

Study of Strategic Entrepreneurship on Organizational Performance with the Mediating Role of Human Resource Information Systems (study case: Social Security Organization of East Azerbaijan Province)

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ABSTRACT

The purpose of this study was to investigate the effect of strategic entrepreneurship on the performance of the organization with the mediator role of human resources information systems. For this purpose, the statistical society of the staff of the Social Security Organization of the East Azerbaijan province was selected. Of all its employees, which was 930 people, 273 people were selected using the Cochran formula as the statistical sample. A questionnaire was used to measure the variables of the research. The results of the analysis of research hypotheses, which were carried out using correlation and structural equations, show that strategic entrepreneurship has a positive and significant effect on the performance of the organization. The role of mediation of human resources information systems in the relationship between strategic entrepreneurship and organization performance was also confirmed. Also, in reviewing research hypotheses, the impact of all the components of strategic entrepreneurship, including entrepreneurial thinking, entrepreneurial culture, entrepreneurial leadership, strategic resource management, creativity and innovation, was confirmed positively and significantly on human resource information systems and organizational performance.

Introduction

The twenty-first century business space can be characterized by new competitive perspectives, increased risk, reduced ability to predict, and new structural forms in terms of four factors of change, complexity, chaos and contradiction. No organization is safe from the immense pressures of these four factors (Razavi, et al., 2014). In such circumstances, how organizations work? Organizations need to create value and create wealth in order to grow, succeed, and stay in a turbulent environment today. Therefore, familiarity with the process of wealth creation is one of the main goals of research in organizational science. How can a company create value and wealth (the ultimate goal of strategic management and entrepreneurship)? According to Cochin & et al., companies that are interested in sustainable wealth creation cannot act solely on the basis of entrepreneurial or strategy-related activities, since the pursuit of limited activities in one field only enables the firm to derive its value and advantage related to the same field.

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Consequently, these types of actions will only lead to short-term wealth creation (Cochin & et al). Therefore, both the pursuit of opportunity and the pursuit of advantage are among the necessary behaviors for the production of wealth, and none are enough on their own; therefore, integrating relevant knowledge into entrepreneurship and strategic management to achieve advancement in understanding how wealth is created and improving organizational performance is important. Also, human resources are the main asset of each organization, and any organization must take actions in the field of human resources and management in the direction of mission, realization of goals and implementation of its strategies. Human resource management is a process that, while ensuring human resource efficiency, seeks to increase organizational capability and profitability through employees, which is one of the most important success factors in the current world. There are several tools that facilitate this important and vital process in the organization. One of these tools is the use of new technologies and a variety of advanced systems, such as the human resource information system, which seeks to increase the effectiveness of human resource management. Human resource information systems refer to processes and systems in the relationship between human resource management and IT (Zarifian and Mohammad Reza, 2013), which meets the needs of a number of institutional stakeholders including human resource specialists, executives, and employees. Hence, today, organizations are increasingly dependent on human resources information systems to enhance the effectiveness of human resource management (Keshtegar and Shokouhi, 2014).

Therefore, due to the importance of the mentioned issues, this research aims to investigate the effect of strategic entrepreneurship on the performance of the organization with the mediator role of human resources information systems.

Review of Literature

Entrepreneurship

Since the last decade of the twentieth century, entrepreneurship has been fully accepted as a discipline in management science and has become a higher level of complexity with conceptual studies, modeling and empirical research of academic researchers. Although the term entrepreneurship has been used for decades, there is still no generally accepted definition for it. Basically, entrepreneurship refers to the opportunistic actions of an individual who creates value and is associated with risk. Entrepreneurship is also strongly associated with innovation. (Stevenson et al., 1985) defines entrepreneurship as “the process of creating value through the creation of a unique collection of resources in order to exploit opportunities” (Cross and Rigtring, 2015)

Entrepreneurship View

The origin of the term “entrepreneurship” comes from the seventeenth century in France, where an entrepreneur was someone who was committed to a specific commercial project (Wickham, 2001). It can be seen that entrepreneurial research has undergone dramatic changes over the past 25 years. In the late 1980s, entrepreneurial research focused on the study of the entrepreneurial personality psychology, but then, sciences such as sociology and organizational studies, economic theories and other sciences, also studied entrepreneurship and the phenomenon of entrepreneurship (Gergirover et al., 2006). It should be noted that between 1993 and 1998, entrepreneurship research was influenced by a source-centered approach to the company, which later led to the integration of strategic and research management of entrepreneurship. Several definitions of the concept of entrepreneurship are presented. According to the concept of

strategic entrepreneurship, entrepreneurship can be defined as identifying and exploiting opportunities that have not been exploited before (Heath et al., 2001).

