

Designing a Model of Foresight Drivers for Managers of Bank Sepah Using a Mixed-Methods Approach

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ABSTRACT

Objective: Rapid economic, technological, and regulatory transformations in the banking sector have underscored the importance of foresight skills among managers. This study aimed to design a model of foresight drivers for managers of Bank Sepah using a mixed-methods approach.

Methods: This applied study employed an exploratory sequential mixed-methods design. In the qualitative phase, semi-structured interviews were conducted with 19 banking experts, and the data were analyzed through open, axial, and selective coding. In the quantitative phase, a researcher-developed questionnaire was distributed to 289 managers and employees of Bank Sepah in Alborz Province. Confirmatory factor analysis was used to validate the proposed model.

Results: Qualitative analysis resulted in a paradigmatic model comprising six main dimensions: causal conditions, contextual conditions, intervening factors, the core phenomenon, strategies, and consequences. The core phenomenon consisted of two components: future-oriented insight and environmental alertness. Quantitative findings showed that the data followed a normal distribution and that all factor loadings exceeded 0.4, indicating an acceptable model fit.

Conclusions: The findings demonstrate that the development of foresight skills among Bank Sepah managers is a multidimensional and systematic process. Strengthening these skills can enhance strategic planning, improve decision-making agility, and contribute to sustainable competitive advantage in the banking sector.

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Introduction

Futures studies skills refer to a set of cognitive, analytical, and strategic capabilities that enable individuals to systematically identify, analyze, and interpret future developments and, based on such insights, make more informed decisions. These skills go beyond mere forecasting and emphasize understanding uncertainties, identifying drivers of change, analyzing trends, and envisioning alternative futures. From this perspective, futures studies represent a dynamic and learning-oriented approach that frees managers' thinking from excessive dependence on past experiences and prepares them to confront probable, possible, and desirable futures (UNDP, 2021). Among the most important components of futures studies skills are systems thinking, long-term orientation, the ability to analyze macro-level drivers, scenario planning, uncertainty analysis, and the interpretation of weak signals of change. These skills help individuals avoid fragmented analyses of phenomena and instead understand the complex interrelationships among economic, technological, social, and political factors. Research indicates that the development of these skills significantly enhances organizational learning capacity and improves the quality of strategic decision-making (Schoemaker et al., 2018).

At the managerial level, futures studies skills are recognized as a core component of managerial competencies. Future-oriented managers are capable not only of addressing current problems but also of evaluating the long-term consequences of their decisions, thereby avoiding the trap of short-term and reactive decision-making. Consequently, futures studies have increasingly been regarded as a strategic capability in many leading organizations (Rohrbeck & Kum, 2018).

The banking system, due to the nature of its operations, is highly influenced by environmental changes and economic, technological, and regulatory uncertainties. In such a context, the importance of futures studies skills for bank managers becomes more pronounced than in many other organizations. These skills enable banking managers to anticipate changes in financial markets, customer behavior, emerging technologies, and monetary and credit policies before they occur, and to develop the necessary preparedness to respond effectively.

Moreover, the expansion of digital banking, the emergence of fintech companies, and the growing use of technologies such as artificial intelligence and big data have fundamentally transformed banks' business models. Under these conditions, futures studies skills assist managers in analyzing the strategic implications of these transformations and designing alternative pathways for the

development of banking services. Research shows that banks adopting future-oriented approaches perform better in terms of innovation and maintaining competitive advantage (OECD, 2020).

Futures studies skills also play a crucial role in risk management and enhancing banks' resilience. Analyzing various economic and financial scenarios, assessing the impacts of potential crises, and anticipating the consequences of major decisions are among the key functions of futures studies within the banking system. These functions can significantly reduce banks' vulnerability to environmental shocks.

The importance of futures studies in banking stems from the pivotal role banks play in economic stability, resource allocation, and the achievement of macro-level development goals. Decisions made by banking managers have consequences that extend beyond the organization and affect the broader economic system. Therefore, adopting a future-oriented approach grounded in scientific analysis of alternative futures is essential for the effective governance of banks. Futures studies provide a systematic framework for dealing with uncertainty and enhance the quality of banking policymaking and decision-making (UNDP, 2021).

