Int. J. Nonlinear Anal. Appl. 12 (2021) No. 2, 2109-2129
ISSN: 2008-6822 (electronic)
http://dx.doi.org/10.22075/IJNAA.2021.5350

Testing and fitting a maskan bank marketing model using an integrated supply chain approach in the construction and housing industry

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(Communicated by Ehsan Kozegar)

Abstract

Maskan Bank is one of the state-owned banks with a wide range of banking services, including financing for housing and construction, financing plans of the government development programs in housing development, inclusive public banking services to conduct its inherent mission, and banking businesses requiring financing from standard methods and banking marketing. This research aimed to provide Maskan bank marketing model using an integrated supply chain approach considering the financial and credit turnover in the construction and housing industry. The Grounded theory strategies, including reading documents, in-depth interviews with experts and extracting concepts, and open, axial, and selective coding, were used in the qualitative section using the mixed method. Then, a paradigm model was presented with 6 dimensions and 42 components. The descriptive survey method was used in the quantitative part, and PLS software was used to test the proposed model. The results were confirmed and fitted in a model for Maskan bank marketing using an integrated supply chain approach in the construction and housing industry.

Keywords: Supply Chain, Construction and housing industry, Banking marketing model, Grounded theory, Integrity

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Received: March 2021 *Accepted:* July 2021

1. Introduction

Maskan Bank is a state-owned bank in Iran in the specialized field of housing, founded in 1979 to facilitate the implementation of Article 31 of the Constitution of the Islamic Republic of Iran based on integrating Mortgage Bank of Iran, Construction Bank, Housing Loan Savings Company, and Construction Investment Company of Banks. Maskan Bank, like many state-owned banks, is often challenged to strike a balance between the beneficial guidance of efficient banking operations and pursuing the social objectives of housing production. The bank strives to comply with banking guidelines and social objectives of housing various segments of the population, especially the less affluent sections of society. Examples of bilateral or multilateral activities of Maskan Bank can be found in providing low-cost facilities similar to "Maskan Mehr" supported by government orders and credit lines of the Central Bank in terms of meeting social objectives and providing other banking services similar to commercial and specialized banks. Accordingly, the strategies of Maskan Bank have been announced as follows [5]:

1. Development of retail banking for individuals
2. Providing investment banking services
3. Strengthening mortgage banking
4. Implementing development banking
5. Reinforcing corporate banking
6. Improving the performance of the bank's financial group ... launching various financial holding companies
7. Effective participating in policymaking about housing and urban development sector

The mission statement of Maskan Bank testifies that this state-specialized bank considers providing financial, banking, and consulting services to activists, developers, and builders of housing units in the housing sector as part of its mission in addition to facilitating the process of financing the housing sector financing and providing banking finance. As a government and development bank, it is intended to play an influential role in implementing financial and banking programs of government development projects in housing and urban development and regeneration [1]. The bank considered a standard marketing model in acquiring and retaining banking customers before the formal preparation of the mission statement of this specialized bank in the field of the housing construction industry in interbank competition with other commercial banks. Determining the bank's target customers tended to the major customers providing extensive resources who were not necessarily in the construction and housing market and, like other commercial banks, including all market segments. The definition of the actual position of the specialized and state-owned Maskan in the construction and housing market has received serious attention in recent years, focusing on redefining the role of development banks in repairing the country's economy. Thus, all stakeholders, including the government (and its social objectives), the people (as actual and potential bank customers), and other operators and market players, were considered in the construction and housing sectors. Therefore, an effective marketing model can be designed with an integrated supply chain approach in the field of construction and housing industry by focusing on target customers and market segmentation and looking at a broad and relatively diverse range of needs and tastes of the bank's customers through

full identifying of the market, customers, suppliers, etc. Therefore, the central question of this research is, "What is the model of Maskan Bank for marketing using a supply chain approach in the construction and housing industry, and what are the dimensions, components, and characteristics of this model?"

2. Literature

2.1. Supply chain

In this section, the supply chain was defined considering the construction and housing industry within an organization, despite comprehensive definitions of the supply chain. For example, the term "supply chain" in the APICS Glossary is defined as, "The supply chain includes all the processes that connect suppliers to consumers. Hence, the integration of supply chain management seems necessary to ensure supply chain coordination," [5].

2.2. Supply chain integration

In the Webster Dictionary, integration is defined as "the integrated control of several economic processes, or in particular consecutive or similar industries, which were previously performed independently." Since the study of supply chain integration in most sources refers to issues related to a single organization, the definitions, explanations of communications, and concepts of the supply chain can be help simulate a large complex of construction and housing industry, as a comprehensive organization with a common goal of construction prosperity and with scattered components. Flynn et al. defined supply chain integration as the degree to which a manufacturer strategically collaborates with its supply chain partners and manages internal and inter-organizational processes through collaboration. The purpose of integration is to achieve an efficient flow of products and services, information, money, and decisions to provide maximum value to customers at the lowest cost and faster speed [4].

Supply chain integration considers perspectives, objectives, and strategies rather than the integration of chain partners. All of these partners need to understand that they are partners and those(he) in the chain are(is) successful if they(he) are(is) joined by other successful partners. [7] reviewed the supply chains of 20 European car companies and indicated a relatively slow movement of supply chain management in the real world. In this research, only 10% of the surveyed companies were close to full integration, and this requires further investment and supply chain studies [14].

Customers and suppliers work together to define a useful strategy for the parties and set objectives. Information technology facilitates the integration of business processes across the supply chain (Figure 1).

