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RESILIENCE AND KNOWLEDGE-BASED FIRMS' PERFORMANCE: THE MEDIATING ROLE OF ENTREPRENEURIAL THINKING

Hosseini Elahe

Department of Business Administration, Yazd University, Yazd, (IRAN)

Email: Elahe.hosseini@stu.yazd.ac.ir

Tajpour Mehdi

Faculty of Entrepreneurship, University of Tehran, Tehran, (IRAN)

Email: tajpour@ut.ac.ir

Salamzadeh Aidin

Faculty of Management, University of Tehran, Tehran, (IRAN)

Email: salamzadeh@ut.ac.ir

Demiryurek Kursat

Faculty of Agriculture, Department of Agricultural,

Ondokuz Mayıs University, Samsun, (TURKEY)

Email: kursatd@omu.edu.tr

Kawamorita Hiroko

Faculty of Economics and Administrative Sciences,

Ondokuz Mayıs University, Samsun, (TURKEY)

Email: hiroko.kawamorita@omu.edu.tr

ABSTRACT

Resilient organisations tolerate challenges and provide them with growth and survival in complex environments. Therefore, the present study aimed to investigate the effect of resilience on the performance of knowledge companies based on information technology by considering the mediation role of entrepreneurial thinking in Iranian science and technology parks. Data were collected using a questionnaire with a Likert scale from a sample of 172 students who were executives of the selected knowledge-based companies. Data analysis was performed with a structural equation modelling approach using Smart PLS 3 software. The research findings indicated a positive and significant increase in the performance of knowledge-based companies by the mediation of

entrepreneurial thinking. According to the findings, companies can be equipped with their dynamics and structural trust and process continuity. Since it is not enough to have structural trust capabilities, companies that survive and succeed in the long run should also have dynamic capabilities. Paying attention to the dynamic capabilities of knowledge-based companies, if not accompanied by considering structural trust capabilities, is ineffective because its impact would be reduced.

Keywords: Resilience, Entrepreneurial Thinking, Performance, Knowledge-based Firms

JEL classification: P17, D8

INTRODUCTION

Communities, organisations and individuals are in diverse and changing environmental conditions. Changes in the conditions of organisations in the current era have led to changes in their attitudes towards their environment [84].

Therefore, environments that are more dynamic than before or are responsive to dynamics in front of organisations provide more significant opportunities for success and growth of the organisations [73]. They can also pose significant threats and challenges to the efficiency and success of organisations.

Environmental disorders such as natural hazards, political unrest, economic instability and human error severely threaten the performance of knowledge-based companies [60], [4]. In such an environment, the key factor in the success of successful organisations, especially knowledge-based companies, is to take advantage of the current competitive advantage or discover innovations that determine the future competitive advantage. The increase in these disorders also increases the attention to resilience for knowledge-based firms [38], [56].

Resilient organisations, such as those that respond to disease, can respond to these changes and develop the innate power to return to normal with minimal external impact [19]. Therefore, resilient organisations can tolerate discontinuities and interruptions [81]. In addition, organisational resilience helps maintain and improve corporate performance in critical situations [42]. Thus, these companies can grow and survive in complex environments [34] and improve business compatibility and reliability [92]. The importance of organisational resilience increases when work processes are disrupted due to unforeseen crises such as labour leave [55]. In this study, knowledge-based companies in the field of information technology are considered, due to the importance in the scientific and technological development of the country, to commercialise ideas and knowledge by providing new products and services, promoting previous products and services through research activities.

Furthermore, selected joint development, maintaining and creating a sustainable competitive advantage in the areas of software, hardware, information exchange security, increasing e-readiness and Internet development.

In recent years, much research has been done on the failure rate of technology and information-based companies [70]. In a report, companies launched in this field in 2014, it has been shown that only 56% entered 2018, and the rest have failed [41], [57].

Thus, the main problem in these companies is their high failure rate. These companies also face particular challenges in the life cycle that awareness of these challenges helps them be prepared to face them. This readiness will be achieved through factors that contribute to resilience [50]. Although organisational capabilities have become a powerful resource, the solutions that worked successfully in different competitive conditions gradually lose their primary function over time. Therefore, changing capabilities and forming new capabilities as a prerequisite to maintain the competitive advantage of such companies is a necessity [59], [51], [72]. Therefore, success in one economic company in terms of product innovation, processes and working methods in comparison with other peers and differentiate the field for the development of entrepreneurial capacity and consequently economic indicators in other provide companies with their relevant requirements [29], [15]. Also, IT-based companies can easily open their way forward in times of crisis due to their agile structure and efficient human capital and play an essential role in economic resilience and achieving the goals of a resilient economy [75]. In fact, despite the importance of resilience in knowledge-based companies in technology and information, studies published in the country so far have not directly and specifically addressed the knowledge-based companies in this field [71]. Therefore, in the present study, the effect of resilience on the performance of knowledge-based companies in the field of information technology in science and technology parks of Iranian universities has been mediated by entrepreneurial thinking. This study is important and innovative according to the literature according to researchers.