In a study aimed at identifying future-oriented competencies of managers in Iran's banking system, Hosseini and Ahmadi (2021) concluded that skills such as systems thinking, analysis of macroeconomic trends, scenario planning, and understanding uncertainty are among the most important components of futures studies skills for banking managers. Their findings indicated that developing these skills plays a significant role in improving the quality of strategic decision-making and increasing banks' readiness to cope with future transformations. Similarly, Karimi and Sadeghi (2020), in a study on the role of futures studies in strategic decision-making in financial organizations, found that the application of futures-oriented approaches and tools reduces reactive and short-term decision-making among managers. Their results suggest that enhancing futures studies skills among managers of financial organizations—particularly banks—can lead to greater strategic effectiveness and organizational sustainability. Rezaei (2022), using a mixed-methods approach to develop a model for enhancing futures-oriented skills among managers in public organizations, identified individual, organizational, and environmental factors as the main drivers of futures studies skills development. The quantitative findings confirmed the validity and good fit of the proposed model and demonstrated its applicability to state-owned banks, including Bank Sepah.

Rohrbeck and Kum (2018), in their study on the impact of organizational futures studies on firm performance, concluded that the development of futures studies skills among managers has a positive and significant effect on organizational performance and the creation of sustainable competitive advantage. Their findings indicate that organizations that systematically engage in environmental scanning, trend analysis, and scenario planning are better equipped to cope with future uncertainties. Likewise, Schoemaker, Heaton, and Teece (2018), focusing on the role of leadership and dynamic capabilities in complex organizations, emphasized that managers' future-oriented and futures studies skills play a key role in guiding organizations under conditions of transformation and uncertainty. This study highlights the necessity of institutionalizing futures-oriented thinking among managers, particularly in financial and banking industries.

In large state-owned banks such as Bank Sepah, the need for futures studies becomes even more critical, as these banks bear not only competitive pressures but also governance and social responsibilities. Developing futures studies skills among managers in such banks enables better anticipation of the consequences of macroeconomic policies, intelligent adaptation to regulatory changes, and more efficient use of resources. In this sense, futures studies serve as a tool for transitioning from reactive management to proactive management within the banking system.

In conclusion, futures studies should not be viewed as a luxury or a purely academic activity, but rather as a strategic necessity for the survival and sustainability of banks in today's turbulent environment. Accordingly, identifying and modeling the drivers of futures studies skills among managers of Bank Sepah using a mixed-methods approach can provide a foundation for designing effective policies in human capital development and enhancing future-oriented leadership capacity within the country's banking system. Therefore, the aim of this study is to develop a model of the drivers of futures studies skills among managers of Bank Sepah using a mixed-methods methodology.

Material and Methods

The present study is applied in terms of purpose and employs a mixed-methods exploratory design, conducted in two sequential qualitative and quantitative phases.

In the qualitative phase, the participants consisted of experts from the banking system, primarily senior and middle managers. These experts were selected using theoretical sampling

complemented by snowball sampling. Data were collected through semi-structured interviews, which continued until theoretical saturation was achieved. In total, 19 interviews were conducted and analyzed.

In the quantitative phase, the study adopted a survey research design with the aim of testing and validating the model extracted from the qualitative findings. The statistical population of this phase included managers and employees of Bank Sepah in Alborz Province, totaling 985 individuals. Based on the Krejcie and Morgan sample size table, a sample of 278 respondents was determined. Ultimately, 289 usable questionnaires were collected and included in the final analysis.

The data collection instrument in the quantitative phase was a researcher-developed questionnaire derived from the qualitative results. The questionnaire consisted of 112 items across 21 components, measured using a seven-point Likert scale. Content validity was confirmed through expert judgment and calculation of the Content Validity Ratio (CVR), while reliability was assessed using Cronbach's alpha coefficient, which indicated acceptable internal consistency.

Qualitative data were analyzed using open, axial, and selective coding, whereas quantitative data were analyzed through confirmatory factor analysis (CFA). The results demonstrated an acceptable and satisfactory fit of the proposed research model. Ethical principles of research were observed throughout all stages of the study.

