



A SEM-Artificial Neural Network Analysis to Examine the Role of Strategic Foresight on Organizational Success

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ABSTRACT

Purpose - This study develops a research framework to examine the role of strategic foresight on organizational success at Jordanian financial services companies listed on the Amman Stock Exchange.

Design/ Methodology /Approach – This study targeted the most important Jordanian financial services companies listed on the Amman Stock Exchange, (171) questionnaires were retrieved, and responses were analyzed using descriptive statistics, and SMART PLS & SEM-ANN method.

Finding – The findings indicated that three out of four dimensions of strategic foresight significantly impact organizational success, which are scenario planning, future vision, and environmental scanning. In contrast, the strategic choice did not have any significant impact on organizational success, and this was confirmed by testing the ANN model.

KEYWORDS: Strategic Foresight, Organizational Success, Scenario Planning, Future Vision, Environmental Scanning, Strategic Choice

1. INTRODUCTION

Today's world is complex and quickly changing in rapid ways that are increasingly difficult to predict, such that focusing on a single issue is no longer sufficient to deal with emerging threats and opportunities (VAN Dorsser & Taneja, 2020), which produces more pressure on organizations and forces them to keep pace with the pace of change and reimagining thinking about how they do their work, and how value is created, distributed and captured, not only to survive and thrive but also to meet challenges (Grove et al., 2023). In the same context, the ability of organizations to detect environmental opportunities, exploit energies, discover internal strengths and weaknesses, and harness them to achieve their goals increases their efficiency and effectiveness, as, the availability of cohesion among employees collectively to make appropriate decisions, solve problems, and avoid previous mistakes all lead to the organization moving forward

with clear steps towards organizational success (Vayyavur, 2015) This, of course, requires the application and development of new knowledge in addition to the use of technology, which has a large and important role in managing, processing, structuring and benefiting from information quickly as a rapid response to environmental changes (Garcia & Sosa-Fey, 2020). On the other hand, Jordanian financial services companies contribute to activating the role of rational financial systems in supporting economic growth and development and enabling a thriving ecosystem for financial technology. Therefore, they must constantly use forecasting and strategic foresight tools to survive in a dynamic environment. Therefore, this paper attempts to shed light on achieving this through implementing strategic foresight effectively to discover emerging challenges and opportunities and how to respond to them to achieve organizational success.

LITERATURE REVIEW & HYPOTHESES DEVELOPMENT

The future will not be the same as it was before by embracing strategic foresight, adaptability, and transformational thinking, companies can position themselves to survive and thrive in the decades ahead by focusing on strategic foresight to identify and address challenges and opportunities, as strategic forecasting is determined through three types of thinking (future, system, and acceleration), where it appears as a vital capability that enables organizations to adapt to industry changes, explore emerging challenges and opportunities, and guide decision-making in uncertain contexts, it is a critical tool for companies to proactively identify emerging trends and potential risks, develop plans to mitigate threats and capitalize on opportunities, and ultimately enhance their long-term success and can help management make better decisions about the future of the organization (Grove et al., 2023). In the same context, experimental evidence revealed a positive relationship between environmental scanning capabilities, strategic decision-making capabilities, integration capabilities, and organizational excellence where environmental scanning enables managers to monitor their surrounding environment, develop current and future business strategies accordingly, in addition, achieve organizational excellence also strategic choice capabilities enable managers and leaders to develop strategic plans, choose the most effective initiatives, and implement them to achieve organizational excellence (Qahtan & Al Himyari, 2022). Strategic foresight also affects strategic agility, so organizations must have the ability to exploit opportunities available in the business environment and adapt to them, and this can be done by redistributing the resources they possess efficiently and effectively (Flaih & Chalab, 2022). As well as the cognitive administrative capabilities of strategic foresight have a direct impact on its application in the organization, thus ensuring administrative innovation, as the higher the cognitive administrative capabilities with strategic foresight, the greater the added value therefore, it must be integrated within the framework of dynamic

capabilities, which leads to enhanced performance and thus the sustainability of the organization (Dominiece-Diasa & Volkova, 2020). In the same field, the concept of strategic foresight was discussed and the two distinct methods by which it was explained on the one hand, it guides policy by providing more systematic knowledge about relevant trends and developments in organizational environments. ; On the other hand, it acts as a driver of reflexive mutual social learning processes among policymakers that stimulate the generation of shared visions for public policy that allow strategic foresight to make an effective contribution to public policy making (Habegger, 2010). Therefore, for a better understanding of the role of strategic foresight in delivering innovations, it is viewed from the perspective of managerial ability that requires a certain set of skills and mindset to master strategic foresight, It represents the ability to create future value and sustainability and the ability for strategic foresight must be dynamic, because It refers to the organization's ability to enhance competitive advantage, enhance decision-making processes in organizations, and thus sustainability for the future, leading to management innovations and ensuring sustainability in uncertain environments (Rohrbeck, 2012). Dimensions of strategic foresight - such as scenarios, written reports, and forecasts - can be useful in communicating ideas to a wide range of stakeholders, and it is a process that continually trains individuals to deal with complexity, think in an integrative manner, and be skilled in developing hedging strategies for the future (Bezold, 2009). On the other hand, inter-organizational cooperation is very important and beneficial in organizational success and is a means of enhancing the quality of services provided. However, inter-organizational cooperation is not easy, especially if organizations must deal with rapid turnover of workers, inconsistent schedules, changes in workers' powers, and other factors. Environmental changes indicate that for organizations, programs, or services to succeed, it is necessary to move away from traditional methods and rely on long-term planning and access to long-term financing (Fraser et al., 2022). As well as that organizational success