RESILIENCE

In today's world, organisations, in order to achieve success, need to pay attention to the concept of resilience as one of the important strategies to achieve sustainable competitive advantage [89]. Resilience in the corporate sense means the ability to withstand crises and turmoil. This concept is related to start-up activities, risk management, crisis, business planning and strategic management and helps businesses to be able to operate in any situation [52]. In addition, resilience is the ability to cope with the devastating changes and challenges that exist in the course of business or the ability to return the business to normal after tolerating setbacks at a high level [61].

Resilience thinking is a powerful incentive to improve the competitive advantage of organisations [23]. Creating resilience develops the organisation's potential for sustainability. Resilience thinking requires the organisation to be viewed as a living system closely related to social, environmental, and economic systems [58], [9]. Lack of liquidity leads to a loss of quality in corporate outputs,

which leads to inefficiencies in internal resources and ultimately reduces the long-term sustainability of business performance, including economic growth [93]. Thus, organisational resilience capacity is a multidimensional set of procedures, resources, behaviours, capabilities and mental models that lead to organisational resilience [44]. Also, the resilience capacity of the company enhances the capability of the organisation in the face of specific situations and accelerates the implementation of transformational actions in the event of unexpected events that contribute to the long-term survival of the organisation [33]. Resilience is also conceptualised in different ways in the business world: Some methods focus on the characteristics of the company that understand the performance of resilience through its operation and how to maintain it by using promotional behaviour [91]. Researchers attribute organisational resilience to a comprehensive awareness of the organisation's position, key vulnerabilities, and adaptive capacities in a dynamic and complex environment [43]. Organisational adaptability is the ability of an organisation to learn and simultaneously change and adapt to the environment [47]. Some researchers cite adaptability capacity as one of the indicators of vulnerability that the system can change its conditions to move to a situation with less vulnerability [46]. Organisations that focus on productivity generally face disruptions that affect the quality of adaptability and active responses. In addition, positive behaviour within the organisation and the organisation's view of disorders as an opportunity for development is emphasised [10]. Situational awareness means the ability of the organisation to be constantly aware of itself and the environment as situational awareness [7] considers people's situational awareness based on their perception of internal elements, including temporal and spatial volume, concepts, and visualisation of future situations.

In explaining why resilient people have high performance, it can be pointed out that having high resilience causes people to use healthy problem-solving methods to deal with problems. Resilience also applies to people who are at risk but not disturbed. Therefore, facing danger is necessary for vulnerability, but it is not a sufficient condition. Therefore, with increasing employees' resilience, their performance also increases [62]. If employees are justified to resilience in the workplace, their performance will increase, which will increase the company's real productivity in the long run [95]. Organisational dynamism shows that organisations are adaptable and complex systems that change over time [49].

New information may lead to conflict with knowledge that has already been learned, thus creating a sense of imbalance for understanding and integrating the new concept into a knowledge structure [22], [18]. defined dynamic capabilities as the capacity of an organisation to create, expand, and purposefully improve its resource base. Resource base here refers to specific and intangible assets and resources along with capabilities owned or controlled by the organisation, and the organisation has access to it [18]. Capabilities are therefore considered as part of the resource base [83]. Therefore, dynamic capabilities can change an organisation's resources according to circumstances. In fact, organisations learn

from internal and external sources, and this leads organisations to build and enhance their knowledge assets [90]. New opportunities are discovered and exploited through learning new knowledge and skills [83]. Dynamic capabilities refer to the organisation's ability to recognise the value of new external knowledge, combine and commercialise it, and require a set of routines to manage knowledge and the collective impact of continuous learning in the organisation, which leads to achieving and maintaining competitive advantage [22]. Dynamic managerial capabilities are effective in shaping the dynamic capabilities of the organisation. These types of capabilities lead to access to valuable resources and information [74]. Management experience and skills as a result of these interactions lead to the development of human capital capabilities [23] because the more information acquisition and reasoning of managers increases, the better the management skills and experience [17].

