aimed to clarify the concept of an entrepreneur and their role in society.

In this context, efforts have been made to distinguish between entrepreneurs and other individuals in society by highlighting their unique characteristics in terms of personality, family background, life history, and sociological factors (Ward et al., 2018, p. 498). However, it has become increasingly evident that while entrepreneurial activities originate at the individual level, both the entrepreneur and the entrepreneurial activity do not exist in isolation; they are significantly influenced by contextual and environmental factors. In other words, entrepreneurial motivations and activities are shaped by various elements, including cultural, institutional, governmental, business environment, and macroeconomic conditions (WDNSM & Wjajm, 2018, p. 56).

Accordingly, the concept of entrepreneurship policymaking emerged as a crucial tool for fostering entrepreneurship in countries during the 1990s. Governments recognized the need to articulate both their economic and non-economic policies to promote and enhance entrepreneurial development.

Therefore, changes should be made to factors such as taxes, interest rates, laws, subsidies, financial assistance, and education—essentially, all elements that shape the business environment and foster entrepreneurship. However, the effective implementation of these policies cannot achieve the desired impact without taking into account local and regional characteristics, including beliefs, values, and cultural, social, and traditional factors. This is because, first and foremost, the individual dimension encompasses the attitudes, ideals, and opportunities that entrepreneurs encounter in their respective living and working environments (Hassan et al., 2021, p. 4129).

Secondly, individual lifestyles significantly influence the new startups they establish (Martin et al., 2021, p. 173). One crucial component for enhancing entrepreneurs' motivation is spirituality and spiritualism (Sulastini Wijayanti et al., 2023). Belief in a

higher power appears to provide comfort during painful and threatening situations, facilitating the ability to endure such challenges. Spirituality and spiritual beliefs may serve as the primary means of attaining peace or acceptance in difficult circumstances (Rocha et al., 2023).

On the other hand, in the field of psychology, the concept of resilience holds a significant position in describing the mental state of individuals facing sensitive situations and enduring adverse conditions. Resilience, defined as the ability to positively adapt to threats, is a psychological construct that has been extensively studied in relation to an individual's response to risky situations. It is shaped by a combination of four behavioral factors: tolerance of hardships and challenges, flexibility, high motivation, and positive thinking (Crossman, 2024). The resilience of entrepreneurs is closely linked to their sustainability on the entrepreneurial journey. Spirituality is regarded as a significant factor in establishing a business grounded in non-material values (Vasconcelos, 2020).

Additionally, spirituality and spiritual beliefs serve as supportive elements in adapting to challenging situations (Shahrokhi et al., 2019). According to the American Psychological Association (2018), resilience enables entrepreneurs to adapt and empowers them to recognize and employ various strategies to confront challenges and enhance decision-making. Consequently, resilience and spirituality bolster entrepreneurs' motivation and improve their overall attitude (Sharma & Singh, 2020). Richardson (2002) posits that states of resilience are attained through a process of failure and reintegration. This resilient reintegration necessitates energy for growth, which appears to originate from a spiritual and intrinsic source (Wnuk, 2023). Flach asserts that this force exists within each individual, driving them toward self-actualization, altruism, wisdom, and harmony. This power is derived from a spiritual source (Wnuk, 2024).

The significant increase in research on ethics, spirituality, and religiosity in the workplace has paralleled the rising focus on

the previously overlooked spiritual and religious aspects of human existence. Walker (2012) noted that faith in the workplace is associated with positive outcomes in both professional and personal life. Yeganeh et al. (2012) reported a significant relationship between spirituality at work and organizational commitment, as well as self-monitoring. Empirical studies indicate that religious and spiritual beliefs enhance spiritual intelligence, thereby improving performance and adaptability in entrepreneurship (Sunita & Anthuvan, 2015). According to Pruzan (2011), spirituality-based entrepreneurial intention is a coherent and abstract ethical approach that fosters social responsibility. Kumar and Muruganantham (2015) also demonstrated that spirituality plays a significant role in entrepreneurial success. Furthermore, they introduced spirituality-based entrepreneurship as being more creative and responsible. Lari (2012) demonstrated in his research that spirituality is directly related to entrepreneurial intelligence. Consequently, individuals with elevated levels of spirituality tend to possess greater business acumen. Fogel (2000), a Nobel Prize winner in Economics, emphasizes the significance of spirituality in both economics and entrepreneurship. He views spirituality in the workplace as a source of goal orientation, a sense of responsibility, and perseverance (Margaca et al., 2020). Weber (1979) contends that entrepreneurship is driven not only by material motivations but also by internal motivations, values, and norms. Spirituality, influenced by the entrepreneur's beliefs as an internal factor, along with cultural and social norms as external factors, contributes to the spiritual resilience of an entrepreneur.

In recent years, Iran has faced numerous challenges, including sanctions and the resulting severe fluctuations in macroeconomic indicators such as growth, income, and inflation. These issues have contributed to significant social and political dissatisfaction.

The prevailing discourse in the country revolves around the concept of a resistance economy, which is grounded in resilience

literature. Consequently, it can be anticipated that the planning for the growth and development of start-ups hinges on enhancing their resilience indicators. While research has been conducted in this area, a theoretical gap regarding resilience in start-ups remains evident. This issue is particularly pronounced in the field of information technology, due to its unique characteristics, such as the shorter life cycles of technologies and the associated challenges. On the other hand, the culture and social context of entrepreneurship in the country have consistently been viewed as opportunities for business growth. Cultural factors, motivations, goals, human capital, and personality traits significantly influence the development of entrepreneurship and shape individuals' attitudes toward initiating and sustaining successful entrepreneurial activities. Considering the current economic and social environment, new businesses must develop both internal and external capacities more than ever to effectively confront crises, instabilities, and future challenges.

In the meantime, resilience, as a crucial capability for survival and growth, becomes more meaningful and effective when it transcends the purely operational level. It evolves into a combined, value-oriented capability that integrates deeper factors such as spirituality and knowledge processing. Spirituality in business, with its focus on meaning, ethics, commitment, and responsibility, can serve as a source of inspiration for resilient, responsible, and humane decision-making. However, realizing this capacity is not possible without the support of knowledge and the ability to interpret and analyze data. Conversely, knowledge processing not only equips decision-makers with a deeper understanding of their environment but also serves as a platform for institutionalizing spiritual values within the decision-making structure of businesses. By structuring scattered information and creating organizational memory, it facilitates learning and enhances overall decision-making. This synergy between knowledge and spirituality creates a pathway for developing a form of spiritual resilience that can effectively respond to

startups within the Iranian cultural context. Consequently, designing a conceptual model to explain and analyze the mechanisms of spiritual resilience—particularly with an emphasis on knowledge processing and a data-driven approach—represents a significant step toward addressing existing theoretical gaps and fostering the development of a native and efficient model for managing Iranian startups. In light of the rapid expansion of startup ideas in the information technology sector, this study aims to answer the question: What does the spiritual resilience model look like in new businesses within the field of information and communication technology, particularly from a knowledge processing perspective?