Results

Qualitative Findings

The qualitative findings of the study were derived from the analysis of expert interview data using open, axial, and selective coding. This process led to the identification of a paradigmatic model of the drivers of futures studies skills among managers of Bank Sepah.

The core phenomenon of the study was identified as the development of futures studies skills, which was conceptualized through two main components: future-oriented insight and environmental alertness. Future-oriented insight encompasses the ability to analyze trends, design future scenarios, understand environmental changes, and develop future-oriented thinking. Environmental alertness refers to the capability for early identification of emerging changes and uncertainties, as well as timely responses to environmental stimuli.

Within the paradigmatic model, causal conditions influencing the formation of this phenomenon included organizational policy, leadership, and globalization, all of which play a decisive role in directing the development of futures studies skills.

Contextual conditions consisted of flexible and agile organizational structures, communication skills, and organizational culture and behavior, providing the necessary foundation for the realization of the core phenomenon. The findings also indicated that intervening conditions, such as technology, the external environment, market dynamics, and customers, can either facilitate or hinder the development process of futures studies skills.

Based on the analysis, strategies for achieving the development of futures studies skills were identified as continuous learning, research skills, effective communication, effective management, and the application of emerging technologies.

Finally, the consequences of developing futures studies skills among managers included improved strategic planning, value creation and competitive advantage, increased agility in decision-making, effective responsiveness to market needs, and innovation in services and products.

Overall, the coding process resulted in the identification of 112 indicators, 21 components, and 6 main factors, which were integrated into the paradigmatic model of futures studies skills development among managers of Bank Sepah (Table 1).

Table 1. Drivers of Futures Studies Skills among Managers of Bank Sepah (Mixed-Methods Approach)

| Paradigmatic Model Dimension | Driver / Main Category | Components (Results of Axial Coding) |
|------------------------------|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Causal Conditions | Organizational and Macro Drivers | Organizational policy, leadership, globalization |
| Contextual Conditions | Structural and Cultural Drivers | Flexible and agile structure, communication skills, organizational culture and behavior |
| Intervening Conditions | Environmental and Competitive Drivers | Technology, environment, market, customers |
| Core Phenomenon | Managers' Futures Studies Skills | Future-oriented insight, environmental alertness |
| Strategies | Skill Development Implementation Drivers | Continuous learning, research skills, effective communication, effective management, use of emerging technologies |
| Consequences | Outcomes of Futures Studies Skills Development | Strategic planning, value creation and competitive advantage, decision-making agility, responsiveness to market needs, service and product innovation |

Quantitative Findings

Prior to testing the research model, the Kolmogorov–Smirnov (K–S) test was conducted to examine the normality of the data. The results are presented in Table 2.