results from the interaction of several factors together, such as business ethics, employee cooperation, and participation in training courses, seminars, and meetings for ethical awareness, this leads to the development of traits among employees, such as openness, responsibility, and intellectual and emotional contribution, in a way that requires the highest level of personal participation. This leads to organizational success and sustainability (Silas-Dikibo & Njoku, 2022). Also, transformational leadership is considered a critical organizational success factor by bringing about changes in organizations to achieve the required strategic intentions that can only be achieved through effective transformational leadership. Self-development plans must be formulated at all levels and focus on teamwork to spread optimism and enthusiasm among employees to implement radical change, this, in turn, leads to organizational success (Nuel et al., 2021). Therefore, it is necessary to manage employee relations and adopt effective practices and policies by selecting employees and placing them in the appropriate place, which improves the organization's productivity and always represents the availability of financial and human resources, which contributes to organizational success (Ogar et al., 2021). So, modern organizations must promote a culture of open communication to motivate employee performance and institutionalize consulting programs in organizations to properly prepare new employees to achieve superior performance, grievances and conflicts at work must also be reduced through the participation of employees, listening to their concerns and problems, and training them, which makes them feel comfortable and happy, which is extremely important for achieving high performance, which leads to enhancing organizational success (Ugoani, 2020). as well as social sustainability capabilities, successful integration, and organizational project management efforts have a positive impact on organizational success, which is achieved through excellence in time and quality management of stakeholders, human resources, and economic and social sustainability, as developing vision, policy,

and direction with stakeholders leads to organizational success (Yazici, 2020). Accordingly, the following hypotheses were formulated:

H₁: There is a significant impact at ($\alpha \leq 0.05$) of strategic foresight by their dimensions (environmental scanning, future vision, scenarios planning, and strategic choice) on organizational success at Jordanian financial services companies.

H₂: There is a significant impact at ($\alpha \leq 0.05$) of strategic foresight on flexibility at Jordanian financial services companies.

H₃: There is a significant impact at ($\alpha \leq 0.05$) of strategic foresight on consistency at Jordanian financial services companies.

H₄: There is a significant impact at ($\alpha \leq 0.05$) of strategic foresight on innovation at Jordanian financial services companies.

H₅: There is a significant impact at ($\alpha \leq 0.05$) of strategic foresight on growth at Jordanian financial services companies.

CONCEPTUAL FRAMEWORK

Strategic Foresight

Strategic foresight (SF) developed in the 1950s through two main schools: the French Foresight School, which calls for cooperative systemic thinking, and the American Rand Corporation, which established the concept of "strategic foresight," which is based on methods of anticipating the future, where strategic foresight is considered an important process for identifying activities and processes that help decision-makers chart a course for the organization's future work, formulate flexible policies to deal with future conditions and develop procedures that enhance the desired situation, within a specific time frame based on studying the environment surrounding the organization, developing alternatives and building Scenarios (Altarawneh, 2023), whereas foresight practices take into account all the influences of long-term political, economic, social, technological, cultural, and legal trends so that strategic foresight to envision the future is no longer a luxury, but rather a necessity to achieve large-scale change (Bezold, 2009). Also, foresight is a key strategic capability that includes a set of methods that help explore, imagine, and anticipate the future in an open and

structured way that requires recognition and acceptance that the future is a space of unpredictable possibilities and that we need to focus on the long term and look beyond it through... Incorporate multiple perspectives to navigate potential changes (Grove et al., 2023). and it is a method for understanding, mapping, and influencing the future, through a set of practices that help actors choose the optimal path forward by understanding the potential consequences. Thus, it is considered an important tool that can be used in long-term strategic planning activities and to support the decision-making process (Mohammadi, 2023). Below we discuss Strategic Foresight dimensions:

1. Environmental Scanning

The company must understand and address its internal and external variables to improve its success, as environmental scanning (ES) refers to the organization's ability to study and manage its internal and external environments to collect information and use that information as early warning signs of potential environmental changes, to determine its future course of action (Qahtan & Al Himyari, 2022). Therefore, applying strategic foresight requires a dynamic management ability to sense and seize the opportunities we obtain from environmental scanning as the greater the management's awareness of challenges and opportunities, the greater the likelihood that the organization will foster an innovative environment (Dominiece-Diasa & Volkova, 2020). This requires identifying and analyzing environmental uncertainties (Grove et al., 2023), as the earlier the organization can detect the first indicators of external change in a turbulent environment, the greater the remaining reaction time and the earlier the response (Maertins, 2016).