## 2. Literature Review

### *Resilience*

The concept of resilience was first introduced by Werner in the field of developmental psychology; however, it gradually expanded into other areas, including social psychology and clinical psychology. Resilience encompasses not only the ability to withstand harm but also the active and constructive engagement of individuals within their environments. This definition clearly outlines the characteristics of resilient individuals (Karimi et al., 2017). At the organizational level, resilience refers to a structural and procedural dynamic that equips an organization with the capacity to confront challenges and difficulties. Resilient organizations are characterized by effective power structures, strong social relationships, a realistic understanding of their circumstances, a positive attitude toward change, and effective differentiation and communication.

### *Knowledge Processing*

Knowledge processing is a systematic and dynamic process that aims to transform raw data and information into understandable, usable, and transferable knowledge. This process involves collecting, organizing, interpreting, analyzing, combining, and applying information across various fields. Knowledge processing is conducted using tools and techniques such as data mining,

machine learning, artificial intelligence, expert systems, and knowledge management systems.

In this process, data is collected as raw input from various sources and then transformed into meaningful information by applying appropriate filters and algorithms. Subsequently, this information is converted into knowledge through conceptual understanding, which explains the relationships between components and integrates experiences and prior knowledge. This knowledge can be utilized for decision-making, problem-solving, innovation, or training.

Knowledge processing encompasses not only technical aspects but also cognitive, social, and organizational dimensions. Effective knowledge transfer necessitates a cultural context, a shared language, and interaction among individuals. This process is crucial in various domains, including organizations, research, education, technology development, and intelligent systems. In the digital age, knowledge processing is regarded as a key component of competitive advantage and organizational survival, as the rapid pace of change and environmental complexity demand informed, knowledge-based decision-making.

In summary, knowledge processing serves as a bridge between fragmented data and informed decision-making. By structuring and imparting meaning to information, it empowers both organizations and individuals, leading to enhanced knowledge and capability (Kaiser, 2023). A review of resilience models in business reveals that, in a corporate context, resilience refers to the ability to endure crises and turbulence. This concept is closely linked to startup activities, risk and crisis management, business planning, and strategic management. Resilience enables companies to maintain their operations under various conditions. Reason: Improved clarity, vocabulary, and technical accuracy while maintaining the original meaning.

Business resilience refers to the structural and procedural dynamics that enable an organization to effectively address challenges and difficulties. It encompasses

the capacity to withstand crises and turbulence. In today's environment, there is an increasing focus on developing business resilience, which includes crisis response planning and equips organizations with the capabilities to not only survive but also thrive in adverse conditions.

### ***Review of Business Resilience Models***

Resilience, in a corporate context, refers to the ability to withstand crises and turbulence. This concept is closely related to startup activities, risk and crisis management, business planning, and strategic management. Resilience enables companies to maintain their operations under various circumstances. Business resilience encompasses the structural and procedural dynamics that empower an organization to effectively address challenges and difficulties. It also signifies the capacity to endure crises and turbulence. Today, there is an increasing interest in developing business resilience, which includes crisis response planning and equips organizations with the capabilities to survive and thrive despite adverse conditions.

Dariani et al. (2019) conducted a study titled a Dynamic Capability Development Model in Startups: A Case Study of Information Technology Businesses. The aim of this research is to understand the development of dynamic capabilities in startups. The study employs a qualitative case study methodology for data collection, aligning with its purpose.

Data were collected through a study of documentary sources and semi-structured interviews with 15 companies in the information technology sector in Tehran, utilizing purposive sampling. During the open coding phase, 201 preliminary codes were identified from the analysis of the interviews. After refining and merging similar codes, the final count was reduced to 144 codes.

In the second stage, axial coding was conducted using the frameworks of the axial coding model to analyze the phenomenon under investigation. The results revealed four primary categories related to the

development of dynamic capabilities in startups.

These categories are the key drivers of dynamic capabilities development, which encompass managerial characteristics, business attributes, strategic orientations, and contextual factors. All of these elements contribute to enhanced company performance. These findings offer valuable insights for both managers and researchers on how to cultivate and develop dynamic capabilities in start-ups.

Rahman Seresht et al. (2019) conducted a study titled a Resilience Model for ICT-Based Startups with a Mixed Approach. Today, we are witnessing significant growth in startups and their impact on national economies; however, their high failure rate, particularly in the early stages of their life cycle, poses a major challenge for both the scientific and professional communities. The purpose of this article is to develop a resilience model for ICT-based startups throughout their life cycle.

For this purpose, a mixed-exploratory research method was employed. In the qualitative phase, a multi-case study strategy was utilized, involving purposive sampling of four startups: Piping, Achareh, Obar, and Kashmon. Additionally, content analysis of data collected from interviews, as well as a review of documents and news using Atlas T software, facilitated the extraction of a resilience model.

Afterward, in the quantitative phase, we analyzed the results of 190 questionnaires collected from the ecosystem of Iranian startup companies. Utilizing the partial least squares approach in SmartPLS software, we examined the developed model.

The findings indicate that the startup resilience model comprises three dimensions: challenge (which includes product, technology, team, financial, and legal challenges), action (which encompasses rotation, value proposition, lean customer development, platform building, and both internal and environmental actions), and transition drivers (which consist of key team capabilities and the role of the startup ecosystem). These resilience-enhancing and

resilient factors can serve as a roadmap for startup founders throughout their lifecycle.

Khajehdehi and Fathollah (2017) conducted a study titled “Presenting an Expanded Model of Startup Growth in the Field of Information Technology.” Startups represent an emerging phenomenon in the business landscape that, despite sharing many similarities with other types of enterprises, follow a distinct trajectory in their growth process due to their unique characteristics. In this study, the phenomenon is first examined, and the frameworks and definitions related to it are articulated from the perspective of the movement and navigation along their growth path, starting from the initial idea and concept stage to the evolution stage.

Next, by examining IT startups, we analyze the factors that affect their growth. Finally, we propose a model to enhance developers' decision-making at various stages of growth and to outline the progression from the idea and concept stage to evolution.

This model outlines the progression of a startup through three distinct stages of growth and provides recommendations at each stage to expedite the startup's advancement.

The present study exemplifies applied mixed research, utilizing data-driven theory and design science research (DSR) methods.

Ganzin and Islam (2020) conducted a study titled and Entrepreneurship: The Role of Magical Thinking in Futuristic Sensitization. on a qualitative empirical study of Canadian entrepreneurs, aims to explore the relationship between entrepreneurship and spirituality.

The concept of as an emerging construct refers to a set of beliefs that sustain the motivation and focus of entrepreneurs. This perspective shifts from a scientific-rational context, where the entrepreneur imposes his or her will on the environment, to a spiritual context, where the entrepreneur perseveres by maintaining faith in a broader cosmic belief system. Key elements of magical thinking include finding direction, accessing answers, and achieving peace.

Spirituality is often regarded as a strong predictor of successful entrepreneurs who

establish companies grounded in personal values, suggesting that economic values are not the most important (Pawar, 2023).

There appears to be a significant relationship between psychology/psychiatry and religion/spirituality, particularly in their shared objective of fostering resilience (Dhiman et al., 2018). Resilience is defined as the ability to withstand or recover quickly from challenging circumstances. It encompasses personal resources, including positive emotions and mental and behavioral processes, which enhance personal capital, protect individuals from the potentially adverse effects of stress, and improve their capacity to cope with psychological distress (Oyewunmi et al., 2021, p. 160). Consequently, in recent years, there has been an increased focus on personal and organizational resilience as critical components of human resource management and occupational psychology. This emphasis aims not only to boost productivity but also to promote well-being and job commitment in the workplace (Lata et al., 2021, p. 650).

