



MSM

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Determinants of Customer Satisfaction in Mobile Banking Services in Azerbaijan

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A handwritten signature in black ink, appearing to read "Elkin Nurmammadov".

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Abbreviation List

ABA: Azerbaijan Banking Associations

ACB: Azerbaijan Central Bank (previous version)

ATMs: Automated teller machines

BBVB: Baku Interbank Foreign Exchange

CBAR: Central Bank of Azerbaijan Republic

JSC: Joint-stock company

EF: Electronic Fund Transfer

FED: Federal Reserve

FIMSA: Financial Market Supervisory Authority (Azerbaijan)

OECD: Organization for Economic Co-Operation and Development

OJSC: Open joint-stock company

POS: Point of Sales Terminal

R&D: Research and Development

USA: The United States of America

USSR: Union of Soviet Socialist Republics

WEB: World Electronic Broadcast

Abstract

The quality of the products and services they offer has an important place in meeting the customer demands of service enterprises. One of the most important building blocks that will enable a business to stand out from the competition is to provide better quality services and to provide trust. It is extremely important to ensure customer satisfaction as a result of the quality of services offered within the banking sector.

Today, mobile banking, which is one of the alternative distribution tools in electronic banking, has gained an important place among banking transactions by showing a rapid development.

The aim of this thesis study is to reveal the relationship and the effect between the variables that enable customers using mobile banking to be satisfied with the service they receive.

It is also to determine whether customer satisfaction in mobile banking services differs according to some demographic variables. For this purpose, a research was conducted on the customers of a private bank aged 15-54 using mobile banking, living in Baku.

399 people participated in the research. The data needed in the research were collected using the questionnaire technique, which is one of the quantitative research methods. The obtained data were analyzed in SPSS 25.0 program.

According to the results of the study, the most important factors affecting customer satisfaction in mobile banking are respectively ease of use, support given to the service provided, service security, service performance, persuasion that the transactions are done correctly, the content of the service offered and the efficiency of the transactions. It has been found that the variables of education level, age level, income level, duration of use and frequency of use are effective on customer satisfaction in mobile banking.

Keywords; Electronic Banking, Mobile Banking, Customer happiness.

INTRODUCTION

Although the banking sector has an important place in the finance sector, they play an important role in ensuring the flow of money in the operation of the entire financial and real sector. In addition, the banking sector adapts to global and technological changes and reflects internet and computer technologies to all their systems. Today, with internet and mobile banking applications, bank customers can easily perform many transactions on their computers or mobile devices without going to branches or ATMs.

Developments in internet and mobile banking have brought a new dimension to the banking sector. Today, bank customers can perform many transactions without contacting the bank representative without any time and place restrictions. Internet and mobile banking, which is widely used especially in Azerbaijan, has led to an increase in competition in this field. Increasing competition in internet and mobile banking has made the marketing strategies of banks over internet and mobile banking important. It is considered important for banks to determine their customers' perceptions of financial service quality regarding internet and mobile banking applications in determining their marketing strategies.

The aim of this research is to determine the evaluation status of the financial service quality of internet banking and mobile banking applications in the banking sector by the customers.

The research consists of four parts. In the introduction, the subject is introduced and topics such as research motivation and research problem are mentioned. In the first part, banking and the development of banking in Azerbaijan were discussed and Internet banking and mobile banking were mentioned. In the second part, a large-scale literature review was made. In the third chapter, the analysis and research information are given. In the fourth and last part, the analysis was made and the findings related to the analysis were given.

Research Motivation

According to the 2021 data of the Banks Association in Azerbaijan, the number of people using mobile banking is approximately 5,425,000 (Bedalov, 2021). The satisfaction in mobile banking, where the number of users is increasing day by day, naturally gains importance for the banking sector. The aim of this study is to examine the effects of mobile banking applications on customer satisfaction. It is thought that the results of the research will be especially beneficial for practitioners in the banking sector.

Research Objectives/Questions

The aim of this study is to examine the effects of mobile banking applications on customer satisfaction. It is thought that the results of the research will be beneficial especially for practitioners in the banking sector. For this purpose, in the research, customer satisfaction levels of customers using mobile banking products were tried to be determined in the dimensions of persuasion that the transactions were made correctly, the efficiency of the transactions, the support given to the service provided, the service security provided, the ease of use, the service performance and the content of the service provided. In the research, it is also aimed to reveal whether customer satisfaction in mobile banking differs according to frequency of use, duration of use, type of transaction, age, gender, occupation, education and income level. In line with these purposes, answers to the following questions were sought.

1. What are the indicators that determine customer satisfaction in mobile banking service in Azerbaijan?
2. Are the customers' behaviors affected by the performance of mobile banking services?
3. What is the relationship between mobile banking and the bank's customer satisfaction?

Practical Implications of Research

Unfortunately, all banks did not switch mobile banking yet in Azerbaijan because of lack of information and they think it is costly. However they are unaware of its advantages. This research can show them how important the subject is in terms of customers as a result for gaining competitive advantage. In addition to being a study that will be a source for literature writers, this study is important as it will allow banks to see the benefits of mobile banking and determinants of customer Satisfaction in Mobile Banking Services according to the real survey.

Research Gap/Problem

There are not enough studies in the literature on mobile banking especially on Determinants of Customer Satisfaction for mobile banking services in Azerbaijan. The importance of this study will be primarily to fill this gap.

Survey form

In order to maintain transparency and anonymity, I have focused on the following issues (in more detail Annex-1)

- ✓ I didn't include any questions that ask the respondent for identifying details includes names, birthdates, location, and other data points
- ✓ Respondents can opt-out of receiving my survey invitations
- ✓ Everything is transparent about why I am collecting the data and how it will be used

1. DEVELOPMENT OF AZERBAIJAN BANKING AND MOBILE BANKING

1.1 Historical development of banking

The first activities that will mean banking have been carried out since the time money was first invented. Taxation has also become widespread with the use of coins. Taxes, previously levied only on healthy animals or bread-making materials such as wheat, began to lose function as empires expanded. Therefore, a tool of exchange was needed. Thanks to money, trade with communities in distant lands has also become widespread (Kumar, Prakash and Khan, 2020). However, with the widespread use of money, the need for safe storage of coins arose. Since it is inconvenient to keep coins in homes for security reasons, coins have begun to be kept in temples under the supervision of devout and honest priests. The temples in Ancient Greece, Rome and Babylon, in addition to their religious duties, also served to ensure the security of these coins. Since coins can be collected and stored more easily than other goods, a wealthy merchant class emerged over time and began to lend coins. Therefore, it is possible to say that the first banking activities started in temples.

