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Creating New Knowledge on Supply Chain Performance Management in Private Banks

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ABSTRACT

This research aimed to create new knowledge on supply chain performance management in private banks. It was performed in two phases using a thematic analysis under the qualitative methodology and the correlational analysis technique using structural equation modeling in the quantitative part. The data was obtained from in-depth and semi-structured interviews with 12 managers of five private banks in Iran, based on purposeful sampling and continued until reaching theoretical saturation. The statistical population in the quantitative part included all 235 managers of Mellat Bank's branches, from which 144 were selected by simple random sampling. A researcher-made questionnaire was used to collect the data for the first part. The validity was assessed by factor analysis of the extracted components. A reliability value of 0.7 was obtained using Cronbach's alpha. The factor load of causal factors on the main category was 0.53, contextual factors on strategies were 0.54, intervening factors on strategies were 0.37, the main category on strategies was 0.47, and finally, the factor load of strategies on consequences was 0.71. A performance measurement system is a framework for measuring supply chain performance. To create knowledge in the supply chain based on research findings, one must first know what knowledge is important to maintain and how it can be maintained effectively. ©authors

1. Introduction

Globalization and structural change in information and knowledge society are driving forces that have changed business structures in the 21st century (Destino et al., 2022). Knowledge has become important due to the new environmental conditions that affect organizations, and the traditional factors of production are placed in the background. Today's organizations are dealing with changing customer needs, shorter product life cycles, and complex systems and processes. All these things force people and organizations to constantly think, innovate and perform better (Milisavljevic-Syed et al., 2020). Knowledge capital increases value in service organizations and the scope of publishing and sharing knowledge among people in the supply chain (Li & Wang, 2018). Knowledge management becomes permanent value by determining useful knowledge for information and data management practices in the supply chain. Supply chain performance management has grown significantly in the field of academic research in the past few decades; This growth represents a cohesive element that aligns different aspects of business improvement (Alicke, 2021). Supply chain performance management guides strategy formulation and plays a key role in strategy implementation and monitoring (Kazmi & Ahmed, 2021). The purpose of supply chain performance management is to optimize the business process through the monitoring and analysis of key performance indicators. This type of approach to data and information

allows banks to track different criteria at different organizational levels and take timely actions (Nsikan et al., 2022).

The poor performance of supply chains in knowledge creation is mainly due to systemic inefficiencies and inappropriate processes, not necessarily individual inefficiencies (Granados et al., 2017).

In this regard, the supply chain management of banking services, in the face of the increasing expectations of employees, managers, and customers, needs to use efficient methods to monitor knowledge to achieve a favorable level of satisfaction with its domestic and foreign customers. Changing the perspective from performance evaluation to performance management is one of the important results of dealing with operational processes because performance management is a continuous, deep, extensive, comprehensive, and natural management process that explains mutual expectations between individuals and units and achieves the best results in the organization are focused through the understanding of organizational performance, to direct the efforts of organizational units towards efficiency within the framework of planned goals, standards and required skills (Husna et al., 2021).

Knowledge is a critical element in the environment of information-intensive and service-oriented organizations, which is an outstanding competency for organizations to survive in today's dynamic world. The implementation of knowledge management in the supply chain

develops a collaborative environment in the supply chain, as a result of which the chain has the necessary competence to achieve a strategic and improved competitive point (Chams-Anturi et al., 2020). Supply chain management, like any management structure and approach, requires the use of mechanisms to monitor and evaluate performance to identify and determine the extent to which customers' needs and expectations are met and support the organization to understand the work processes and what the organization knew before that. does not have and can ultimately lead to the improvement of processes, it is necessary. The banking industry is not excluded from this category due to its determining position in many equations, and the need to use a different approach in it compared to other service industries is noteworthy (Ni et al., 2020). One of the important elements in the implementation of knowledge management in the supply chain is the publication and sharing of knowledge among the people in the chain, which can be a competitive advantage in the supply chain. Effective knowledge flows in the process of knowledge creation among chain employees ensure agility, compatibility, and balance in the chain (Franciosa et al., 2020). Also, despite the company's attitude of creating collaborative networks outside the organization, the communication network in the supply chain is the best network in which knowledge creation and dissemination take place (Tomé et al., 2020). Banking is mainly analytical work based on complex tasks, problem-solving, learning new things, and using computers and the Internet,