Organizational entrepreneurship

Organizational entrepreneurship, that is the emergence of a tendency toward entrepreneurship in established or large organizations, promotes strategic agility, flexibility, creativity, and continuous innovation with the goal of transforming office-oriented employees into intra-organizational entrepreneurs. The major difference between entrepreneurs (independent) and intra-organizational entrepreneurs is the business environment in which they operate. In the conditions that an independent entrepreneur tolerates personal risks, and has limited resources and flexibility in redirecting the company, an internal entrepreneur has to operate within a set of predetermined rules, procedures and bureaucracy, but it exploits from the resources of the company and the existing business network. Organizational entrepreneurs, therefore, often tolerate less personal risks (Cross and Rigttering, 2015). Risky internal enterprises are entrepreneurial initiatives that originate within an organizational structure and initiate new businesses for the organization. Risky domestic firms are being used by established organizations / large companies for strategic upgrade goals "and growth to form fully independent units with the goal of developing new products or entering new industries (Cross & Rigttering, 2015).

Strategic management focuses on actions that need to be taken to achieve sustainable competitive advantage and company performance (Shideuth & Maurice, 2009). Some writers (Ireland et al., 2001) see strategic management as a platform for entrepreneurial actions aimed at identifying and exploiting opportunities.

The concept of strategic entrepreneurship

There is no common understanding about the term strategic entrepreneurship. Strategic entrepreneurship has been viewed by various researchers from a variety of angles, including: Organizational Perspective or Entrepreneurship Approach (Ireland et al., 2009), Strategic Views (Sheffield and Vikland, 2009), Theory of Complexity (Shinette and Maurice, 2009), and Policy Perspectives Or economic policy (Fran Huber et al., 2009). The term strategic entrepreneurship was first introduced by (Heath et al., 2001) in an article that was edited as a guest editor in the introduction to the Strategic Entrepreneurship Issue in the Journal of Strategic Management entitled "Entrepreneurial Strategies for the Creation of Wealth". In the first research to integrate entrepreneurship and strategic management, the main focus was on concepts common to both disciplines (Cavin and Miles, 1999). One of the most important research work to conceptualize strategic entrepreneurship is the study done by Ireland (Heath & Sirmon, 2003). Strategic entrepreneurship, according to these writers, involves identifying and exploiting opportunities, while simultaneously creating and maintaining competitive advantage (Ireland, Heath and Sirmon, 2003).

The four main dimensions of strategic entrepreneurship identified in their work are entrepreneurial culture and entrepreneurial leadership, entrepreneurial mentality, strategic resource management, and the development of innovations through creativity (Ireland, Heath and Sirmon, 2003). Their model is presented in the following figure:

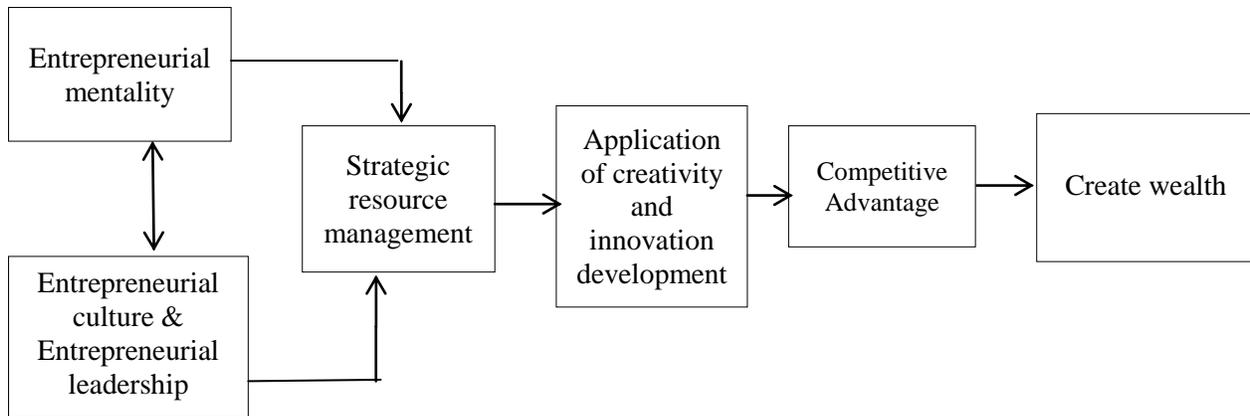


Figure (1-1): Ireland and Web’s Strategic Entrepreneurship (2003)

Strategic management and entrepreneurship are complementary. Some researchers have argued that entrepreneurship and strategic management are inseparable from one another, since it is difficult to understand the findings of one of these two disciplines without studying another field. (Barney and Arican, 2001) have found a close, though not quite distinct, relationship between theories of competitive advantage and creativity theories and entrepreneurship. According to Ireland (Heath & Sirmon, 2003), companies seeking strategic entrepreneurship are essentially looking for new opportunities (i.e., opportunistic behavior) and simultaneously aiming at changing their existing competitive position in the industry or creating new spaces in the market (i.e., profit-seeking behavior).