During the Roman period, banking activities gradually emerged from the temple and began to be institutionalized in different buildings. In this period, the provisions regarding the seizure of the land of those who could not pay their debts for the first time started to be implemented. This has been an important turning point in the relationship between the creditor and the debtor. After the Roman Empire collapsed, the Papacy and Church took over the lending business, and the other wealthy class engaged in banking activities was condemned.

In today's sense, it is possible to find the ancestors of banking activities in Italy in the 12th century. As the origin of the word, banks derived from the word "banco", which means table and counter in Italian, became widespread thanks to Jewish merchants who carried out transactions

such as borrowing and lending on the looms they opened in the markets of Lombardy in Italy, and the word started to be used in the meaning of today's bank (Parasız, 2011).

In the following period, although the events such as the Germanic raids and the Crusades in Europe slowed down the banking activities, the relations and trade between East and West started to increase due to these events. With the beginning of the age of discovery, banking activities started to spread in Genoa, Florence, Venice and Barcelona (Monnet and Velde, 2021).

The beginning of the modern banking system today is the Amsterdam Clearing Bank established in the Netherlands in 1609. This bank started its activities as a central bank in order to solve the problem of the appreciation of foreign currency against local currency due to commercial activities (Mammadova, 2019).

Renaissance and Reform movements and freedom movements in Europe have ensured that interest has a legal structure. In addition, developments such as increasing colonialism, the globalization of trade and the circulation of paper money led to an increase in the need for loans during the Industrial Revolution. The need for loans, on the other hand, has been an important milestone in the birth of the modern banking system (Otgontugs, 2019).

After the establishment of the Amsterdam Clearing Bank, the Bank of England was established in 1694 and this new system that investors will gain in the long term was adopted. The Bulgarian National Bank, which was established in Bulgaria at the end of the 19th century, opened the doors of a new era in which each nation will now have its own bank. In today's global power USA, the first bank FED was established in 1913. During the Great Depression, the powers of the FED were expanded and the bank began to function as a Central Bank (Monnet and Velde, 2021).

1.2 Overview of Banking System of Azerbaijan Republic

The Azerbaijani economy decreased by 3.8% in 2016 and by 5.4% in the non-oil sectors, with the effect of the sharp drop in the oil price. With the slow recovery of oil prices and the depreciation of the national currency, new business opportunities have arisen for the private sector with the help of reforms such as liberalization of the business environment and export promotion. Thanks to these developing business opportunities, the country's economy grew by 0.1% and the non-oil economy by 2.7% in 2017. In Azerbaijan, where the inflation rate was 12.4% in 2016, inflation rose to 12.9% in 2017 with the effect of devaluation and increasing import prices. Thanks to the gradual increase in oil prices, the current account balance had a surplus of \$ 1.7 billion in 2017. The big deficit in the past years has also been closed. The improvement in the balance of payments is an increase in tourism revenues and portfolio investments as well as rising oil prices. As a result, the country's foreign exchange reserves have increased by \$ 2 billion (Ahmadov, 2018).

The Azerbaijani banking sector has benefited from the government's investment in the non-oil economy from oil revenues and the rapid expansion of high-margin retail and micro-lending over the past decade. Due to the sharp decline in oil revenues in 2014, Azerbaijan's banking sector faced significant increases in non-performing loans. In addition, the preference of more cash in the economy prevents the development of the financial system. However, as there is a high dollarization in the Azerbaijani economy, the efficiency of the monetary policy is negatively affected by this situation. As a result of efforts to prevent dollarization, the dollarization rate in the economy fell below 70% as of the end of 2017.

During these fluctuations, the licenses of two banks in Azerbaijan were revoked in 2017; the activities of various bank branches were suspended or merged with other branches for expense

optimization. For this reason, the number of bank branches in Azerbaijan decreased from 569 to 509 in 2017. The number of ATMs decreased from 2461 to 2431, and the number of POS terminals decreased from 71 thousand 806 to 65 thousand 471. With the effect of the double devaluation in 2015, the value of the assets of the banks in the Azerbaijani banking sector decreased by 11.2% to € 13.8 billion, and the total loan portfolio decreased by 29% to € 5.6 billion. NPLs increased from 6.9% to 14%. 2017 was a year of recovery and the total capital of the banking sector increased by 52%, reaching € 1.8 billion (Ahmadov, 2018).

Long-term debt is on the rise in the Azerbaijani banking sector. Although the quality of loans in banks has increased, banks play a small role in financing the real economy. Lack of credit, strict collateral requirements, high interest rates, dollarization and inadequacy of credit risk are among the most important obstacles to the development of the Azerbaijani private sector.

Some changes were made in the banking legislation in Azerbaijan in 2018. The Principles Regarding Foreign Currency Transactions of Residents and Non-Residents of the Azerbaijan Republic have been amended by the decision of the Central Bank Board of Directors dated 26.01.2018 and numbered 4/1. This change made it difficult for both Azerbaijani and foreign nationals to transfer foreign currency through the banking system. Among the changes, if advance payment is made for goods and services imported to Azerbaijan, this import has to be proven within 270 days by means of a customs declaration. In addition, according to the changes in the Banking Law, the maximum tenure for audit and board members has been reduced.