therefore, they should use this key knowledge in their performance. Also, the banking industry plays an important role in the development of the national and global economy, because it removes the economic boundaries between countries (Rejeb et al., 2021). The globalization of financial markets forces bankers to become more efficient in managing the knowledge of their banking operations, maintaining and using knowledge, and creating new knowledge and innovations. Considering the importance of the banking sector and its dynamic changes in the global economy, bank managers must become efficient in knowledge management of banking operations (Jegan et al., 2021). They must be aware of new products and services to respond to the ever-changing needs of customers and a rapidly changing market that requires constant exchange and analysis of information from different sources, branches, and countries. Like many knowledge-based industries, the ability to create a competitive advantage depends on the ability to use knowledge (Bergstrom et al., 2020). It is important to mention that the implementation of the knowledge creation system is not without obstacles because it requires some organizational and technological changes (Bratianu et al., 2021). For this purpose, other management systems can be used, such as improving supply chain infrastructure and logistics processes. The above-mentioned cases are part of the issues and challenges that we are witnessing in the field of banking today, which directly or indirectly have significant effects on the processes of providing services in

the supply chain and finally on banking customers (both real and legal). It leaves the title of part of the suppliers and consumers of the mentioned chain. Therefore, the necessity of reforming many processes and mechanisms governing the supply chain of this sector of the industry is prioritized. In addition, in the Iranian banking industry, especially private banks, due to the use of some mechanisms and the requirement to improve operations, and increase the amount of outsourcing, the requirement optimally manage various costs and pressures on the headquarters and line units, as well as the need to increase the speed and the quality in providing services, the development of electronic banking, and above all, the increase in the dissatisfaction of the stakeholders, makes the necessity of developing and improving the supply chain performance management approach in that industry inevitable. By facilitating the creation of knowledge in all banks, knowledge management systems also enable knowledge-sharing processes for employees in transferring the required knowledge, despite the boundaries of time and space. The purpose of knowledge policies is to create a general framework to guide individual learning processes and the flow of knowledge among organization members.

Therefore, recognizing the components of new knowledge creation based on supply chain performance management in private banks can help to a great extent to control and strengthen the service supply chain. Therefore, this research is looking for an answer to the question, what is the state of the components of creating new

knowledge based on supply chain performance management in private banks?

2. Literature Review

Over the past decade, there have been many research efforts that address various aspects of supply chain performance management. Shepherd & Günter (2010) provide a classification of supply chain performance measurement systems and metrics with a critical review of contemporary literature. Their study shows that despite significant advances in the literature in the past decade, there are still important topics related to supply chain performance management such as process modeling, data integration, software support, and forecasting that have not received sufficient research attention. Knowledge flow refers to the movement of knowledge across people, processes, time, and space, depicting changes, displacements, and programs. The knowledge that flows in the supply chain creates new knowledge by sharing, acquiring, and exchanging. In other words, if knowledge is accumulated and does not flow, it cannot contribute to informed decision-making and reasonable actions. As a result, it is necessary to determine how knowledge flows in the organization because knowledge flow is the basic goal of knowledge management (Ahbabi et al., 2019).

The knowledge management approach is considered a new horizon to improve the supply chain and the performance of service organizations, which is a more systematic and comprehensive approach than the traditional performance evaluation

methods by using mechanisms and processes including determining the strategic goals of performance. Measuring performance, collecting and analyzing performance data, reviewing data reports, and applying knowledge to improve the performance of the organization's supply chain plays a more effective role in this field. Despite considerable evidence from the literature, there is a wide area for research and addressing critical issues in measuring supply chain performance based on knowledge, components such as metrics, integration, business intelligence, and shared decision-making (Kamble et al., 2021). Evidence in this field introduced a framework for developing metrics that measure the performance of key supply chain processes, identify how each firm affects overall supply chain performance, and can be translated into shareholder value (Croxtton et al., 2001). Gunasekaran et al (2004) developed a framework for supply chain performance metrics and measures considering the four main supply chain processes: planning, sourcing, manufacturing, and delivery.