Research spanning over a decade, from 2003 to 2014, provides compelling evidence of the significance of resilience in the workplace for employee well-being and performance. Findings from this research indicate that interventions aimed at enhancing resilience and sustaining employee well-being in the face of adversity and challenges at work can effectively reduce issues such as depression, stress, negative mood, and anxiety—key factors influencing psychological well-being (Michelis, 2018).

Sepahvand (2019), in his research on the role of workplace spirituality and resilience in predicting employees' psychological well-being, demonstrated that resilience significantly contributes to predicting employees' overall psychological well-being and its various factors. However, workplace spirituality only significantly contributes to predicting the self-acceptance factor.

As a result, it can be concluded that workplace spirituality and resilience significantly contribute to psychological well-being. Benfil (2003) identified three primary approaches in research within the

field of spirituality. The quantitative approach demonstrates how spirituality in the workplace enhances organizational performance through the use of quantitative research methods.

The second approach employs qualitative research methods to demonstrate why spirituality should be integrated into organizations and how this integration can be achieved. The third approach also utilizes qualitative research to investigate how spirituality manifests within an organization and the effects of a spiritual organization on both individual and organizational performance (Jurkiewicz et al., 2019, p. 261).

Spirituality in the workplace and employee spirituality are two important aspects that an organization needs to develop (Iqbal et al., 2020, p. 355). Discovering faith or spiritual beliefs, connecting with a higher power, and fostering relationships with colleagues are essential characteristics that enhance the spiritual well-being of employees in the information technology sector. A key aspect of workplace spirituality involves possessing a profound sense of value and purpose in one's work (Espedal, 2021).

The manifestation and expression of spirituality in the workplace encompass the understanding that each individual possesses unique inner motivations, truths, and inclinations to engage in activities that enhance the value and significance of their own lives and the lives of others. The dimension of meaningful work, in relation to spirituality in the workplace, refers to work that brings joy to employees and inspires them to embody various virtues (Gupta et al., 2018).

Today, startups encounter a range of challenges related to the market, target audience, hiring practices, product development, capital acquisition, and customer service, and there is no straightforward solution to these issues. Entrepreneurs who possess high levels of resilience and perseverance do not internalize these problems; instead, they concentrate on their long-term mission (Tarkzadeh and Razi, 2017).

On the contrary, a rigid and inflexible entrepreneur becomes preoccupied with temporary problems. As previously mentioned, several factors influence the success of startups. Spirituality is one such factor that, when leveraged effectively, can enhance business performance. This study explores the role of spiritual resilience in startups.

Given the significance of ICT startups, this study is presented as a case study in this field. The following is a review of research aligned with the research objective: Rashid et al. (2021), in their study titled *Spirituality and Entrepreneurship: Integrating Spiritual Beliefs into an Entrepreneurial Journey*, that the process by which Pakistani entrepreneurs manage their businesses, grounded in their spiritual beliefs regarding their mission and goals, can be categorized into three types: diagnostic spiritual beliefs, confirmation of spiritual beliefs, and the realization of beliefs in practice. Each of these spiritual beliefs is cultivated through lifelong learning and experience, with an emphasis on trust in business relationships.

Raco et al. (2021), in their study titled *Spirituality: The Power of Entrepreneurship* that a genuine spiritual entrepreneur not only pursues personal interests but also strives for the betterment of others. Businesses that provide value to others tend to thrive and reap economic rewards. Spirituality serves as the foundational principle for entrepreneurs who engage in business to fulfill customer needs.

Rocha et al. (2021), in their study titled *Spirituality: Concepts and Perspectives*, that spirituality generates social value and blessings, which can be reflected in the organization's mission, vision, and values. This article builds upon previous research by categorizing and systematizing existing studies while proposing a unified conceptual framework—the mental and linguistic representation of organizational spirituality. It also elucidates the nature of this phenomenon, along with its inherent qualities and characteristics.

Margaca et al. (2020), in their study titled *Intention: The Match between Spirituality and Resilience*, that if spirituality is viewed

as a form of intelligence that can be cultivated, it may serve as an effective coping mechanism in entrepreneurship, particularly in decision-making. A spiritually aware and resilient entrepreneur possesses the essential qualities for attaining personal success and maintaining exceptional performance over a lifetime.

Sirini et al. (2019), in their study titled *Importance of Spirituality Dimensions in Entrepreneurship*, that the dimensions of spirituality—vision, faith/hope, humanitarian love, meaning/prayer, and membership—significantly influence entrepreneurial intention, entrepreneurial networks, entrepreneurial capabilities, and entrepreneurial success.

In light of these cases, there appears to be a strong connection between psychology/psychiatry and religion/spirituality, particularly in their shared objective of fostering resilience. Resilience, as defined in the dictionary, is the ability to withstand or recover quickly from challenging circumstances. It encompasses personal resources, including positive emotions and mental and behavioral processes that enhance personal well-being and safeguard individuals from the potentially adverse effects of stress, thereby improving their capacity to cope with psychological distress.

For this reason, concern for personal and organizational resilience as essential components of human resource management and occupational psychology has intensified in recent years. This focus aims not only to enhance productivity but also to promote well-being and job commitment in the workplace. Research conducted over more than a decade, from 2003 to 2014, further underscores the significance of workplace resilience for employee well-being and performance.

The findings of this research indicate that interventions aimed at enhancing resilience and promoting the well-being and performance of employees during times of suffering and hardship at work can effectively reduce issues such as depression, stress, negative mood, and anxiety. These

factors are significant determinants of psychological well-being.

Sepahvand (2019), in his research on the role of workplace spirituality and resilience in predicting employees' psychological well-being, demonstrated that resilience significantly contributes to predicting employees' overall psychological well-being and its various factors. However, workplace spirituality only significantly contributes to predicting the self-acceptance factor.

As a result, it can be concluded that workplace spirituality and resilience significantly contribute to psychological well-being. This article explores the role of spirituality-oriented resilience in startup businesses. Additionally, considering the importance of information and communication technology (ICT) startups, this research examines this field on a case-by-case basis.

In today's world, startups are emerging as hubs of innovation and economic growth; however, one of the biggest challenges these organizations face is maintaining resilience in the face of market fluctuations, economic uncertainties, and internal pressures. Resilience is recognized as a key trait for coping with crises and challenges. While many studies have explored resilience in organizations, particularly startups, most have focused on economic, managerial, and psychological aspects of resilience. However, the spiritual dimension of resilience, which can serve as a rich source for overcoming crises, has received less attention. Especially in the context of startups, where organizational culture and individual motivations play a critical role in their success or failure, the spiritual aspect of resilience could serve as a powerful tool in knowledge processing and transfer.