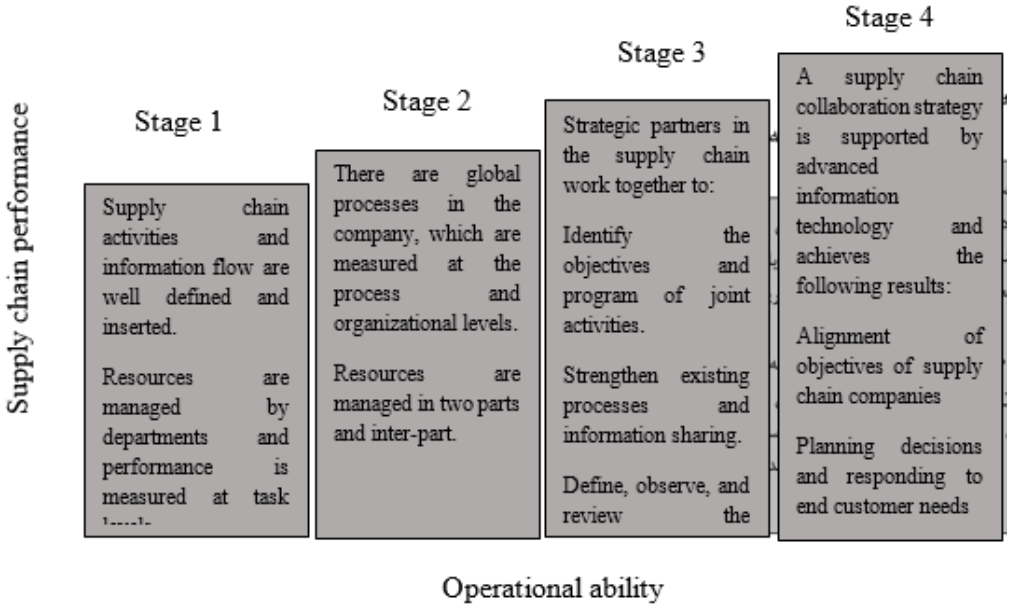

Figure 1: Supply Chain Maturity Levels (Cohen and Russell, 2004)

2.2.1. Supply chain integration factors

Many factors play a role in supply chain integration that organizations need to consider. Lee and Wang reported three factors for supply chain integration, coordination and resource sharing, inter-organizational communication, and information sharing. This paper aimed to generalize these factors in integrating an industry's supply chain on a national scale with the presence of independent organizations and companies.

2.2.2. The concept of construction supply chain management

Zhou et al. defined construction supply chain management as coordination of inter-organizational decision-making in CSC, integration of crucial construction business processes, and critical members involved in the construction supply chain, including employer/owner, designer, main contractor, subcontractors, suppliers, etc. Construction Supply Chain Management (CSCM) focuses on using processes, technology, and supplier capabilities to increase the competitive advantage. Supply chain management emphasizes long-term relationships, win/win, and collaboration between chain members. The ultimate objective of the Construction Supply Chain Management is to improve building performance and increase value for the employer at a lower cost[13].

2.2.3. The effect of information technology (IT) on building supply chain management

The construction industry is one of the most dependent industries on information, among other industries. Various information forms, including drawings, detailed images, cost analysis tables, financial and budget reports, risk analysis charts, contract documents, and planning tables, demonstrate the dependence and importance of information in this industry. Zhou et al. [13] divided construction information into three groups of general information, organizational-specific information, and project-specific information. Communication is always a critical factor in the success and failure of a construction project. Using the Internet as a communication platform can help better transfer information in the supply chain. In addition, the high speed and ease of data transfer using the Internet save costs compared to traditional methods such as electronic data interchange (EDI) [15].

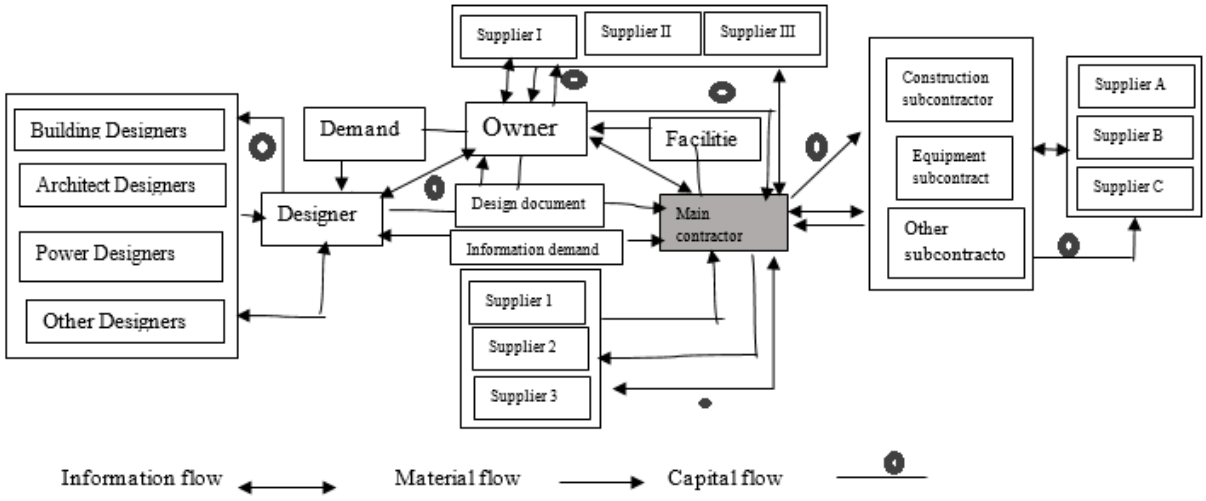

Figure 2: The overall structure of the construction supply chain ([13])

2.3. Status of construction supply chain in Iran

The traditional structure and attitude in this industry and the presence of civil engineers, who have little information about supply chain management in managerial positions, have led to a lack of study of supply chain in this industry. In addition, the high complexity and the high number of the supply chain elements in construction projects are some of the reasons that prevented researchers from entering the industry. Another issue is the significant change of supply chain members in different projects and even in one project, which arises from short-term relationships in this industry and adds to the complexity of the supply chain in the construction industry [12]. The issues mentioned earlier regarding the supply chain and its integration factors in the construction and housing industry are among the available library resources studied to achieve the research objectives.