Process continuity in the resilience component includes activities that focus only on events that are considered a disaster in the business in question. In an event or catastrophe, the company can be recovered based on priority and importance to achieving the desired productivity [63]. Process continuity also allows corporate executives to react in the shortest possible time in the event of a disaster. This rapid response causes the company to be mentally prepared to face disaster [23]. Continuity of a process does not simply include tasks that must be performed back-to-back in order for the company to achieve a set of values at the end of the work [82]. This process develops over time. Business process continuity is creating agreements and proposed methods that enable the company to respond appropriately to events so that it continues vital business activities with appropriate levels of planning, downtime, or necessary changes [3]. Thus, business process planning has led to identifying business operational risks and vulnerabilities and presenting processes and risk mitigation that respond effectively to destructive events [28]. Given that knowledge-based companies are in a changing and unpredictable environment and must have a dynamic environment; Therefore, flexible structures in it can move in the direction of effectiveness. Such organisations can achieve their goals, adapt to changing environments, and survive [77].

Knowledge-Based Firms' Performance

The European Foundation Organizational Excellence Model presents the quality of business performance as a measure of an individual, group, organisation or process level in achieving a given goal; In other words, the function of measuring the efficiency and effectiveness of a mechanism or process by an organisation is to achieve the desired results [94]. Continuous improvement of business performance creates a huge synergistic force that can support the growth and development program and create opportunities for business excellence [89]. The performance will not be possible without reviewing and gaining knowledge of the progress and achievement of goals and without identifying the challenges of business progress and obtaining feedback

and information about the implementation of developed policies, and identifying those that need great improvement [76]. Performance refers to action and the result of the action. Performance is defined as today's action, which is the prelude to producing a certain amount of tomorrow's output value [48]. In this study, the company's efficiency in financial performance includes market performance, which includes factors such as profitability, growth and customer satisfaction, process performance, which refers to quality and efficiency [89] and internal performance related to individual capabilities. It includes satisfied, creative and innovative employees [80]. Therefore, the success and progress of any company depend on the high performance of employees and the business. If the organisation does not pay attention to the factors affecting performance, its productivity decreases and fails to achieve its goals [37].

Entrepreneurial Thinking

In companies, entrepreneurial thinking is used as a competitive advantage by investing resources in opportunities [8]. Entrepreneurial thinking demonstrates the search for innovation and creativity to seize opportunities [13]. The practice of entrepreneurial thinking with mindset reform reflects the intellectual position and behaviour. Entrepreneurial thinking is a new concept and unique thought and behavioural process [54]. Entrepreneurial thinking reflects how companies think and act [31]. It has also been stated that entrepreneurial thinking is crucial in shaping the performance of knowledge-based companies [1]. Thus, entrepreneurial thinking shapes and systematises the turmoil, which means that a person with entrepreneurial thinking will create order and harmony in his mind and integrate his thinking [79]. Entrepreneurial thinking is the process of finding alternative ways to compete and provide value to the customer in knowledge-based companies [8]. Entrepreneurial thinking is interpreted as the opportunity to explore new ideas as the result of unexpected events. Entrepreneurial thinking is becoming increasingly important for employees, teams and organisations operating in a changing environment. This concept is valuable for exploring opportunities outside the conventional context and thus generates new ideas through unexpected events [45]. Knowledge-based companies in changing environments strive to Minimise damage to the company, which can be achieved by expanding resilience. As a result, entrepreneurial thinking enables managers to continuously and creatively adjust for change [45]. Entrepreneurial thinking leads to creating new answers without prior planning and assurance of the consequences; That is, discovering the idea that our action creates [87].

Entrepreneurial thinking also empowers the organisation to adapt to the dynamics of the environment and activates the company's capacity to adapt to environmental changes [16]. Finally, entrepreneurial thinking creates value for the company by increasing the speed of learning and the power of adaptability.

THEORETICAL FRAMEWORK

The present study investigates the effect of resilience on the performance of knowledge-based firms by the mediation of entrepreneurial thinking. Researchers state that organisations with future orientation are designed for the future, ready to deal with future risks [18]. Individuals with high future orientation have less opportunistic behaviours and risk-averse relationships [5]. Some other researchers argued that performance orientation is closely related to the sense of responsibility and accountability [78]. Organisations that avoid high uncertainty have less risk-taking, indicating that the organisation is planning and investing in the future [93]. Previous research shows that organisations with a high functional tendency focus on long-term strategic programs [25]. Based on previous studies and cognitive social theory of organisations in the field of structural reliance, organisational capabilities and process continuity [2], [39]. the high ability to retrieve in the event of a risk. As a result, these are dangers. They see opportunities that they can exploit [39]. According to the content listed, finally, the research model was designed.