One of the main gaps in current research is the insufficient focus on the relationship between spiritual resilience and knowledge processing in startups. While some studies have explored spiritual resilience in various contexts, few have specifically focused on its impact in startups and knowledge processing within these environments. Furthermore, most existing studies have concentrated on crisis management models and business

strategies, considering spiritual resilience in relation to issues like personal commitment, workplace spirituality, and social networks. However, the impact of spiritual resilience on knowledge processing and innovation in startups has been less addressed. This research gap presents a unique opportunity to explore the connection between spiritual resilience and knowledge processing within these types of organizations.

Designing a spiritual resilience model with an emphasis on knowledge processing in startups can provide solutions to enhance their resilience in the face of challenges. Such a model could help startups not only from an economic and business standpoint but also from a spiritual and emotional perspective when dealing with crises. Focusing on the spiritual aspects of resilience, especially when financial and human resources are limited, can help entrepreneurs and startup teams strengthen their ability to process and transfer knowledge, thus enabling them to navigate through crises. In this regard, a spiritual resilience model can facilitate synergy between individuals, organizations, and communities, fostering innovation and progress.

To fill this research gap and design a spiritual resilience model in startups, the use of the Grounded Theory approach is particularly important. This methodology can assist researchers in uncovering patterns of spiritual resilience and its connection with knowledge processing by collecting empirical data from startups. Grounded Theory is especially useful for studying phenomena that are naturally emerging and have not been fully defined in the existing literature. Therefore, applying this approach in the research can help clarify how spiritual resilience impacts knowledge processing and how these dimensions can be leveraged to design effective models in startups. The research gap in spiritual resilience and knowledge processing in startups, using a Grounded Theory approach, presents an interesting and critical research opportunity that can contribute to the growth and success of these organizations in today's complex and challenging world.

### **3. Method**

The present study is applied research in terms of its purpose and qualitative research in terms of its methodology, utilizing a data-driven theory approach based on the framework established by Strauss and Corbin (1998). This study employed a methodological perspective that incorporated various data collection methods, including a library study, a review of specialized sources and texts, and semi-structured interviews.

From a data perspective, which involves managing the compatibility of various data sources within the same methodology, the researchers in this study considered multiple data sources. The potential participants included experts, industry leaders, and founders or co-founders of start-up businesses from 2022 to 2024.

The sampling method employed was purposive, and individuals were specifically selected for this study. This group was chosen to participate in the qualitative component of the research and took part in the interview process.

The purposive sampling method was employed to select the participants for this study, specifically a group of experts. The primary source of data was interviews, which began as exploratory and descriptive. After each interview, the data were coded individually, and through the constant comparative method, theoretical codes emerged via re-coding. In total, 20 interviews were analyzed, leading to the identification of concepts, subcategories, and main categories. It is important to note that the densification and saturation of the axial categories were achieved through theoretical sampling. By conducting interviews with the research's statistical population, the concepts within each category were refined and enriched. For instance, the first eight interviews led to the condensation of the category related to the type of change.

In other categories, such as results and consequences, the data were insufficient; therefore, the interviews continued based on theoretical sampling until the desired category was saturated. It is important to note that theoretical sampling for the interviews was not determined by the

number of interviewees but rather by the significance of their contributions to refining the categories.

The interviews achieved theoretical saturation by the 20th interview. The duration of the interviews varied from 60 to 180 minutes, with some conducted in two sessions. Grounded theory was employed to analyze the qualitative research data. This approach involved three stages of data analysis: open coding, axial coding, and selective coding. The interviews were guided by the following questions posed to the individuals selected for the qualitative sample:

- 1- Why is spiritual resilience important for startup businesses?
- 2- How can spirituality and ethical values contribute to empowerment and tolerance when facing business challenges?
- 3- What tools or methods can be employed to enhance spiritual resilience in start-ups?
- 4- How can we perceive everyday entrepreneurial challenges and shortcomings

as opportunities for personal growth and business development?

5- What strategies can be implemented to foster a spiritual workplace and promote ethical values within the organization?

6- How can we benefit from incorporating spiritual approaches into business leadership and management?

7- Is spirituality an effective factor in attracting and retaining talent in start-ups?

8- How can spiritual values be integrated into a marketing and branding strategy for start-ups?

9- What is the impact of the surrounding environment and organizational culture on spiritual resilience?

10- How can we ensure that the development of spirituality in startups is viewed as an ongoing and sustainable process?

#### 4. Findings

Descriptive statistics of the participants in the library and field sections are presented in Table 1.

*Table 1. Demographic characteristics of interviewees*

Section	Variable	Category	Frequency	Frequency percentage
Survey Section	Gender	Female	6	30
		Male	14	70
	Work experience	Masters	11	55.56
		PhD and above	9	44.44
	Education	15-20	11	55.00
		20-25	6	30.00
		25 and above	3	15.00
	Age	30-40	9	45.00
		40-50	10	50.00
		50 and above	1	5.00

For the purpose of open coding, all interviews were entered into Atlasti software, necessary checks were made, and the desired codes were extracted. The labeling of the codes was done based on the interviews, and the researcher tried to adhere to the individuals' insights regarding the answers as much as possible in order to

prevent any possible and unwanted bias as much as possible. Throughout the coding process, the researcher adhered to the theoretical sensitivity that is one of the principles of data-based theorizing research, and did this to enrich the research as much as possible. Table 2 shows an example of the coding of the interviews conducted.

*Table 2. Open coding of interviews*

Code	Interview
Political, economic, geographical factors Environmental, legal, environmental conditions	Tactile factors in starting a business: I think all factors, such as political, economic, cultural, geographical, these have a very big impact. Even environmental, legal environmental conditions have a big impact.
Intrinsic motivation, Iranian atmosphere Limitations of employee life	But well, I saw my father's life, I saw what happened to an employee and I was like that I would be an employee for life. Another issue was that an atmosphere emerged in Iran that seemed to give me the belief that sir, you can start a business yourself.
Conditions of profitability Conditions of business failure	Well, now the failure cases needed further investigation, what are the financial losses? Maybe what will be the profit cases, and all of these have their own definitions.
Use of social media	We had taken support in a report for social media in Iran, it was a report in Persian, English, and everything was publishable
Country restrictions and filtering	Because they closed my Telegram and we were just starting the design process
Ability to lead a team in the face of fear	In the world of technology, fear and challenges are very common. To face these