One of the prerequisites for effective supply chain performance measurement is the initiative to standardize knowledge extraction and creation processes in the supply chain. Standard models facilitate program integration and collaboration, enable benchmarking for performance comparison, and provide best practices for process improvement and competitive advantage. This is where partners in a supply chain can communicate more unambiguously and can jointly measure, manage and

control their processes (McDonald, 2002).

In today's business environment, companies strive for global competition by implementing supply chain management based on knowledge components, because what happens in one part of the world has wide consequences in other parts of the world (Sharma et al., 2021). When a part of the world is affected by a disaster or crisis, its economic, social, and emotional consequences are not limited to that particular region, but their secondary and secondary effects create ripples in supply chains around the world (Goli et al., 2017). Hofmann et al. (2013) defined supply chain performance as the result of how the supply chain is managed and how the logistics drivers (facilities, inventory, and transportation) and interaction drivers (information, sourcing, and pricing) interact together to determine. They know the level of performance in terms of responsiveness and efficiency of the supply chain. A huge amount of data is generated in the supply chain, and new tools and methods must be developed to be able to store, manage and analyze the data as well as monitor the performance of the supply chain (Chae & Olson, 2013). While Lima-Junior & Carpinetti (2017) analyzed 84 studies between 2003 and 2014 that included supply chain performance management measurement models and showed that researchers in many studies use its combined methods with fuzzy logic. Therefore, it seems that organizations have turned to a knowledge-based economy by giving more importance to their information and data than other traditional resources and assets. Asamoah et al.

(2021) emphasize that supply chain performance is affected by information systems and increases the company's efficiency. Although many studies have been conducted on the performance evaluation of the supply chain in the manufacturing sector due to the novelty of the service supply chain performance concept and the specific problems and characteristics of this sector, few pieces of research have been conducted on the performance evaluation of the service supply chain. There is a lot of uncertainty, especially in the field of services. In 2012, Cho and his colleagues presented a framework for measuring the performance of supply chain management in the service sector in the evaluation of supply chain operations, customer service, and organizational management, emphasizing the service quality criteria. As stated, banks play a very important role in the economy of any country, and they should pay attention to knowledge management during their supply chain. Banks have realized the necessity of using their experience and intangible assets to better respond to changes in the business environment. The application of knowledge management in the banking industry is not different from other industries, but the increasing complexity of the banking environment makes its implementation more difficult.

Although the importance of knowledge management in organizations is increasingly recognized, there is no single framework that can guide organizations in formally implementing a knowledge management process. Any knowledge

management framework adopted by a particular organization can be successful only if it is suitable for that organization, otherwise, it must be modified and developed by users.

3. Method

Considering the current research objectives, it can be categorized under fundamental research, because it seeks to develop new knowledge creation and extract the main themes and organize the creation of knowledge in the banking supply chain, and on the other hand, the current research also has a practical orientation. The current research was conducted with both the qualitative and quantitative methods. In the qualitative part, the participants comprised the managers and experts of private banks. 12 people were interviewed to reach the theoretical saturation index. Thematic analysis is the process of coding qualitative information, and this may be done with a list of themes, a complex pattern of themes, indicators or related features. To measure the reliability, first, the documents were read line by line, and manual coding was done. The final categories were reviewed by two public administration professors, and based on their opinions, the themes were modified. ATLAS TI software was used for thematic analysis.