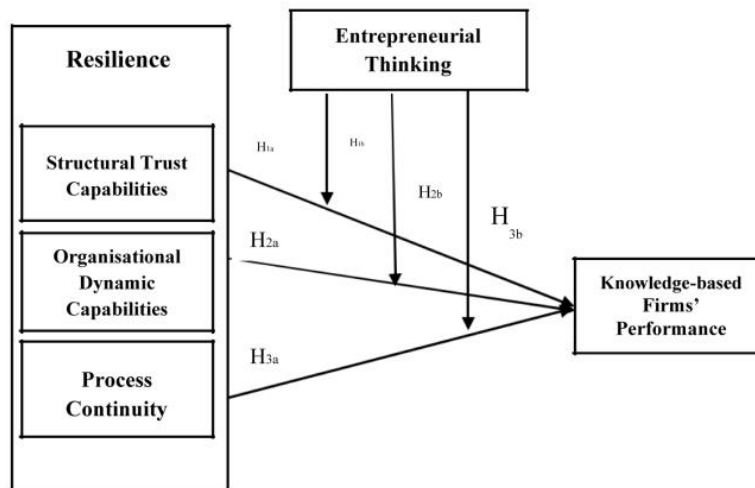


Fig. 1. Theoretical framework (source: authors' elaboration)

The main hypothesis is “Resilience affects the knowledge-based firms’ performance with the mediation of entrepreneurial thinking”. The hypotheses extracted from the framework are as follows:

H1a. Structural trust capabilities have a significant impact on knowledge-based firms’ performance.

H1b. Structural trust capabilities significantly impact knowledge-based firms’ performance considering the mediating role of entrepreneurial thinking.

H2A. Organisational dynamic capabilities have a significant impact on knowledge-based firms’ performance.

H2B. Organisational dynamic capabilities significantly impact knowledge-based firms’ performance considering the mediating role of entrepreneurial thinking.

H3a. Process continuity has a significant impact on knowledge-based firms' performance.

H3b. Process continuity significantly impacts knowledge-based firms' performance considering the mediating role of entrepreneurial thinking.

RESEARCH METHODS

Population and sample

This research is a descriptive correlational study in terms of practical purpose and in terms of data collection method due to the lack of manipulation of variables [64]. The statistical population consists of 313 managers of knowledge-based companies located in the Science and Technology Park of Iran Universities, including in 1399 in Tehran, Shiraz, Isfahan and Yazd, which operate in the field of information and communication technology. Using Cochran's formula, the sample size of 172 people was determined and selected from the available sampling method from the community. In this study, the criteria for selecting knowledge-based companies active in the field of information and communication technology is that the number of their direct employees is up to 25 people, and their activity history is more than four years was used. They also failed during their activity, but they continued to survive, and by changing their strategy, they were able to continue on their path and maintain their position. The content validity of the data collection tool was evaluated using the opinions of professors and several experts, and their suggested views were applied in the questionnaire, and the validity of the structure was confirmed using confirmatory factor analysis. The reliability of the data collection tool was also evaluated and confirmed by Cronbach's alpha method. In this tool, the answer to each question has a different number of values above 0.7 acceptable reliability. Table 1 shows the reliability results of the questionnaire. In the second part, PLS 3 software was used to analyse the constructs and relationships expressed in the theoretical framework. This method is a statistical model to examine the relationships between latent variables and explicit variables. A t-test was used to evaluate the fitness of the research framework and the assumed relationships between the variables.

Reliability and validity

In order to evaluate the relationships between the variables of the conceptual model, data were collected by a questionnaire. The questionnaire of this research is designed based on the literature. The questionnaire used to collect data from this study consists of respondents' demographic information and research-related questions. We used a Likert scale ranging from 1 (very low) to 5 (very high) to measure the variables. Five questions were created to measure each variable.

Research data were collected using a 25-item electronic researcher-made questionnaire. However, access to 172 usable questionnaires was provided. In

order to evaluate the reliability of the tool for measuring research variables, Cronbach’s alpha coefficient and combined reliability have been measured [11].

As shown in Table 1, the value of Cronbach’s alpha coefficients for all variables is more than the minimum acceptable, i.e., 0.7; Therefore, it can be inferred that the tool for measuring variables has an acceptable reliability level.

Constructs	Variables		Questions	Cronbach’s alpha
Knowledge-based Firms’ Performance	-		1-6	0.858
Resilience	Structural Capabilities	Trust	7-12	0.809
	Organisational Capabilities	Dynamic	13-18	0.853
	Process Continuity		19-24	0.868
Entrepreneurial Thinking	-		25-30	0.768

Table 1. The questionnaire

FINDINGS

Descriptive statistics

Based on the gathered data, 68.60% of respondents were male and 31.39% were female. In terms of age, 12.79% were under 35 years old, 37.21% were between 45 and 35 years old, 34.88% were between 55 and 45 years old, and 15.12% were over 55 years old. In terms of work experience, 34.88% had under 10 years, 48.84% had 10 to 20 years and 12.70% had 20 to 30 years of work experience.