and challenges	challenges, teams need strong leadership that will not be overwhelmed by them or insecure. This ability to lead a team through fear and challenges means building deep connections with team members, providing trusted guidance, and creating a safe space to voice concerns and problems.
Creating spiritual values	Creating a culture of values in a startup means creating an environment where team members can connect with shared values such as ethics, trust, respect, and collaboration. These values serve as a guiding force for business decisions, behaviors, and communications.
Ability to increase self-confidence	In technology environments, self-confidence is especially important. The ability to build self-confidence in startup teams means providing training opportunities, encouraging creativity and innovation, and providing positive feedback to individuals. These activities create self-confidence in individuals, which in turn helps increase business efficiency and success.
Entrepreneurship prospects in the country	Creating a foundation for entrepreneurship in the country is one of the main goals. Given this criterion, spiritual resilience in ICT start-ups should actively utilize the capabilities available in the country to encourage and support entrepreneurs. This includes providing financial facilities, creating incentive policies and laws, and providing fertile ground for the growth and development of start-ups.
Creating new entrepreneurial platforms in the field of technology	Spiritual resilience should actively use solutions such as creating communication networks with the technology industry, providing specialized training, and providing support programs for startups to provide suitable platforms for the growth and development of start-ups.
Access to physical communication infrastructure	Spiritual resilience should take steps to create and strengthen the necessary technical and physical infrastructure for start-ups in the field of technology. This includes providing access to relevant infrastructure such as high-speed internet, suitable workspace, and access to the necessary equipment and technologies. Creating these accesses helps start-ups to easily operate and grow in a competitive environment.
Acceptance of innovation and creativity	Innovation and creativity acceptance refers to the extent to which a start-up business in the field of information and communication technology accepts innovations and new ideas and uses them to create creative and new solutions. In other words, this measure indicates the ability of the business to adapt to changes and embrace innovative opportunities in the market.
Probability acceptance	Adaptability refers to the extent to which a start-up business in the field of information and communication technology accepts and has the ability to manage and cope with uncertainties and changes in the business environment. For example, it indicates the ability of the business to make decisions quickly and respond to rapid changes in the market.
Perceived risk	Perceived risk refers to the extent to which a startup in the field of information and communication technology can identify and understand the various risks associated with its activity and then implement strategies and methods to manage and mitigate them. In other words, this measure indicates the ability of the business to assess and manage the productivity and risks associated with its activities.

In the following, based on the dimensions of the Strauss and Corbin data-based model, the classification of identification codes is specified in Tables 3 to 7.

**Table 3. Causal conditions of the model**

Selected Category	Core Category	Open Code
Causal Conditions	Effective Leadership	Ability to lead a team in the face of fear and challenges
		Creating spiritual values
		Ability to increase self-confidence
		Encouraging team members' resilience
		Friendly communication and support with team members
		Encouraging movement and purposefulness
	Startup Business Structure	Entrepreneurship outlook in the country
		Creating new entrepreneurship platforms in the field of technology
		Access to physical communication infrastructure
		Access to ICT infrastructure
		Access to skilled and semi-skilled labor
	Entrepreneurial Psychological Characteristics	Availability of sufficient hardware and software facilities and equipment.
		Acceptance of innovation and creativity
		Probability tolerance
		Perceived risk tolerance
		Support in the entrepreneurial process
		Ideation generation
		Criticism
		System thinking
	Communication and Networking	Emotional intelligence
		Realism
		Effective communication with customers
		Communication with competitors and colleagues
Identifying opportunities for collaboration with different people		
Open and transparent communication		
Team orientation and a sense of belonging to the team		
Establishing continuous and respectful communication with customers		

Selected Category	Core Category	Open Code
		Ability to follow up and track problems
		Observing the status of requests
		Paying attention to the quality of employees' work life
	Support Systems	Caring for employees' mental health
		Establishing a counseling and psychological unit

Causal conditions refer to events or incidents that lead to the emergence or expansion of a phenomenon. In the present study, based on participants' perspectives, the categories of effective leadership, startup business structure, psychological characteristics of the entrepreneur, communication and networking, and support systems were identified and linked to a broader category called causal conditions. The following are examples of interviews that indirectly indicated the axial code:

**Effective Leadership**

*Leadership in startups is of great importance. Leaders must be able to foster spiritual values and healthy communication within the organization. Effective leadership means the ability of leaders to build trust, commitment, and solidarity within the organization and to inspire and give hope to employees. This type of leadership helps create a spiritual and participatory environment in which employees can effectively deal with challenges and uncertain situations.*

**Startup Business Structure**

*In startups, the structure is usually flexible and adaptable. These structures must be designed in a way that allows rapid response to changes in the market and technology. They should encourage entrepreneurial activity by promoting transparency,*

*operational efficiency, collaboration, and effective communication.*

**Psychological Characteristics of the Entrepreneur**

*These characteristics include flexibility, perseverance, initiative, creativity, and communication skills. Entrepreneurs in startups need to be capable of facing challenges and problems while also being able to seize opportunities and transform them into successful ideas.*

**Communication and Networking**

*In the field of information and communication technology, communication and networking are crucial. Entrepreneurs must be able to establish and maintain effective relationships with customers, colleagues, investors, and other members of the business community. These connections contribute to creating new opportunities, sharing information, and accessing essential resources.*

**Support Systems**

*Support systems include infrastructure, organizational culture, policies, and core business processes that enhance the capabilities and resilience of the business. These systems should reinforce organizational spirituality and values, and also provide timely support in the form of financial, human, and technical resources.*

**Table 4. Contextual Conditions**

Selected Category	Core Category	Open Code
Contextual Conditions	Startup Business Environment	Spiritual and supportive work environment
		Attention to spiritual values
		Respect
		Respect for trust
		Respect for cooperation
		Flexible environment
		Encouragement of consultation and dialogue
		Efforts to maintain material and spiritual values (without confrontation)
	Government Factors	Amount of opportunity for business development in the government structure
		Existence of government support services for the entrepreneurship sector in the country
		Financial and spiritual support and support for entrepreneurial and innovative centers
		Allocation of necessary credit to research institutions, etc.

Selected Category	Core Category	Open Code
		Amount of encouragement and determination of valuable points for start-up businesses
		Market needs assessment
	Market and Competitor Analysis	Investigation of the state of demands and the position of competitors in the international market
		Identification of the differentiation of the start-up business in the market
		Identification of special specialization in the start-up business
		Identification of the marketing position in the start-up business
		Identification of opportunities in the field of information and communications technology
	Professional Ethics	Adherence to professional work ethics
		Ethical commitment as an agile competitive advantage.
		Duty and responsibility
		Adherence to the principles of professional ethics
		Adherence to religious values and principles
		Having a national spirit (protecting the interests of the National)
		Protecting the rights and interests of stakeholders
		Customer-centricity (Customer-centricity)

Context refers to a set of specific characteristics that indicate the phenomenon under study — essentially, it is the setting in which the events and incidents related to the phenomenon occur. Context reflects the particular conditions within which action-reaction strategies are implemented. The identified contextual conditions include: the internal environment of the startup, government factors, market and competitor analysis, and professional ethics. Below are references to interviews that indirectly revealed the axial code:

**Internal Environment of the Startup**

*This factor includes the organizational structure, organizational culture, human resources, strategies, and operational processes of the business. In the field of information and communication technology, the internal environment must be highly dynamic and technologically up-to-date. To enhance spiritually-oriented resilience, the startup should foster a flexible work culture, develop employees' skills in professional ethics, and incorporate ethical and social values into organizational decision-making.*

**Government Factors**

*Policy changes, government laws, and regulations in the field of information and communication technology can significantly impact startups. For example, laws related to*

*privacy and data security may impose certain requirements. For spiritually-oriented resilience, startups must comply with legal and regulatory frameworks while also using these requirements as an opportunity to reinforce ethical and social values in their business practices.*

**Market and Competitor Analysis**

*Proper understanding of the market and competitors is of great importance. This includes understanding customer needs, identifying competitors, analyzing market trends, and evaluating internal and external strengths and weaknesses. To strengthen spiritually-oriented resilience, startups should enhance their competitiveness through the delivery of high-quality products and services with added value, thereby achieving long-term success.*