2. Future Vision

Strategic foresight practitioners face the challenge of improving plausible future vision (FV) through a systematic process of forecasting (van Dorsser, & Taneja, 2020), where it was generally agreed that strategic foresight can serve as a tool that can help individuals adopt a systemic view of interconnected global challenges. (Bezold, 2009) It can help identify and explore challenges and opportunities arising from the multiple signals and drivers of change shaping the future (Grove et al., 2023). Thus,

maintaining the future vision, sensing opportunities and improvements, and assisting decision-makers in shaping the organization's future course of action (Dominiece-Diasa & Volkova, 2020) is a sensitive process primarily to ensure the full realization of the organization's strategic basic pillars and thus achieve the vision as a strategic goal by educating all members in the organization for weak signals in the surrounding environment (Maertins, 2016), organizations can also use smart techniques such as anchoring and reframing negative thoughts and using positive language patterns to help individuals maintain a good future vision, overcome challenges, and stay motivated while working to achieve organizational goals (Bohra & Shukla, 2023).

3. Strategic Choice

Strategic choice (SC) capabilities are the organization's ability to choose the alternative that best suits its internal and external conditions, which includes choosing the future that will support its ambition and help it achieve its long-term goals (Qahtan & Al Himyari, 2022). Here there is a need to integrate an understanding of complexity and uncertainty into the decision-making process (Bezold, 2009) Because Managers don't need only to be able to sense opportunities; They must also possess the skills required to seize them (Dominiece-Diasa & Volkova, 2020). So, developing strategic options in an uncertain context and utilizing strategic foresight enables organizations to better deal with future complexities (Grove et al., 2023).

4. Scenario Planning

Building scenario and analyzing trends provides policymakers with the possibility to test decisions that address deep uncertainties, these simulations can help decision-makers avoid costly mistakes in the real world and serve to help societies prepare for and anticipate alternative futures (Bezold, 2009).

Scenario planning (SP) requires organizations to have planning systems that conduct various hypothetical scenario analyses, and this analysis can be done through mechanisms such as simulations, stress tests, etc. which enables the organization to develop different contingency measures against different possible outcomes in the context of long-term

thinking and planning (Mohammadi, 2023). Thus, building scenarios is one of the most common strategic forecasting methods, through which more than one scenario is developed for the proposed alternatives in the long, short, and medium term (Altarawneh, 2023) because the survey system contains fundamental blind spots that require thoughtful thinking to survey regularly where environmental scanning can generate a lot of new data, but the difficult part is selecting valuable knowledge, determining the implications for action, and to choose the most appropriate future scenario (Mohammadi, 2023)

Organizational Success

Organizational success (OP) refers to the superior and sustainable performance results that organizations achieve as a result of implementing appropriate strategies, it also represents valuable insights into the efficiency and effectiveness of the organization in achieving its goals and objectives in a dynamic business environment, therefore, a motivated, specialized, and high-performance workforce must be available to raise organizational competitiveness and achieve organizational success (Alzghoul et al., 2023) as many tools contribute to achieving organizational success, such as flexibility, especially in uncertainty situations (Mahmood et al., 2022), employee consistency and cooperation (Valiyan, 2016), and innovation (Daha et al., 2022). Therefore, the author believes that success in the future is an indication of insight, which is the big picture, which reflects measurements of success from different points of view and angles, and provides indicators towards more advanced evaluation measures, as organizational success shows the organization's development, continuity, progress, and dealing with the changing circumstances it faces. Below we discuss some Tools for organizational success.

1. Flexibility

Flexibility (FLX) allows the organization to confront situations of uncertainty and situations of continuous environmental change and is considered a strategic capability that allows it to build proactive strategies that constitute a strategic advantage that enables it to deal smoothly,

efficiently, and effectively (Mahmood et al., 2022). Flexibility encourages employees to generate effective and efficient alternatives to achieve goals. Therefore, it motivates them to become more creative in performing tasks, which leads to rising levels of innovation in the organization (Dahal et al., 2022). It is also considered a skill at the individual and team levels that contributes to dealing positively with changes and difficulties, and it is one of the most important basic assets for enhancing performance and thus organizational success (Arora et al., 2023).

2. Consistency

The basic importance of consistency (CO) in the organization is for individuals to cooperate to achieve common goals, this requires the availability of integrity, solidarity, cooperation, and participation to achieve organizational goals, it also requires solving problems through teamwork, thus, it indicates the amount of cooperation and coordination between individuals in organizational units and their participation in decision-making (Valiyan, 2016). So, whenever there is effective internal communication, there is consistency in the words and actions of employees and provides a comfortable work environment characterized by coordination and communication, which supports the performance of employees to achieve the required organizational goals and objectives (Quilon & Perreras, 2020).

3. Innovation

Innovation (INN) can be defined as the implementation of creative ideas in an organization, which is considered the first step towards development and modernization at present. Especially with the advancement of technology and the increase in competition in companies, innovation helps people achieve their social and economic goals through cooperation whereas the presence of trust in the organization has an important role in the interaction of employees and the development of innovative ideas for the organization (Nurlaela et al., 2022). Therefore organizational success can be enhanced by focusing on human resources behaving in unique ways and viewing creative human resources as an essential skill because they work to improve

organizational success and by focusing on teamwork that leads to the innovation of new work practices that can be used to improve the ability of human resources to contribute organizational success (Daha et al., 2022)

4. Growth

Growth (GR) strategy is considered one of the strategies that organizations aspire to achieve through sales growth, increased assets, or increased profits, which allows them to survive, continue, increase market share, and outperform competitors (Wheelen et al, 2015, 221). Growth also leads to organizational sustainability, especially if the organization has highly skilled executives and creative workers who play a crucial role in enhancing problem-solving skills (Dahal et al., 2022).