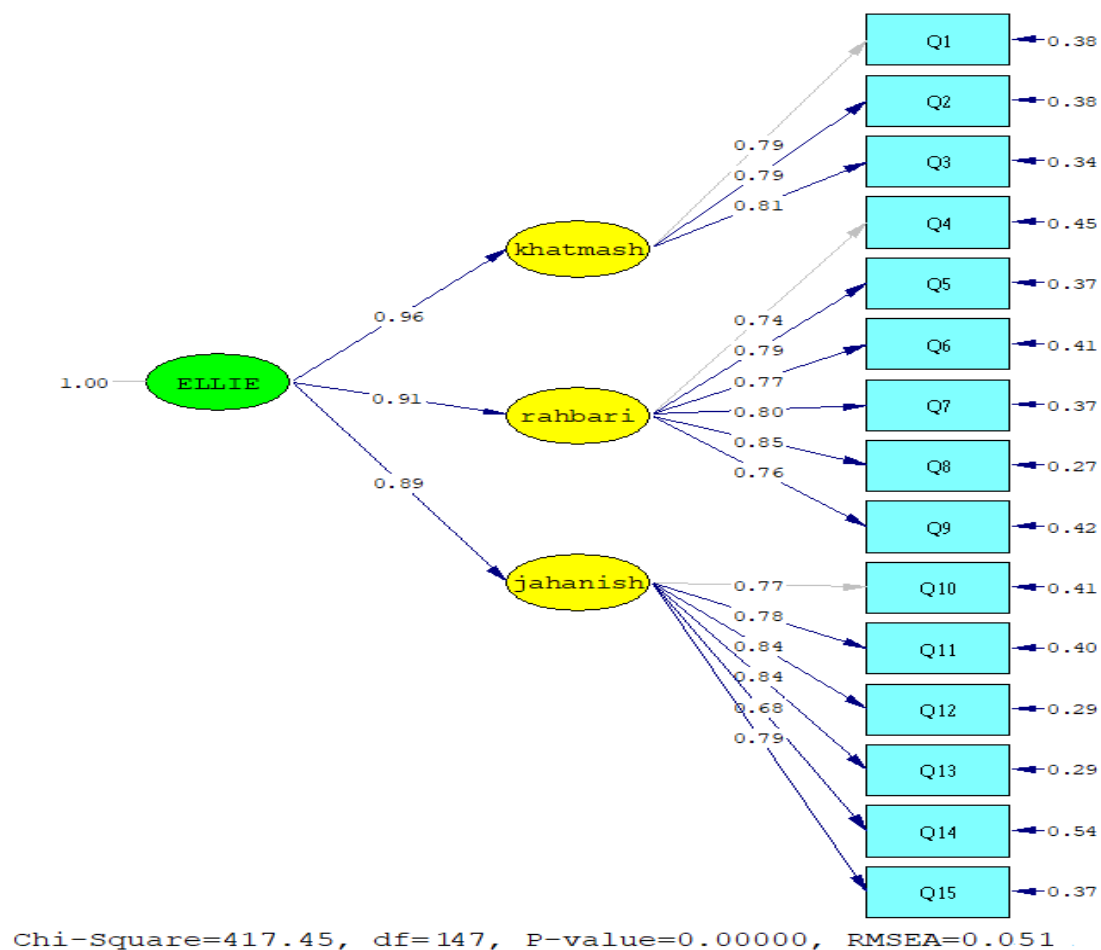
Table 2. Results of the Kolmogorov–Smirnov Normality Test

| Index | Value |
|---------------------------|-------|
| Significance level (Sig.) | 0.491 |
| Degrees of freedom | 288 |
| K–S statistic | 1.715 |

The results in Table 2 indicate that the obtained significance level for the variable development of futures studies skills (Sig. = 0.491) is greater than 0.05, and the K–S statistic is 1.715. Therefore, the data distribution of this variable can be considered normal.

Confirmatory Factor Analysis Results

The output of the confirmatory factor analysis (CFA) for causal conditions is illustrated in Figure 1.

**Figure 1.** Standardized Factor Loadings of Causal Conditions

The results indicate that the observed variables adequately explain the latent construct. Since all factor loadings of the observed variables (components and indicators) are greater than 0.40, a satisfactory relationship exists between the indicators (observed variables) and their respective components (latent variables), as well as between the components and the causal conditions (latent construct). The CFA results for contextual conditions are presented in Figure 2.