Inferential statistics

In this study, the variability of the independent variable, the performance of knowledge-based companies has been the dependent variable, and entrepreneurial thinking has been the mediating variable. The variable of resilience is considered with the factors of structural reliability, organisational capability and process continuity.

In order to evaluate the reliability of the questionnaire, the partial least squares method have been used. In this method, reliability is measured by two criteria: factor loads and combined reliability. The load is a factor between 0 and 1, which indicates the strength of the explicit variable (question) in measuring the hidden variable (principal variable). The closer the number is to 1, the more reliable the question will be. The criterion for the correctness of the factor load coefficients is 0.4 [26]. In this study, as shown in Table 2, all coefficients indicate that this criterion is correct. All factor loads above 0.4 and at the level of 99% confidence are significant, which indicates that the indicators explain the

conceptual variables well. Studies show that the value of Cronbach’s alpha coefficient and the combined reliability of all constructs is more than the minimum acceptable, i.e., 0.7. Therefore, the constructs of this study have the desired reliability. Also, the analysis of the average variance extracted criterion shows that the whole construct's value is higher than the acceptable minimum, i.e., 0.5. Therefore, the constructs of this study have convergent validity as desired. According to the results of Table 2, because all indices have the mean values of variance extracted higher than 0.5, convergent validity is established in all indices.

Constructs	Variables	Composite Reliability	AVE	Rho-A	R2	R2-adjusted
Knowledge-based Firms' Performance	-	0.914	0.544	0.873	0.334	0.251
Resilience	Structural Trust Capabilities	0.877	0.749	0.837	---	---
	Organisational Dynamic Capabilities	0.715	0.804	0.701	---	---
	Process Continuity	0.901	0.605	0.873	---	---
Entrepreneurial Thinking	-	0.832	0.745	0.788	0.714	0.688

Table 2. Composite reliability, AVE, Convergent validity

In order to evaluate the convergent validity, the AVE index was extracted, and for divergent measurement, the R² was used [11]. As Table 3 shows, the AVE values are greater than the acceptable minimum of 0.5 [6]. Therefore, research variables have convergent validity. Also, since the R² are greater than the correlation of the variable with other variables, divergent validity is acceptable if the numbers in the original diameter are higher than their lower [11]. Therefore, one could mention that the variables are valid, and their divergent validity is also confirmed.

	Organisational Dynamic Capabilities	Entrepreneurial Thinking	Knowledge-based Firms' Performance	Process Continuity	Structural Trust Capabilities
Organisational Dynamic Capabilities	0.727				
Entrepreneurial Thinking	0.485	0.789			
Knowledge-based Firms' Performance	0.054	0.393	0.737		
Process Continuity	0.638	0.676	0.140	0.778	
Structural Trust Capabilities	0.042	0.356	0.473	0.100	0.692