**Professional Ethics**

*Professional ethics play a critical role in business behavior and decision-making. To build spiritually-oriented resilience, startups must adhere to ethical standards in all aspects of their operations. This includes respecting the rights of customers, employees, and other stakeholders. Furthermore, values such as fairness, transparency, and respect for privacy should guide all organizational decisions.*

**Table 5. Identified intervening conditions**

Selected Category	Core Category	Open Code
Intervening Conditions	Weakness of regulatory institutions	Avoiding pivotal relationships and lobbying
		Lack of inspection and evaluation of responsible institutions
		Partisanship

Selected Category	Core Category	Open Code
		Corruption of managers
		Lobbying
		Conflicts and contradictions of regulatory laws
		Inefficiency and ambiguity of laws related to punishment
		Political behaviors of top managers
	Financial pressure	Failure to achieve financial goals
		Exchange rate fluctuations
		Economic instability in the country
		Need for excessive financing
		Need to attract investors and positive imagery
		Need to increase business value based on manipulation of financial reports
	Environmental conditions	Rapid changes in global business environments
		Competitive pressure
		Economic and political sanctions as a performance barrier
		Complex and inflexible structure
		Strong structural focus
		Government dictated orders to start-up businesses
		Traditional entrepreneurship structure and tax reporting system
		Cumbersome administrative processes and paperwork
	Social and cultural conditions	Decision makers' lack of knowledge of start-up businesses
		Traditional and selfish thoughts of managers
		Lack of culture of using spiritual solutions in new technologies Business
		Distrust of modern management tools and reliance on traditional methods full of mistakes
		Difficulty accepting education in the field of ethics, spirituality and values
		Outdated thinking about spirituality is a sign of weakness in business.
		Lack of appropriate culture for observing ethics and spirituality in business

Intervening Conditions are structural circumstances related to a phenomenon that influence the strategies of action and reaction. These conditions either facilitate or constrain strategies within a specific context. The identified intervening conditions include: weak regulatory institutions, financial pressure, environmental conditions, and socio-cultural conditions. Below are references to interviews that indirectly revealed the axial code:

**Weak Regulatory Institutions**

*Regulatory institutions and laws are meant to provide a legal and fair environment for businesses. When these institutions are weak, the likelihood of fraud, corruption, and law violations increases, which can lead to a loss of investor and customer trust, additional legal expenses, and even revocation of licenses and permits. This can significantly reduce a business's ability to cope with financial and environmental challenges.*

**Financial Pressure**

*Financial pressure is one of the primary threats to the capability of startups in the technology sector. Lack of capital, delayed payments, or limited access to appropriate*

*financial resources can restrict business development, hinder the ability to compete with industry peers, and reduce capacity for further research and development. On the other hand, proper financial management and the use of effective financial tools can help enhance the financial resilience of a business.*

**Environmental Conditions**

*Environmental conditions include natural factors such as climate, geology, competitive landscape, and geographical location. These factors can have a direct impact on business operations — for instance, through natural disasters, fluctuations in raw material prices, or changes in customer demand and preferences.*

**Socio-Cultural Conditions**

*Socio-cultural conditions encompass aspects such as the level of economic development, government policies, organizational culture, and population density. Changes in these factors can significantly affect businesses by altering consumption patterns, customer needs, and even creating new opportunities for growth and development.*

Table 6. Model strategies

Selected Category	Core Category	Open Code
Strategies	Policymaking	Strong understanding of the needs and priorities of the ICT sector by start-ups
		Sufficient attention to entrepreneurship and start-ups in the country's macro-policies
		Adoption of appropriate and operational plans by the government to realize the formulated general policies
		Availability of appropriate insurance and welfare coverage for start-ups
		Integration and stability in government policies towards start-ups
		Avoidance of applying arbitrary policies towards start-ups
		Availability of an appropriate roadmap and systematic government thinking on entrepreneurship in the ICT sector
		Considering entrepreneurship as synonymous with job creation in policies and decision-making
		Existence of a comprehensive entrepreneurship development plan in the country
		Support of managers for innovation and creativity based on the spiritual aspects of start-ups
		Attention to and application of rules for promoting faculty members with entrepreneurship expertise
		A management system and experienced and innovative managers
		Support of managers for the intellectual property of start-ups and optimal commercialization of inventions
		Stability of managers and Government employers
	Providing modern and up-to-date software and hardware	
	Compliance with international laws	
	Creating a database and knowledge base in the organization	
	Providing financial and organizational resources to create digital innovation and creativity	
	Creating a digital consulting and specialized team in the field of spirituality in business	
	Determining protocols for spirituality processes in business	
	Considering cultural similarities between start-up businesses and the field of information and communication technology	
	Similar motivations in business, spirituality, and the field of information and communication technology	
	Articles, scientific and research publications on the place of spirituality in business	
	Expanding a research culture and an inspiring environment on the place of spirituality in business	
	Creating a basis for creating spiritual motivation in business among students	
	Preferring self-employment and expanding a culture of self-employment among students in technology and communication fields	
	Media - social norms and success stories of spirituality in business	
	Holding scientific conferences, meetings, and symposiums And...	
	The existence of a supportive culture for start-up businesses in universities,	
	The trust of universities and industry in the development of entrepreneurship and start-up businesses	
	Avoiding traditional and non-applied education	
	Training new skills and professions based on the current state of the business	
	Knowledge sharing in teams	
	Relationship of educational programs in the field of business with the needs of the technology market	
	Existence of problem-oriented courses and projects in information and communication technology	
	Standardization of education based on psychological characteristics	
	Increasing employee innovation and creativity based on educational procedures	
	Increasing employee flexibility based on the characteristics of e-learning	
	Creating an incentive system for participation in work and spiritual programs	
	Integrating entertaining programs and work programs	
	Approving laws to facilitate the creation of organizational processes and scoring	
	Creating a support and monitoring unit for employee and manager affairs	
Incentive system for fair ranking of employees based on material and spiritual performance		
Creating an online consulting system to assess the status of employees		
Creating comprehensive databases to detect hidden behavioral practices Employees		
Planning to increase the job enthusiasm of employees and managers		

Selected Category	Core Category	Open Code
		based on the institutionalization of spirituality
		Planning for employee commitment and job attachment
		Planning to improve the quality of work life
		Planning for the resilience of human capital
		Planning to understand organizational justice
		Creating a positive competitive atmosphere among colleagues
		Planning to create a learning business
		Planning to improve employees' job attitude
		Planning to improve job expertise and knowledge
		Planning to improve employee performance and efficiency

Strategies are based on actions and reactions aimed at controlling, managing, and providing feedback for the phenomenon under study. Strategies are purposeful and occur for a reason. There are always intervening conditions present that either facilitate or constrain these strategies. The identified strategies include: policy-making, innovation and creativity, culture building, training, and hope and motivation. Below are references to interviews that indirectly revealed the axial code:

**Policy-Making**

*In this model, policy-making is a strategy that involves setting goals, determining strategies, and formulating policies related to spiritually-oriented resilience. These policies should aim to create a safe and supportive environment for individuals' work spirit, enhance organizational trust and spiritual values, and encourage innovative thinking.*