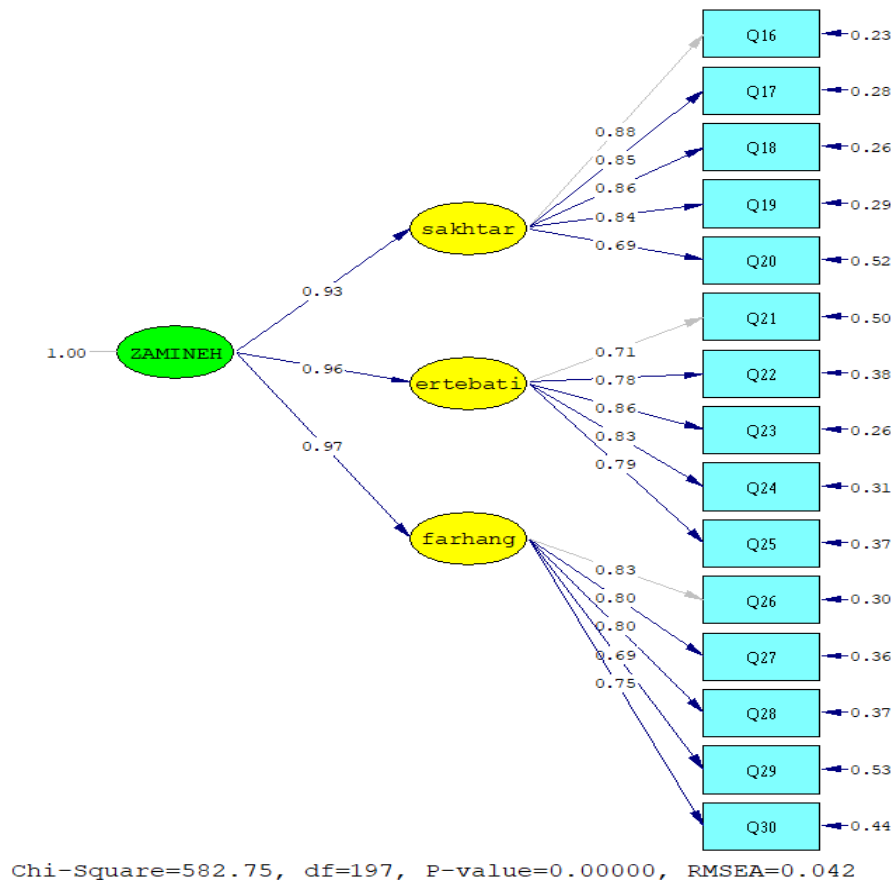


Figure 2. Standardized Factor Loadings of Contextual Conditions

The findings show that the observed variables effectively explain the latent variable. Given that all factor loadings exceed 0.40, a desirable relationship exists between the indicators and their corresponding components, as well as between the components and the contextual conditions. The CFA output for strategies is illustrated in Figure 3.