3. Research methodology

The primary purpose of this research was to design a marketing model for Maskan bank using an integrated supply chain approach in the construction and housing industry. Thus, theoretical foundations and all the library of books, documents, and statistics in the banking system and the archives of Maskan bank were studied to identify the effective factors. In addition, interviews were used for further understanding, then quantitative approaches were used to confirm the qualitative results [8].

3.1. Qualitative method: strategies of the Grounded Theory

In this stage, the required qualitative data were collected and analyzed using the content analysis method as a research technique, concepts, categories, and main and secondary factors. Scientific experts were selected by the purposive sampling method and interviewed through in-depth and exploratory interviews. These concepts, factors, and categories are the basis for developing a questionnaire. The data obtained at this stage are processed by the coding process proposed by Creswell and Strauss-Corbin 1998, which includes open, axial, and selective coding to provide the paradigm model [9]. The marketing model of Maskan Bank uses a supply chain integration approach in the construction and housing industry using the obtained data, as well as the consensus of experts on the classification of selected concepts and codes based on the paradigm model.

3.2. Quantitative study

At this stage, the dimensions, components, and indicators obtained in the qualitative stage were statistically analyzed, and their importance was quantified through factor loading after the approval of experts by the Delphi method. Then, a descriptive survey research method was used to prepare a questionnaire for the statistical population [11]. The conceptual model derived from the grounded theory was evaluated by analyzing the data and using PLS software.

4. Statistical population

The statistical population of the study consists of two groups:

The statistical population in the qualitative section: This population included experts from the scientific community and banking and university experts who had executive experience in decision-making levels in the categories related to housing and construction banks. This group was selected to conduct a qualitative part of the research and participated in the interview process. Then, 14 experts in the field of banking and housing were interviewed, including the Deputy Minister, Mayor, CEO, member of the bank's board of directors, director of affairs, head of the department, and CEO of companies covered by Maskan bank who had executive experience at decision-making levels.

The statistical population in the quantitative section: According to the experts and the mission of Maskan Bank, the first four strategies out of the total of seven strategies of Maskan Bank, taken from the book of strategic plans of Maskan bank, can be based on the community that addresses these strategies. Therefore, the statistical population of this research included actual and potential customers of the bank who are in the specialized areas of the bank's business.

Therefore, the statistical population of the present research is:

A. Retail banking customers, such as depositors and regular applicants for banking finance, people as the bank's current or future major customers

B. Investments and partnerships, construction companies in banking strategy

C. All manufacturing, distribution, and service businesses in the construction and housing sector in corporate banking strategy. The researcher had to take samples in this population among natural and legal people due to the population size. The formula of the unknown population volume was used due to the lack of accurate information of these customers during the past year. Cochran's formula was used to estimate the sample size.

$$n = \left(\frac{Z_{\alpha/2} \times \delta}{\epsilon}\right) = \left(\frac{1.96 \times 0.667}{0.0667}\right) \approx 384 \qquad (1)$$

A total of statistical samples were considered to further ensure access to usable answers. The questionnaires were distributed upon the importance of each cluster by combining the extracted ratio by experts. The distribution ratio of the questionnaires between the sections of the statistical population was examined in several stages by experts' opinions and the Delphi method to reach a consensus. According to the weight and importance of customers, the percentage of customer importance was summarized as follows: Public and mortgage banking including 45% of public customers, investment banking including consulting and construction engineering companies (25%), and corporate (specialized) banking, including all related businesses (30%). The importance percentage of 400 samples from the statistical population and samples included public customers (180 samples), construction

companies (100 samples), and businesses related to the construction sector (120 samples). Thus, 180 samples from public customers were randomly selected. A total of 100 100 samples of technical staff and engineers working in construction companies were selected by the selective method according to the importance of turnover and its transaction ratios between consulting engineers and major construction contractors with a ratio of 90 samples of major contractors and 10 samples of consulting engineering companies. The selection of 120 samples for specialized businesses in the construction and housing sector is determined selectively and according to the importance of turnover and financial transactions in the construction and housing industry.

According to experts in the engineering and construction industry, businesses related to the construction and housing sector, the importance of brickwork, plasterwork, sales, and rental was 38, 60, 2, and 2%, respectively.

The number of samples related to each business was determined according to the following table:

Table 1: Number of statistical samples in each group of the population

Subgroups of respondents		**Frequency**	**Frequency percentage**
Public customers		180	45
Employees of construction companies (Population of Engineers)		100	25
Businesses related to the construction and housing industry	Building materials	10	30
	Iron and profiles	10	
	Ready-mixed concrete	10	
	Transfer contractors	5	
	Equipment rental	5	
	Minor contractors	5	
	Mechanical installations	12	
	Electrical installations	10	
	Elevator	8	
	Wood industry	10	
	Kitchen cabinet	8	
	Toilets and faucets	12	
	Decorating	12	
	Real estates	3	
	total	400	100

Interview protocol

Exploratory and semi-structured interviews with experts were used to collect data. In the quality section, the following 8 questions were asked:

1. What are the components of Maskan Bank's marketing model?
2. What are the main factors of the supply chain in the construction and housing industry?