Method

Research design:

A quantitative approach was used to achieve research objectives.

Participants

The participants are employees of (29) Jordanian financial services companies listed on the Amman Stock Exchange. A stratified random sample was drawn, consisting of (171) employees.

Measurement

The questionnaire survey was developed depending on the literature review. This study mainly uses the validated existing scales of previous studies which depend on Likert-scale with responses to options that range from 1 to 5, in this regard. Accordingly, the study preserves validity to confirm that all of the questions are understood, and that no ambiguity existed. To measure strategic foresight the study adopts a four-dimensional scale which is represented in (ES, FV, SC, and SP) and consists of (20) items based on (Badr, 2023; Shalaka & Gouda, 2021). In terms of measuring Organizational Success, the study adopts four-dimensional scales represented in (FLX, CON, INN, and GR) based on (Radwan,

2021; Al-Sarayrah, 2021) that include (20) Items.

Analysis & Discussion

The SMART PLS & SEM-ANN method was used to analyze the data. SEM was used to examine the relationships in the conceptual model of the study, and ANN was used to clarify the role of external constructs in predicting internal constructs. It became clear that PLS-SEM is suitable for complex models with multiple structures.

Measurement Model

Evaluation of the measurement model included assessing the convergent and discriminant validity of each measurement scale.

Convergent Validity

Convergent validity enables us to determine the extent of the reliability and credibility of the indicators in terms of the closeness of the questions to each other in interpreting the latent variables, Convergent validity was assessed using factor loading, Cronbach's alpha, composite construct reliability, and average variance extracted (Hair et al., 2014). Loading factor values must be greater than 0.70, While Cronbach alpha values should be higher than 0.7, CR values must be greater than 0.70, and AVE values must be higher than 0.50. These values indicate acceptable convergent validity for the measurement model. The results of the convergent validity test are shown in Table 1. First, the full factor loadings for the items in the measurement model were greater than 0.70 and each item loaded significantly. Also, all Cronbach alpha values recorded values higher than 0.70. We note from Table No. 1 that the values of AVE that were calculated for the various variables range from 0.501 to 0.553 and meet the condition of variance validity, which is greater than 0.5. We also note that all composite reliability values are greater than 0.7, which explains that the consistency between the variables is high.

Table 1. Overview of Tests for Reliability and Convergent Validity.

Variable	Construct	Item	Factor loading	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	AVE
Strategic Foresight	ES	ES3	0.776	0.719	0.720	0.842	0.640
		ES4	0.795				
		ES5	0.792				
	FV	FV1	0.812	0.832	0.838	0.881	0.599
		FV2	0.703				
		FV3	0.790				
		FV4	0.809				
		FV5	0.748				
	SP	SP1	0.697	0.791	0.792	0.857	0.545
		SP2	0.763				
		SP3	0.708				
		SP4	0.759				
		SP5	0.762				
	SC	SC1	0.775	0.817	0.817	0.872	0.577
		SC2	0.754				
SC3		0.754					
SC4		0.771					
SC5		0.744					
Organizational Success	FI	FLX1	0.799	0.811	0.813	0.876	0.639
		FLX2	0.778				
		FLX3	0.841				
		FLX4	0.778				
	CO	CONS2	0.696	0.739	0.741	0.836	0.562
		CONS3	0.758				
		CONS4	0.765				
		CONS5	0.776				
	INN	INOV1	0.783	0.803	0.805	0.872	0.630
		INOV2	0.851				
		INOV3	0.803				
		INOV5	0.733				
	GR	GROW1	0.743	0.815	0.821	0.871	0.576

Discriminant validity

Discriminant validity shows the extent to which each latent variable is distinguished from the other.

To ensure that indicators that measure a particular latent variable cannot measure another latent variable, we will analyze the Larcker Fornell coefficient, where the square root value of the composite reliability must be greater than the Larcker Fornell value for all cases (Gujarati, 2004).

Table 2. Outcomes of Fornell-Lacker's Criterion.

	SE	FV	OS	SC	SP
ES	0.800				
FV	0.612	0.810			
OS	0.690	0.799	0.697		
SC	0.641	0.650	0.686	0.760	
SP	0.652	0.655	0.769	0.725	0.738

In Table 2, the square root value of the composite reliability is greater than the Larcker Fornell value for each Dimension, which indicates that the model met this standard and was characterized by true differentiation between dimensions.

Structural model

Through the measurement model, the validity and reliability of the current study model were confirmed. The next step in PLS-SEM includes evaluating the structural model of the current study tool by examining the level of collinearity in the structural model of the study tool., The parameters of the independent variables may be biased due to the presence of a high level of collinearity between the expected latent variables, Therefore, we need to examine this relationship. In PLS-SEM, the problem of collinearity arises when the Tolerance values are less than 0.20, and when the Variance Inflation Factor (VIF) values are less than 10 (Hair et al., 2014).