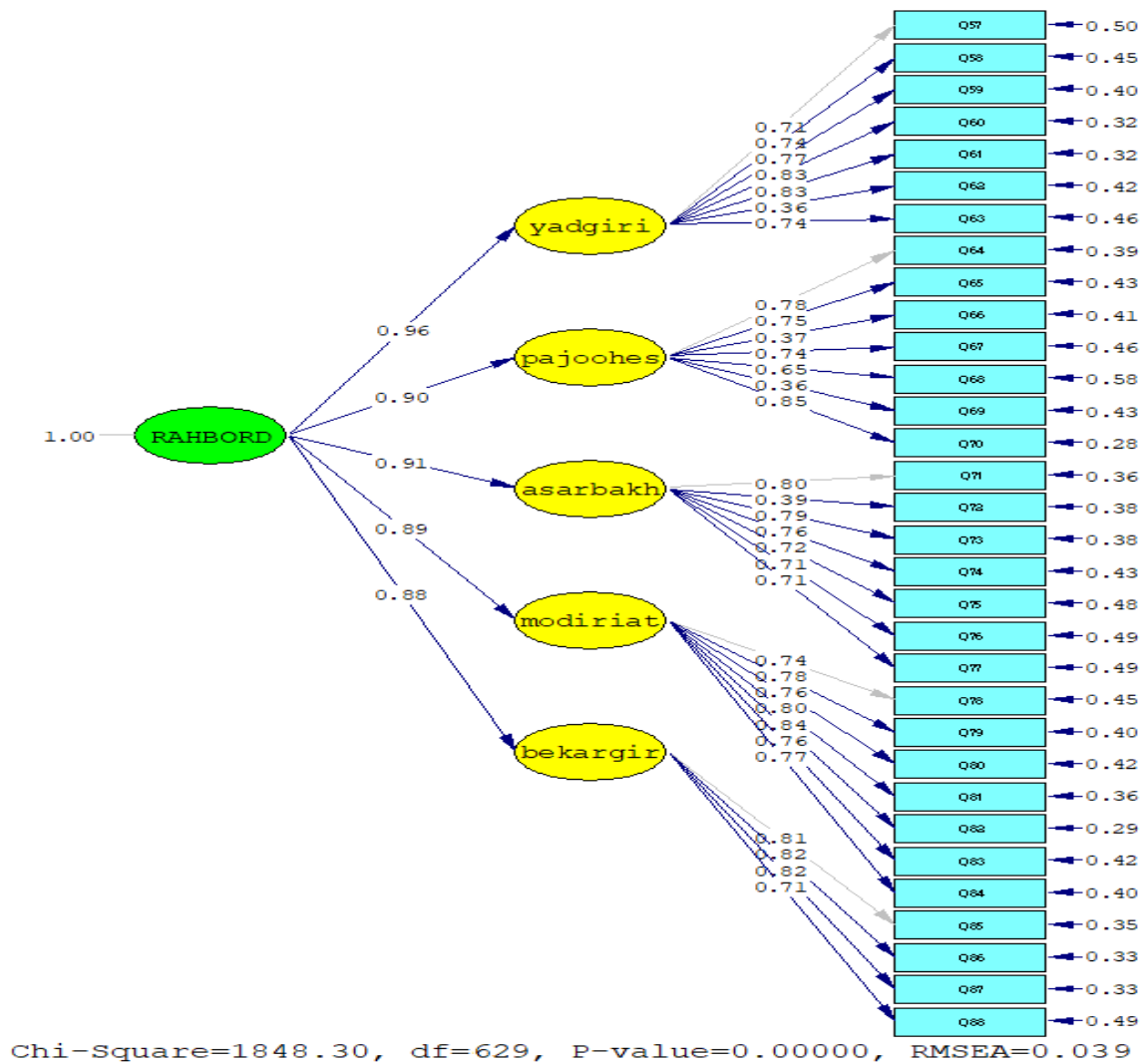


Figure 3. Standardized Factor Loadings of Strategies

The results demonstrate that the observed variables appropriately explain the latent construct. As all factor loadings are greater than 0.40, there is a satisfactory relationship between the indicators and their respective components, as well as between the components and the strategic dimension. Finally, the CFA results for consequences are presented in Figure 4.