According to the changes, members of the audit and board of directors will be elected for a maximum of three years. At the same time, the powers of the supervisory boards have been expanded with other amendments. In addition, the Financial Markets Supervisory Authority (FIMSA) has adopted a series of normative actions to rehabilitate bankrupt banks and ensure a

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more stable structure for banks (Baku Research Institute, 2019). As of January 31, 2019, a total of 30 banks, 2 of which are state and 28 are private, operate in Azerbaijan. The number of banks with foreign capital is 15. Among these banks, the number of those with a rate of foreign capital more than 50% is 8 (2 of them are local branches of foreign banks), and the number of those with a foreign capital ratio of less than 50% is 7. There are a total of 508 bank branches, 2510 ATMs and 17 thousand 588 banking sector employees in Azerbaijan (FIMSA, 2019).

Table 1.1 General Outlook of Azerbaijan Banking Sector

Number of Banks	30
State <i>Banks</i>	2
Private <i>Banks</i>	28
Foreign banks	15
50% - 100% banks with foreign capital	8
llocal branches of foreign banks	2
Banks with less than 50% foreign capital	7
Number of bank branches	508
Number of ATMs	2.510
Number of Employees	17.588

Source: (FIMSA, 2019).

The total asset size of the Azerbaijani banking sector is 29 billion 602 million AZN. Total debts are 25 billion 485 million AZN. The total equity capital of the banks in the Azerbaijani banking sector is at the level of AZN 3.8 billion. Table 9 shows the balance sheet of the Azerbaijani banking sector.

Table 1.2 Total Assets of the Azerbaijan Banking Sector (Million AZN)

ASSETS	31.01.2019
Cash and cash equivalents	1.190,6
CBAR receivables, total	1,887.5

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Correspondent accounts in other banks	2,433.4
Deposits in financial institutions including banks	6,504.4
Securities	3,903.8
Payables to financial institutions including banks	260.0
Loans to Customers	12,541.0
Fixed assets	948.8
Intangible assets	146.5
Other assets (less specific reserves)	1,294.3
Total assets	29,602.9

Source: FIMSA 2019.

According to the data obtained from Azerbaijan Banks Association, the biggest bank in terms of asset size is Azarbaijan Beynalxalq Bank ASC with 7932.8 million AZN. PAŞA Bank ASC ranks second with AZN 4695.7 million, Kapital Bank ASC with AZN 3716.5 million and Xalq Bank ASC with AZN 2008.2 million in fourth place. The following banks, on the other hand, have an asset size of less than 1 billion AZN. The total asset size of banks operating in the banking sector of Azerbaijan is shown in Table 1.3.

Table 1.3 Assets of Azerbaijani Banks (Million AZN) 2018-Q4

#	Bank name	AZN	#	Bank name	AZN
1	Azarbaycan Beynalxalq Bankı OJSC	7932,8	16	AFB Bank OJSC	417,5
2	PAŞA Bank OJSC	4695,7	17	Nikoil Bank İKB OJSC	417,0
3	Kapital Bank OJSC	3716,5	18	Expressbank OJSC	395,2
4	Xalq Bank OJSC	2008,2	19	Azar Türk Bank OJSC	368,3
5	Bank Respublika OJSC	983,1	20	Bank BTB OJSC	314,8
6	AccessBank CJSC	878,7	21	Bank of Baku OJSC	300,1
7	Azarbaycan Sanaye Bankı OJSC	822,3	22	NBCBank OJSC	283,4
8	Rabitabank OJSC	772,1	23	Amrahbank OJSC	230,3

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9	Unibank KB OJSC	693,9	24	Ziraat Bank Azərbaycan OJSC	227,9
10	Premium Bank OJSC	646,3	25	Naxçıvanbank OJSC	196,5
11	AtaBank OJSC	581,1	26	Günay Bank OJSC	191,2
12	Muğanbank OJSC	551,7	27	Bank Avrasiya OJSC	167,6
13	AGBank OJSC	496,2	28	Bank VTB (Azərbaycan)	135,3
14	TuranBank OJSC	492,6	29	Bank Melli İran Bakı Filialı	110,4
15	Yapı Kredi Bank Azərbaycan QSC	426,7	30	National Bank of Pakistan NBP Bakı filialı	11,5

Source: ABA, 2019.

The total liabilities of all banks in the Azerbaijani banking sector are shown in Table 10. As of January 31, 2019, there are a total of 18.5 billion AZN deposits in the Azerbaijani banking sector. The sector's total debt and capital is around 29 billion AZN. More than 70% of the liabilities of the balance sheet constitute the item of deposits.

Table 1.4 Liabilities and Capital of the Balance Sheet of the Azerbaijan Banking Sector (Million AZN)

LIABILITIES	31.01.2019
1. Deposits (excluding financial institutions)	18.547,4
1.1 Individual Accounts	7.980,7
1.2 Corporate Accounts	10.566,7
2. CBAR's bank claims	369,5
3. Loro accounts	280,5
4. Deposits of financial theories	1.460,2

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5. Banks' Loans	87,1
6. Loans of other financial institutions	2.008,4
7. Security securities issued by banks	1.840,0
8. Other debts	1.492,5
9. Total debt	25.485,6
CAPITAL	
10. Equity	3.835,8
11. General reserves	281,5
12. Total capital	4.117,3
13. Total debt and capital	29.602,9

Source: FIMSA, 2019.

Following the recovery period, 2018 has been the year of development for Azerbaijani banks.

Loans given in 2018 have increased for the first time since 2015. Table 1.5 shows the total loan size provided by Azerbaijani banks.

Table 1.5 Total Loan Size of Azerbaijan Banks (Million AZN) (2018-Q4)

#	Bank name	AZN	#	Bank name	AZN
1	Azarbaycan Beynəlxalq Bank ASC	1923,0	16	Expressbank ASC	222,2
2	Kapital Bank ASC	1500,9	17	NBC Bank ASC	204,5
3	Xalq Bank ASC	1382,6	18	Bank of Baku ASC	200,4
4	PAŞA Bank ASC	1320,9	19	AFB Bank ASC	194,3
5	Premium Bank ASC	584,6	20	Bank BTB ASC	175,2

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6	AccessBank QSC	542,5	21	Yapı Kredi Bank Azərbaycan QSC	174
7	AtaBank ASC	428,6	22	Azar Türk Bank ASC	165,6
8	Unibank KB ASC	387,7	23	Günay Bank ASC	146,1
9	Muğanbank ASC	371,6	24	Amrahbank ASC	111,9
10	Bank Respublika ASC	343,6	25	Ziraat Bank Azərbaycan ASC	105,5
11	Rabitabank ASC	317,8	26	Bank Avrasiya ASC	99,0
12	TuranBank ASC	313,1	27	Naxçıvanbank ASC	64,9
13	Azərbaycan Sənaye Bank ASC	285,9	28	Bank VTB (Azərbaycan) ASC	49,4
14	Nikoil Bank İKB ASC	282,7	29	Bank Melli İran Bakı filialı	3,6
15	AGBank ASC	245,7	30	National Bank of Pakistan NBP Bakı filialı	1,3

Source: ABA, 2019.

