

## Market Segmentation in the Banking Industry Based on Customers' Expected Benefits: A Study of Shahr Bank

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### Abstract

Nowadays, the analysis of customer behavior is necessary for active organizations in the field of banking which deal with many customers with different characteristics. In recent years, Shahr Bank of Iran has faced many problems because of poor customer-orientedness and customer services. Therefore, to solve the existing problem, the current study concentrated on segmenting the customers of Shahr Bank based on their expected benefits. This study is applied in terms of purpose and descriptive-survey research in terms of data collection and analysis. To achieve the research objectives, through field studies and exploratory interviews with customers and banking experts, 165 benefits were extracted. Then, using expert questionnaires, the number of these benefits was reduced, and through factor analysis, nine factors were identified as the most important expected benefits. Moreover, using cluster analysis, four customer segments were extracted, namely benefit-oriented, peace-oriented, interest-oriented, and moderate ones. Finally, a suitable marketing solution was provided to the bank consistent with the most important features of the segments. For bank managers, this paper provides an appropriate view to identify customers' preferences as an important factor in customer-orientedness and bank profitability.

**Keywords:** Market segmentation, Banking industry, Expected benefits approach, Factor analysis, Cluster analysis.

### Introduction

Currently, given the expansion of financial institutions and banks, attention to the processes of providing services and their customer-oriented attitude has been more considered by customers than ever. Thus, studies on the quality of financial services are increased and these studies propose new insights for managers in service sectors. Researchers evaluate some market opportunities like differences among purchaser groups (Abimbola et al., 2012).

Market segmentation is a basic concept of modern marketing (Wind, 1978) and is very pervasive both in practice and academic literature (Liu et al., 2010). Customers' priorities for different properties in the same service, product, or administration are very different (Guillet & Kucukusta, 2016). Market segmentation is a strategy that tries to classify the customer based on their needs, characteristics, or behavior. These may need different marketing diplomacies (Kotler & Armstrong, 2010; Liu et al., 2019), and these diplomacies make markets to be able to classify the customers (Guillet & Kucukusta, 2016).

First, Customers' information makes you to have insight about needs and motivations of

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customers (Cameron et al., 2006), causes increased understanding about market by predicting its happening facts (phenomena), and provides better intention models (Hunt, 2002). Second, grounding market segmentation strategy in competition theory helps macro dimension marketing to develop (Hunt & Arnett, 2004).

The financial services sector is growing worldwide (Fullerton, 2019). In recent years, the monetary and financial industry in Iran has witnessed many changes. The establishment of various private banks, Gharz al-Hasna Funds, and financial and credit institutions have led to a competitive situation. Moreover, the arrival of new technologies in Iran and a change in laws and regulations have made this market dynamic and complex. In these conditions, service quality is the primary weapon in the competition (El Saghier & Nathan, 2013; Osei-Poku, 2012;). In addition, it should be determined that which service quality component is more important for different customers. Customer's information helps banks concentrate on certain groups of customers (market segment) instead of all aspects to provide services more effectively. Banks that are good in service quality obtain more advantages, and according to the promoted level of service quality, they use more incomes to allow customers use services of other institutions while maintaining customers (Bennett & Higgins, 1988) and develop market share (Bowen & Hedges, 1993; Esfidani et al., 2014).

Different studies have been done in the field of market segmentation. Machauer and Morgner (2001) concluded that segmentation by expected benefits and attitudes could enhance a bank's ability to address the conflict between individual service and cost-saving standardization. Using cluster analyses of section sets up four types of customers. These four customer groups give special priority to information services and technology. Five different bank customer commitment profiles were identified by Fullerton (2019) with various types based on factors such as size, behavior, and intentions. In a study by Piercy, Campbell, and Heinrich (2011) based on demographic-based segmentation as a means of targeting customers of financial services identified 10 clusters.

Moreover, other previous studies in this context (Andronikidis & Dimitriadis, 2003; Foscht et al., 2010; Gupta & Dev, 2012; Kaynak & Harcar, 2005; Rashid, 2012; Sayani & Miniaoui, 2013) indicate that they were trying to identify customers expected from banks or they have examined a particular bank, and they didn't the customers segmentation of the banking industry. Therefore, customer segmentation and in particular, segmentation according to customers' expected benefits in Shahr Bank, have rarely been taken into consideration. The most important differences of this research with similar studies done in this field are as follows. First, the study intended to examine the concept map and position of the bank and its departments based on the most important factors expected by customers and to determine the most important departments for the bank to whose customers the bank is currently closest. Second, the paper aims at inspecting the difference in the expected benefits of customers during recent years as a result of changes in consumer behavior and making an up-to-date review of these expected benefits and the difference in the expected benefits compared to previous research. Third, the study wanted to investigate the changes in the economic situation of the country in recent years, which have caused many changes in the behavior of banks and customers that need to be updated in order to examine the benefits expected by customers. Fourth, as different banks have different conditions and behaviors and many of their customers are different, the segmentation of Shahr Bank customers and the determination of their expected benefits have not been studied in previous studies.

Thus, market segmentation according to customer expected benefits in the Shahr bank of Iran is the most important innovation of this study. Moreover, this study can supplement past studies in the market segmentation domain. These findings can be of great interest to

marketing followers generally, and particularly to researchers working on market segmentation.

With the increase in the population of Iran to over 82 million people, more customers go to the banks for daily transactions. As a result, people who go to the banks have more diverse needs and expected benefits, but these differences do not mean an absolute lack of similarity between people. If customers are not classified in the banking industry, banks will face various problems in this area. Some of the problems caused by the lack of customer segmentation for banks include lack of accurate knowledge of bank customers and lack of knowledge of the behavioral process of customers in transactions, increased advertising costs and decreased effectiveness due to the lack of market segmentation and customer recognition, lack of effective planning with a fragmented approach from attracting to retaining customers, and having an unsegmented class of customers that prevents designing a marketing strategy that fits each segment.

In recent years, the Shahr Bank of Iran has faced many problems because of the poor customer-orientedness and customer services. In this regard, the problems of Shahr Bank that make segmentation necessary for this bank include dispersion of customer data and their non-segregation for planning, lack of effective marketing plan due to lack of knowledge about customers, lack of knowledge about the demands of customers by the bank in order to provide value-added services to them, and high marketing costs and market targeting based on judgment and experience and not based on data extracted from customers and their segmentation. Hence, it seemed necessary to identify the customers of this bank, and so it was selected for this study.

In this study, “segmentation” as a strategic tool helps the banks to work according to these differences and the expectations of customers. For bank managers, this paper provides a view that to identify customers' preferences. Customer identification helps banks increase profitability because services and products that are present in the banks should be based on a better understanding of customers. In addition, performing customer segmentation in banks has advantages for the bank, which are in fact the practical dimensions of this research for the Shahr Bank. Some of the applications of this research in order to solve the mentioned problems include

- Dividing customers and extracting their service features and demographics in order to design an effective and targeted marketing mix based on the benefits and services of customers in each department.
- Designing a marketing strategy based on each department as well as the service features and benefits of that department
- Strategically reducing advertising costs while improving advertising effectiveness
- Applying the benefits of segmentation approach and RFM tailored to each segment and effective measures from attracting to retaining customers.

As a result, the objectives of this study that aimed to develop marketing activities of Shahr Bank in the banking industry of Iran are as follows.

- Identification of customer expected benefits in Shahr Bank
- Identification of different customer segments in Shahr Bank based on their expected benefits
- Analysis of demographic characteristics and importance of customer expected benefits in each segment
- Identification of the most important segments for Shahr Bank and the determination of the most important expected benefits in these segments
- The provision of marketing strategies tailored to the characteristics of the important segments.