In the quantitative part, the correlation analysis and structural equation model technique were used. The statistical population was all 235 managers of Mellat Bank branches, out of which 144 people were selected by simple random sampling. The tool for collecting information in this part was a researcher-made questionnaire

developed based on the data extracted from the first part of the research. Validity of the study was assessed using factor analysis and the reliability of the data was evaluated through Cronbach's alpha, which yielded a value of 0.7. AMOS software was used at this stage.

4. Findings

To analyze the data in the current research, the following steps were taken into consideration: 1. Familiarization with the texts: In this step, the data was extracted from the texts and the initial study and review of the events were done; 2. Creation of primary codes: In this step, the coding framework was explained and then a code was assigned to each of the units extracted from the documents.

The research model was developed using the factors of service supply chain performance management model in private banks and by using the content analysis of in-depth and semi-structured interviews with experts; managers, and employees of private banks. Therefore, to obtain the required data, all the conducted interviews were recorded and transcribed.

The interview questions were as follows:

1- According to the policies and regulations and processes governing the banking network, what factors should be considered to manage the performance of the service supply chain in banks?

2- What scientific and cultural qualifications of people in the organization and society are effective in the process of performance management; How are these

qualifications obtained in Iranian private banks?

3- The service delivery process requires the presence of both the customer and the provider. In addition, the delivery and consumption of services happen simultaneously, which leads to difficulty in evaluating the performance of the service delivery process; Do you think this definition is applicable in the country's banks? If there is a difference, please explain?

4- In your opinion, to fulfill your duties and responsibilities successfully, what is the most important function of the service supply chain required by the banks?

5- In your opinion, what are the most important comprehensive programs for the development of service supply chain performance management in the banks?

The transcribed verbatim was entered into the Atlas software for analysis. It was reviewed many times and its key points were broken into semantic units in the form of sentences and paragraphs related to the main theme. The data were periodically and continuously reviewed and refined, and based on the similarities of the data, in an inductive process, a set of similar data was gathered around a central concept. The concepts that had common meanings were organized in the form of categories that had a more abstract level than the concepts and their semantic load and content were more related. Table (1) shows the main dimensions and sub-components of the service supply chain performance management model factors in private banks.

Table 1. The main dimensions and sub-components of creating new knowledge based on supply chain performance management in private banks

Main dimensions	Subcomponents	Main dimensions	Subcomponents
Intensification of competition	Domestic competition	Organizational strategies	Market demand
	Competitive Advantage		services management
	Raised expectations		Sustainability of supply
Supply chain inefficiencies	Weakness of the supply chain	Challenges of banking services	Banking services capabilities
	Weak communication and information		Features of banking services
Challenges of the banking system	supply of resources	Development strategy	Development of social capital
	Rules and structure		Development of systems thinking
	Financial performance		Technology Development
	communication system	Partnership strategy	Sharing of benefits
	Cash management		Shared transparency
Service quality management	Variety	Discovery strategy	Public policy
	Speed		Discover new markets
	ease		Analysis and identification of resources
	Reliability	cost management	
Facilitating elements	Technology	Focus strategy	Revision of evaluation indicators
	Risk		Ultrastructural evaluations
	Process management	Reforming the performance evaluation system	Improving the evaluation mechanism
	Complaints management		Cultivation
	Allocation planning	Financial-administrative function	Financial interests
	demand management		development
Appropriate corrective actions	Management based on goals	Performance improvement and innovation	Stakeholder satisfaction
	Content modification		Improve performance
	Process reforms	Supply chain development	supply chain operation
Action management			Development of banking ability
	Process management		
	Complaints management		
	Allocation planning		
	demand management		
	Management based on goals		

As Table 1 shows, 53 sub-components were categorized into 17 main components. In order to check the status of intra-structural relationships

of the recognized components, the structural equation model was used based on Figure 1.