Human Resources

The human resources among the resources and facilities of the organization have a special importance and place and a close attention to this important source of the organization make the company to get closer to its aims. The manpower committed to the goals and values of the organization is a major indicator of the superiority of an organization to other organizations, and therefore this important indicator increases the effectiveness and efficiency of the organization and leads to advance and the progress of society. Therefore, it is the duty of managers and specialists to be careful about maintaining and developing the staff and make them committed to the organization. Due to the intense competition in the modern world, it can be argued that human resources are the most important competitive advantage for any organization. Therefore, managers should be aware how to deal with this strategic factor and learn how to use this competitive advantage effectively , then the organization will gain a strong competitive power.

Since the organization as a set of human interactions with the psychological, social and technical dimensions is one of the most sophisticated systems available, and since social interactions are the most volatile and unstable issues, human resource management can be more complicated than other sources of the organization(Mosadegi Mogaddam, 2014).

Human Resource Administration is the policies and actions needed to implement some of the management tasks that relate to aspects of employee engagement, especially for staffing, employee training, performance appraisal, rewarding, and creating a healthy and fair environment for employees (Isenel & Bohlnder, 2007).

Human resource management is one of the branches of management science that provides us with the necessary tools for optimal utilization of managers from human resources of the organization (knowledge, skills, abilities and abilities of the organization) as well as providing material and spiritual needs of the employees. In the definition provided, employees are considered as sources, because firstly as productive forces are one of the important factors of

production, secondly, their potential and developmental capabilities are effective for the overall productivity of the organization. Therefore, the main task of human resource management is to help the organization and all its employees to achieve their goals (Bamdad Sufy, 2001). Since the organization as a set of human interactions due to having psychosocial and organizational dimensions and ... is among the most sophisticated systems available, and since social phenomena are among the most common phenomena, human resource management is due to having the mission of attracting, absorbing, maintaining and developing human resources of the organization is distinguished from other sectors (production, finance, sales, etc.), and thus its tasks can be much more complicated and more problematic. Human resource management is a specialized fields that tries to improve the estimation of needs, aspirations and individual and organizational goals by inventing and preparing plans, policies and activities (Bamdad Sufy,2001).

Organizational Performance

The performance in the word means mode or quality. Therefore, organizational performance is a general concept that refers to how an organization performs. The most famous definition of performance is presented by Nily (qtd in Adams & Kenerly, 2002): The process of explaining the quality of the effectiveness and effectiveness of past actions. According to this definition, performance is divided into two components: (1) performance that describes how the organization uses resources in the production of services or products, that is, the relationship between the actual and desired combination of inputs for the production of certain outputs; and (2) the effectiveness that describes the degree of achievement of organizational goals. These goals are usually explained in the appropriate format (the degree of outputs with the needs of customers), availability (aspects such as frequency, presentation among priority groups, and physical distance), and quality (degree of implementation of required standards).

As previously mentioned, organizational performance is a multi-dimensional concept (Rach et al., 2009) and an organization is considered a high-performance organization when it has achieved a higher level of performance than its closest competitors. It is also said that the accounting scales alone lack the necessary credibility to measure the performance of the company. This can be justified for two major reasons. First, accounting scales have little ability to measure the monetary value of intangible assets. Secondly, these scales are considered to be inappropriate in evaluating the sources of the competitive advantage. Therefore, marketing scales are often used alongside accounting scales. Although the nature of the two mentioned scales is markedly different, the existence of these two on the balance sheet of the organization leads to an overview of the company's performance (Morgan & Strong, 2003).

Factors Affecting Organizational Performance

There are two main trends in measuring strategic performance. An economic view that emphasizes the importance of external market factors, such as competitive position, and an organization's vision of behavioral and sociological vision and their adaptation to the environment. Andrew emphasizes both economic and organizational factors in relation to strategy evaluation as factors affecting performance (Peret, 2005). Torric and McGuinn have listed the factors influencing performance as follows:

- 1.The alignment of organizational elements with the organizational environment is an effective factor in promoting organizational performance. Because the results of the research show that different levels of environmental change require designing different structures. There is also an alignment between strategy and environment which is, according to Frederickson, a key skill.

2. Tisy argues, “An organization needs to adapt its capabilities to its variable environment if it is to achieve the best performance.”

3. Rare, valuable, and inimitable organizational resources play a crucial role in gaining competitive advantage for the organization. Barney has divided these resources into three groups, physical, human, and capital.

Internal background

(Jafarinia and GhasemiNasab, 2016) in their research entitled, *The Relationship between Information Management Systems (MIS) and the Performance of Human Resource Staffers*, concluded that human resources information systems have a positive impact on the human resource management's performance.

(Abolfazlie et al., 2015) investigated the mediator role of the market orientation in the relationship between entrepreneurial orientation and performance. The results of the research model showed that the entrepreneurial orientation has a positive and significant relationship with the organizational performance, and according to the proposed analysis model; the results also show that if entrepreneurial orientation associate with market orientation, its impact on performance will be more and more stable; therefore, the indirect effect of entrepreneurial orientation on organizational performance is more than its direct impact.