## Theoretical Development

### *Market Segmentation*

Market segmentation is among the important and key concepts in marketing discussions today (Bassi, 2015; Lees et al., 2016) and is taken into consideration by companies with strong brands such as banks. In today's complicated world, consumers face so many choices for selecting and purchasing goods and services (Aghaei et al., 2014), and thus usually their responses come from what brand is actually in their mind (Hasan & Khan, 2015). In total, 81 percent of global marketers report that they mainly compete on the basis of customer experience (Mahr et al., 2019). However, not all consumers are alike and the recognition of customers experience is needed to understand different customer segments and their unique characteristics (De Keyser et al., 2015). Accordingly, Market segmentation is the ideal approach to focus on client wants and needs (Abimbola et al., 2012).

Market segmentation in its strategic sensation often refers to such things as the use of specific statistical techniques to notice groups of possible customers who have different needs (Hunt & Arnett, 2004). The segmentation process requires involvement of total market to divide equivalently, select the target segment, and create special market (Abimbola et al., 2012). It can help the company to gain more information about priority and needs of consumers, have different policies for selected segment to amend consumer satisfaction, and increase income (Liu et al., 2019).

Segmentation can be done in several ways. We chose to group them into four wide categories, namely geographic, demographic, psychographic, and behavioural segmentation. These approaches are not applied one at a time in practice (Marshall & Johnston, 2010). A marketing manager may combine these approaches, wherever appropriate, in different markets to give product (Abimbola et al., 2012).

In an study on predicting financial products acquisition via dynamic segmentation (an application to the Italian market), Bassi (2015) identified 5 clusters. The results of Souza et al. (2019) study showed that there are six clusters of processes and four classes of customer in the market, each with distinct profiles and needs. Garland (2005) classified the retail-banking client according to customer satisfaction and customer loyalty. Cho et al. (2017) showed that four homogenous subgroups in factor-cluster segmentation approach were generated: highly constrained, cost and time conscious, family togetherness, unmotivated and constrained. In addition, Mir mohammadi et al. (2016) identified and described five clusters in a study on segmentation of chain stores based on the expected interests.

### *Market Segmentation in Microbanking Context*

Recently, customer survey has grabbed the attention of financial service companies (Cameron et al., 2006). Improvements in the financial and banking division, for example, execution of new advancements, continually changing of client needs, increment in the number of items offered and deregulation process have made division rehearses significant in that segment (Asiedu, 2016). Asiedu (2016) showed that division rehearses have gigantically affected on the exhibition of the chose banks in Colombia.

In the coming era and given the PESTEL situation (Political, Economic, Social, Technological, Environmental, and Legal) in the banking industry as well as the market size, variety in products and services, differences in lifestyles and tastes of customers, and the presence of economic and cultural entities in different groups, ignoring this issue puts Shahr Bank of Iran on a challenging path in attracting and retaining customers, and the complied

marketing programs will lose their effectiveness ignoring other factors. In addition, limited financial and technical resources do not allow the bank to operate in a wide range and provide various products and services for different customer groups without giving attention to this important marketing aspect. Accordingly, the benefits are divided into two parts. First, segmentation enables the banks to provide the required services and change themselves. Second, it helps the banks to identify the most important and valuable customers (Khajvand & Tarokh, 2011). Generally, the main foundations of market segmentation are *geographical* (Abimbola et al., 2012; Gonzalez-Benito & Gonzalez-Benito, 2005; Marshall & Johnston, 2010; Minhas & Jacobs, 1996), *demographic* (Abimbola et al., 2012; Ahmad, 2003; Lees et al., 2016; Marshall & Johnston, 2010; Piercy et al., 2011), *psychological* (Abimbola et al., 2012; Ahmad, 2003; Harrison, 1994; Marshall & Johnston, 2010), and *behavioral* (Abimbola et al., 2012; McDougall & Levesque, 1994; Marshall & Johnston, 2010).

### *Expected Benefits Approach*

Since the appearance of market segmentation in the late 1950s, the methods for department have developed extensively (Dolnicar & Leisch, 2004). Nobody single methodology is the best when leading the business sector division (Dolnicar et al., 2018). According to Haley (1968), the advantages that individuals search when using a given sector are the needed explanations for the attendance of genuine market segments. Generally, in the present conditions, the use of many criteria without making a logical relationship between them and the future purchase behavior of customers is not that effective.

To compensate for the shortcomings of these methods, criteria such as the expected customer benefits should be used. The reason for this recommendation is that the segmentation approach based on expected benefits is a form of behavioral segmentation (Esfidani et al., 2014), and that this approach is a direct measure of difference in preferences between customers and provides managers with a practical analysis. The benefits consist of total product benefits and satisfactions that meet the needs of a person (Cermak et al., 1994). This type of segmentation follows its causal relationship in the future behavior of banking customers. However, it should be noted that although it is difficult to have a correct choice to show real incentives of customers, these criteria (i.e., benefits) can have a key role in compiling marketing strategies (and other marketing process steps) for the bank and helping it move towards customer-orientedness. Indeed, relation– as measures of the subjective estimate of bank service, towards various aspects of the customer-bank relationship– result from goals and knowledge or customer experiences (Machauer & Morgner, 2001). Studies by Haley (1968; 1995) proved the effectiveness of segmentation according to expected customer benefits. It is argued in these studies that the benefits that people are looking for constitute the main purchase reason and is a suitable basis for market segmentation. Banking sector marketing researchers and experts want to clarify the customers' expectations of the banks to find out which services are more important to them.

In a study by Rashid (2012), e-banking (ATM, internet, telephone banking), convenience, staff competency, appearance (internal and external), the impact of others, and advertising were introduced as the most important factors to select a bank. In a study by Sayani and Miniaoui (2013), profit, advice from friends, branch position, cost of services, and reliability constituted the criteria to select a bank. Limited studies are conducted on banking industry market segmentation according to expected customer benefits. For example, Mortazavi et al. (2009) in a study on bank market segmentation in Mashhad based on expected customer benefits determined three segments. Esfidani et al. (2014) conducted a study in microbanking market segmentation based on expected customer benefits in Mellat Bank and identified four segments through cluster analysis.

## Methodology

The objective of this study was to investigate customer segmentation in the Shahr Bank of Iran based on the customers' expected benefits. In addition, the demographic variables and expected benefits of each segment were taken into consideration. The statistical population of this study included all people with a personal account (natural persons) that used at least one of the services of Shahr Bank in Tehran.

In terms of objective and data collection methods, this study was an applied and descriptive-survey study, respectively. In this study, a list of customer expected benefits was obtained through seeking the opinions of banking experts and investigating the different indexes in the previous studies in the field of banking expected benefits. After confirming the indexes by the marketing manager of the bank and the supervisors, a questionnaire suitable for the determined indexes was prepared and data collection and field monitoring with the guideline was performed in July 2019, and the data for segmentation were extracted. To prepare this questionnaire, library research (i.e., examining the related articles and books), a field study, and exploratory interviews (structured and flexible interviews through face-to-face, phone call, and internet modes with 35 customers with financial maturity and 15 managers and staff of 10 branches of public and private banks of Iran as banking experts) were carried out. Accordingly, a list of customer expected criteria (165 criteria) were extracted that was used to select the banks. Then, with the cooperation of marketing experts and consultants – including five faculty members and four banking experts – and using questionnaire and pretesting it with 60 customers, 50 criteria were selected. Accordingly, the validity (CVI= 0.825) and reliability (Cronbach's alpha= 0.871) of the questionnaire were confirmed.