Table (3) shows that all VIF values for the latent variables have achieved values less than 10 and that all Tolerance values have achieved the acceptable statistical threshold, which is higher than 0.20, and therefore it can be said that there are no problems of multicollinearity in the structural model of the study tool.

Table 3. Results of multicollinearity test

latent variables	VIF	Tolerance
ES	2.424	0.524
FV	3.034	0.302
SP	2.360	0.511
SC	3.037	0.299

To evaluate the relationship assumed in the structural model and test the hypotheses, we will rely on a set of criteria, including: (f2, R2), The results of these tests were as follows:

Table 4. Results of coefficient of determination R2 and Effect Size F2 test

	F ²	AR ²	R ²
ES	0.051	0.679	0.682
FV	0.041		
SC	0.034		
SP	0.141		

coefficient of determination (R2)

It is a common measure upon which the structural model is evaluated. This coefficient represents the combined effects of all independent variables on the dependent variables. Table (4) shows that the four independent variables explain %68 percent of the variance occurring in the dependent variable (organizational success

Effect Size F2

It is used to measure the size of the effect of each independent variable on the interpretation of the dependent variable. The level of influence can be determined by 0.35 => Large effect 0.15 => Medium effect 0.02 => Small effect. The table 4 shows that all independent variables recorded high influence values on the dependent variable.

Hypotheses Testing:

The Structural model explores the overall effects and relationship between the research constructs path coefficient (β) and significance level, and t values. A path coefficient is the standardized regression coefficient , where an absolute (β) value of or more indicates a large effect, values around 0.3 medium and values of less than (0.1) a small effect, table (5) shows the effects among the constructs of the proposed model.

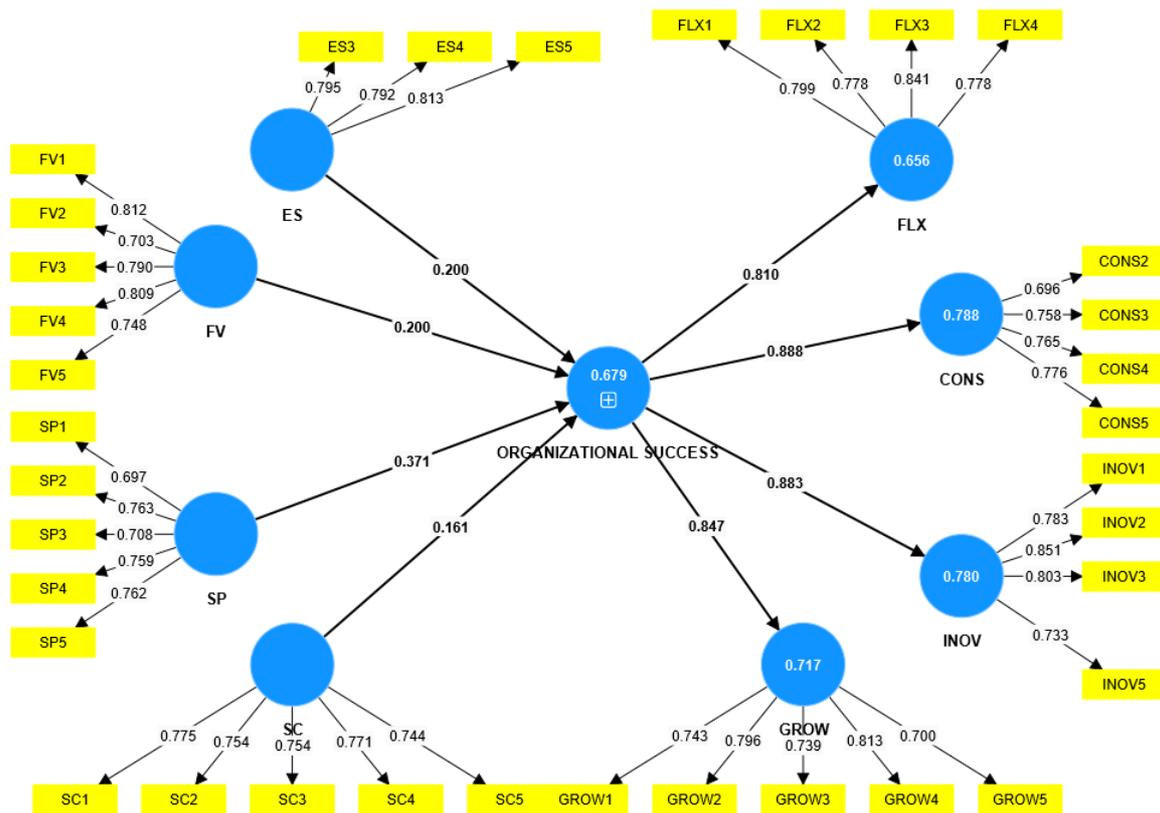


Table 5. Results of hypothesis testing: link relations between key study variables