The total amount of loans granted in Azerbaijan has reached 11.7 billion AZN from 8.4 billion AZN in 2009. The ratio of short-term loans among these loans is 17.9%. A total of 2.1 billion AZN loan is short-term and 9.6 billion AZN is long-term. On the other hand, overdue debts were 303 million AZN in 2009, but increased more than 5 times in 2017 and reached 1.6 billion AZN. While the ratio of non-performing loans was 3.6% in 2009, this ratio increased to 13.8% in 2017.

Determinants of customer satisfaction in mobile banking services (Azerbaijan)

Table 1.6 Outlook of Loans in Azerbaijan Banking Sector

Indicator	LI¹	STLI²	RSL³	LTLI⁴	LTLR⁵	OD⁶	ROD⁷
2009	8.407,5	2.359,9	28,1	6.047,5	71,9	303,5	3,6
2010	9.163,4	2.567,1	28,0	6.596,3	72,0	492,9	5,4
2011	9.850,3	2.951,2	30,0	6.899,1	70,0	633,8	6,4
2012	12.243,7	3.508,3	28,7	8.735,4	71,3	748,8	5,9
2013	15.422,9	3.335,5	21,6	12.087,5	78,4	792,8	5,1
2014	18.542,6	3.931,3	21,2	14.611,3	78,8	976,3	5,3
2015	21.730,4	5.297,3	24,4	16.433,1	75,6	1.508,5	6,9
2016	16.444,6	3.478,0	21,1	12.966,6	78,9	1.472,6	9,0
2017	11.757,8	2.101,3	17,9	9.656,5	82,1	1.626,7	13,8

1 Loan Investments (Million AZN),

2 Short Term Loan Investments (Million AZN)

3 Rate of Short Term Loans (%),

4 Long Term Loan Investments (Million AZN),

5 Long Term Loan Rate (%),

6 Overdue Debts (Million AZN),

7 Rate of Overdue Debts (%)

1.3 Overview of The History of Banking System In Azerbaijan

1.3.1 Tsarist Russian Period

In the 1860s, a large amount of capital was required for the development of oil industry and agriculture in Azerbaijan, which was bound to Tsarist Russia. The development of the industrial and agricultural sector and such facts made the existence of banks and financial institutions inevitable. The weakness of financial theories has highlighted usurers. The interest rate applied by usurers in 1860-1870 reached 36% annually in Baku. In rural areas, this rate is around 60% annually. Increasing demand for low-cost loans has accelerated the development of financial institutions in Azerbaijan. Azerbaijan's financial system has developed in two directions (Ismayılov, 1997):

- Commercial banks opening branches in Azerbaijan, establishing mutual credit institutions and lombards;
- Financial institutions (such as Gosbank, Treasury) opening branches in Azerbaijan.

Until the 1917 Revolution, the Azerbaijani financial system included 28 commercial banks, 7 mortgage credit banks, 13 treasury branches, 135 small credit establishments and numerous safes. These numerical sources showed that the Azerbaijani financial system had the strongest and widest network in the Caucasus.

1.3.2 The Period of the Azerbaijan Democratic Republic

The crisis that started in Tsarist Russia at the beginning of 1917 led to the establishment of the South Caucasus Confederation. This confederation was formed by the gathering of three communities (Azerbaijan, Georgian and Armenian). The union ended when Georgia, one of the members of the Confederation, declared its independence on May 26, 1918. Azerbaijan declared

its independence on May 28, 1918 and entered a new period. The Assembly of the Azerbaijan Democratic Republic has attached great importance to the creation of a strong economy. Of the 215 draft laws discussed and discussed by the parliament, 82 of them were related to financial regulations. These regulations have been submitted to the Ministry of Finance.

The main task given to the Ministry of Finance was to regulate the money circulation that got out of control during the First World War in a short period of time. For this, arrangements have been made in three directions:

- Increasing state revenues and trying to reduce its expenditures;
- Regulation of runaway money and credit circulation;
- Renewal of the state financial law.

Meanwhile, the lending branch of the Ministry of Finance prepared a draft law on the National Bank of Azerbaijan (Central Bank) and submitted it to the parliament and this law was approved on September 16, 1919. On September 30, 1919, the National Bank was opened with an official ceremony (Ismayılov, 1997). However, like the Azerbaijan Democratic Republic, the life of the National Bank of Azerbaijan could not be long. The independence came to an end with the occupation of Azerbaijan by the Red Army on April 28, 1920. During the occupation, Azerbaijan was plundered and all gold, silver and other reserves in the country were taken by the army to Astrakhan, Russia. In addition, when the British left the country, they took out precious items worth 212 million manats.

1.3.3 USSR Period

On April 28, 1920, it was declared that the Azerbaijan Soviet Socialist Republic was established under the USSR. Thus, Azerbaijan entered a new era. With the "Law on the Nationalization of

Banks" enacted on June 9, 1920, the banking system was completely left to the state authority. All private, commercial, foreign and public banks and mutual credit institutions in the country were merged under the name of Azerbaijan People's Bank and nationalized. The closure and nationalization of banks was carried out as follows;

2. All banks were declared branches of Azerbaijan People's Bank and these branches were merged into four branches;
3. Managers and workers of banks that were closed and nationalized were temporarily suspended and asked to collect almost all information (assets, liabilities, account transactions, balance sheets dated December 14, 1917 and April 28, 1920, etc.);
4. A financial committee affiliated to the People's Commissariat, which is the most competent authority, was established for the healthy execution of the nationalization of banks.