The final questionnaire was designed in two sections of demographic information of customers and the degree of importance of identifying and presenting benefits to customers in selecting the bank (according to a 5-point Likert scale). To get the required data, according to infinite statistical population members, the sample size was determined using the Cochran formula as 385. To ensure obtaining accurate results, 600 paper-based questionnaires were distributed among the customers of Shahr Bank in Tehran using cluster sampling based on the district, because, according to the prediction by the researcher about different expected advantages in different districts of Tehran, it was attempted to consider all districts. Accordingly, the branches of the bank were classified and one branch was selected from every district randomly. It took about 15 minutes for a respondent to complete the questionnaire and the entire data collection took about 30 days. Finally, 600 complete questionnaires were collected. On the other hand, to ensure the appropriateness of the sample size, the KMO test was used (with an approximate value of 0.918). Factor analysis was used to achieve research objective, i.e., determining the benefits customers expected to achieve from the bank. Moreover, to segment the customers according to the expected benefits, cluster analysis was used, and to determine the most important segments for the bank, conceptual maps were used. Data were analyzed using SPSS 24.

In Table 1, the questions in the questionnaire related to the main variables and factors are described.

**Table 1.** Number of Questions Based on the Questionnaire Main Variables and Factors

Demographic variables	Questions about expected benefits		
	Factors number	Factors name	Questions number
Questions 1 to 7	Suggested factor1	Services	8 to 25
	Suggested factor2	Rates	26 to 28
	Suggested factor3	Convenience	29 to 32
	Suggested factor4	Perceptible things	33 to 35
	Suggested factor5	Inform	36 to 38
	Suggested factor6	Security	39 to 42
	Suggested factor7	Staff	43 to 49
	Suggested factor8	Technology	50 to 53
	Suggested factor9	Reputation	54 to 57

## Results and Discussion

In the data analysis phase, cluster analysis was used to summarize the data, place them into the main factors, and name them by factor analysis, and to segment the factors and determine the main segments. Cluster analysis is a set of classification methods to reduce data dimensions within homogenous groups according to similarities and differences and distance between variables (Seyyedhashemi & Mamduhi, 2010). In addition, to determine the most important segments for Shahr Bank, conceptual maps were used. Tests were performed using SPSS 24. In the following, the results of these methods are presented.

### Factor Analysis

To use factor analysis, it should be ensured that it is possible to analyze data using this method. For this purpose, the KMO test and Bartlett's test are used. The results of the KMO test (0.918) and Bartlett's test (0.000 and below 0.05) in this study indicated the appropriateness of the factor analysis, and using Table 2, six questions were eliminated and factor analysis done on the questions. Finally, 9 main factors and 44 items related to expected customer benefits were obtained that explained 60.29% of the total variance (Objective 1). Moreover, total variance was investigated and then, factors were named.

**Table 2.** Description of the Total Variance

Component	Initial special values			Sum of the squares of extracted factor loads			Sum of the squares of rotated factor loads		
	Total	Variance percentage	Cumulative percentage	Total	Variance percentage	Cumulative percentage	Total	Variance percentage	Cumulative percentage
1	13.510	28.835	28.835	13.510	28.835	28.835	6.964	14.288	14.288
2	2.844	6.257	35.092	2.844	6.257	35.092	3.321	7.318	21.606
3	2.495	5.483	40.575	2.495	5.483	40.575	3.126	6.885	28.491
4	2.105	4.616	45.191	2.105	4.616	45.191	2.958	6.511	35.002
5	1.766	3.863	49.054	1.766	3.863	49.054	2.794	6.147	41.149
6	1.517	3.308	52.362	1.517	3.308	52.362	2.566	5.640	46.789
7	1.323	2.877	55.239	1.323	2.877	55.239	2.247	4.927	51.716
8	1.213	2.633	57.872	1.213	2.633	57.872	2.167	4.752	56.468
9	1.121	2.429	60.301	1.121	2.429	60.301	1.752	3.831	60.299

Considering the total variance in Table 2, each component has a quality score called "Eigenvalue." Only components with large eigenvalues are likely to represent a true principal factor. A general rule of thumb is to choose components whose eigenvalues are at least 1, and components with low quality scores (eigenvalues less than 1) are not good representations for real traits. Therefore, it seemed that nine basic factors could be identified. This was because our nine factors had at least one eigenvalue greater than one and had good values.

The Rotated Component Matrix also determines which items measure which factors. By examining the rotating matrix for the research items, the items that measure each factor were determined, and the results of classifying the items into factors are presented in Table 3. Then the factors were named. The results with items related to each factor and Cronbach's alpha are presented in Table 3.

**Table 3.** Information About the Research's Main Factors

Factors number	Factors name	Number of indicators	Description of Indicators	Cronbach's alpha
Factor1	Services	12	Providing free and comprehensive e-cards Having branches with free services Accounts checking Diverse electronic services Speed of banking operations Stability in electronic services Network banking	0.901
Factor2	Staff	7	Providing loans with the right conditions Convenience in opening or closing an account Lottery and valuable prizes Providing modern banking systems Providing inventory and bill declaration in a variety of methods at minimal costs	0.817
Factor3	Convenience	4	Employee willingness to meet customer needs Appropriate number of employees Individual attention and responsiveness to customers Friendly and respectful behavioral honesty of employees legal justice in providing services knowledge and skill of employees	0.782
Factor4	Security	4	Number of branches in city and country Proximity to branch More bank working hours Proximity to ATMs	0.796
Factor5	Reputation	4	Preservation of customers' privacy Commitment of bank to promises Low risk and financial stability of bank Security in e-banking	0.720
Factor6	Inform	3	Bank reputation The bank is private or governmental Bank's financial power Participation in community Financial advice	0.709
Factor7	Technology	4	E-information about the new products or services staff providing the customers with adequate information about services and products in branches Presentation of extensive ATM and card reader services Presentation of diverse e-banking services, Presentation of more mobile and phone banking services bank innovation and products creation	0.743
Factor8	Perceptible things	3	Branch appearance (internal/external) and staff branch facilities attractive advertising	0.726
Factor9	Rates	3	Providing loans with low-interest rates offering a range of investment products low profit rate for accounts	0.702



Table 3 provides information on the nine main factors and the number of items that each of these factors is examined by. According to the results shown in this table, the indicators for measuring the services of Shahr Bank have been included in 12 items (including providing free and comprehensive e-cards, having branches with free services, accounts checking, diverse electronic services, speed of banking operations, stability in electronic services, network banking, providing loans with the right conditions, convenience in opening or closing an account, lottery and valuable prizes, providing modern banking systems, and providing inventory and bill declaration in a variety of methods at minimal costs). The items examined in other factors are presented in the Table 3. In addition, the Cronbach's alpha value for all these factors is more than 0.7, which shows the confirmation of the reliability of this measurement.

After extracting and naming customer expected benefits from the bank in the first step, customers should be classified according to their expected benefits. The results of step two are presented in the following lines.

### *Cluster Analysis*

For factors customers segmentation (objective 2), the dendrogram diagram was used in the hierarchical cluster analysis (along with the square of the euclidean distance for clusters distance). There are several methods to calculate the center of the clusters. McQueen (1998) proposed a method in which cluster center is recalculated when the sample belonging to that becomes a cluster. To perform segmentation and determine the number of segments in this plan, K-Means analysis in SPSS 24 was used, which led to the extraction of four segments. Final cluster centers resulted from K-Means analysis are presented in Table 4. In fact, the content of this table indicates the importance and priority of each factor or their behavioral importance in each segment.