3. How does the integration of the supply chain of the construction and housing industry help the marketing of Maskan Bank? Please explain.
4. How does the integration of the supply chain of the construction and housing industry benefit Maskan Bank customers? Please explain.
5. What infrastructure is required to integrate the supply chain of the construction and housing industry? Please explain.
6. What are the critical factors in improving Maskan Bank marketing by creating a supply chain integration in the construction and housing industry? Please explain.
7. What are the content factors for improving Maskan Bank marketing by creating a supply chain integration in the construction and housing industry? Please explain.
8. What are the structural factors in improving Maskan Bank marketing by creating a supply chain integration in the construction and housing industry? Please explain

5. Findings

5.1. Axial coding

Axial coding links categories and subcategories according to their dimensions and characteristics. A set of concepts and categories were extracted by performing the above processes, of which 42 components that were most compatible with the concepts of the project were obtained from qualitative interviews.

1. Maskan Bank banking finance
2. Establishing construction land funds
3. Electronic services
4. Members of the industry supply chain as potential customers of the bank
5. Dependence of construction and housing market businesses on each other
6. Significant turnover of the construction and housing market
7. Variety of components of the construction and housing market
8. Expansion of the missions of Maskan Bank
9. Non-dependence of the housing sector on foreign exchange
10. Strengthening the capacity of Maskan Bank
11. Government efforts to strengthen the housing market
12. Low growth of the capital market
13. Dependence of Iran's economy on the financial market
14. The pivotal role of Maskan bank in the housing market

15. The monopoly of many housing bank services
16. The dependence of Maskan Bank on acquiring resources despite being a state-owned bank
17. The bank as an intermediary in the transfer of asset value between owners and consumers
18. IT infrastructure
19. Social networks
20. Governmental support
21. Real demand by people
22. The need for employment and lasting benefits
23. Macroeconomic calculations
24. New technologies in the construction industry
25. Paying attention to the construction style
26. Financial technologies (FinTechs)
27. Land and construction prices
28. Traders and the relationship between investment demand
29. Strengthening the integration of the housing industry supply chain
30. Transparency in the supply chain of the construction industry to plan for business continuity
31. Strong inter-sectoral information network
32. Secure Financial Transfer Network
33. Reviewing the marketing process
34. Development of mortgage banking
35. Participatory management of companies active in the field of construction
36. Adequate research in providing new banking services in Iran and the world
37. Corporate Banking for Chain Members
38. Integrated management of financing and planning
39. Housing market boom
40. Stabilization of prices
41. Creating sustainable employment
42. Satisfaction of the bank's customers and audience

5.2. Selective coding

Selective coding is the process of selecting the main category, systematically linking it to other categories, validating these relationships, and completing categories that need further modification and development. Selective coding based on the results of open coding and axial coding is the main stage of theorizing. This method systematically links the central category to other categories, presents those relationships within a narrative framework, and modifies those categories that need further improvement and development. Strauss-Corbin's analytical tool was used to discover the relationship between the categories [4]. The main dimensions of the proposed model include causal conditions as events that create situations and issues related to a phenomenon and explain why individuals and groups respond in specific ways [16]. In this study, causal conditions include a set of categories that explain the existence of the Maskan bank. Contextual conditions represent a specific set of characteristics related to the phenomenon, which generally refers to the location of relevant events and happenings and leads to proper banking business and up-to-date banking marketing [6]. Intervention conditions are a set of general environmental conditions, including space, time, culture, etc., that can be limiting and facilitating. The phenomenon centrality is the basis and axis of the process related to all other major categories. Strategies are the output of a phenomenon centrality with consequences to manage the phenomenon centrality. Consequences result from actions, reactions, and outputs of a set of proposed dimensions and their consequences. The researcher arranged the results obtained from the surveys according to the insights obtained from the research and the experts' opinion (Table 2).

A total of 16 axial titles were selected in the category or main dimension of causal conditions and under the wide range of missions of Maskan Bank as a comprehensive specialized Housing-Development bank. The 6 axes in the category or main dimension of contextual conditions were the demand of stakeholders, including people-government-guilds. Economic conditions and investment demand were the title of the six central indicators and categories in the main category or dimension of intervention conditions. The four indicators in the main category or dimension of the phenomenon centrality were under the heading of Maskan Bank marketing using a supply chain integration approach in the construction and housing industry. The six indicators in the category or main dimension of strategies were titled intelligent market management and supply chain of the construction and housing industry. Finally, the four indicators in the category or main dimension of consequences were named customer and audience satisfaction. Therefore, the components and indicators of the marketing model of Maskan Bank using a supply change integration approach in the construction and housing industry were obtained in the following order based on this selective coding.

Table 2: Category clusters (resulting from selective coding) and Research Core categories (selected)

Selected code	Axial code
(Causal conditions) The wide range of missions of Maskan Bank as a comprehensive specialized development- housing bank	• Maskan Bank banking finance • Establishing construction land funds • Electronic services • Members of the industry supply chain as potential customers of the bank • Dependence of construction and housing market businesses on each other • Significant turnover of the construction and housing market • Variety of components of the construction and housing market • Expansion of the missions of Maskan Bank • Non-dependence of the housing sector on foreign exchange • Strengthening the capacity of Maskan Bank • Government efforts to strengthen the housing market • Low growth of the capital market • Dependence of Iran's economy on the financial market • The pivotal role of Maskan bank in the housing market • The monopoly of many housing bank services • The dependence of Maskan Bank on acquiring resources despite being a state-owned bank
(contextual conditions) The demand of stakeholders including people-government-guilds	• The bank as an intermediary in the transfer of asset value between owners and consumers • IT infrastructure • Social networks • Governmental support • Real demand by people • The need for employment and lasting benefits
(interfering factors) Economic conditions and investment demand	• Macroeconomic calculations • New technologies in the construction industry • Paying attention to the construction style • Financial technologies (FinTechs) • Land and construction prices • Traders and the relationship between investment demand
(phenomenon centrality) under the heading of Maskan Bank marketing using supply chain integration approach in construction and housing industry	• Strengthening the integration of the housing industry supply chain • Transparency in the supply chain of the construction industry to plan for business continuity • Strong inter-sectoral information network • Secure Financial Transfer Network