Although a number of decisions were made to reorganize the financial system, the role of banks in increasing production and economic developments remained passive in the late 1970s and early 1980s. The contribution of the banking sector to the economy was gradually weakened.

When M. Gorbachev came to power in 1985, the USSR entered a new era. Gorbachev's Perestroika (Restructuring) reforms that would bring the end of the USSR also had an impact on the country's financial system.

Before January 1, 1988, the Soviet banking system had more administrative than economic functions. The reform of the banking system after perestroika was as follows (Uludağ, 1996).

- Restructuring of Gosbank,
- Establishment of specialized banks,
- Establishing commercial banks.

In the past, all control functions were under the monopoly of Gosbank. There were two plans, the Gosbank loan plan and the cash plan. This bank was in a position to allocate and use budget funds, although financial decisions were carried out by the Ministry of Finance in the country. The first reform of the Soviet banking system, which can be considered fundamental, was implemented in 1987-1988. With this change, Gosbank became the central bank that existed in the market economy. The definition, powers and duties of this institution have been redefined. Control of the money supply in the country, regulation of the budget, execution of financial policies, realization of foreign payments, etc. Gosbank started to undertake such tasks. The most prominent aspect of the reform was the delivery of some tasks to five specially established specialized banks. These banks undertook tasks such as issuing short-term loans, supervising the use of these loans for their purposes, and controlling financial documents.

As a result of the reform, five state specialized banks were established in the country:

- Agroprombank (Agriculture Bank)
- Promstroybank (Industrial Bank)
- Sberbank (Deposit Bank)
- Zhilsotsbank (Estate Bank)
- Vneshekonombank (Foreign Trade Bank)

The owners of the banks established during this period were ministries or state institutions affiliated to the ministries. Therefore, these banks were restricted from acting independently and could only be effective in the implementation of ministry-related projects. The business volume of these banks was very small.

The banking system in Azerbaijan, a member of the USSR, consisted of Gosbank and Azerbaijani branches of five specialized banks. In addition, there were up to 40 trade and

cooperative banks with very small transaction volumes. Among these five specialized banks, whose names are mentioned above, the Azerbaijan branch of Zhilsotsbank (Estate Bank) was closed in 1991 and its assets were transferred to the Azerbaijan branch of Gosbank (ISO, 1993).

1.3.4 After Independence

Azerbaijan declared its independence on October 18, 1991 and entered a new era. Two important laws came into force on August 7, 1992 in order to establish the legal framework of a competitive and modern banking system in accordance with the principles of market economy in Azerbaijan. These are the "Law on the Central Bank" and the "Law on Banks and Banking Activities". In addition to these laws, the Azerbaijan Parliament adopted another law of jurisdiction. With this authorization law, the Central Bank urgently made the following regulations and submitted to the parliament.

- Completing the arrangements for its own organization;
- Preparation of monetary policies for 1992 and beyond;
- Preparation of regulations regarding investments, pension funds, leasing and other financial institutions in cooperation with the Council of Ministers.

It is aimed to establish a banking structure consisting of the Central Bank and other banks in Azerbaijan. The banking system established is aimed to be open to the outside. It is aimed that Azerbaijani banks have branches and representative offices in foreign countries, establishment of Azerbaijani banks in these countries, banks and citizens of foreign countries can establish banks in Azerbaijan, and open branches of existing banks.

Table 1.7 Banks Operating in Azerbaijan

Years	Public	Private	Foreign	Total
1994	4	195	11	210

Determinants of customer satisfaction in mobile banking services (Azerbaijan)

1995	4	165	11	180
1996	4	119	13	136
1997	4	82	13	99
1998	4	63	12	79
1999	4	53	13	70
2000	4	41	16	59
2001	2	35	16	53
2002	2	29	15	46
2003	2	27	17	46
2004	2	27	15	44
2005	2	24	18	44

Source: AMB, 2006.

As of January 1, 2006, 44 banks are operating in Azerbaijan. 2 of them were established with the state, 18 with foreign and 24 with domestic capital.

Banks in Azerbaijan carry out their foreign exchange transactions through the Baku Interbank Foreign Exchange Exchange (BBVB) (Interbank). In the BBVB, banks make their purchases and sales as spots over the exchange rate determined by the central bank. In this market, the sales amount and exchange rate are completely under the control of Central Bank of Azerbaijan. The purchases made are transferred to the banks' accounts with the International Bank or the Central Bank of Azerbaijan with spot value. Foreign banks are obliged to carry out stock exchange transactions through the International Bank.

The banking sector is of vital importance in the establishment and establishment of a free market economy. Because banks act as a kind of bridge between those who lend savings and those who will turn them into investments.

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In the old system, the collection of savings and distribution of credits was determined only by the central authority. Bank loans, on the other hand, were given only for the realization of investment plans based on political preferences. For this reason, banks were working according to orders and instructions, and loans were allocated without considering the risk.

On June 10 and 14, 1996, the new "Central Bank Law" and "Law on Banks and Banking Activities" were approved and entered into force. Although there is not much difference between them with the old laws, there are some important changes in the new laws:

- Issue of articles related to insurance of bank deposits and Savings Deposit Insurance Fund.
- ACB affiliation directly to the President of Azerbaijan;
- If there is any intervention in the ACB, this should be immediately reported to the President;
- Decreasing the number of members of the Board of Directors from 9 to 7;
- The minimum capital of the ACB is 15 billion manat;
- Referring to banks as “credit institutions”, not “banks” in the law;
- The total capital of foreign banks does not exceed 30% of the banks' total capital;
- Insurance of bank deposits and the removal of the articles related to the Savings Deposit Insurance Fund.