**Table 4.** Final Cluster Centers

<b>Factors</b>	<b>Segment 1</b>	<b>Segment 2</b>	<b>Segment 3</b>	<b>Segment 4</b>
Factor1 Services	4.44	3.01	3.15	3.10
Factor2 Staff	4.33	2.15	3.23	3.03
Factor3 Convenience	4.26	3.89	2.82	3.12
Factor4 Security	4.11	3.90	2.85	3.00
Factor5 Reputation	4.37	3.85	2.80	3.09
Factor6 Inform	3.58	3.63	2.24	3.15
Factor7 Technology	4.41	3.16	3.08	2.99
Factor8 Perceptible things	4.20	3.53	2.57	3.09
Factor9 Rates	3.39	1.62	1.71	2.83
Members of each segment	20.9%	27%	17.8%	34.3%

The data obtained from customers' scores were coded to their expected benefits on the nine factors examined and clustered using SPSS software. Based on the results, customers were divided into 4 sections that had the expected benefits of proximity to each other. The sections consisted of 20.9, 27, 17.8, and 34.3 percents of the sample members, respectively. The numbers presented in each row of Table 4 are the average customer feedback for each section on that invoice. As it turns out, the highest and lowest averages are related to section 1 and 3 customers, respectively. Customer feedback and the naming of each section accordingly are provided below in Table 5.

Following the analysis of the importance of customer expected benefits in each segment, the analyses of demographic characteristics, behavioral characteristics, and the importance

level of benefits are carried out according to customer expected benefits in each segment and the results are presented Table 5 (objective 3).

**Table 5.** Demographic Characteristics of Each Segment (Numbers in Percent)

Demographic variables		Segment 1	Segment 2	Segment 3	Segment 4
Members of each segment		20.9	27	17.8	34.3
Gender	Female	43.9	31.0	32.5	34.4
	Male	56.1	69.0	67.5	65.6
Marital status	Single	33.7	48.4	39.8	47.5
	Married	66.3	51.6	60.2	52.5
Age	Under 18 years	0.0	4.0	3.6	2.5
	18 to 25 years	20.4	25.4	22.9	26.9
	25 to 35 years	40.8	38.1	37.3	35.6
	35 to 45 years	21.4	19.8	19.3	21.9
	45 to 55 years	11.3	10.3	14.5	8.1
	55 to 65 years	6.1	1.6	2.4	3.1
Education	65 to 75 years	0.0	0.8	0.0	1.9
	Lower than diploma	15.3	15.8	19.3	23.7
	Diploma	39.8	47.6	49.4	39.4
	Bachelor's	28.6	31.0	26.5	31.3
	Master's and higher	16.3	5.6	4.8	5.6
	Duration of relation with the bank	Less than 1 year	24.6	13.5	12.0
1 to 5 years		40.8	27.0	32.5	41.3
5 to 10 years		23.4	31.7	37.3	32.5
Over 10 years		11.2	27.8	18.2	14.9
Income (Rials)	Less than 10 million	6.0	19.0	12.0	15.6
	10-20 Million	32.7	25.4	50.6	34.4
	20-40 Million	37.8	34.1	32.5	36.9
	40-60 Million	19.4	13.6	3.7	10.0
	60-80 Million	3.1	6.3	0.0	2.5
	Over 80 million	1.0	1.6	1.2	0.6
Job	Educational, cultural, and artistic	9.1	15.9	14.5	10.6
	Administrative and financial employee	27.6	13.4	6.0	15.6
	Manager	11.2	4.8	1.2	7.5
	Self-employed/Freelance Jobs(1) (doctor, lawyer, engineer)	3.1	4.0	6.0	3.1
	Self-employed/Freelance Jobs(2) (businessman, shopkeeper, coach, farmer, worker)	39.8	50.0	61.4	49.4
	Other jobs	9.2	11.9	10.9	13.8

Table 5 presents the demographic information of customers separately for each section. The largest section was Section 4 and the smallest Section was 3. In addition, the customers of Section 2 had more contact with the bank and the customers of this section had the highest income. In the following, we will discuss the details of demographic information separately for each section. In this section, the most important data in Tables 4 and 5 regarding each segment are analyzed.

**Segment 1:** This segment includes 98 (20.9%) respondents. Males (56.1%), married respondents (66.3%), age group 25 to 35 years old (40.8%), respondents with a bachelor's degree (39.8%), self-employed (2) respondents (39.8%), respondents with 20 to 40 million rials income (37.8%), and relationship period from 1 to 5 years (40.8%) constituted the major demographic variable percentages in this segment. In this segment, all factors are of great

importance and have the highest score compared to other segments. The high importance of benefits for respondents in this segment shows that these customers are **benefit-oriented**.

**Segment 2:** This segment includes 126 (27%) respondents. Males (69%), single respondents (51.6%), age group 25 to 35 years old (38.1%), respondents with a diploma degree (47.6%), administrative and financial employee respondents (50%), respondents with 20 to 40 million rials income (34.1%), and relationship period from 5 to 10 years (31.7%) constituted the major demographic variable percentages in this segment. Here, the services and technology factor has medium importance and the employee factor is considered insignificant. The rates factor has the lowest score compared to other segments and is insignificant, and the factors of convenience and perceptible things, inform, security and reputation have importance rates more than average. The high importance of psychological and sedative benefits for respondents in this segment shows that these customers are **peace-oriented**.

**Segment 3:** This segment includes 83 (17.8%) respondents. Males (67.5%), married respondents (60.2%), age group 25 to 35 years old (37.3%), respondents with a diploma degree (49.4%), self-employed (2) respondents (61.4%), respondents with 10 to 20 million rials income (50.6%), and relationship period from 5 to 10 years (37.3%) constituted the major demographic variable percentages in this segment. In general, the respondents in this segment attribute low importance to all factors. The low importance of benefits for respondents in this segment (this segment also has the longest relationship with the bank) shows that these customers are **interest-oriented** and interested in this bank.

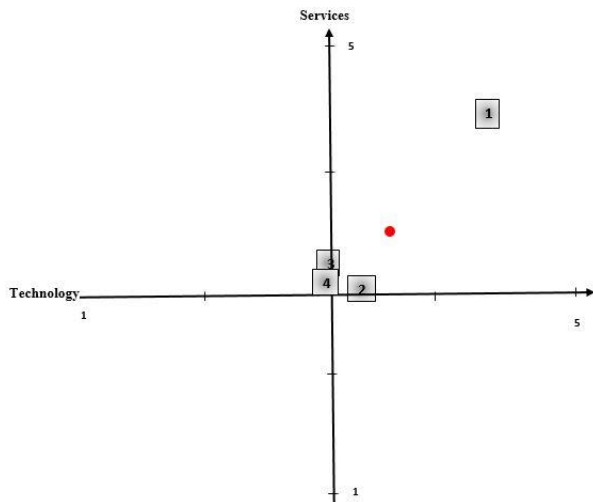
**Segment 4:** This segment includes 160 (34.3%) respondents. Males (65.6%), married respondents (52.5%), age group 25 to 35 years old (35.6%), respondents with a bachelor's degree (39.4%), self-employed (2) respondents (49.4%), respondents with 20 to 40 million rials income (36.9%), and a relationship period from 1 to 5 years (41.3%) constituted the major demographic variable percentages in this segment. Here, the respondents gave a relatively moderate degree of importance to all factors. This shows that the customers are **moderate** and are satisfied with their existing amount of benefits.

This result is consistent with Esfidani et al. (2014) who identified microbanking based on expected customer benefits of Mellat Bank in 4 segments as well as a study by Machauer and Morgner (2001). However, it is not consistent with Mortazavi et al. (2009) who determined Mashhad's banks based on expected customer benefits in three segments as well as Garland (2005), Baradaran and Farrokhi (2014), Shashidhar and Varadarajan (2011), Piercy et al. (2011), Bassi (2015), Souza et al. (2019) and Fullerton (2019).