(Talebi et al., 2014) in a research entitled *Identifying the Effect of Strategic Entrepreneurship on Financial and Non-Financial Performance*, concluded that entrepreneurial culture, entrepreneurial leadership, strategic resource management, and the use of creativity and innovation development affect performance, but the entrepreneurial thinking does not affect performance in Fannap company. However, in the end, it became clear that strategic entrepreneurship has a significant effect on performance of the Fanapp company. (Shaban and Yousefy, 2014) In their research entitled: *Explaining the Role of Strategic Factors in Improving Organizational Performance of Guilan Provincial Companies through Entrepreneurship*, indicated that there is a significant relationship of 59% between strategic factors and their components with entrepreneurship and entrepreneurship with organizational performance level, and strategic factors through entrepreneurship have a positive impact on organizational performance.

Foreign background

(Nutza et al., 2017) in a study entitled “adaptation and use of HRIS and its impact on organizational performance in small and medium-sized companies” concluded that the use and utilization of human resource information systems, have a positive impact on the performance of small companies.

(Angelen et al., 2015) In a research paper titled: *An entrepreneurial orientation and performance as a mediator of transformational leadership*, found that entrepreneurial orientation has a positive role in corporate performance. Also, the role of transitional leadership mediation was confirmed in the relationship between entrepreneurial orientation and performance.

(Ryle et al., 2014) in their research: *The role of entrepreneurship in organizational performance with the role of organizational learning and organization size*, concluded that entrepreneurship has a positive and significant role in improving organizational performance. Also, the role of organizational learning mediator has been confirmed in the relationship between entrepreneurship and performance. The mediating role of the organization was not approved.

Research type

This research, based on the purpose of research is practical, because it examines the impact of strategic entrepreneurship on the organization's performance and can help them improve their service quality and promote it. Also, based on the data collection method, this descriptive research is of survey type, because it describes the systematic description of the current situation and the relationship between variables by using a questionnaire. The sample size is 273 people using the Cochran formula. The questionnaire was distributed randomly. The data were analyzed using descriptive and inferential statistics. At the level of descriptive statistics, the statistical characteristics such as frequency, percentage, mean and standard deviation were used for data analysis. At the level of inferential statistics, structural equation modeling was used to analyze the data. Structural equation is a multivariate analysis and is a multi-variable regression family, or more precisely, a general linear model extension that allows simultaneous testing of a set of regression equations. . The tools used to perform data analysis are SPSS24 and SMART PLS3 software. SPSS software was used for single-variable and two-variable analyzes, and conducted reliability tests and PLS software for multivariate analysis and hypothesis testing.

Validity and Reliability of the Measurement Tool

Validity: In this research, after extensive studies and consultation with various faculty members, a questionnaire was prepared and then, to assess the validity of the questionnaire, after approving supervisors and counselors, a questionnaire was distributed among 10 experts of the research, and finally after the consideration of these points, the final version of the questionnaire was obtained.

Reliability: In order to measure the reliability of the questionnaire, a sample of 30 questionnaires was distributed among the population and analyzed using SPSS software, its Cronach's alpha was measured. Considering that each Cronbach's alpha in every items of research was above 0.7, the reliability of the questionnaire was confirmed. The Cronbach's alpha for each of the variables in the study is described in Table 2-3.

Table (2-3): Cronbach's alpha for each item

| Variable | Cronbach's alpha |
|-----------------------------------|------------------|
| Organization performance | 804.0 |
| Human resource information system | 850.0 |
| Entrepreneurial thought | 778.0 |
| Entrepreneurial culture | 715.0 |
| Entrepreneurial leadership | 752.0 |
| Strategic management of resources | 815.0 |
| Innovation and creativity | 748.0 |
| total | 946.0 |

The high sample size and the normal distribution of data are two important prerequisites for using a covariance-based approach. In contrast , small amount of sensitivity to sample size and normal distribution of data, are two important features of the approach based on variance (Sarafizadeh and Asghar, 2004).

In this research, an approach based on variance has been used. In measuring the model using this method, its reliability and validity are measured. The reliability of the measurement model is evaluated using one-dimensional reliability (factor load) and internal consistency and validity of

the measurement model is evaluated in two parts of convergent validity and divergent validity. In the study of structural model, the fitting of the structural model and path coefficients are measured. It should be noted that the study of the model of measurement is as a confirmatory factor analysis and the study of structural model is as a path analysis in a covariance-based approach. The steps of the multivariate analysis and the acceptable values for each test are described in Table 4-3. In the present study, the tools used for performing univariate and bivariate analysis is, SPSS version 24 and for multivariate analysis is, version 3 of Smart PLS software.