H	PATH	Beta (β)	Sample mean (M)	Standard deviation (STDEV)	T-Values.	P-Values.	R ²	Remarks
H1	ES -> ORGANIZATIONAL SUCCESS	0.200	0.196	0.071	2.824	0.005	0.48	SUPPORT ED
H2	FV -> ORGANIZATIONAL SUCCESS	0.200	0.202	0.075	2.661	0.008	0.53	SUPPORT ED
H3	SC -> ORGANIZATIONAL SUCCESS	0.161	0.169	0.087	1.841	0.066	0.47	NOT SUPPORT ED
H4	SP -> ORGANIZATIONAL SUCCESS	0.371	0.365	0.093	3.984	0.000	0.59	SUPPORT ED

The SEM results revealed that Strategic foresight has a significant effect on Organizational Success. Three hypotheses out of four were supported which means that three relationships were significant at the 0.05 level, with the path coefficient at 0.371-0.200 respectively. The strongest value was found in the effect of SP -> ORGANIZATIONAL SUCCESS, which indicates the importance of the scenario

planning process in better preparing for a range of possible futures, achieving flexibility and adaptation in the face of unexpected changes, and finally mitigating risks, on the other hand, the lowest value was found on the effect of SC -> ORGANIZATIONAL SUCCESS.

ANN ANALYSIS

The ANN methodology explains the importance of this tool in scientific research, as this methodology refers to how cognitive neurons are concentrated and accumulated through several complex probabilistic learning processes to utilize the optimal cognitive neurons as acquired information in predicting outcomes in the neural nodes.

The analysis of the ANN model includes adopting the independent dimensions (ES) (FV) (SP) (SC) as input neurons, while the dependent variable (organizational success) was considered as the output neuron. Also relying on each of R2, RMSE, and S2 and extracting their values from the test data according to the equation $R^2 = 1 - \frac{RMSE}{S^2}$. These values confirm the strength of the model and its ability to predict results, which reflects the value of this model in predicting the impact of strategic foresight on organizational success.

The predictive ability of the artificial neural network model was relied upon by calculating the values of the root mean square error (RMSE) included in the testing and training phases of this model and by calculating many iterations. Table 6 indicates the outputs of these two phases, in which the consolidated data show a clear trend, as the average RMSE values for both the training and testing phases were (0.087) (0.088), respectively, which are weak values

that indicate the significantly improved predictive accuracy of the ANN model, and verify the effectiveness of the ANN model.

In the second stage of testing this model, reliance was placed on the ratio of variance index (R2) shown by the model, as the results of this test indicate that the input neurons, which represent the independent variables, can explain, and predict about (77.7%) of the variation resulting from organizational success. The value of (R2) indicated by testing the ANN model (The value of R2 in the ANN model was calculated through the following equation: $R^2 = 1 - \frac{RMSE}{S^2}$, which is (77.7%) exceeds the value of (R2) (69.7%) that was recorded in the structural relationship modeling (SEM) analysis, which confirms the superior predictive power of the ANN model, especially in explaining the impact of strategic foresight on organizational success. Table (6) also shows the performance indicators for RMSE values within 10 neural networks in the training and testing phases, as all of them recorded values less than 0.1, which reflects the accuracy of the model. These low RMSE values, which are close to the minimum error, indicate a reliable model. High. The training phase recorded an average RMSE value (0.088).

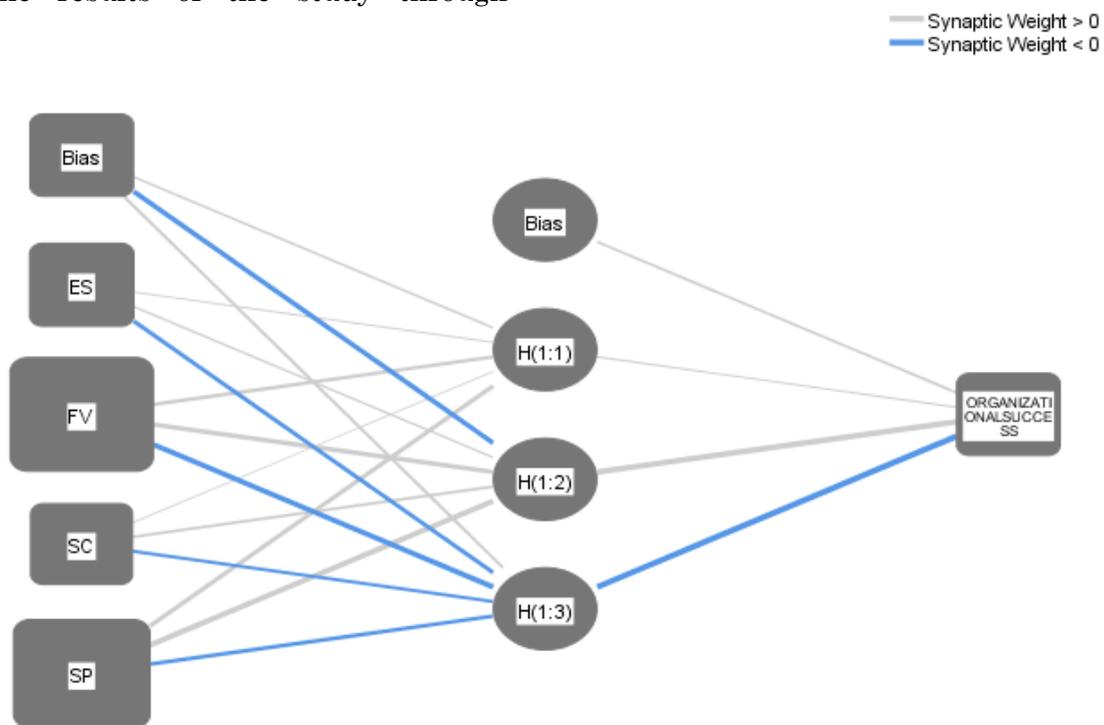
Table 6. RMSE Performance in Training and Testing Phases.