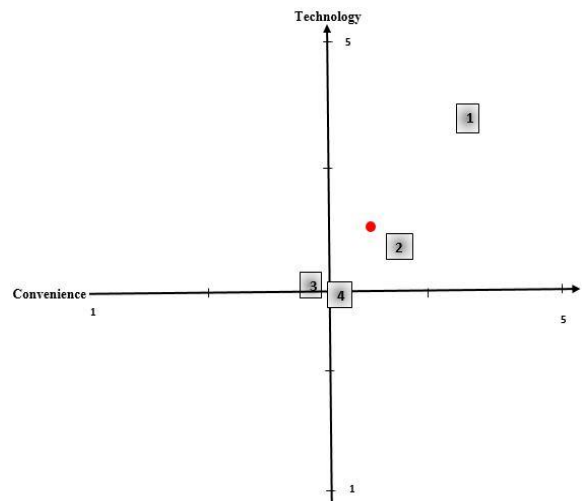
Then, in order to collect and use clustering to determine a segment that has the highest consistency with Shahr Bank, conceptual maps were used based on the customer expected benefits in each segment.

### *Conceptual Maps*

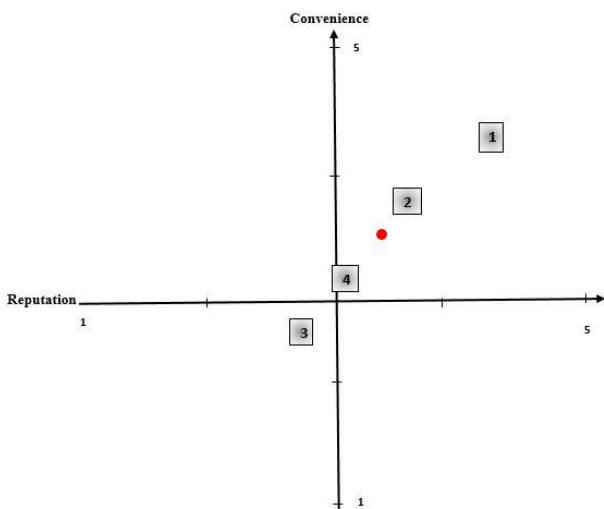
The objective of conceptual map learning is enabling learners to complete the forgotten knowledge, clarify the existing knowledge, understand the communications, and promote critical thinking (Hicks-Moore, 2005). In this regard, according to a meeting with experts in the field of banking domain marketing, out of the nine proposed benefits in the questionnaire, four benefits that were more important from the perspective of customers (Table 4) were selected and drawn as conceptual maps along with the 4 segments and the locations of the bank according to their scores relative to the benefits (objective 4). Then, the conceptual maps of the analysis of Shahr Bank's customer expected benefits were investigated (the specifications of these maps are proposed according to a 5-point Likert scale in customer expected benefits questionnaire).



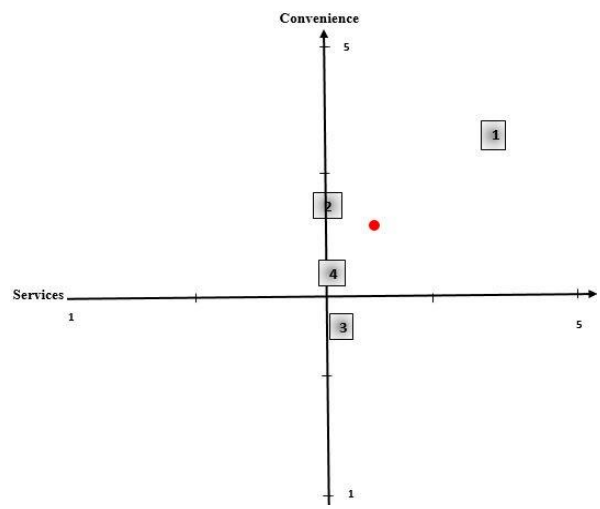
**Figure 1.** Conceptual Map of Services-Technology



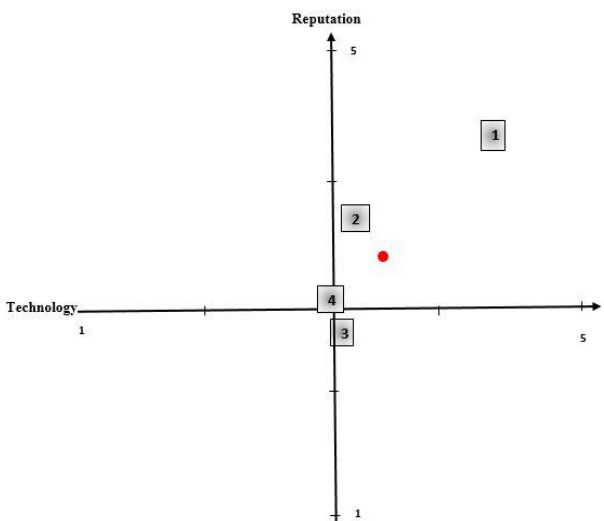
**Figure 2.** Conceptual Map of Convenience-Technology



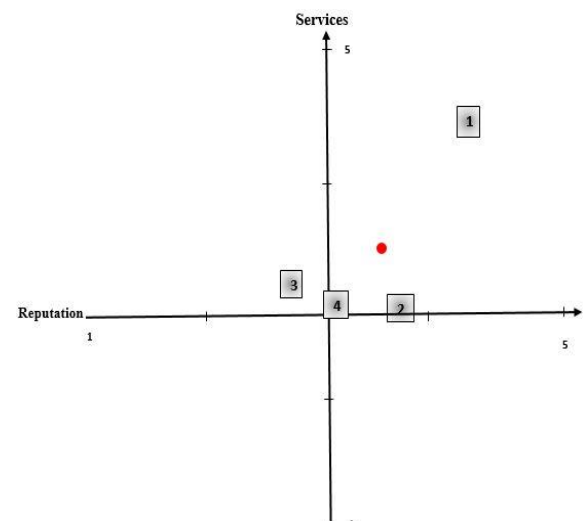
**Figure 3.** Conceptual Map of Convenience-Reputation



**Figure 4.** Conceptual Map of Services-Convenience



**Figure 5.** Conceptual Map of Reputation-Technology



**Figure 6.** Conceptual Map of Services-Reputation

Using concept maps 1 to 6, four items of the most important factors desired by customers have been examined in pairs. In addition, according to the average customer opinions in each factor (Table 4), the position of each section in the concept maps was determined. It should be noted that the intersection point of the axes is 3 points. As it turns out, Section 1 has the highest score on all maps. Figure 1 shows that customers in section 2 are more satisfied with the technology used (Score 3.3) and consider the services of the Shahr Bank to be moderate (Score 3). In addition, Section 4 in all maps is close to the intersection of the axes and the average view. In addition, the general position of Shahr Bank (indicated by a red circle in the maps) was determined through the overall average of the four sections (Table 4) in the invoice.

Therefore, as the most important findings from the above conceptual maps, to identify segments with the highest consistency with Shahr Bank of Iran and determine the most important benefits that are looked for in these segments, the arrangement of the segments in the conceptual maps shows that Shahr Bank is more closely related to peace-oriented customers (Segment 2). This group constitutes 27% of the total population who participated in this study. On the other hand, the moderate customers (Segment 4) constitute the largest group. This group constitutes 34.3% of the total population. Therefore, this cluster has a high attractiveness for the bank.