Table (4-3): Multivariate Analysis Stages

| | | | Tests used | Acceptable values |
|------------------------------------|---------------|--------------------------------|--|--|
| Measurement model evaluation | validity | converge | Average extracted variance | More than 0.5 |
| | | Divergent | Fornel-Larker Criterion Transverse load test HTMT ratio | More than squared R2 At least 1% more than semi-transverse load factor Less than 0.9 |
| | reliability | Single dimensional reliability | evaluation of Factor Burden | More than 0.67 |
| | | Internal consistency | Cronbach's alpha Combined reliability | More than 0.7 More than 0.7 |
| Evaluation of the structural model | The model fit | | Coaxial test The coefficient of determination Effect size (f2) Redundancy Validity (Q2) | Less than 5 More than 0.25 More than 0.02 More than 0.02 |
| | Path analysis | | Direct effect Indirect effect | More than 1.96 More than 0.96 |

(Derived from Hear, Halt, Ringle and Sarsted, 2013)

1-2- Descriptive analyzes

Descriptive statistics have been used to analyze the data of the first part of the questionnaire, which is related to the general characteristics of the studied population. The results of this analysis provide information on the distribution of characteristics such as gender, age, respondent education, and work experience.

1-1-2- Gender

In this section, the results of the descriptive analysis of the gender of respondents are presented in Table 1-4.

Table (1.4): Frequency distribution of respondents' gender

| Gender | Frequency | Frequency Percentage | Percentage Of Cumulative Frequency |
|--------|-----------|----------------------|------------------------------------|
| female | 8 | 8.30 | 8.30 |
| male | 189 | 2.69 | 100 |
| total | 273 | 100 | - |

2-1-2 Age

In this section, the results of the descriptive analysis of respondents' age are presented in Table 2-4.

Table (2-2): Distribution of respondents age

| Age | Frequency | Frequency percentage | Percentage of cumulative frequency |
|--------------------|-----------|----------------------|------------------------------------|
| Under 30 years old | 70 | 6.25 | 6.25 |
| 31-40 years old | 115 | 1.42 | 8.67 |
| 41-50 years old | 55 | 1.20 | 9.87 |
| Over 50 years old | 33 | 112 | 100 |

3-1-2 Education

In this section, the results of the descriptive analysis of respondents' education are presented in Table 3-4.

Table (3-4): Frequency distribution of respondents' education

| Education | Frequency | Frequency percentage | Percentage of cumulative frequency |
|---------------------------|-----------|----------------------|------------------------------------|
| Diploma | 13 | 8.4 | 8.4 |
| Associate Degree | 86 | 5.31 | 3.36 |
| Masters degree and higher | 117 | 42.9 | 1.79 |
| | 57 | 9.20 | 100 |
| total | 273 | 100 | - |

4-1-2- work experience

In this section, the results of the descriptive analysis of the company's activity history are presented in Table 4-4.

Table (4-4): Frequency distribution of work experience

| Experience | Frequency | Frequency Percentage | Percentage Of Cumulative Frequency |
|---------------|-----------|----------------------|------------------------------------|
| 1-5 years | 62 | 7.22 | 7.22 |
| 6 years -10 | 86 | 5.31 | 2.54 |
| 11 years-15 | 53 | 4.19 | 6.73 |
| 16 -20 years | 35 | 8.12 | 4.86 |
| Over 20 years | 37 | 6.13 | 100 |
| total | 273 | 100 | - |

Univariate analysis

This section includes the study of descriptive variables such as standard deviation, skewness, elongation, as well as single-sample t-test. The purpose of this analysis is to be aware of the quality of the data, describe some of the observations and the level of perception of community members from the variables.

Table (4-5): Descriptive indices of research variables

| Variable | Mean | Standard Deviation | Skewness | Elongation |
|-----------------------------------|-------|--------------------|----------|------------|
| Organizational performance | 927.3 | 576.0 | -0.549 | 368.0 |
| Human resource information system | 822.3 | 721.0 | -0.747 | 848.0 |
| Entrepreneurial thinking | 964.3 | 641.0 | -0.931 | 834.1 |
| Entrepreneurial culture | 121.4 | 468.0 | 344.-0 | 265.0 |
| Entrepreneurial leadership | 794.3 | 674.0 | 491.-0 | 070.0 |
| Strategic resource management | 811.3 | 714.0 | 474.-0 | 240.0 |
| Creativity & innovation | 567.3 | 693.0 | -0.261 | -0.105 |