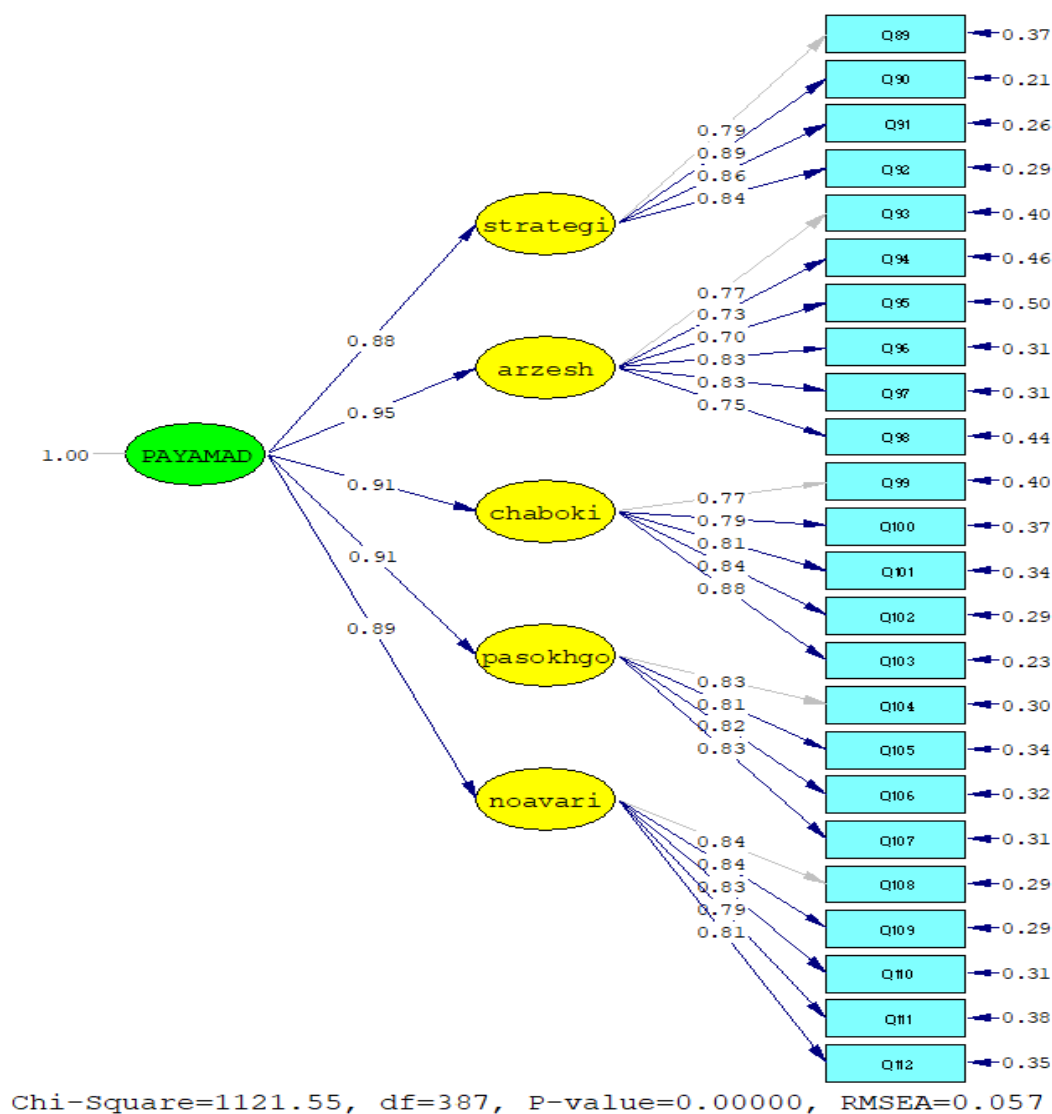


Figure 4. Standardized Factor Loadings of Consequences

The findings indicate that the observed variables adequately explain the latent variable. Since all factor loadings exceed 0.40, a strong and acceptable relationship exists between the indicators and their components, as well as between the components and the consequences of futures studies skills development.

Discussion

The aim of the present study was to design a model of the drivers of futures studies skills among managers of Bank Sepah using a mixed-methods approach. The qualitative and quantitative findings, analyzed in a complementary and convergent manner, provide a coherent framework for explaining how futures studies skills are formed and developed among banking managers. In this section, the results of both research phases are discussed in light of relevant theoretical foundations and prior empirical studies.

The qualitative findings indicated that the development of managers' futures studies skills constitutes the core phenomenon of the proposed model, which manifests in two main dimensions: future-oriented insight and environmental alertness. This result is highly consistent with the theoretical literature on futures studies, which conceptualizes foresight as a combination of the ability to envision alternative futures and the continuous monitoring of the surrounding environment (Voros, 2003).

Future-oriented insight refers to the capacity for trend analysis, scenario planning, and long-term thinking. According to Schoemaker et al. (2018), these capabilities represent key pillars of strategic decision-making under conditions of uncertainty. Environmental alertness, on the other hand, reflects managers' sensitivity to weak signals of change, technological developments, and market behavior, which corresponds closely with the concept of environmental scanning in the strategic management literature (Aguilar, 1967). The empirical confirmation of these two dimensions in the quantitative phase, along with satisfactory factor loadings, indicates that futures studies skills among managers of Bank Sepah have a dual yet coherent structure.

Within the paradigmatic model, organizational policy, leadership, and globalization were identified as causal conditions influencing the development of futures studies skills. From a theoretical perspective, organizational policies and strategic orientations shape learning trajectories and managers' perceptions of the future. In line with the dynamic capabilities theory (Teece, 2007), organizations that adopt flexible and future-oriented policies provide a more favorable context for developing foresight-related competencies.

Leadership also emerged as a critical factor in institutionalizing future-oriented thinking. Transformational leadership, with its emphasis on vision building and intellectual stimulation, plays a decisive role in fostering futures studies skills among managers (Bass & Avolio, 1994).