(Strategies) Intelligent market and supply chain management in the construction and housing industry	• Reviewing the marketing process • Development of mortgage banking • Participatory management of companies active in the field of construction • Adequate research in providing new banking services in Iran and the world • Corporate Banking for Chain Members • Integrated management of financing and planning
(consequences) Satisfaction of customers and audience	• Housing market boom • Stabilization of prices • Creating sustainable employment • Satisfaction of the bank's customers and audience

The researcher asked seven questions with a 5 Likert scale regarding the quality of the conceptual model with the Grounded theory and provided it to 14 experts to evaluate the Grounded data theorizing. Since these seven questions examine the provided Grounded model from 7 different perspectives, Hotelling T-test was used to investigate the opinion of these 14 experts (Table 3).

Table 3: Hotelling T-test results

No.	**Question**	**Mean**	**Standard deviation**	**Hotelling T-test**	
				F statistic	**Significance level**
1	The concepts presented in the model are derived from the examined data.	4.283	0.683	14.567	0.021
2	Concepts are identified and systematically related.	4.133	0.738		
3	There are conceptual links in concepts and categories, and the categories are well formulated.	4.271	0.801		
4	The theory is developed in such a way that it involves changing different situations.	3.972	0.769		
5	General conditions that may affect the phenomenon (Maskan Bank marketing model using a supply chain integration approach in the construction and housing industry) are described.	3.988	0.798		
6	It is thought to change a process in theory.	4.033	0.667		
7	Theoretical findings seem essential.	4.106	0.629		

The mean values of each of the 7 evaluated questions are greater than 3 (equal to "I have no opinion" or "moderate" in the questionnaire), and also the standard deviation of the obtained values is less than 1. On the other hand, the F-value (14.567) is significant at the error level of less than 0.05 (0.021), indicating that the results of all seven questions are significantly different from the mean value of 3. Therefore, the questions' acceptability that measures the quality of the Grounded model

is evaluated at a high level by experts. Therefore, the proposed Grounded model is high quality from the point of view of experts. Therefore, the conceptual model derived from selective and axial coding is presented as follows considering the Grounded Theory:

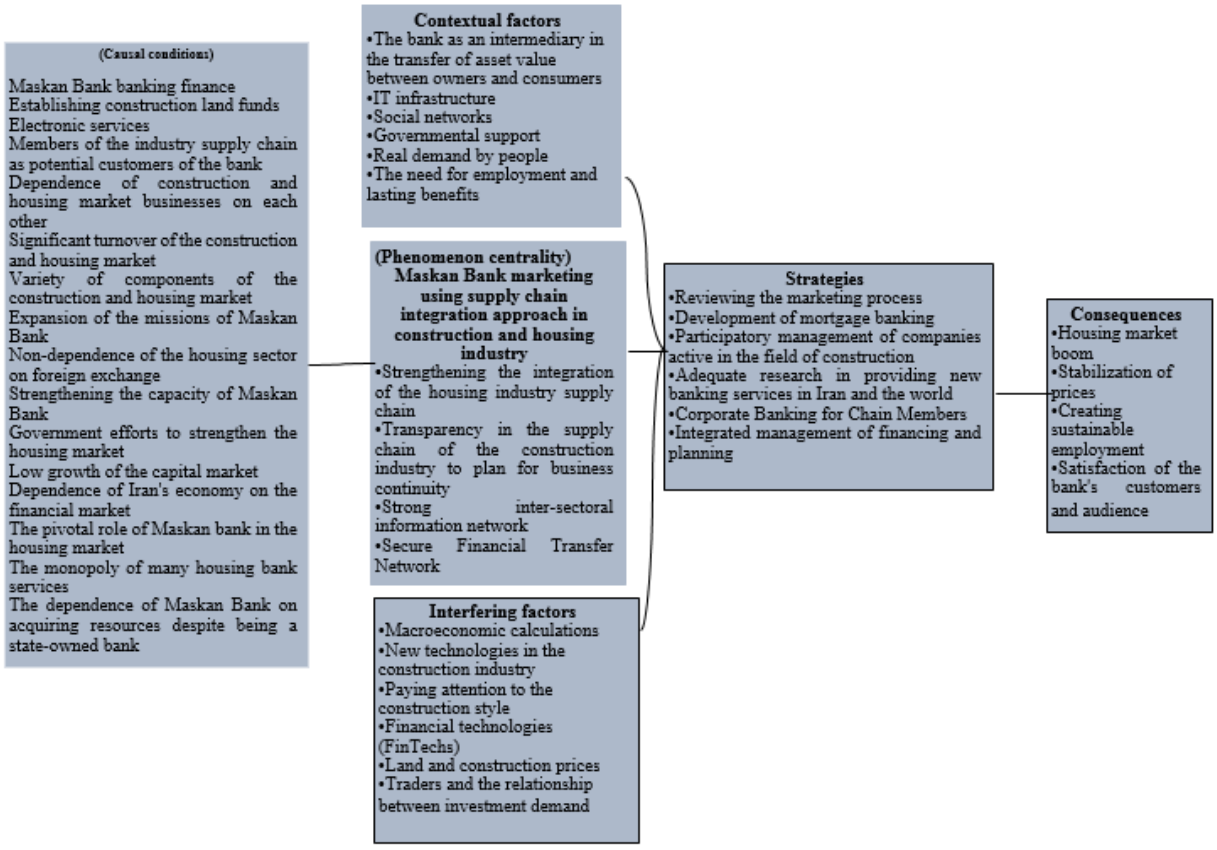

Figure 3: Paradigm model of research based on the Grounded Theory

The proposed model of Maskan Bank using a supply chain integration approach in the construction and housing industry is presented in Figure 4 according to the survey of research experts in the stage of selective coding and replacement of the concepts and dimensions and the six main variables in the corresponding position.