Table (5-4): A test of the variables of the research

| | Test value | | | | | | |
|-----------------------------------|------------|--------------------|-------------------|--------------------------------------|------------------------|---|-------|
| | T value | Degrees of freedom | Meaningful number | Community perception of the variable | The average difference | 95% confidence interval Minimum limit Maximum limit | |
| Organizational performance | 589.26 | 272 | 0.000 | Optimal | 927.0 | 859.0 | 996.0 |
| Human resource information system | 823.18 | 272 | 0.000 | optimal | 822.0 | 736.0 | 908.0 |
| Entrepreneurial thinking | 836.24 | 272 | 0.000 | optimal | 964.0 | 888.0 | 041.1 |
| Entrepreneurial culture | 542.39 | 272 | 0.000 | optimal | 121.1 | 065.1 | 177.1 |
| Entrepreneurial leadership | 469.19 | 272 | 000.0 | optimal | 794.0 | 713.0 | 874.0 |
| Strategic resource management | 751.18 | 272 | 000.0 | optimal | 811.0 | 726.0 | 896.0 |
| Creativity & innovation | 522.13 | 272 | 000.0 | optimal | 567.0 | 485.0 | 650.0 |

Bivariate analysis

After analyzing the univariate and describing the characteristics of the society examined based on the variables of the research, the analysis of the bifurcate relationships of the variables has been studied.

In Table 6-4, the results of the Pearson correlation coefficient calculation are shown. All coefficients are confirmed at 99% confidence level and have positive values. Therefore, the zero assumption is based on the absence of correlation and the claim is preserved. Therefore, it can be said that by increasing or decreasing the value of one variable, the value of another variable increases or decreases; in other words, all relations are direct and significant.

Table (6-4): Correlation coefficients of research variables

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------------------------------------|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------|
| 1.entrepreneurial mindset | Correlation coefficients Significance level Number of observations | 000.1 - 273 | | | | | | |
| 2. entrepreneurial culture | Correlation coefficients Significance level Number of observations | 485.0 001.0 273 | 000.1 - 273 | | | | | |
| 3. Entrepreneurial leadership | Correlation coefficients Significance level Number of observations | 514.0 001.0 273 | 558.2 001.0 273 | 000.1 - 273 | | | | |
| 4.strategic management of resources | Correlation coefficients Significance level Number of observations | 724.0 001.0 273 | 547.0 001.0 273 | 596.0 001.0 273 | 000.1 - 273 | | | |
| 5. Creativity and innovation | Correlation coefficients Significance level Number of observations | 598.0 001.0 273 | 487.0 001.0 273 | 528.0 001.0 273 | 630.0 001.0 273 | 000.1 - 273 | | |
| 6. human resource information system | Correlation coefficients Significance level Number of observations | 711.0 001.0 273 | 568.0 001.0 273 | 604.0 001.0 273 | 662.0 001.0 273 | 617.0 001.0 273 | 001.1 - 273 | |
| 7.organizational performance | Correlation coefficients Significance level Number of observations | 758.0 001.0 273 | 648.0 001.0 273 | 712.0 001.0 273 | 770.0 001.0 273 | 722.0 001.0 273 | 781.0 001.0 273 | 000.0 - 273 |

Qualification Sample Tests

One of the methods for measuring the proportion of sample size for factor analysis is the calculation of the Kaiser Myers (KMO) and the Bartlett test. The range of KMO is between 0 and 1. As much as this value is closer to 1, the data is considered appropriate for a factor analysis. The minimum amount available for this index is 6.0.

Table (7-4): The results of the sampling adequacy test

| variable | KMO indicator | Bartlett Test | | |
|-----------------------------------|---------------|----------------------|-------------------|--------------------|
| | | Approximate K square | Degree of freedom | significant number |
| Organization performance | 810.0 | 902.512 | 28 | 000.0 |
| Human resource | 875.0 | 013.1220 | 28 | 000.0 |
| information system | 674.0 | 269.726 | 10 | 000.0 |
| Entrepreneurial thinking | 628.0 | 339.85 | 6 | 000.0 |
| Entrepreneurial culture | 792.0 | 327.425 | 15 | 000.0 |
| Entrepreneurial leadership | 716.0 | 737.432 | 6 | 000.0 |
| Strategic management of resources | 817.0 | 604.440 | 21 | 000.0 |
| Creativity and innovation | | | | |
| total | 832.0 | 439.8721 | 861 | 000.0 |

The path analysis

The path analysis, analyzes the hypothesized relationships. In this analysis, the values of the path coefficient represent the standardized beta (β) in the regression, the critical value denotes the coefficient t of each path and the significance level also indicates the confidence level to the values obtained. The results of this analysis can be expressed in the form of direct effects that examine the relationship between the two variables and indirect effects that examine the relationship between more than two variables. The mentioned two sections are discussed below.

Direct effects

In this section, we examine the direct effects of independent variables on affiliated entities. In fact, the direct paths in this analysis are the result of the development of research hypotheses. The results of this review are descriptions of the tables.

The main hypothesis testing

The main hypotheses of the research are presented below:

- 1.Strategic entrepreneurship affects the organization's performance
- Strategic entrepreneurship affects human resources information system.2
3. Human resources information systems affect the performance of the organization.
4. Human resources information systems have a mediating role in the relationship between strategic entrepreneurship and organizational performance.