Furthermore, globalization as a macro-level force compels banks to continuously monitor international developments, emerging technologies, and global standards, thereby intensifying the need for futures studies skills. The confirmatory factor analysis results further demonstrated that these factors adequately explain the latent construct of causal conditions.

The contextual conditions identified in this study include flexible and agile organizational structures, communication skills, and organizational culture and behavior. These findings are consistent with organizational learning theory, which emphasizes the role of non-rigid structures and supportive cultures in developing cognitive and learning capabilities (Senge, 1990). Hierarchical and bureaucratic structures often inhibit the emergence of future-oriented thinking, whereas agile structures facilitate knowledge exchange, collective learning, and participatory scenario planning. Organizational culture, through encouraging creativity, tolerance for ambiguity, and acceptance of uncertainty, provides a fertile ground for the development of futures studies skills. The quantitative confirmation of these components underscores that such skills cannot be effectively developed without appropriate structural and cultural foundations.

The findings also revealed that technology, the external environment, market dynamics, and customers function as intervening conditions, capable of either facilitating or constraining the development of futures studies skills. This result aligns with the contingency approach to management, suggesting that the effectiveness of foresight-related skills is contingent upon environmental conditions. Rapid advancements in financial technologies (FinTech), artificial intelligence, and big data compel banking managers to continuously reassess possible futures. Simultaneously, changing customer expectations and intensified competition influence the pace and direction of foresight-oriented learning. Quantitative results confirmed the acceptable model fit of these factors and validated their mediating role within the proposed framework.

The identified strategies—including continuous learning, research skills, effective communication, effective management, and the application of emerging technologies—are consistent with the view of futures studies as an organizational capability (Rohrbeck & Kum, 2018). Continuous learning and research skills enable systematic trend analysis and scientifically grounded scenario development, while effective communication facilitates the exchange of future-oriented knowledge across organizational levels. Technology serves as a critical enabler of foresight activities by supporting data analysis and the identification of emerging patterns. The

statistical validation of these strategies highlights that the development of futures studies skills requires systematic, multi-level interventions rather than isolated initiatives.

The consequences of developing futures studies skills include improved strategic planning, value creation and competitive advantage, enhanced decision-making agility, effective responsiveness to market needs, and innovation in banking services and products. These findings are consistent with the knowledge-based view of competitive advantage, which regards future-oriented knowledge as a strategic organizational resource (Grant, 1996). The quantitative results demonstrated strong explanatory power in the relationships between futures studies skills and these outcomes, indicating that future-oriented managers tend to make more proactive and effective decisions, ultimately enhancing bank performance.

Overall, the integration of qualitative and quantitative findings indicates that the development of futures studies skills among managers of Bank Sepah is a systematic and multidimensional process, shaped by causal, contextual, and intervening factors and operationalized through specific strategies that lead to value-creating organizational outcomes. The proposed model can serve as a practical framework for policymakers and senior banking executives in designing future-oriented human capital development programs.

In conclusion, the findings of this study emphasize that futures studies should not be regarded as a peripheral or optional activity, but rather as a strategic capability essential for large state-owned banks operating in today's turbulent economic and technological environment. It is therefore recommended that futures studies be institutionalized as a systematic approach within the strategic planning and decision-making processes of Bank Sepah. By relying on trend analysis and future scenarios, managers can enhance their preparedness for environmental uncertainties and improve decision-making quality. Additionally, given the significant role of continuous learning and educational strategies in developing futures studies skills, the design and implementation of targeted, practice-oriented training programs—particularly focused on scenario planning and decision-making under uncertainty—appear essential. Strengthening cultural and structural infrastructures that support future-oriented thinking, through increased organizational flexibility and the promotion of innovation-friendly and ambiguity-tolerant cultures, can further enhance the effectiveness of managers' futures studies skills and facilitate the realization of desired organizational outcomes.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving human participants were reviewed and approved by the ethics committee of Islamic Azad University. The patients/participants provided their written informed consent to participate in this study.

Author contributions

All authors contributed to the study conception and design, material preparation, data collection, and analysis. All authors contributed to the article and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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