According to the new law, a minimum capital requirement was stipulated for the development of the banking system, for the establishment of new banks and for the old banks to continue their activities. In the ACB's official letter dated December 23, 1997 and numbered 010/991, it was envisaged that the minimum capital of the banks would be increased to 5,000,000 dollars until

2001. The aforementioned number is a minimum capital requirement for both active and newly opened banks today.

1.4 Functions of the banking sector

The banking sector has functions regarding the money market and capital market, as well as international functions. Table 1.8 shows some of the bank functions

Table 1.8 Functions of the Banks

For the Money Market
Accepting deposits
Opening a loan
Creating money
Towards the Capital Market
Securities brokerage
Investment consulting
International Functions
Fund transfer
Opening foreign currency deposits and lending
To finance foreign trade

Source: Mukhtrav, Yüksel and Mammadov, 2018.

1.5 Marketing in the Banking Sector

The basic principle of marketing - “don't strive to sell, create a self-selling product” principle is reflected in the sales promotion system. Even spending large sums of money on the services provided will not work if the customer requirements are not adequately studied and the services offered by the bank are not fully compatible with the needs of the customer. This means that the

bank's ability to earn high returns decreases (Esgerova, 2010:217). The purpose of banking marketing is to increase the competitiveness and profitability of the banking activities by creating the necessary conditions to adapt to the needs of the financial markets and the constantly changing environment (Esgerova, 2010: 49). As a matter of fact, banking marketing functions as a tool for connects the bank to the market. In this way, the bank receives the necessary information about the market, its features and requirements, the wishes of the customers and the competitive situation and affects the market in different ways (Quliyev, 2011: 52).

Historically, marketing in the service industry has been implemented after industrial enterprises.

For the first time, airline companies and then banks started to use marketing in the service area.

This is explained above all by the deterioration of competition in banking services and the

deterioration of banking activities as a result of changes in the environment. C.F.Sing, a

researcher on American banking, shows the main reasons for the following five major changes in the financial sector in the 1990s (İbrahimov, 2009: 39):

1. *Scientific and technological progress:* The development of electronic, automation and telecommunication systems leads to a change in the technology of banking transactions, which leads to the expansion of the national and regional scope of financial and credit institutions, that is, the globalization of competition in the banking sector. The computerization of the banking business was a precondition for the "financial revolution." At the same time, improving banking transactions can make access to financial services difficult.
2. *Competition:* Legal reforms aimed at reducing or eliminating existing restrictions and restrictions on financial activities implemented in most developed countries have led to the weakening of competition barriers. Currently, the banking services market is

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not nearly adequately protected in all countries around the world. Each country's bank is in sharp competition with banks in both their own country and other countries. One of the main reasons for the competition in the banking sector is the lack of patent protection. Any product prepared by the bank can be imitated by other banks immediately and offered to customers.

3. *Interest rate and regular change of interest rate.* Economic difficulties - decrease in production, balance of payments, inflation, increase in external debt, decrease in real estate transactions and other negative factors and uncertainty in the capital market lead to a significant increase in interest rates. This leads to increased levels of trust and interest rate risks in banks.
4. *For customers, the struggle is taking a tighter direction.* Previously, banks did not have to "chase after customers" when they had absolute power. The establishment of legislation on banks and banking activities caused a sharp increase in competition in the banking sector and a decrease in the relative income of banks. Offering and marketing new services to customers in a competitive environment has been a key factor in the success of the banking activity.
5. *Capital adequacy or adequacy of capital.* The optimal ratio between the bank's equity and attractive capital and sufficient capital is an indication that the bank is prone to risk. High level of capital increases customer confidence and reduces the risk of banks and their customers (Блэкуэлл, Минидиард and Энджел, 2007: 143).

Banking is closely related to economic psychology. Marketing is an important component of the functioning of any sector, especially the banking sector, as a process of determining the needs of individuals and legal entities and as a payment process. The bank is at the top of this pyramid

(Sizov, 2011: 53).

1.6 Internet Banking

It is defined as an internet portal that bank customers can use in many different ways, from bill payments to investment transactions (Pikkarainen et al., 2004: 224-235). Internet banking is important in terms of providing cost and savings for both banks and customers (Robinson, 2000: 11-19; Sathye, 1999). Internet banking services can be offered to customers in two general ways: first, by establishing a website in existing branches and physical offices, and the other is the use of virtual, branchless internet banking (Furst et al., 2002: 95-117). Time, cost savings and freedom of place are the main reasons for using internet banking (Karjaluoto et al., 2004: 1).

The benefits of internet banking are: to perform banking transactions quickly, easily, inexpensively and uninterruptedly, without going to the branch, without waiting in line, getting detailed reports and information, and performing the transactions selectively, within the framework of confidentiality and security (Tan and Teo, 2000: 1-42).

Factors affecting the use of internet banking: trust, ease of use, individual habits and beliefs, service quality, time saving, 24/7 access, low cost, ability to use information technologies. It is stated that it is one of the most profitable applications in e-commerce in recent years.

Transactions such as online shopping, stock trading and e-payment can be made (Lee et al., 2009: 130; Bauer and Hein, 2006: 1715).

1.7 Mobile Banking

Mobile banking, which shows itself with the widespread use of internet banking, is being used effectively with the active increase in the use of smart devices and phones (Laukkanen, 2017).

The banking sector's active use of technology by keeping a close eye on it enables banking transactions to be carried out more practically and quickly. Therefore, mobile banking applications are becoming an application frequently used by banks and bank customers.

1.7.1 The Concept of Mobile Banking

Thanks to the developing technology, businesses are making contact with their customers over the internet and mobile devices. Thanks to the developing technology, the banking sector also enables its customers, who receive service from it, to carry out all financial transactions they want to do via internet and mobile banking without having to go to bank branches. Mobile banking is a digital service offered to its customers by a bank or other financial institution. It is possible for bank customers to perform their financial transactions via remote access via mobile devices. Mobile banking applications are an application that is quickly adapted and used by banks due to the many advantages it provides to banks and their customers (Arcand et al., 2017). Today, the most used system after internet banking and developed as an alternative to internet banking is the mobile banking system. Bank customers can easily access their banking transactions through the mobile banking system and perform these transactions actively and easily (Tam et al., 2017). For this reason, the banking sector constantly develops and updates its mobile banking system and applications in order to provide its customers with more efficient, fast, quality and comfortable access to the service it provides (Raza et al., 2019). The frequent use of mobile banking applications, which are equipped with powerful technological features and applications, by customers and the increase in their use show that there is a direct relationship with quality. As long as customers who can perform their banking transactions safely, quickly and comfortably with mobile banking applications are satisfied with the service they receive, it is

seen that there will be an increase in customers' orientation and desire to use mobile banking applications (Sagib and Zapan, 2014:332).