Moreover, among benefits that are presented in Table 4, factors that have been taken into consideration more specifically considering scores in the two groups (i.e., groups 2 and 4) are convenience, perceptible things, inform, security, and reputation. Therefore, indexes in these factors should be taken into consideration carefully and bank should be more concentrated and employ more effective strategies to promote these factors and their indexes for customers. In Table 6, indexes related to these five factors are pointed out and these results (the most important customer expected benefits of two selected groups for Shahr Bank) are compared to other studies.

**Table 6.** Description of the benefit indicators and researchs with similar results

Factors	Indicators	Researchs with similar results
Convenience	Number of branches in city and country	Alfansi and Sargeant (2000),
	Proximity to branch	Almossawi (2001), Blankson et al.
	More bank working hours (After working hours or on holidays)	(2009), Marimuthu et al. (2010), Hedayatnia and Eshghi (2011), Rashid (2012), Gupta and Dev (2012)
Perceptible things	Proximity to ATMs	
	Branch appearance (internal/external) and staff	McDougall and Levesque (1994),
	Branches facilities	Alfansi and Sargeant (2000),
Inform	Attractive advertising	Mortazavi et al. (2009), Hosseini and Ghaderi (2010)
	Financial advice	
	E-information about the new product or service staff providing the customers with adequate information about services and products in branches	Machauer and Morgner (2001), Mortazavi et al. (2009), Hosseini and Ghaderi (2010)
Security	Preservation of customers' privacy	
	Commitment of bank to promises	Alfansi and Sargeant (2000), Machauer and Morgner (2001), Mokhlis et al.
	Low risk and financial stability of bank	(2009), Hosseini and Ghaderi (2010)
Reputation	Security in e-banking	
	Bank reputation	
	The bank is private or governmental	Almossawi (2001), Marimuthu et al. (2010)
	Bank's financial power	
	Participation in community	

Table 6 lists the studies that have achieved the same results and factors as this study. For example, Almosawi (2001) and Marimuthu et al. (2010) have also introduced reputation and comfort criteria as the most important criteria for selecting a bank. Machauer and Morgner (2001) also cited information and security as measures of expected customer benefits. This result is consistent with Rashid (2012) who introduced e-banking, convenience, staff competency, appearance, the impact of others, and advertising as the most important factors to select a bank. However, it is not consistent with Machauer and Morgner (2001), Andronikidis and Dimitriadis (2003), Kaynak and Harcar (2005), Foscht et al. (2010), Gupta and Dev (2012) and Sayani and Miniaoui (2013).

## Conclusions

Customer segmentation can have an important role in determining marketing strategy and designing an advertising campaign for a bank brand; moreover, it can increase its effectiveness and facilitate the innovation process in providing value-adding services (Zakrzewska & Murlewski, 2005). In recent years, the Shahr Bank of Iran has faced many problems because of the poor customer orientedness and customer services. In this regard, the problems of Shahr Bank that make segmentation necessary for this bank are the dispersion of customer data and their non-segregation for planning purposes, The lack of an effective marketing plan due to the lack of knowledge about customers, the lack of knowledge about the demands of customers by the bank in order to provide value-added services to them, and high marketing costs and market targeting based on judgment and experience rather than data extracted from customers and their segmentation. Hence, it was considered it to be necessary to identify the customers. For this reason, the Shahr Bank of Iran was selected for this study. Due to its formation based on customer's needs and their main purchase reason, market segmentation according to the expected is a stronger form of market segmentation compared to traditional methods (Machauer & Morgner, 2001). Expected benefits show what customers are interested in and give importance to them, and these variables are more accurately related to descriptive variables such as demographic characteristics and lifestyle. Therefore, according to the importance of the topic, this study concentrated on the customer segmentation of Shahr Bank based on customer expected benefits in the banking industry of Iran. In this regard, factor analysis, cluster analysis, and conceptual maps were used to meet the objectives, and data were analyzed using SPSS 24. In the following, a summary of the results according to research objectives is presented.

Previous studies on Iranian and World's banking industry have not paid much attention to the customer expected benefits and customer segmentation. Also, precisely, the most important difference between this study and similar studies has been provided. That is to say, a review of the concept map and position of banks and departments, the differences appeared in the expected benefits from the time the previous research has been done, changes in the economic situation of the country and many changes in the behavior of banks and customers, the segmentation of Shahr Bank customers, and determining their expected benefits have not been done in the previous studies. Thus, market segmentation according to customer expected benefits, studied in the Shahr Bank of Iran, is the most important innovation of this study, and this study can supplement past studies in this arena more. For bank managers, this paper provides a view that to identify customers' preferences. Customer identification helps banks increase profitability because services and products that are presented in the banks should be based on a better understanding of customers.

Moreover, some of the applications of this research in order to solve the problems of Shahr Bank are Dividing customers and extracting their expected service features and demographics

in order to design an effective and targeted marketing mix based on the expected benefits and services of customers in each department, designing a marketing strategy based on the service features and benefits of each sector, strategically reducing advertisement costs and at the same time improving the effectiveness of advertising, applying the segmentation of benefits and RFM approaches appropriately to each sector and putting into practice the effective measures from attracting to retaining customers.

With regard to the first research objective, the expected customer benefits were classified into nine categories (Table 3). Concerning the second research objective, the customers of this bank were classified into four segments of benefit-oriented, peace-oriented, interest-oriented, and moderate (Table 4) according to their expected benefits and regarding the third research objective, the demographic characteristics and expected benefits were described (Table 5). The results are consistent with those of Esfidani et al. (2014) as well as a study by Machauer and Morgner (2001). However, it is not consistent with Mortazavi et al. (2009) as well as Garland (2005), Baradaran and Farrokhi (2014), Shashidhar and Varadarajan (2011), Piercy et al. (2011), Bassi (2015), Souza et al. (2019) and Fullerton (2019). As a general conclusion from conceptual maps and regarding the fourth research objective, it can be said that the Shahr Bank of Iran shows more consistency with peace-oriented customers. This group constitutes 27% of total population. On the other hand, moderate customers constitute the largest group (34.3%); therefore, this cluster has high attractiveness. In addition, among benefits presented in Table 4, convenience, perceptible things, inform, security, and reputation are taken into consideration more than other benefits. Table 6 lists the studies that have achieved the same results and factors as this study. For example, Almosawi (2001) and Marimuthu et al. (2010) have also introduced reputation and comfort criteria as the most important criteria for selecting a bank. Machauer and Morgner (2001) also cited information and security as measures of expected customer benefits. This result is consistent with Rashid (2012) who introduced e-banking, convenience, staff competency, appearance, the impact of others, and advertising as the most important factors to select a bank. However, it is not consistent with Machauer and Morgner (2001), Andronikidis and Dimitriadis (2003), Kaynak and Harcar (2005), Foscht et al. (2010), Gupta and Dev (2012) and Sayani and Miniaoui (2013). About the fifth research objective, the most important opportunities that exist in these two segments along with suggestions to promote marketing strategies are as follows.

- The components of convenience, perceptible things, inform, security, and reputation that are selected as the most important factors in the selected segments (2 and 4) should be taken into consideration specifically to satisfy customers more than ever. Indeed, the banks can direct a special attention towards these factors. Examples include actions such as increasing the number of ATMs and small branches in the city, promoting the appearance of branches and staff, and instructing the customers about how to use electronic services of the bank. Moreover, free consultation and informing the customers, commitment to promises and privacy, and presenting financial reports to gain trust and participation in society should be taken into account.
- Sixty-nine percent of peace-oriented customers and 65.6% of moderate customers are males. Therefore, it is better to design advertising and marketing techniques to be attractive for males. Examples include using attractive colors, quick and accurate responding (because males like quick reactions), and increased use of electronic services so that they do not have to go to the banks in person.
- About the customers, 51.6% of peace-oriented customers are single and 52.2% of moderate customers are married. Therefore, in advertising, specific strategies should be used to attract both groups. For example, it is better to use two types of pictures in advertisings: one type should be comprised of pictures attractive for single people and

the other type should be attractive for families. Developing internet services to keep families together can be another solution.