6. Research model measurement

6.1. Factor load coefficients

First, the research model is tested based on factor load coefficients. A factor load less than 0.3 is considered as a weak relationship, from 0.3 to 0.6 is acceptable, and greater than 0.6 is very desirable [3]. The factor loads of the questions are presented in Table 4 and Figure 5.

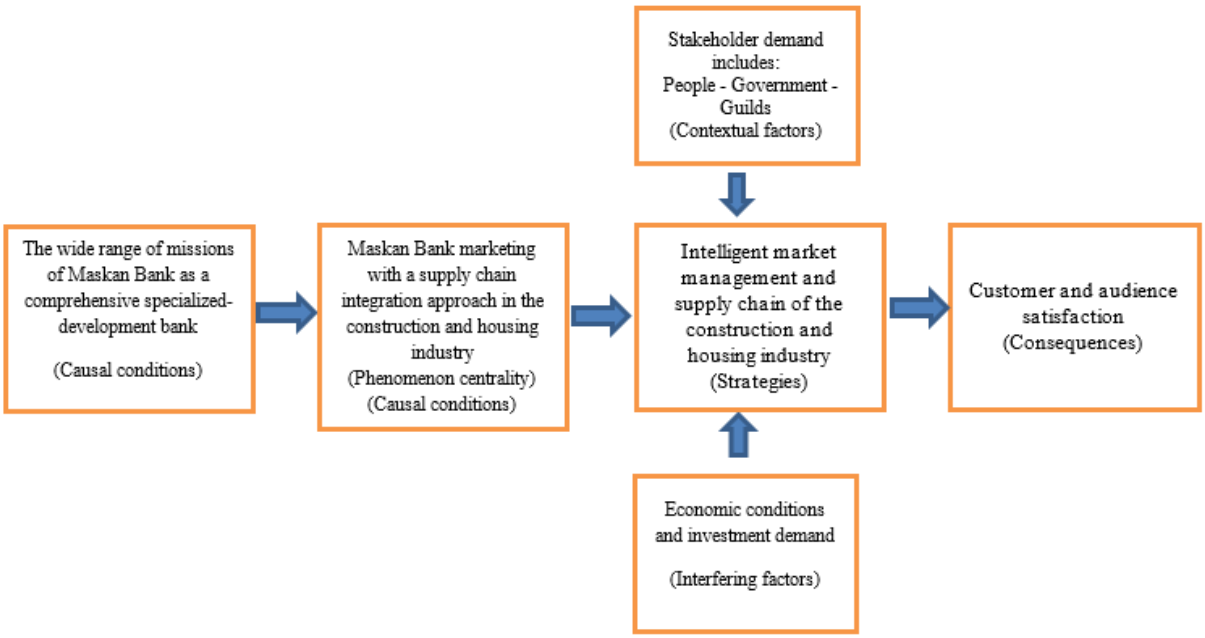

Figure 4: The proposed marketing model of Maskan Bank using a supply chain integration approach in the construction and housing industry