Netwo rk	Sum of square error (Training) (organizational success)	Sum of square error (Testing) (organizational success)	Sample size (Trainin g(organizi ational success)	Sample size (Testing) (organizati onal success)	RMSE (Training) (organizational success)	RMSE (Testing) (organizational success)
1	0.824	.231	120	51	0.083	0.067
2	0.746	0.365	123	48	0.078	0.087
3	1.361	0.693	116	55	0.073	0.082
4	0.754	0.319	125	46	0.078	0.083
5	0.995	0.223	126	45	0.089	0.070
6	1.387	0.714	122	49	0.077	0.081
7	0.69	0.427	108	63	0.080	0.082
8	0.669	0.434	114	57	0.077	0.087
9	0.773	0.24	123	48	0.079	0.071
10	0.873	0.253	128	43	0.083	0.077
Total	0.907	.390			0.087	0.088

In the third stage of this test, a sensitivity analysis was conducted to analyze and clarify the predictive capabilities of the input neurons, which represent the independent variables (ES, FV, SC, and SP). This would show the relative importance of the external structures to the independent variables, and accurately determine their effectiveness in influencing organizational success in companies. Jordanian financial services, as the importance of each determinant was determined by monitoring changes in expected results for influence, different measures were applied for each factor to arrive at a result that reflects the relative importance of that determinant.

Table (7) indicates the results of the test, as Table (7) shows the adoption of (SP) as the highest determining factor in influencing organizational success, and it is characterized by a natural significance of 95.2%. It is followed by (ES) with a clear natural significance of 62%. While (FV) shows lower normalized significance values, 43.6%. These results are largely consistent with the results of the study through

structural equation analysis (SEM), which indicated the importance of (SP) and (ES) in achieving organizational success. Interestingly, despite differences in normalized significance in all cases of the ANN model (ANN-1 to ANN-10); The continued emergence of FV SP and ES as dominant factors reinforces their influential roles in achieving organizational success For Jordanian financial services companies. This in-depth assessment not only reflects the significant impact of SP and ES on OS, but also skillfully emphasizes the necessity for Jordanian financial services companies to develop strategies and plans towards understanding and identifying these aspects of SP and ES and working to enhance and strengthen them in a way that reflects positively on their success and continuity, through future vision. By developing different possible scenarios and integrating them, financial service companies in Jordan can establish sustainable organizational success.



Hidden layer activation function: Sigmoid

Output layer activation function: Sigmoid

Figure 2. The ANN Model.

Table 7. Sensitivity Assessment Using Normalised_Importance Measures.

network	ES	FV	SP
ANN1	0.215	0.423	0.362
ANN2	0.259	0.165	0.576
ANN3	0.304	0.32	0.376
ANN4	0.215	0.348	0.436
ANN5	0.268	0.278	0.453
ANN6	0.281	0.328	0.391
ANN7	0.233	0.302	0.464
ANN8	0.247	0.272	0.481
ANN9	0.307	0.311	0.382
ANN10	0.302	0.212	0.486
ANN-total	0.2631	0.2959	0.4407
Maximum-Relative-Importance	0.302	0.212	0.486
Normalized-Relative-Importance (%)	62.1%	43.6%	95.2%

DISCUSSION

This study aimed to test the effect of strategic foresight in achieving organizational success. Accordingly, it was assumed that the high ability of Jordanian financial services companies to anticipate the future through (environmental scanning, future vision, scenario planning, and finally strategic choice) would contribute to Its organizational success.

Two different approaches were used to test and confirm this relationship. Smart-pls was used in the first part of the analysis to determine the impact of strategic foresight on organizational success, while ANN was used in the second part of the analysis to confirm the results and reach more accurate results.

The results of the study showed that strategic foresight, in its dimensions, affects the organizational success of Jordanian financial services companies. The percentage of influence that appeared from the results of SMART-PLS was (69.7%), based on the R2 value of 0.679, and the percentage of influence in the results of the ANN analysis increased to 0.777.

The results of the SMART-PLS and ANN test showed that the most influential dimension in achieving organizational success is scenario planning, as the value of the path coefficient reached (0.371). This result was confirmed by the ANN test, as it recorded after scenario planning the highest relative importance for a specific factor in organizational success, reaching (95%).

Through this result, the third hypothesis was proven in this study. The results of the two tests showed an impact of both the environmental scan and the future vision in achieving organizational success, as the path coefficients reached (0.200) (0.200), respectively. This result was confirmed by the ANN test, as both the environmental scan and the future vision recorded relative importance values of (62%). (43.6%) respectively. Through this result, the first and second hypotheses were proven in this study.