- The age group 25 to 35 years old had the highest percentage in two groups (38.1% in peace-oriented customers and 39.4% in moderate customers). These results indicate the strong presence of the youths among bank customers. Therefore, it is suggested to work on this issue in terms of content, e.g., using pictures related to the youths and whatever shows the energy and features of this period. For example, the color of the bank's logo is an advantage in advertising. In addition, in designing and developing banking products and services, it is recommended to promote designs related to the youths both qualitatively and quantitatively.
- The relationship periods of 5 to 10 years (31.7%) and 1 to 5 years (41.3%) constituted the highest percentages among the peace-oriented and moderate customers, respectively. Since the fourth group is the largest group, it is suggested to use advertising in the mass media along with other advertising modes such as sending text messages, providing various facilities, loans, and lotteries, and informing the customers.

The limitations of this study included distributing questionnaires only in Tehran, complicated administrative processes in the banks, and the customers' lack of familiarity with banking services.

For future studies, it is recommended to use other segmentation methods and integrate them according to customer expected benefits. In addition, the classification of factors and criteria of this study in other countries and compare the results can be considered by future researchers.

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## References

- Abimbola, T., Trueman, M., Iglesias, O., Muhamad, R., Melewar, T. C., & Alwi, S. F. S. (2012). Segmentation and brand positioning for Islamic financial services. *European Journal of Marketing*, 46(7/8), 900-921. <https://doi.org/10.1108/03090561211230061>
- Aghaei, M., Vahedi, E., Kahreh, M. S., & Pirooz, M. (2014). An examination of the relationship between services marketing mix and brand equity dimensions. *Procedia-Social and Behavioral Sciences*, 109, 865-869. <https://doi.org/10.1016/j.sbspro.2013.12.555>
- Ahmad, R. (2003). Benefit segmentation. *International Journal of Market Research*, 45(3), 1-13. <https://doi.org/10.1177/147078530304500302>
- Alfansi, L., & Sargeant, A. (2000). Market segmentation in the Indonesian Banking sector: The relationship between demographics and desired customer benefits. *International Journal of Bank Marketing*, 18(2), 64-74. <https://doi.org/10.1108/02652320010322976>
- Almossawi, M. (2001). Bank selection criteria employed by college students in Bahrain: An empirical analysis. *International Journal of Bank Marketing*, 19(3), 115-125. <https://doi.org/10.1108/02652320110388540>
- Andronikidis, A. I., & Dimitriadis, N. I. (2003). Segmentation of bank customers by utilising ethnic/cultural profile dimensions: A qualitative approach. *Journal of Marketing Management*, 19(5-6), 629-655. <https://doi.org/10.1080/0267257X.2003.9728229>
- Asiedu, E. (2016). A study of use and impact of market segmentation practices on bank performance: with special reference to commercial banks in Colombia. *Journal of Business and Financial Affairs*, 5(162), 2167-0234. <https://doi.org/10.4172/2167-0234.1000162>
- Baradaran, V., & Farrokhi, Z. (2014). Customer segmentation in the banking industry by extended model of RFMC. *Iranian Journal of Brand Management*, 1(2), 135-154. <https://doi.org/10.22051/BMR.2015.1226>
- Bassi, F. (2015). Forecasting financial products acquisition via dynamic segmentation: An application to the Italian market. *International Journal of Market Research*, 57(6), 909-930. <https://doi.org/10.2501/IJMR-2015-071>
- Bennett, D., & Higgins, M. (1988). Quality means more than smiles. *ABA Banking journal*, 80(6), 46-57.
- Blankson, C., Omar, O. E., & Cheng, J. M. S. (2009). Retail bank selection in developed and developing countries: A cross-national study of students' bank-selection criteria. *Thunderbird International Business Review*, 51(2), 183-198. <https://doi.org/10.1002/tie.20257>
- Bowen, J. W., & Hedges, R. B. (1993). Increasing service quality in retail banking. *Journal of Retail Banking*, 15(3), 21-29.
- Cameron, F., Cornish, C. & Nelson, W. (2006). FSS2: A new methodology for segmenting consumers for financial services. *Journal of Financial Services Marketing*, 10(3), 260-271. <https://doi.org/10.1057/palgrave.fsm.4770191>
- Cermak, D. S., File, K. M., & Prince, R. A. (1994). A benefit segmentation of the major donor market. *Journal of Business Research*, 29(2), 121-130. [https://doi.org/10.1016/0148-2963\(94\)90016-7](https://doi.org/10.1016/0148-2963(94)90016-7)
- Cho, M., Bonn, M. A., & Brymer, R. A. (2017). A constraint-based approach to wine tourism market segmentation. *Journal of Hospitality & Tourism Research*, 41(4), 415-444. <https://doi.org/10.1177/1096348014538049>
- De Keyser, A., Schepers, J., & Konuş, U. (2015). Multichannel customer segmentation: Does the after-sales channel matter? A replication and extension. *International Journal of Research in Marketing*, 32(4), 453-456. <https://doi.org/10.1016/j.ijresmar.2015.09.005>
- Dolnicar, S., Grün, B., & Leisch, F. (2018). *Market segmentation analysis: Understanding it, doing it, and making it useful* (p. 324). Springer Nature.
- Dolnicar, S. & Leisch, F. (2004). Segmenting markets by bagged clustering. *Australasian Marketing Journal (AMJ)*, 12(1), 51-65. [https://doi.org/10.1016/S1441-3582\(04\)70088-9](https://doi.org/10.1016/S1441-3582(04)70088-9)
- El Saghier, N., & Nathan, D. (2013, April). *Service quality dimensions and customers' satisfactions of banks in Egypt*. In ... (Eds.), Proceedings of 20th international business research conference (pp. 1-13), Dubai, UAE.