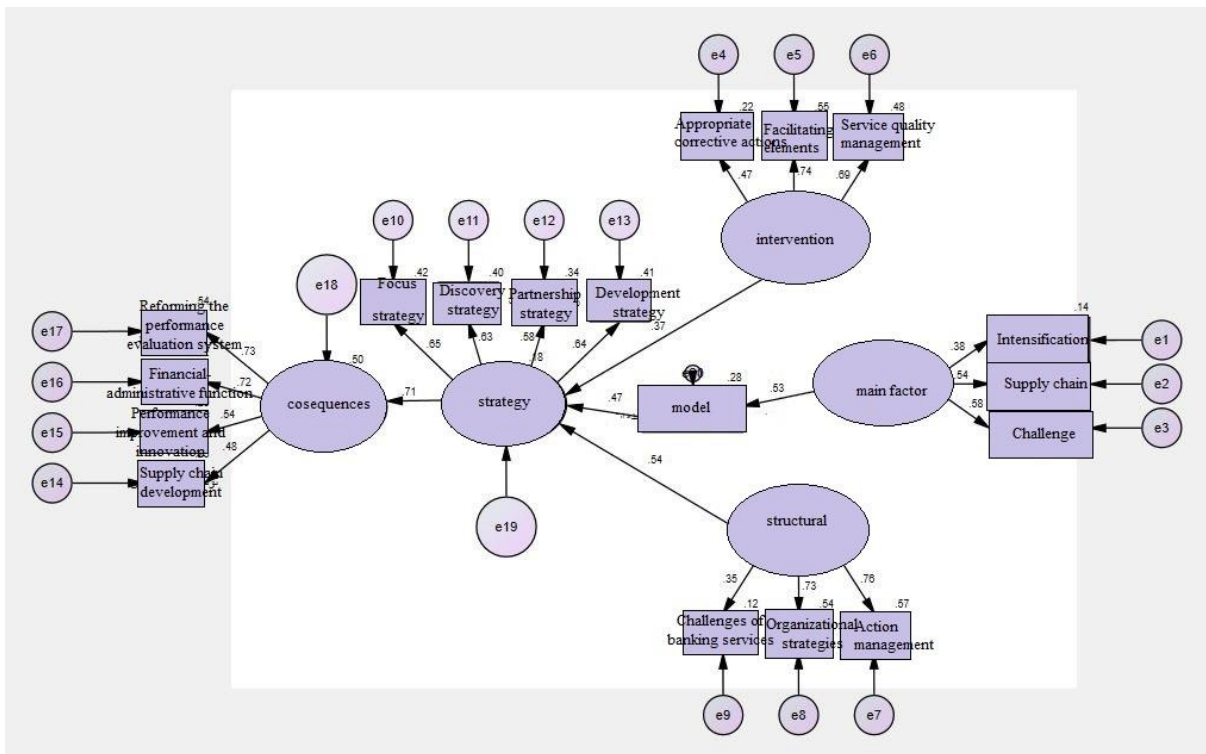


Figure 1. New knowledge creation factors based on supply chain performance management in private banks

All the factor loadings are higher than 0.3, to express the acceptability of the model, Bentler-Bonnet normalized fit indices, relative fit, incremental fit, adaptive indices, and perfect square are used, and the results obtained from the model are shown in Table 3.

Table 2. Fit indices of service supply chain performance management model in private banks

RMSEA	X2/df	Model
<0.1	1-3	Acceptable amount
0.026	2.491	Calculated

Root Mean Square Error (RMSEA): This index is based on residual matrix analysis and, unlike many fit indices, can be calculated for different confidence intervals. This index is based on the decentralized parameter. If the value of this index is equal to zero, it indicates that the chi-square is

smaller than the degree of freedom, and its permissible limit is 0.1. The obtained RMSEA value is 0.026, which is desirable according to the standard value of less than 0.1.

Normalized chi-score (X2/df): This index is obtained by dividing the chi-square by the degree of freedom. The chi-square ratio to the degree of freedom is equal to 2.491 and is favorable. In general, considering all the indicators, it can be said that the model has a good fit. Factor loadings indicate the degree of influence of the observed variable in explaining and measuring the related hidden variables. To confirm the factor load, the significance level is considered. In the following, the influence of the identified factors on each other has been investigated.