Table 3. Divergent validity

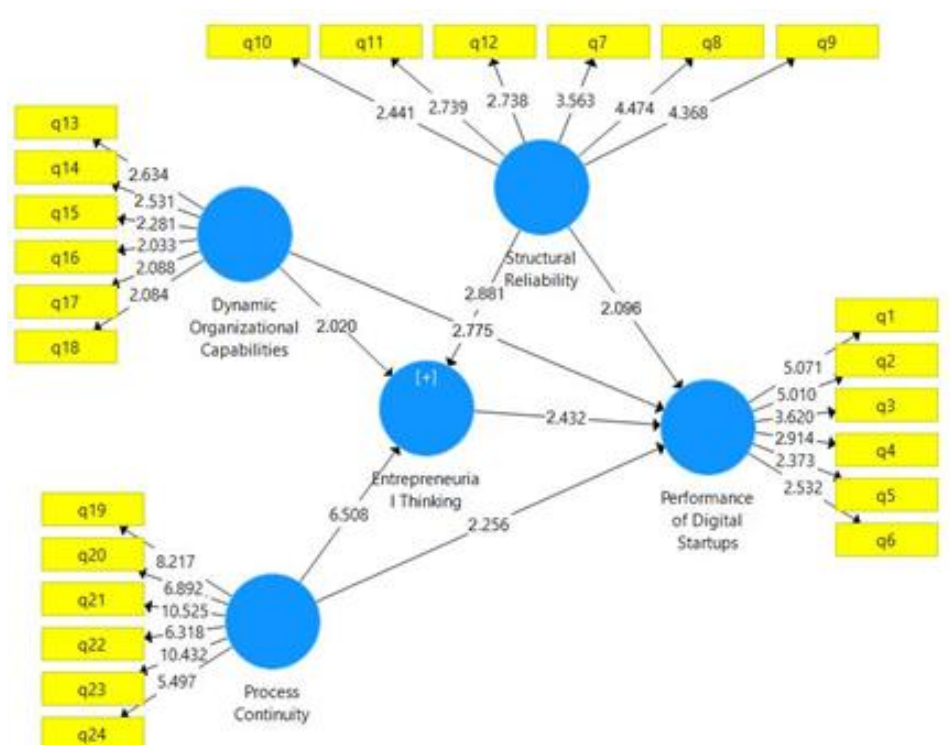


Fig. 2. t-statistics

Based on the above and the results obtained from the output of Smart PLS 3 software in Tables 2 and 3, the validity (convergent and divergent) and reliability (combined reliability coefficient and Cronbach's alpha) are appropriate. In order

to investigate the fitness of the model at three levels of measurement, structural and general, are considered [14]. To evaluate the fitness of the structural model, the partial least squares criteria are used. The fitness of the structural model using T-coefficients is such that these coefficients must be greater than 1.96 to confirm their significance at the 95% confidence level (Fig. 2).

Coefficient of determination (R^2)

The second criterion for examining the fit of a structural model in research is the R^2 coefficients related to the latent endogenous variables of the model. This criterion is used to examine the intensity of the relationships between constructs, which only applies to dependent and not independent constructs. R^2 is a criterion that indicates the effect of exogenous variables on an endogenous variable, and three values of 0.19, 0.33 and 0.67 are considered for weak, medium and strong values of R^2 . In this study, the criterion for the performance of knowledge-based companies (0.334) and entrepreneurial thinking (0.714), so the structural model from the perspective of this criterion has a good fit at a strong level. Also, the results are shown according to Fig. 3.

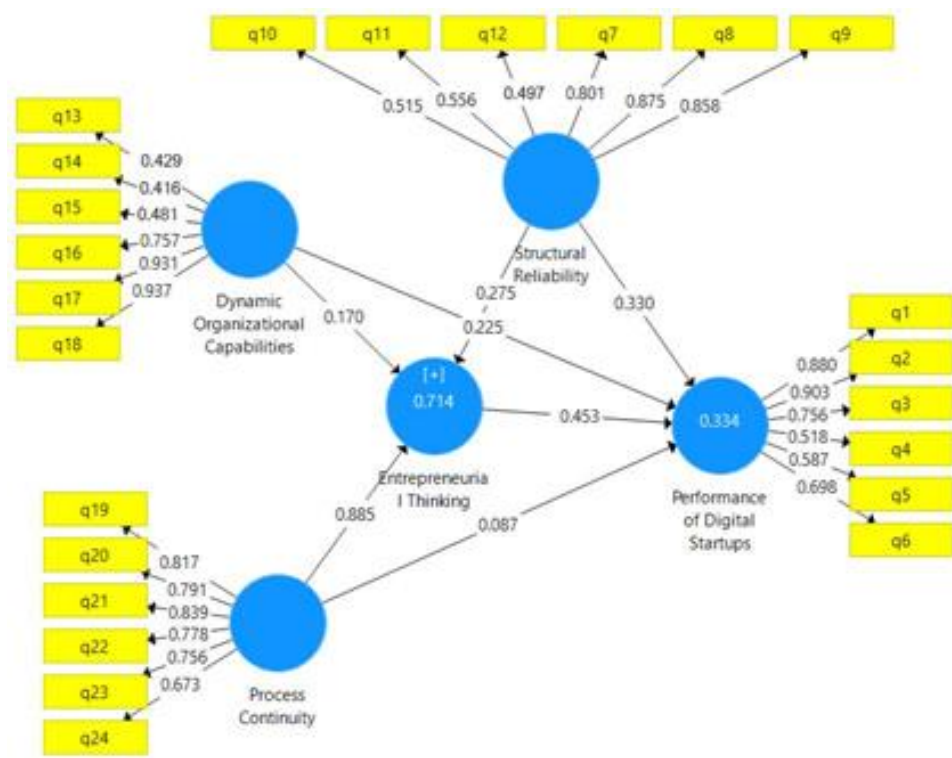


Fig. 3. Factor loadings

Q2 criterion

The Q2 criterion is calculated for all dependent constructs. It represents the product of the combined values of the research constructs in the values of the coefficient of determination related to them. This criterion, introduced by Stone and Geiser (1975), determines the model’s predictive power in dependent

variables. According to them, models with an acceptable structural fit should be able to predict the characteristics of the endogenous constructs of the model. This means that if the relationships between constructs are properly defined in a model, the constructs will be able to have a sufficient impact on each other's characteristics and thus, the hypotheses are correctly confirmed. The value should be 0.2, 0.15 and 0.35 for all endogenous constructs as low, medium and strong predictive power. This criterion in the present study is for the performance of knowledge-based companies (0.305) and entrepreneurial thinking (0.594).