The results also showed that there was no significant effect of the strategic choice in achieving organizational success, as the path coefficient for this relationship recorded a weak and non-significant value amounting to (0.161). This result was confirmed by the ANN test, which excluded the strategic choice from the network model because it did not achieve any relative importance in the variable. Follower (organizational success), and this result indicates the rejection of the fourth hypothesis of the study.

Theoretical implications

This study contributes to strengthening the current knowledge base by providing valuable theoretical, practical, and administrative evidence regarding the variables and relationships it addresses. This study sought to cover many theoretical, organizational, and applied fields. Hence, this study provided a closer look at how companies develop their capabilities About

strategic foresight to deal with dynamic environments and thus achieve success and continuity. This perspective provides an important basis for understanding the relationship between organizational success and scenario planning, future vision, environmental scanning, and finally the strategic choice in Jordanian financial services companies.

- First: The impact of environmental scanning on organizational success, This result indicates that the ability of the surveyed companies to carry out the environmental scanning process contributes significantly to identifying the opportunities available to them and making comparisons between those opportunities to reach the opportunities that can be exploited successfully based on their capabilities, resources and expertise, as well as allocating the available resources and determining the mechanisms for using them. This is through discovering facts and determining how procedures are improved, to make some changes that attract more customers. Finally, the organization's success in environmental scanning helped it identify the essential and distinctive capabilities that enable it to achieve its goals, which subsequently leads to efficiency in performance to achieve organizational success.
- Second: The impact of future vision on organizational success. The results of the study indicated that future visions affect the achievement of organizational success. The surveyed companies' possession of a clear vision for the future enabled them to anticipate future trends and challenges and set goals that are consistent with the desired results. Through the presence of that vision, the necessary steps to achieve its goals were identified and worked towards achieving them. The future vision of companies contributes to the strategic planning, change, and development management of those companies and the development of innovative solutions that would help their organizations to remain competitive and relevant; Because it clarifies the direction of the business, helps coordinate and group efforts, and motivates the

completion of work to achieve long-term goals.

- Third: The impact of strategic choice on organizational success. The results of the study showed that there is no effect of strategic choice on the organizational success of Jordanian financial services companies, and this indicates the inability of these companies to benefit from their ability to develop appropriate strategic alternatives based on the process of environmental scanning and comparison between those alternatives. And then choose the appropriate strategic alternative for them and implement it correctly, to shift from their current competitive position to a new competitive position and thus not move to a better position in the market.
- Fourth: The impact of scenario planning on organizational success. The results of the study showed that scenario planning had the greatest impact on the organizational success of Jordanian financial services companies, which indicates the scenario planning process helped Jordanian financial services companies to better prepare for a range of possible futures, achieve flexibility and adaptation in the face of unexpected changes, and finally mitigate risks.

Practical implication:

This study can provide many important administrative implications. The study also reveals many valuable practical implications for practitioners in general and practitioners in financial services companies in particular. It can be summarized as follows:

- Regarding the impact of strategic choice on organizational success the management of Jordanian financial services companies must take advantage of their ability to develop strategic alternatives and choose the appropriate strategic alternative for them and implement it correctly, to shift from their current competitive position to a new competitive position and thus move to a better position in the market. Scenario planning for organizational success.

- Regarding the impact of environmental scanning on organizational success, it is necessary to adopt modern methodologies in the environmental scanning process, employ advanced information technology tools, and finally work to spread awareness of environmental scanning among employees to increase the ability of companies to quickly respond to environmental changes and adapt to them through integrated and coherent performance in a way that achieves organizational success.
- Regarding the impact of the future vision on organizational success, The Company's future vision must be based on solid foundations, such as sustainability and social responsibility that enable it to anticipate future trends and challenges and set goals that are compatible with those desired results, thus achieving a bright future for the company and its individuals.
- Regarding the impact of scenario planning on organizational success, it is necessary to conduct a regular and continuous scenario planning process, using the correct tools and for the scenario planning process to be realistic and clear. The scenario planning must be performed regularly, preferably once a year or every six months, by best practices that will affect its corporate operations in the future and thus effectively implement its strategies and make decisions when everything is ambiguous, complex, uncertain, and constantly changing.

Study Limitations:

Despite the results reached by this study regarding the impact of strategic foresight on organizational success and the confirmation of those results using ANN, it faced several limitations. Additional research is needed to determine whether these relationships influence organizational success.

In addition, the lack of literature related to the relationship between strategic foresight and organizational success reduces the possibility of comparison with previous studies. Although the current study used financial services companies listed on the stock market in Jordan, the sample size is

still small, and therefore more research is needed to collect more comprehensive data to reconfirm the results. The questionnaire was distributed to one group of Two main respondents, which is consistent with the approach of the current study, but there may be a possibility of bias occurring, and this requires conducting future studies and collecting data through different respondents. Also, relying solely on the questionnaire to collect data imposes special limitations, since the answers may be biased due to the common method used to collect all the data. This research was conducted in Jordan, which is considered a developing country. The results may not be generalized to other developed countries. Although the current research contains an appropriate sample size, adequate sampling of the research hinders the generalization of the results, and from the point of view of generalizing the results, measuring the research questions based on the opinion of the respondents would limit the generalization of the results.

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