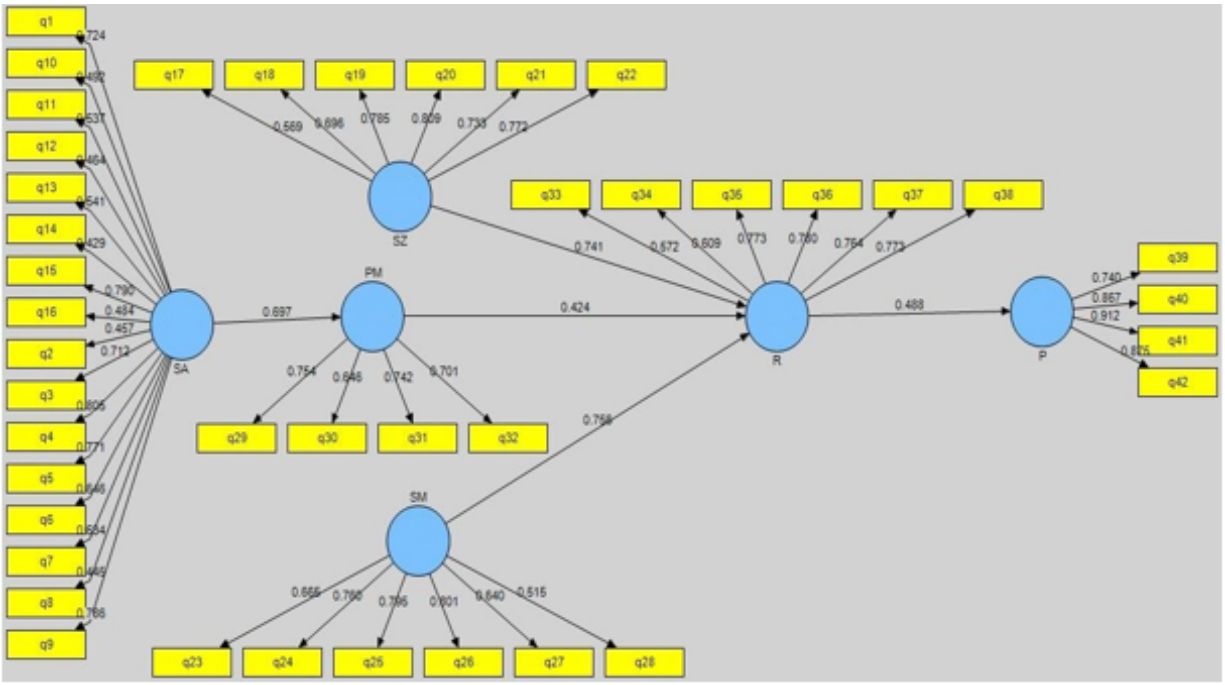

Figure 5: Confirmatory factor analysis in standard estimation mode

Table 4: Confirmatory factor analysis in standard estimation mode

Questions	(Causal conditions) The wide range of missions of Maskan Bank as a comprehensive specialized-development bank	(Contextual factors) Stakeholder demand includes: People - Government - Guilds	(Interfering factors) Economic conditions and investment demand	(phenomenon centrality) Maskan Bank marketing with a supply chain integration approach in the construction and housing industry	(Strategies) Intelligent market management and supply chain of the construction and housing industry	(consequences) Customer and audience satisfaction
q1	0.724					
q2	0.457					
q3	0.712					
q4	0.805					
q5	0.771					
q6	0.646					
q7	0.634					
q8	0.445					
q9	0.786					
q10	0.492					
q11	0.537					
q12	0.464					
q13	0.541					
q14	0.429					
q15	0.79					
q16	0.484					
q17		0.569				
q18		0.696				
q19		0.785				
q20		0.809				
q21		0.733				
q22		0.772				

q23			0.665			
q24			0.76			
q25			0.795			
q26			0.801			
q27			0.64			
q28			0.515			
q29				0.754		
q30				0.646		
q31				0.742		
q32				0.701		
q33					0.572	
q34					0.609	
q35					0.773	
q36					0.78	
q37					0.764	
q38					0.773	
q39						0.74
q40						0.867
q41						0.912
q42						0.875

All factor loads of the indicators are above 0.4, and the factor load of the indicators is desirable.

7. Cronbach's alpha coefficient of the model

Cronbach's alpha coefficient was developed by Cronbach, one of the most common methods of measuring the reliability or reliability of questionnaires. Questionnaire reliability that if the assessed traits are re-measured with the same device and under the same conditions and at different times, the results will be almost the same. Cronbach's alpha coefficient is used to measure the one-dimensionality of attitudes, beliefs, etc., to examine the uniformity of respondents' perceptions of questions based on scales. Scales are groups of numbers assigned to people, objects, or behaviors on a continuum to quantify qualities. The most common scale used in social research is the Likert scale, which assumes that items are homogeneous. Thus, each item takes scores (from 1 to 5), and the sum of the scores from the items will indicate people's orientation. Cronbach's alpha is generally calculated using one of the following equations:

$$\alpha = \frac{k}{k-1}\left(1 - \frac{\sum_{i=1}^{k} S_i^2}{\sigma^2}\right) \qquad (2)$$

Or

$$\alpha = \frac{k\bar{C}}{\bar{V} + (k-1)\bar{C}} \qquad (3)$$

In which, K is the number of questions, S_i^2 is the variance of the i-th question, σ^2 is the variance of the total questions, $\bar{C}$ is the mean variance between questions, $\bar{V}$ is the variance of the mean of question [13]. According to Cronbach's alpha, a more positive correlation between the questions leads

to Cronbach's alpha. A higher mean variance of the questions is achieved by lower Cronbach's alpha. Increasing the number of questions positively or negatively affect (depending on the correlation between the questions) Cronbach's alpha. Increasing the sample size decreases the mean variance of the questions and thus increases Cronbach's alpha. The closer the Cronbach's alpha index is to 1, the greater the internal correlation between the questions and, consequently, the more homogeneous the questions. Cronbach suggested a reliability coefficient as much as 45%, 75%, and 95% as low, moderate and acceptable, and high, respectively. If the alpha value is low, it should be checked which questions can be removed to increase the value. Cronbach's alpha was calculated for causal conditions, contextual conditions, interfering conditions, phenomena centrality, strategies, and consequences and is reported in Table 5 using Smart PLS software. In this study, the questionnaire reliability about independent and dependent variables has been obtained at a very acceptable level [8].

Table 5: Hotelling T-test results

Variable	**Symbol**	**Question**	**Cronbach's alpha alpha**
(Causal conditions) The wide range of missions of Maskan Bank as a comprehensive specialized-development bank	SA	1-16	0.823
(Contextual factors) Stakeholder demand includes: People - Government - Guilds	SZ	17-22	0.824
(Interfering factors) Economic conditions and investment demand	SM	23-28	0.792
(phenomenon centrality) Maskan Bank marketing with a supply chain integration approach in the construction and housing industry	PM	29-32	0.681
(Strategies) Intelligent market management and supply chain of the construction and housing industry	R	33-38	0.811
(consequences) Customer and audience satisfaction	P	39-42	0.874

7.1. Evaluation of the structural model

The structural model or the external model represents the relationships between the latent variables of the model. In this section, the questions (indicators) are not considered, and only the hidden variables and the relationships are examined. The most basic criterion for measuring the relationship between variables in the model is the t-value. Values more than 1.96 indicate the correctness of the relationship between the variables, confirming relationship or relationships at a 95% confidence level. Table 6 and Figure 6 show the test results of the conceptual model of the research in the significant state of t-coefficients.