1.7.2 Transactions that can be made via Mobile Banking Applications

Nowadays, mobile banking applications are developed and offered to users in parallel with the renewal and updating of applications used on mobile devices together with mobile devices. Almost all transactions that can be done through branch banking and internet banking can now be carried out through mobile banking. Many financial transactions are carried out through mobile banking applications (Mallat et al., 2004). These;

- Invoice and institution payments,
- Money order and EFT,
- Monitoring account movements and checking account balance,
- Money transfer between customers' own accounts,
- Making foreign currency transfers to foreign accounts,
- Paying motor vehicle tax and other taxes,
- Traffic fine payment,
- Ability to transfer money between deposit account and investment account,
- Checking credit card account information and accessing credit card statement,
- Ability to pay promissory notes,
- Paying credit card debt or withdrawing cash advances,
- Requesting or canceling a virtual card
- Requesting the credit card statement to be sent to the e-mail address,
- Ability to perform repo transactions,
- Credit card request or cancellation transactions,
- Performing investment transactions,
- Putting or removing credit card transaction restrictions,
- Paying the exam fees of ÖSY and other institutions,
- To perform foreign exchange and gold purchase and sale transactions and to follow the exchange rates,

- Making university tuition payments,
- Making SSK premium payments
- Top up mobile phones,
- HGS loading,
- Performing automatic payment and money transfer orders,
- Performing account opening and closing transactions,
- Carrying out government bond buying and selling transactions,
- Performing Treasury bonus trading transactions,
- Carrying out mutual fund purchase and sale transactions,
- Ability to follow orders for fund buying-selling transactions,
- Carrying out stock trading transactions,
- Carrying out lot buying-selling transactions,
- Performing fund transfer transactions between accounts,
- Many transactions can be made through mobile banking applications.

1.7.3 Advantages and Disadvantages of Mobile Banking Application

With the widespread use of mobile technology, many banks in Azerbaijan, as in the world, offer services to their customers with mobile banking applications. Mobile banking applications provide many advantages to their customers. Most of the transactions carried out via branch banking and internet banking are carried out by customers with a single click from their location in a very short time frame. Thanks to mobile banking, bank customers are not obliged to go to bank branches, wait in line for transactions, waste time or perform their banking transactions within a certain period of time, as in the branched banking system. Customers have the comfort of performing their banking transactions from their homes, workplaces or during their travels whenever they want (Chandran, 2014).

Thanks to the mobile banking application, users can always maintain control over their financial

assets, and by checking their accounts at any time, obtaining real-time information, they can find the opportunity to pay their debts on time and intervene instantly in their investment transactions. Users of the mobile banking application can find the opportunity to perform different transactions such as withdrawing money, obtaining loans, paying bills at any time through a single application, with menus that they can customize. At the same time, users eliminate the need to carry bank cards, credit cards or lose these cards, thanks to its numerous transaction features such as withdrawing money and making payments by phone (Nicoletti, 2014; Tam & Oliveira, 2017; Gu et. al., 2009; Komulainen and Saraniemi, 2019).

While mobile banking applications provide many advantages to customers, they also bring some disadvantages. The biggest problem among these disadvantages is security. Problems such as theft and loss of mobile devices, lack of skills and experience of users, diversity of devices, various features of banks' mobile banking applications and integration problems are the disadvantages of mobile banking application (Nicoletti, 2014:100).

2. LITERATURE REVIEW

2.1 The Concept of Service

The definition of the concept of service differs according to various fields. Therefore, experts bring different definitions to the service. It is expressed as the activities that are offered by different segments to another segment, which are not structurally intangible and therefore not examined with ownership. The concept of service may be related to a product or it may be related to non-physical products. Service activities can be expressed as processes, individual or group performances, and various activities. In short, service is defined as economic actions that

are not a physical product, can be consumed as soon as they are produced and provide value from different perspectives (Mallat et al., 2004: 42-46).

Service can also be defined as a set of activities that can provide solutions to the problems that arise during the relations between the physical systems, products or structures of the service providers, which are generally intangible or intangible. In addition, service can be explained as the spiritual satisfaction that individuals provide in their daily lives and that they can never give up (Mattila, 2003: 101-119).

Most businesses today serve customers in order to protect their assets. Therefore, the trade, manufacturing and service sectors, which have taken part in the economy, have reached a completely different dimension in today's conditions. Due to such a change, almost every institution prefers to be seen as a service business (Makanyeza, 2017).

The element of service emerges as a form of activity that has begun to show itself in many different areas. The most important factor in the formation of this situation is the rapid spread of the service in an inhomogeneous way. The service sector continues its activities in many areas such as entertainment, information, education, social activity and security (Chiu et al., 2017).

Service is expressed as any activity that has the potential to be consumed as soon as it is produced and to meet its needs. At the same time, it can be said as the benefit that consumers have purchased independently of the ownership of the enterprises (Baptista & Oliveira, 2017).

In other words, it is said that service is an activity between customers and suppliers and is performed at a minimum level with the feature of immunity (Changchit et. al., 2017: 239-261).

According to the American Marketing Association (AMA), service; “The actions, benefits, or satisfactions offered for sale or provided with the sale of goods”. It soon became the most widely

accepted definition. The weakest part of the definition is that it does not properly separate services and goods (Geebren et. al., 2021).

In order for the concept of service to be better understood, some features associated with and belonging to the service should be mentioned. In line with this scope, the parts of the service other than tangible goods should be particularly emphasized. The qualifications required for the service are as follows; intangibility, variability, inseparability, perishability and non-transferability of ownership of the service.