The results of the structural equation test for these three main hypotheses are in accordance with Table 15-4.

Table (15-4): Results from the analysis of direct paths for the main hypothesis

| order | path | Path coefficient | Critical value | Significance level | result |
|-------|--|------------------|----------------|--------------------|----------|
| 1 | Strategic Entrepreneurship Organizational Performance | - 744.0 | 896.15 | 000.0 | approved |
| 2 | Strategic Entrepreneurship Information Systems | - 799.0 | 177.33 | 000.0 | approved |
| 3 | Information Systems Organizational Performance | - 200.0 | 955.3 | 000.0 | approved |

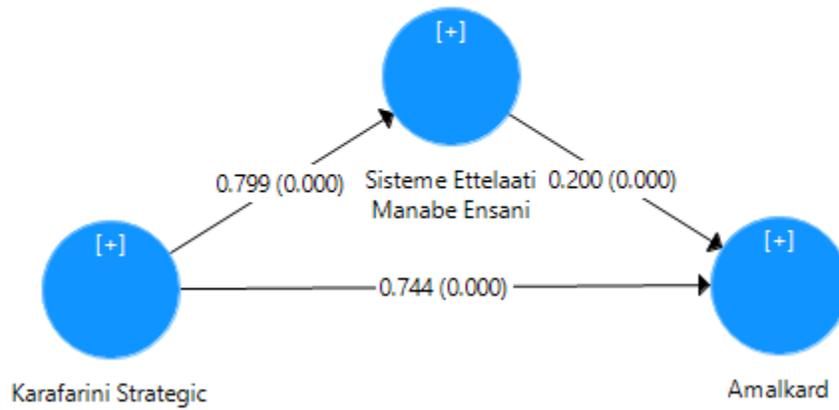


Figure 1-4: Direct path analysis for the main research hypothesis

Table (16-4): The results of indirect path analysis

| Mediator paths | | | | | | |
|-----------------------------|---------------------|--------------------------|---------------|-----------------|--------------|--------------------|
| Independent variable | Mediator variable | Dependant variable | Direct effect | Indirect effect | Total effect | Significance level |
| Strategic entrepreneurs-hip | Information systems | Organization performance | 744.0 | 160.0 | 904.0 | 000.0 |

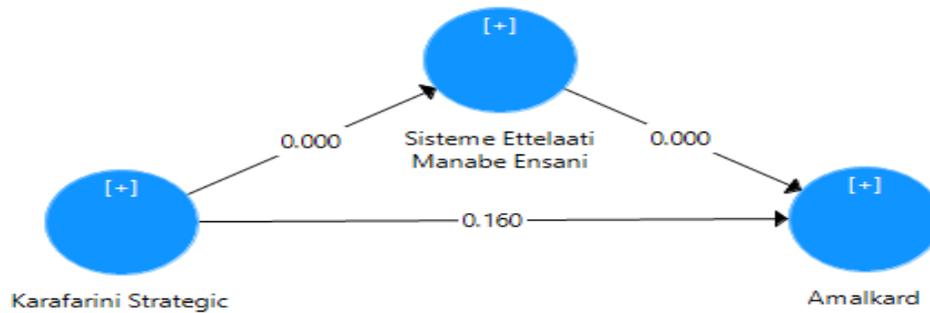
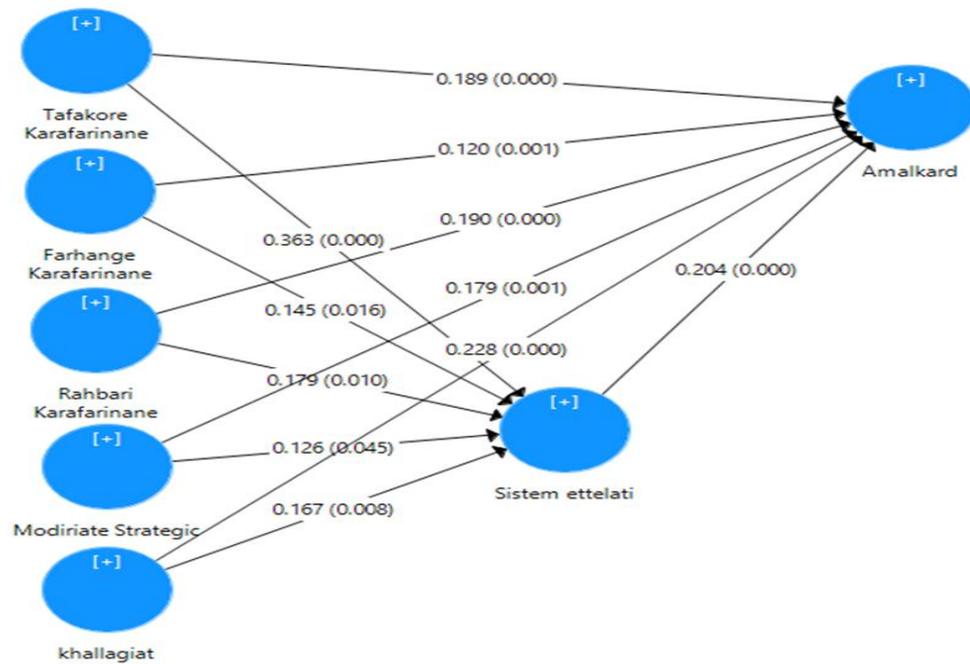