- Esfidani, M. R., Mahmoudi, S. M., Keimasi, M., Mohammadi, H., & Parsafard, M. R. (2014). Retail banking market segmentation based on the expected benefits of Bank Mellat customers. *Iranian Journal of Business Management*, 6(2), 227-250. <https://doi.org/10.22059/IJBM.2014.51378>
- Foscht, T., Maloles, C., Schloffer, J., Chia, S. L., & Sinha, I. J. (2010). Banking on the youth: The case for finer segmentation of the youth market. *Young Consumers: Insight and Ideas for Responsible Marketers*, 11(4), 264 – 276. <https://doi.org/10.1108/17473611011093907>
- Fullerton, G. (2019). Using latent commitment profile analysis to segment bank customers. *International Journal of Bank Marketing*, 38(3), 627-641. <https://doi.org/10.1108/IJBM-04-2019-0135>
- Garland, R. (2005). Segmenting retail banking customers. *Journal of Financial Services Marketing*, 10(2), 179-191. <https://doi.org/10.1057/palgrave.fsm.4770184>
- Gonzalez-Benito, S. & Gonzalez-Benito, J. (2005). The role of geodemographic segmentation in retail location strategy. *International Journal of Market Research*, 47(3), 295-316. <https://doi.org/10.1177/147078530504700305>
- Guillet, B. D., & Kucukusta, D. (2016). Spa market segmentation according to customer preference. *International Journal of Contemporary Hospitality Management*, 28(2), 418-434. <https://doi.org/10.1108/IJCHM-07-2014-0374>
- Gupta, A., & Dev, S. (2012). Client satisfaction in Indian banks: An empirical study. *Management Research Review*, 35(7), 617-636. <https://doi.org/10.1108/01409171211238839>
- Haley, R. I. (1968). Benefit segmentation: A decision-oriented research tool. *Journal of Marketing*, 32(3), 30-35. <https://doi.org/10.1177/002224296803200306>
- Haley, R. I. (1995). Benefit segmentation: A decision-oriented research tool. *Marketing Management*, 4(1), 59-73.
- Harrison, T. S. (1994). Mapping customer segments for personal financial services. *International Journal of Bank Marketing*, 12(8), 17-25. <https://doi.org/10.1108/02652329410069010>
- Hasan, M., & Khan, S. S. (2015). Marketing performance-based brand valuation: An application of marketing profitability and capitalization factor. *Du Journal of Marketing*, 18, 41-56.
- Hedayatnia, A., & Eshghi, K. (2011). Bank selection criteria in the Iranian retail bank industry. *International Journal of Business and Management*, 6(12), 222-231. <https://doi.org/10.5539/ijbm.v6n12p222>
- Hicks-Moore, S. L. (2005). Clinical concept maps in nursing education: An effective way to link theory and practice. *Nurse Education in Practice*, 5(6), 348-352. <https://doi.org/10.1016/j.nepr.2005.05.003>
- Hosseini, M., & Ghaderi, S. (2010). The model of affective factors on Bank Service quality. *Iranian Journal of Business Management Perspective*, 36(3), 89-115.
- Hunt, S. D. (2002). *Foundations of marketing theory: Toward a general theory of marketing*. ME Sharpe.
- Hunt, S. D., & Arnett, D. B. (2004). Market segmentation strategy, competitive advantage and public policy: Grounding segmentation strategy in resource-advantage theory. *Australasian Marketing Journal (AMJ)*, 12(1), 7-25. [https://doi.org/10.1016/S1441-3582\(04\)70083-X](https://doi.org/10.1016/S1441-3582(04)70083-X)
- Kaynak, E., & Hancar, T. D. (2005). American consumers' attitudes towards commercial banks: A comparison of local and national bank customers by use of geodemographic segmentation. *The International Journal of Bank Marketing*, 23(1), 73-89. <https://doi.org/10.1108/02652320510577375>
- Khajvand, M., & Tarokh, M. J. (2011). Estimating customer future value of different customer segments based on adapted RFM model in retail banking context. *Procedia Computer Science*, 3, 1327-1332. <https://doi.org/10.1016/j.procs.2011.01.011>
- Kotler, P., & Armstrong, G. (2010). *Principles of marketing*. Pearson Education.
- Lees, G., Winchester, M., & De Silva, S. (2016). Demographic product segmentation in financial services products in Australia and New Zealand. *Journal of Financial Services Marketing*, 21(3), 240-250. <https://doi.org/10.1057/s41264-016-0004-3>
- Liu, J., Liao, X., Huang, W., & Liao, X. (2019). Market segmentation: A multiple criteria approach combining preference analysis and segmentation decision. *Omega*, 83, 1-13. <https://doi.org/10.1016/j.omega.2018.01.008>

- Liu, Y., Ram, S., Lusch, R. F., & Brusco, M. (2010). Multicriterion market segmentation: A new model, implementation and evaluation. *Marketing Science*, 29(5), 880-894. <https://doi.org/10.1287/mksc.1100.0565>
- Machauer, A., & Morgner, S. (2001). Segmentation of bank customers by expected benefits and attitudes. *International Journal of Bank Marketing*, 19(1), 6-17. <https://doi.org/10.1108/02652320110366472>
- Mahr, D., Stead, S., & Odekerken-Schröder, G. (2019). Making sense of customer service experiences: A text mining review. *Journal of Services Marketing*, 33(1), 88-103. <https://doi.org/10.1108/JSM-10-2018-0295>
- Marimuthu, M., Jing, C. W., Gie, L. P., & Mun, L. P. (2010). Islamic banking: Selection criteria and implications. *Global Journal of Human Social Science*, 10(4), 52-62.
- Marshall, G., & Johnston, M. (2010). *Marketing management*. McGraw-Hill Higher Education.
- McDougall, G. H. G., & Levesque, T. J. (1994). Benefit segmentation using service quality dimensions: An investigation in retail banking. *International Journal of Bank Marketing*, 12, 15-23. <https://doi.org/10.1108/02652329410052946>
- McQueen, J. M. (1998). Segmentation of continuous speech using phonotactics. *Journal of Memory and Language*, 39(1), 21-46. <https://doi.org/10.1006/jmla.1998.2568>
- Minhas, R. S., & Jacobs, E. M. (1996). Benefit segmentation by factor analysis: An improved method of targeting customers for financial services. *International Journal of Bank Marketing*, 14(3), 3-13. <https://doi.org/10.1108/02652329610113126>
- Mir Mohammadi, S. M., NejhandFard, M. S., & Izadkhah, M. M. (2016). Segmentation of chain stores based on expected customer benefits (case study: Adan chain store). *Iranian Journal of Strategic Management Research*, 22(61), 9-28.
- Mokhlis, S., Salleh, H. S., & Mat, N. H. N. (2009). Commercial bank selection: Comparison between single and multiple bank users in Malaysia. *International Journal of Economics and Finance*, 1(2), 263-273. <https://doi.org/10.5539/ijef.v1n2p263>
- Mortazavi, S., Kaffashpour, A., Habibirad, A., & Aseman Darreh, y. (2009). Mashhad bank market segmentation based on expected customer benefits. *Iranian Journal of Financial Economics Research*, 16(29), 126-162. <https://doi.org/10.22067/pm.v16i29.27198>
- Osei-Poku, M. (2012). Assessing service quality in commercial banks: A case study of Merchant Bank Ghana Limited [Unpublished doctoral dissertation]. Kwame Nkrumah University of Science and Technology.
- Piercy, N., Campbell, C., & Heinrich, D. (2011). Suboptimal segmentation: Assessing the use of demographics in financial services advertising. *Journal of Financial Services Marketing*, 16(3-4), 173-182. <https://doi.org/10.1057/fsm.2011.21>
- Rashid, M. (2012). Bank selection criteria in developing country: Evidence from Bangladesh. *Asian Journal of Scientific Research*, 5(2), 58-69. <https://doi.org/10.3923/ajsr.2012>
- Sayani, H., & Miniaoui, H. (2013). Determinants of bank selection in the United Arab Emirates. *International Journal of Bank Marketing*, 31(3), 206-228. <https://doi.org/10.1108/02652321311315302>
- Seyyedhashemi, M., & Mamduhi, A. R. (2010). A cluster analysis of marketing strategies implementation barriers in the car manufacturing industry (Case study: Iran Khodro company). *Iranian Journal of Business Management*, 2(6), 165-186.
- Shashidhar, H. V., & Varadarajan, S. (2011). Customer segmentation of bank based on data mining–security value based heuristic approach as a replacement to K-means segmentation. *International Journal of Computer Applications*, 19(8), 13-18. <https://doi.org/10.5120/2383-3145>
- Souza, L. L. F., Bassi, F., & de Freitas, A. A. F. (2019). Multilevel latent class modeling to segment the microfinance market. *International Journal of Bank Marketing*, 37(5), 1103-1118. <https://doi.org/10.1108/IJBM-05-2018-0132>
- Wind, Y. (1978). Issues and advances in segmentation research. *Journal of Marketing Research*, 15(3), 317-337. <https://doi.org/10.1177/002224377801500302>

---

Zakrzewska, D., & Murlewski, J. (2005, September). Clustering algorithms for bank customer segmentation. *In 5th International Conference on Intelligent Systems Design and Applications (ISDA'05)* (pp. 197-202). IEEE. <https://doi.org/10.1109/ISDA.2005.33>