Table 6: Structural equation model based on significant coefficients

Questions	(Causal conditions) The wide range of missions of Maskan Bank as a comprehensive specialized-development bank	(Contextual factors) Stakeholder demand includes: People - Government - Guilds	(Interfering factors) Economic conditions and investment demand	(phenomenon centrality) Maskan Bank marketing with a supply chain integration approach in the construction and housing industry	(Strategies) Intelligent market management and supply chain of the construction and housing industry	(consequences) Customer and audience satisfaction
q1	4.441					
q2	4.905					
q3	9.511					
q4	21.276					
q5	16.921					
q6	7.863					
q7	7.556					
q8	4.91					
q9	4.699					
q10	4.293					
q11	4.788					
q12	3.691					
q13	4.244					
q14	3.044					
q15	2.06					
q16	4.179					
q17		6.208				
q18		9.642				
q19		17.203				
q20		16.625				
q21		10.256				
q22		11.62				
q23			9.826			
q24			11.679			
q25			14.133			
q26			18.355			
q27			6.062			
q28			3.526			

q29				12.323		
q30				6.058		
q31				7.198		
q32				4.729		
q33					5.23	
q34					6.538	
q35					13.971	
q36					14.003	
q37					14.079	
q38					12.563	
q39						6.807
q40						13.485
q41						27.766
q42						17.079

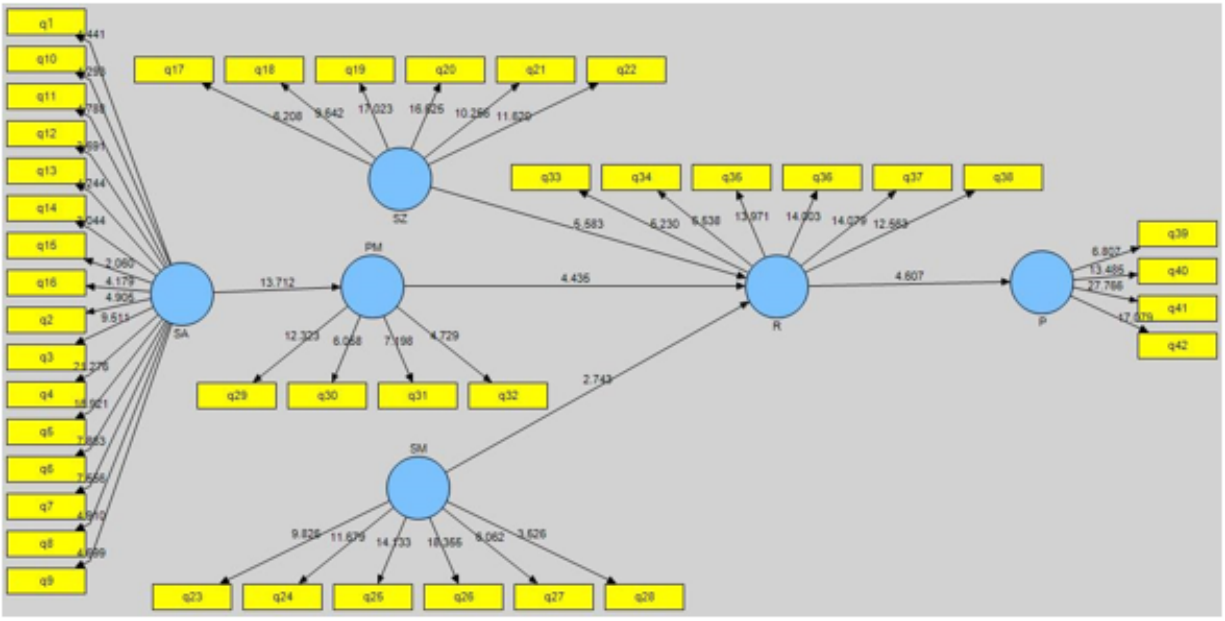

Figure 6: Structural equation model based on significant coefficients

8. Conclusion

The purpose of this study was to obtain some information about Maskan Bank marketing, which has created causal conditions for its marketing due to the wide range of its mission. Providing banking services to the public as a public bank, presenting banking services and banking finance for housing construction and purchase e to builders and applicants for housing, mortgage banking, corporate banking, investment banking, and finally to comply with government housing development policies, development banking, are factors that highlight a wide range of customers and market needs. Responding in a useful way to the needs of customers and audiences is the definition of marketing. From the perspective of banking marketers, a wide range of audiences, from people and applicants for housing and banking services to all sectors related to the construction and housing

industry, which are scattered members of the construction and housing industry supply chain, can all be Maskan Bank customers. Integrative phenomena of this industry supply chain on a national scale are business information flow and financial and credit flow between the chain members in a safe and secure environment. Strengthening the above factors will be one of the vital guides of Maskan Bank for managing banking marketing through the supply chain integration in the construction and housing industry.

The wide range of missions of Maskan Bank as a comprehensive specialized-development bank (casual conditions) and Maskan Bank marketing using a supply chain approach in the construction and housing industry (phenomenon) centrality with a factor load close to 0.7 determines the importance of the relationship in these factors. This issue is quite evident in the model of structural equations of the research in a significant way and according to Figure 6 by comparing the significant t-value and the numerical value of 13.71. Factors such as the demand of stakeholders, including people-government-guilds (contextual factors) and economic conditions and investment demand (interfering factors), had factor coefficients as much as 0.75 (Figure 5). Strategies had the most significant relationship in the marketing model of Maskan Bank in this research.

Providing pure, unique, and high-quality services in each of the above categories are inherently possible and serviceable services of Maskan Bank to its specialized customers. These services can be attractive and useful for chain members through advanced marketing research in the sector and by monitoring the flow of information in the supply chain of the construction and housing industry. The economic situation of the country, sanctions, and the price of real estate and investment demand on the one hand and the demand and expectation of bank stakeholders such as the people's government and guilds from Maskan Bank with marketing thinking using a supply chain integration approach in the construction and housing industry, on the other hand, requires strategies that dynamically enhance supply chain integration.

9. Suggestions for future research

Marketing studies are recommended to focus on common factors of integrating the supply chain in the construction and housing industry and the related banking business of Maskan Bank. Researchers at the Roads, Housing, and Urban Development Research Center are suggested to consider supply chain integration factors and their expansion into other areas related to roads and transportation. The facilities resulting from the integrated supply chain management of other industries in Iran and the world can provide similar models for the marketing of other specialized and commercial banks.

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