**Innovation and Creativity**

*In the startup business environment, innovation and creativity are of great importance. These factors can strengthen spiritually-oriented resilience by encouraging out-of-the-box thinking, creating spaces for flexibility and risk-*

*taking, and continuously improving business processes.*

**Culture Building**

*Culture building plays a foundational role in the process of creating spiritually-oriented resilience. It includes promoting collaboration and effective communication, enhancing shared values and mutual respect, and establishing spaces for reflecting on and evaluating spiritual and ethical issues.*

**Training**

*Regular and continuous training in areas related to spiritual empowerment and the promotion of organizational culture can help increase awareness and individuals' capacity to apply spiritual values and principles. This includes training in spiritual leadership, professional ethics, and the development of communication and collaboration skills.*

**Hope and Motivation**

*Hope and motivation act as dynamic forces behind the structure of spiritually-oriented resilience. These factors, by creating a spiritual connection with the organization's goals and values, strengthen employees' motivation and sense of spirituality, helping them face challenges and crises more effectively.*

Table 7. Model Consequences

Selected Category	Core Category	Open Code
Consequences	Improving the image of a startup	Increasing stakeholder trust
		Increasing employee motivation and job commitment
		Improving customer reliability
		Improving financing status
		Placing the way to receive facilities
		Trusting previous investors and gaining the trust of new investors
		Improving the organization's credibility
		Creating a positive reputation in the field of information and communication technology
		Resilience as a pillar of organizational agility
		Attracting new customers and retaining old customers
	Attracting talented employees	
Prospering a startup	Creating a healthy competitive environment	

Selected Category	Core Category	Open Code
		Spiritual agility
		Creating a sustainable competitive advantage
		Innovating businesses based on ethics
		Increasing the value of business shares
		Reducing legal risks
		Reducing financial risks
		Protecting the organization from legal prosecutions
		Increasing the efficiency of start-up businesses
		Improving internal and external communications
		Developing ethics in business
	Reducing business costs	
	Economic productivity	Attracting foreign investment
		The country's economic growth
		Reducing the country's costs in the field of evaluation and monitoring
		Increasing sustainable income and economic security
		Integrating traditional and modern systems
		Increasing public trust in businesses
		Reducing corruption, fraud, and scandals
		Finance
		Improving entrepreneurial processes
		Reducing unemployment and growing entrepreneurship
Increasing economic transactions and proper marketing of goods and services		
Market boom and increasing economic welfare in society		
Creating employment and growing industries		

Outcomes are the results that emerge from the implemented strategies. They are the consequences and products of actions and reactions. Outcomes cannot always be predicted, nor are they necessarily the ones intended by individuals. Outcomes may take the form of events and incidents, may have negative aspects, may be explicit or implicit, and may occur in the present or future. Moreover, what is considered an outcome at one point in time may later become part of the conditions or contributing factors.

The identified outcomes include: improved image of the startup, startup prosperity, and economic productivity. Below are references to interviews that indirectly revealed the axial code:

**Improved Image of the Startup**

*In this model, improving the image of the startup means creating a positive and trustworthy perception of the business. Strategies for improving the startup's image include providing transparent and accurate information about business activities, delivering high-quality services that meet customer needs, building effective relationships with customers and the community, and maintaining ethical conduct and transparency in business operations.*

After the analysis and measurement of various data, the final research model is

*Enhancing the image of a startup can help strengthen customer trust, attract investors, and draw in top talent from the job market.*

**Startup Prosperity**

*Startup prosperity refers to the sustainable growth and development of the business. To achieve prosperity, startups need to be in a favorable position that supports continuous innovation and renewal, effective communication with the market and customers, and flexible management in response to change. Strategies to increase startup prosperity include advancing technologies, expanding market reach, improving business processes, and attracting suitable financial and human resources.*

**Economic Productivity**

*Economic productivity means the efficient use of resources to produce high-quality products and services with added value. In startups, economic productivity is crucial due to typically limited financial and human resources, which require smart and efficient utilization. Economic productivity can be enhanced by improving processes, reducing waste, increasing the quality of products and services, and improving resource management.*

presented in the form of software output as follows:

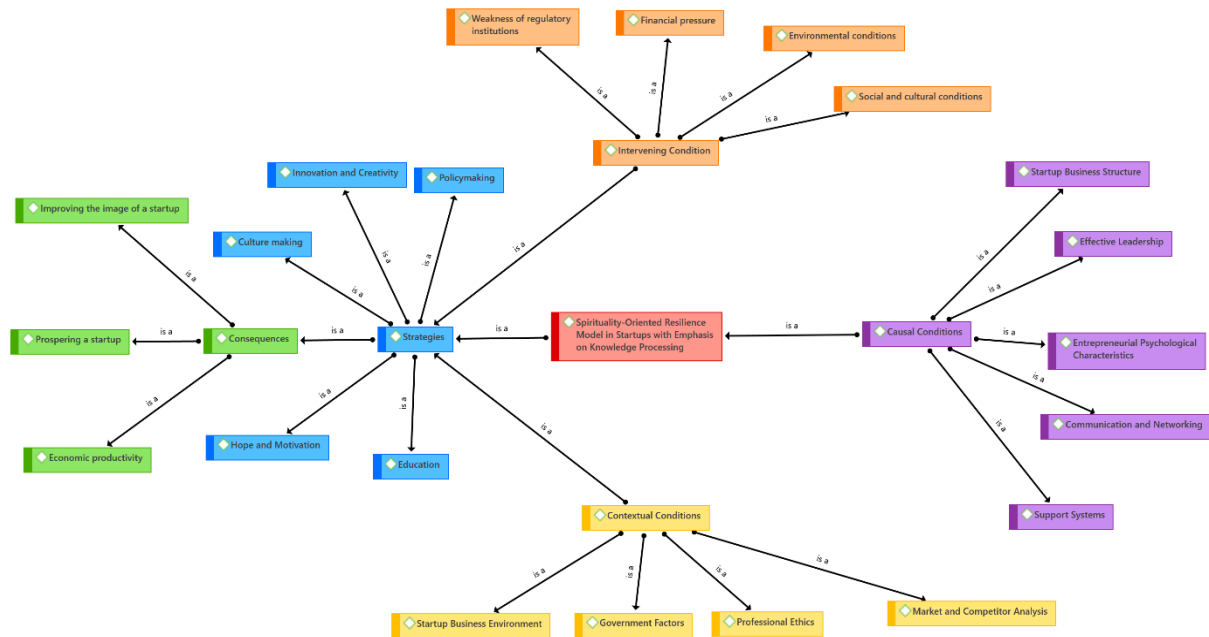


Figure 1. Pattern of formation of the spiritual resilience model in start-up businesses (Atlas-ti software output)

### 5. Discussion

The aim of this research was to design and explain a model of spiritual resilience in start-ups. Utilizing a data-driven approach, 173 initial codes were identified across 21 core categories and 6 optional categories.

Based on the participants' perspectives, the categories of effective leadership, the structure of the start-up business, the psychological characteristics of the entrepreneur, communication and networking, and support systems were identified and connected to a broader category known as causal conditions. In designing a model of spiritual resilience in start-ups, the fundamental role of effective leadership is crucial.