This result indicates the high appropriateness and acceptable structure of the research model.

The goodness of fit (GOF)

The general model includes both parts of the measurement model and the structure, and by confirming its fit, the model's fit is checked. Therefore, the overall fit of the model is possible with the help of the GOF fit goodness criterion. According to the value obtained 0.666 for GOF, the overall fit of the research model is very appropriate and approved-considering the three values of 0.01, 0.25 and 0.36, which are weak, medium and strong values for GOF. A value of 0.666 for this criterion indicates a strong fit of the overall research model.

$$GOF = \sqrt{\text{average (Commonality)} \times \text{average (R}^2\text{)}}$$

Another indicator is the standardised root mean square root index (SRMR).

According to some scholars, the value of 0.05, and according to others, the value of 0.08 is acceptable. Also, according to Hair *et al.*, (2017), the value of SRMR less than 0.10 indicate an acceptable fit of the overall model. According to Table 4, this index is also at an acceptable threshold, so it can be claimed that the current research model has a perfect fit. Normed Fit Index (NFI) has also been used to measure fit. The acceptance range of this index should be between 0 and 1, and the NFI should be greater than 0.9. As a result, as shown in Table 3, this value equals 0.913. It is also confirmed as a result of this index.

	SRMR	NFI
Acceptable value	≥0.10	≤ 0.9
Calculated value	0.072	0.913

Table 4. Fitness Indexes

In order to investigate the mediating role of entrepreneurial thinking, the Sobel test was used.

- a) The value of the coefficient of the independent and mediating variable = 0.443
- b) The value of the path coefficient of the mediator and dependent variables = 0.453

- c) The value of the path coefficient of the independent and dependent variable = 0.214 (sa) Standard error for independent and mediator variable path = 0.078; (sb) Standard error related to mediator and dependent variable path = 0.063 $VAF = (a \times b) / (a \times b) + c$

The value of 4.431 obtained in this test, which is higher than the baseline value of 1.96, indicates the mediating role of the construct of entrepreneurial thinking. VAF statistics show that the intensity of mediation of entrepreneurial thinking is equal to 0.484, which means that the mediating effect is partial. Based on the results, the fit of the proposed model in both measurement and structure is confirmed.

Hypotheses

Finally, t-statistic has been used to investigate the hypothetical relationships between variables. To test the main hypothesis, six sub-hypotheses have been used, which according to Table 5, the t-coefficient for the six existing relationships has been confirmed. To determine the effect of predictor variables on dependent variables, standardised factor load coefficients related to the paths of each hypothesis are examined. These coefficients indicate that independent variables explain changes in dependent variables up to a few per cent.

Hypotheses	Influence Coefficient	T values	Results
Structural Trust Capabilities-Knowledge-based Firms' Performance	0.330	2.096	Confirmed
Structural Trust Capabilities-Entrepreneurial Thinking-Knowledge-based Firms' Performance	0.275	2.881	Confirmed
Organisational Dynamic Capabilities-Knowledge-based Firms' Performance	0.225	2.775	Confirmed
Organisational Dynamic Capabilities-Entrepreneurial Thinking-Knowledge-based Firms' Performance	0.170	2.020	Confirmed
Process Continuity-Knowledge-based Firms' Performance	0.087	2.256	Confirmed
Process Continuity-Knowledge-Entrepreneurial Thinking-based Firms' Performance	0.885	6.508	Confirmed

Table 5. Test results

According to the results of Table 4, it was found that the process continuity has the greatest impact on the performance of knowledge-based companies in Iranian universities through the mediation of entrepreneurial thinking.

CONCLUSION

In this study, six sub-hypotheses have been used to measure the central hypothesis of the impact of resilience on the performance of knowledge-based companies mediated by entrepreneurial thinking [12]. This study shows that resilience has a positive and significant effect on the performance of knowledge-based companies mediated by entrepreneurial thinking. Also, the entrepreneurial thinking of the members of knowledge-based companies will lead to the superiority of these companies in the competitive market, facilitating the achievement of visions and entering new areas and creating new values for the company and stakeholders. Regarding the first research hypothesis and its sub-hypothesis that structural reliability has a positive effect on the performance of knowledge-based companies mediated by entrepreneurial thinking, it can be said that businesses try to strengthen the level of trust between themselves and their stakeholders. Trust can be effective for organisations in various ways, such as increasing predictability, sharing information, and facilitating communication.