Table 3. Examining the influence of the identified factors of the foundation's data model on each other

Effect	t	factor load	Sig	Result
Causal factors on the main category	10.70	0.53	0.000	Confirmation

Background factors on strategies	8.73	0.54	0.000	Confirmation
Intervening factors on strategies	5.19	0.37	0.000	Confirmation
The main category on strategies	4.51	0.47	0.000	Confirmation
Strategies on consequences	9.01	0.71	0.000	Confirmation

According to the table, the factors identified in the foundation's data model have influenced the integration. The factor load of causal factors on the main category is 0.53 and its t-statistic is 10.70, the factor load of background factors on strategies is 0.54 and its t-statistic is 8.73. The factor load of intervening factors on strategies is 0.37 and its t-statistic is 5.19, the factor load of the main category on strategies is 0.47 and its t-statistic is 4.51. Finally, the factor load of the strategies on the outcomes was 0.71 and the TN statistic was 9.01.

5. Discussion

Nowadays, the application of knowledge in continuous operation is the key to any kind of business success. A performance measurement system is a framework for measuring supply chain performance. In order to create knowledge in the supply chain based on research findings, one must first know what knowledge is important to maintain and how it can be maintained in the best way. By maintaining knowledge, the organization will be able to recover its knowledge, so that when experienced and knowledgeable personnel leave the organization, the existing knowledge does not leave the organization. The supply chain is a dynamic entity that contains product and financial information flows. The process of evaluating academic performance also requires taking several steps such as formulating or reviewing macro goals and strategies,

and performance standards, comparing actual performance with the standards of each indicator, announcing the results, and applying corrective actions to continuously improve performance through the feedback mechanism. The results of this research are in line with the studies of Nsikanu et al. (2022), Pakorar et al., Shahbandarzadeh and Behrooz (2021), and Mohaghar and Abbasi (2019).

6. Conclusion

The findings of this research showed that components such as competition intensification, supply chain inefficiency, banking system challenges, service quality management, facilitating elements, appropriate corrective measures, action management, organizational strategies, and banking service challenges in creating knowledge based on chain performance management providing services in private banks have a decisive role. Based on this, to gain knowledge in the performance management of the optimal service supply chain in private banks, pay attention to elements such as internal competition, increased expectations, weak communication and information, provision of resources, rules and structure, financial performance, communication system, social capital development, system thinking, benefit sharing, public policy making, resource analysis, and recognition, discovering new markets, cost management, and cultural building. Currently, due to the

significant number of banks and financial and credit institutions in the country, as well as due to the process of privatization of state-owned banks, supply chain performance management has become particularly important. System performance management and balance supply chain metrics can greatly balance profit and risk sharing, and performance and dynamism in the bank. To be successful in implementing knowledge management, the organization must create various capabilities, so that the flow of knowledge in the organization continues. Based on the results obtained, the following suggestions are presented:

Although the use of new technologies is considered one of the tools of success in the use of knowledge management, only the use of technology alone is not effective, the organization must, first of all, provide access and communication of all its employees to engage in knowledge management. Provide web-based programs and data mining tools to activate new behaviors based on organizational knowledge.

The organization should always conduct a knowledge audit and identify the internal and external factors affecting organizational knowledge such as customer knowledge, process knowledge, product and service knowledge, people knowledge and organizational memory, and the emergence of new media and in the form of educational content among employees to share.

Supporting senior management, alignment of opinions, mutual trust, willingness to share knowledge and experiences, and motivation of

employees are the main components of knowledge management, and continuous attention to these components is necessary. Because in an inappropriate organizational culture, due to the lack of documentation regarding the experiences gained by individuals, as well as the tendency of individuals to refrain from sharing their knowledge and experiences instead of disseminating it, knowledge is not spread in the organization. Another problem in this type of culture is that if a person leaves the organization for any reason, his experience and knowledge is taken away with him. In some cases, this causes the organization to employ incompetent and ineffective people for critical positions.

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Declaration of Competing Interest

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

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