Successful leaders in this field must actively and decisively communicate spiritual values and principles to all team members. By fostering a supportive environment, they can promote a culture of empathy and collaboration. These leaders should view challenges as opportunities for growth and learning for the team, while also encouraging ethical decision-making and accountability that align with spiritual values. Furthermore, the structure of the startup should be designed to support the development and enhancement of spiritual resilience.

Startup organizations should foster an environment that enables entrepreneurs to

consistently and sustainably integrate ethical and spiritual values into their business practices. This involves cultivating a flexible and adaptable organizational culture, encouraging collaboration and knowledge sharing, and promoting open communication among team members.

Also, the psychological characteristics of entrepreneurs—such as willpower, motivation, and self-confidence—play a crucial role in determining the level of spiritual resilience in startup businesses. Additionally, effective communication and networking enhance spiritual resilience by facilitating opportunities for dialogue and the exchange of knowledge and experiences among team members.

Finally, support systems, including consulting, training, and evaluation methods, can enhance the spiritual resilience model in startup businesses. The identified strategies include policy, innovation and creativity, culture, education, and hope and motivation. Spiritual resilience in startups can be bolstered through the implementation of appropriate policies. Policies grounded in strong values and ethical principles foster customer trust and fortify the organization in the face of challenges and unforeseen circumstances.

Pawar (2023) concluded that developing policies that emphasize transparency, fairness, and a commitment to ethical and

social values can create a safe and stable environment for the growth and development of start-ups. Additionally, innovation and creativity play a crucial role in fostering resilience. Promoting a culture of innovation and encouraging creativity within the organization empowers individuals to embrace change and adapt to evolving and unpredictable conditions.

Crossman (2024) demonstrated that fostering an environment conducive to dynamic thinking, encouraging the development of new ideas, and viewing mistakes as learning opportunities can motivate individuals to experiment and cultivate enthusiasm for discovering innovative solutions.

Espedal (2021) stated that motivation and hope for the future are valuable assets that can provide the energy necessary to confront challenges and achieve success in startup businesses.

The identified outcomes include an enhanced startup image, increased startup growth, and improved economic productivity. Spiritual resilience plays a crucial role in the success of startups.

First, this model of resilience has the potential to enhance the image of startups. By emphasizing spiritual values such as work ethic, social responsibility, and respect for individuals, startups can serve as inspiring examples of transparency and trust in competitive markets. Second, spiritual resilience can help startups flourish. By cultivating an environment that promotes spiritual values, individuals become more committed to their work, which in turn boosts creativity, innovation, and entrepreneurial capabilities within the organization.

Shahrokhi et al. (2019) concluded that startups can develop, grow, and thrive more effectively in a competitive market.

Torkzadeh and Razi (2017) demonstrated that a spiritually oriented relationship with the development of a new business fosters optimal economic productivity. This is due to the direct correlation between the promotion of business ethics and economic performance. Not only does this approach help reduce costs associated with unethical

behavior, but it also enhances public trust in the brand, leading to increased customer engagement and higher sales.

The internal environment of the new business, along with governmental factors, market and competitor analysis, and professional ethics, has been identified as essential background conditions. When designing a spiritually-oriented resilience model for new businesses, the first step is to concentrate on the internal environment of the organization. This involves gaining a comprehensive understanding of the prevailing culture and values within the organization.

Creating an environment that is spiritually dynamic and aligned with business values fosters motivation and encourages positive communication within the organization.

Creating an environment that fosters spiritual excellence and inner coherence enables employees to perform more effectively when confronted with future challenges and issues, utilizing ethical and humane values to address them.

## 6. Conclusion

The spiritual resilience model in ICT start-ups can serve as a powerful tool for navigating challenges and sudden changes. One of the primary challenges that start-ups encounter in this sector is the intense competition.

In a dynamic and competitive market like Information and Communication Technology (ICT), the ability to manage competition and maintain differentiation is crucial for new businesses. This model of spiritual resilience can assist companies in enhancing their differentiation and achieving greater success in the market by emphasizing spiritual values and fostering effective communication with customers and the community. Another significant challenge in the ICT sector is the rapid pace of technological advancement and change.

The spiritual resilience model can assist businesses in effectively adapting to technological advancements and seizing new opportunities through flexibility and a readiness for change. By embodying spiritual values and a commitment to ethics in their

actions and decisions, businesses can confront crises and sudden changes with confidence and strength. Consequently, the spiritual resilience model can enable ICT start-ups to achieve success and sustainable growth by fostering positive relationships grounded in spiritual values, adaptability, and resilience against financial pressures and technological shifts.

The aim of this study was to design and elucidate a spiritual resilience model for start-ups using a data-driven approach.

In this context, the analysis of the interview data revealed six key categories related to organizational resilience: effective leadership, business structure, entrepreneurial psychological characteristics, communication and networking, support systems, and contextual conditions. The findings indicate that spiritual resilience can significantly contribute to the sustainability and growth of start-up businesses by leveraging human and cultural capital.

Therefore, understanding, analyzing, and processing both individual and collective knowledge in turbulent environments can create an effective foundation for implementing components of spiritual resilience in start-up businesses.

What makes this model significant in today's knowledge-based business environment is the essential role of knowledge processing and organizational information management in fostering spiritual resilience.

Knowledge structures that develop through experience sharing, tacit knowledge transfer, and environmental analysis enable organizations to respond more swiftly and accurately to threats and changes.

Effective leadership is fully realized when it is grounded in collective knowledge analysis and knowledge-based decision-making. Additionally, knowledge infrastructures in start-ups, particularly in the fields of information and communication technology, can enhance the capacity for spiritual adaptability and flexibility through knowledge management systems, organizational learning, and the processing of past experiences.

On the other hand, communication and networking in this model are viewed not only as sources of support but also as platforms for the production, sharing, and processing of collective knowledge.

Finally, the proposed model demonstrates that incorporating a spiritual approach, alongside knowledge-based and learning structures, can enhance brand image, boost economic performance, and increase productivity in start-ups. These findings underscore that systematic knowledge processing serves as the connection between the elements of spirituality, resilience, and sustainable development in innovative organizations.

To foster spiritual resilience in startups, the initial step is to embed spiritual values into the organizational culture. This process can commence with the creation of a spiritually-oriented code of ethics that encompasses principles such as honesty, altruism, the pursuit of meaning, trust, and accountability.

Holding regular internal dialogue sessions to collectively reflect on the organization's higher purpose and the significance of its activities can foster cohesion, promote inner peace, and sustain motivation among team members.

In the next step, it is essential to establish an infrastructure for knowledge processing within the organization. This will enable the documentation, analysis, and regular reproduction of the experiences, learnings, and insights of its members. Designing digital systems to capture significant experiences in the face of challenges—whether in failures or successes—facilitates the identification of effective patterns of resilience.

Also, employing scientific data analysis methods can help identify the connection between spiritual beliefs and critical decision-making. Furthermore, empowering human resources in both the cognitive and spiritual dimensions is crucial. Conducting training courses focused on resilience skills, systems thinking, spiritual literacy, and ethical decision-making can significantly enhance the internal capacities of the team.

Combining skills training with mindfulness meditation exercises, as well as spiritual

group discussions, can enhance the team's psychological well-being and strengthen the organization's internal cohesion during times of crisis.

### Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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