Therefore, management with entrepreneurial thinking ability must know when to break the usual rules and use new methods and how to combine different patterns and strategies with intuition and creativity. Therefore, structural reliability is such that the organisation behaves fairly in the face of its obligations and even if given the opportunity. Thus, each company can consider a specific value for itself and create value based on that value. For example, one company builds value on respect for the environment, one company builds on quality, and another builds on customer orientation. All of these companies have different organisational values, but they all have a common denominator called organisational value that they plan and take steps to achieve.

The results of the second hypothesis and its sub-hypothesis that organisational dynamism has a positive effect on the performance of knowledge-based companies mediated by entrepreneurial thinking, it can be said that organisational dynamics are essential for successful business performance [30].

Dynamic business capabilities effectively increase the company's capacity to exploit external resources for better business performance in the market, creating operational capabilities and improving the performance of knowledge-based companies and foreign cooperation [27]. The stronger these dynamic organisational capabilities in knowledge-based companies, the better businesses can absorb new environmental knowledge, better integrate this knowledge into routine business processes, and adapt operational capabilities to new environmental requirements. To renovate. Also, at the macro level, entrepreneurial thinking is an understanding. This understanding helps to understand the realities of the environment and the rules that govern it in the complex context of competition between companies and to discover new features of competition sooner than others. In addition, through better entrepreneurial thinking, environmental opportunities can be used to gain a competitive advantage, and environmental threats can be turned into opportunities, and

innovative and value-added solutions can be created to respond to environmental jumps. Regarding the information expressed about dynamic capabilities and its impact on various aspects of the organisation, it can be concluded that dynamic business capabilities can affect the performance of knowledge-based companies by creating a competitive advantage in the market with the use of data analysis is effective and leads to improving the performance of knowledge-based companies.

It can also be said that the existence of dynamic capabilities in organisations leads to better performance in business by making appropriate changes and increasing the company's flexibility. In this regard, it is suggested to the managers of knowledge-based companies to create innovation capabilities and develop creativity and innovation in the company, establish communication capabilities and develop sustainable relationships with stakeholders, develop information capabilities and appropriate use. Using organisational data and the establishment of information systems is recommended to improve the performance of the business so that this process leads to the creation of value and competitive advantage in the business.

Finally, concerning the third research hypothesis and its sub-hypothesis that process continuity has a positive effect on the performance of knowledge-based companies mediated by entrepreneurial thinking, it can be said that process continuity indicates the degree to which the organisation plans and invests for the future [24]. Previous research has shown that organisations with a high-performance orientation have high performance and focus on long-term strategic plans [25], [5]. experimentally showed that supplier-buyers who share a high degree of future orientation do not act opportunistically to maintain reciprocity. It ensures a continuous flow of technical, social and economic resources against a variety of risks. Technical resources (raw materials and information), social resources (continuity that a company ensures in the development and retention of skilled labour) and economic continuity (business continuity or growth through access to finance through strategy formation) are among the resilient dimensions that the potential source of discrepancy (variance, discrepancy) against subcontractors is risky and non-hazardous. Continuity of the business process causes cross-sectoral processes to become tangible returns on investment, and this continuity of processes makes processes run faster and employees more productive. Also, the process continuity leads to standardisation and control of processes that make work procedures efficient and optimise them by prioritising tasks. Therefore, it should be noted that entrepreneurial thinking is a process that leads to the creation of an integrated view in a company. Its output leads to creativity and understanding of the discontinuities of the company. This thinking leads to recognising the desired state, evaluating the existing conditions, and determining how to achieve the desired state. According to the research results, it is suggested that capable organisational systems with technical and individual capabilities be created to function properly when there is a risk.

Finally, considering the confirmation of all research hypotheses, it is suggested that knowledge-based companies equip themselves with dynamic capabilities, structural trust capabilities and process continuity. Merely having structural trust capabilities is not enough, and companies that want to survive and succeed in the long run must have dynamic capabilities. Paying attention only to business dynamics will not be effective if it is not combined with structural trust capabilities because its impact is diminished. In general, policymakers, managers and owners of knowledge-based companies are advised to (i) Hold training courses for employees, such as designing pessimistic scenarios to acquire the skills needed to deal with adversity, (ii) Knowledge-based companies to encourage employees to adopt new methods, encourage them to acquire new skills to provide new solutions, and instil in employees the belief that the fastest solution is not always the best solution, (iii) Accurately identification of customer issues and providing effective solutions to learn the employees of knowledge-based companies through customer training lessons at the lowest cost, (iv) Improve the level of creative thinking of owners to increase the ability to adapt and take timely new initiatives to get the business out of the crisis. One of the limitations of the present study is that it has been done only on a group of knowledge-based companies in the field of information technology. Then, it is suggested that future research expand the existing model and consider other components and research in a wider statistical community.

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