Figure (2-4): Indirect Effect

A subsidiary hypothesis testing

Table (17-4): Results from the analysis of direct paths for the subsidiary hypothesis

| Order of Hypothesis | Path | Path coefficient | Critical value | Significance level | result |
|---------------------|--|------------------|----------------|--------------------|----------|
| 1 | Entrepreneurial Thinking - Human Resources Information System | 363.0 | 274.5 | 000.0 | approved |
| 2 | Entrepreneurial Culture - Human Resources Information System | 145.0 | 449.2 | 016.0 | approved |
| 3 | Entrepreneurial Leadership - Human Resources Information System | 179.0 | 638.02 | 010.0 | approved |
| 4 | Strategic Resource Management - Human Resources Information System | 126.0 | 027.0 | 045.0 | approved |
| 5 | Creativity and Innovation - Human Resources Information System | 167.0 | 713.2 | 008.0 | approved |
| 6 | Entrepreneurial thinking- Organizational Performance | 189.0 | 381.4 | 000.0 | approved |
| 7 | Entrepreneurial culture - Organizational performance | 120.0 | 534.3 | 001.0 | approved |
| 8 | Entrepreneurial Leadership - Organizational Performance | 363.0 | 685.0 | 000.0 | approved |
| 9 | Strategic resource management - Organizational performance | 179.0 | 456.3 | 001.0 | approved |
| 10 | Creativity and Innovation - Organizational Performance | 228.0 | 568.5 | 000.0 | approved |



Figure(3-4): Analysis of direct paths for sub-hypotheses

Conclusion

Based on the results of data analysis, it can be said that strategic entrepreneurship in the statistical society of the research is considered as an appropriate prerequisite for the performance of the organization and human resources information systems. These results coincide with the results of research (Rayle & et al., 2014), (Cohen& et al., 2007), (Ireland and Web, 2007), (Zarifian, 2013), (Nutza & et al., 2017), (Movahed Manesh& Aghajani , 2011). Human resources information systems in the statistical research community are a good predictor of the organization's performance, which agrees with the results of the research (Nutza & et al., 2017), (Jafari Nia and Ghasemi Nasab, 2016), (Mossadeghi Moghaddam, 2015). The indirect impact between strategic entrepreneurship and performance can be deduced by the effect of independent variables on dependent, conditional, and indirect variables. Therefore, the mediation of human resources information systems between the relationship between strategic entrepreneurship and organizational performance is confirmed. The amount of indirect effect is also 0.160. This result is consistent with (Anglen & et al., 2015). Strategic management, creativity and innovation of thinking, culture and innovative strategic leadership in the organization of the statistical research community are directly considered as a prerequisite for human resource information systems and organizational performance, in tandem with the results of (Nutza & et al., 2017), (Shaban and Youseff, 1393), (Angelen & et al., 2015) and (Rayle & et al., 2014).

Research suggestions

By reviewing the results of data analysis and confirming the significance of the hypotheses, the following suggestions are presented.

5-4-1 -Practical suggestions

According to the findings of the analysis of the data and discussions in the conclusion, the following suggestions are presented to the managers of the organization under study.

1.) Regarding the confirmation of the main hypothesis of the research that is the positive impact of strategic entrepreneurship on human resource information systems and performance, the following suggestions are recommended:

A. Supporting and allocating sufficient resources to implement company management and strategic plans

B. Allocating valuable rewards to employees who provide new and entrepreneurial ideas.

C. Employing entrepreneurial executives with a well-planned and strategic program

D.) Recruitment of qualified and specialized personnel in the organization's information systems

E. Allocation of resources to build and strengthen human resources information systems for the organization

2. Regarding the confirmation of the first sub-hypothesis that there is a relationship between entrepreneurial thinking and information systems and performance, there are suggestions that the organization at recruitment, employ those who have innovative ideas and entrepreneurship, and are ambitious and active with long-term goals.

3. Considering the confirmation of the hypothesis that the entrepreneurial culture has a positive impact on information systems and performance, it is suggested that the managers of the organization by organizing training sessions each month and the lectures of experienced people about the organization's goals and the importance of innovation and entrepreneurship for all members of the organization , gradually turn entrepreneurial thinking into a culture for the organization and in the minds of employees.

4.) It is suggested that the use of human resources information systems in the organization and its importance to employees be clearly explained.

Resources

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