The concept of intangibility, which is one of the service qualities, is one of the most basic points that distinguishes goods from services. For services, intangibility is one of the most necessary issues at the point of production of the service. One of the biggest problems of the companies that provide services is that the service to be offered is intangible and has no tangible side. In terms of businesses and consumers, products are real and have a material structure, but the same is not true for services, they form the spiritual parts of the products and may not be in the environment when purchased.

In terms of intangibility, service can be expressed as goods that do not exist physically, cannot be seen by hand, cannot be felt with the senses, in short, consumers cannot have an idea about them.

The most basic point that causes the service element to be separated from the goods is that it does not have a physical structure like the goods (Makanyeza, 2017).

The inseparable feature of the service is that the goods with physical characteristics are primarily produced, then sold and consumed as a result. However, the service is primarily sold and then consumed together with the production. Therefore, the service is indistinguishable from the service provider and performer and is considered as a part of it (Lee et. al., 2015: 551-561).

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Variability in service, services provided by businesses are not always the same. The quality of the service offered varies according to time, place and the characteristics of the person providing the service. In short, the service varies according to the conditions. There are even differences in the service provided by the person providing the same service at certain time intervals (Tran & Corner, 2016).

Among the primary objectives of different businesses in the service sector, it is of great importance to achieve customer satisfaction that they try to offer the same service to everyone in a standard way, rather than creating a separate service element for each customer. In the provision of good and quality service, the priority duty falls to the personnel who provide the service. The primary purpose for quality service is the motivation of the personnel and their sense of duty.

Another feature of the service is the perishability of the service. If the service is not purchased and used on time, it will be wasted and wasted as it cannot be stored. The best example to be given is an appointment with the doctor and the place of the patient who does not go to the examination is wasted. Therefore, the service that is not provided will be wasted and lose its value (Jun & Palacios, 2016).

In addition to the service features mentioned above, the fluctuation of the demand for the service element over time is another feature of the service. It can change from time to time, from season to season, from month to month and even from day to day.

Table 0-1 Differences between service and goods

Evaluation Criteria	Service	Goods
Transactions	People oriented	Technical
	Uncertain, undecided	Decisive

	Labor intensive	Capital intensive
	The customer is part of the process	The customer is disconnected from the process
	Short response time	long response time
Outputs	Simultaneous production and consumption	It is produced first and then consumed.
	Cannot be stocked	Storable
	immovable	Portable
	There is wholesale production	no wholesale production
	Unpatented	Patent
	Abstract and flimsy	physical and durable
	Not standard	It is standard
Employees	Not easy to control	Easy to control
	It has to impress people	Only technical mastery is expected
	Deals with personal decisions	There is an exchange of ideas
	Intense relationship with the customer	Little or no contact with the customer

Source: (Høgevold et. al., 2016: 20-26).

The concept of service was first discussed by French philosophers in the 1700s. All kinds of activities other than agricultural activities were evaluated within the service sector. According to Adam Smith, the concept of service was expressed as “the activities that produce all kinds of tangible and intangible products” and it remained valid until the end of the nineteenth century.

Later, Marshall put forward the idea that if there were no intangible services, there would be no concrete services and added a completely different dimension to the concept of service.

In the table below, the historical change process regarding the concept of service has been tried to be conveyed.

Table 0-2 Historical change of service

Physiocrats, 1750	All activities other than agricultural production
Adam Smith, 1723	All activities that do not result in a tangible product
J.B. Say, 1767	All non-manufacturing activities that add benefits to products
Alfred Marshall, 1842-1924	Products and services that come into existence from the moment they are
Western countries 1925-1950	Services that cause a product to change in form
Contemporary	Services that do not cause a formal change in a good

Source: (Renard et al., 2015)

The service has been tried to be classified in different fields by most researchers. The most important reason for this is that they try to classify the service with different criteria and different perspectives.

In addition to the similar features used during the marketing of a product with service marketing, services may also have some different features. These features can be expressed as follows (Thiagarajah, 2015: 666-677):

- a) Services are intangible in terms of their properties, that is, they are intangible.
- b) Services are perishable, that is, they cannot be stored.

- c) Services are not homogeneous because they cannot be standardized.
- d) Services are inseparable, that is, production and consumption occur simultaneously.
- e) There is no ownership in the Services.

In short, the most important difference between goods and services is that the service has intangible features. While goods are considered as tangible items, services are expressed as intangible items (Juric, 2016: 21-25).

The service industry is growing in almost every part of the world. This situation does not make a difference between developing and developing countries. It is developing at certain standards in almost every country. The global situation of the service sector is shown in the figure below (Thiagarajah, 2015).

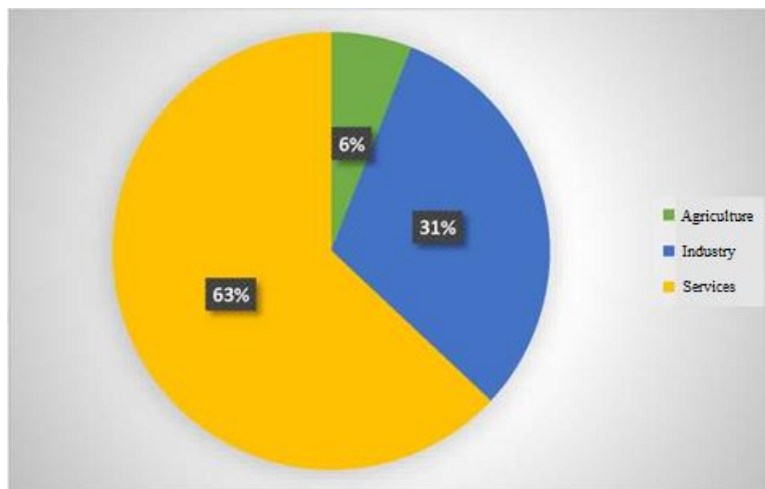


Figure 0-1 The global state of the service industry

Source: (Glave-Geo et. al., 2017)

As can be seen, the service sector is in the first place among the most demanded sectors in the world. The service sector is followed by the industry and then the agricultural sector.

While classifying the service sector, APA has revealed 10 different limits.

These classes are listed as follows (Baum, 2019):

- a) Services in the field of health,
- b) Services related to financial systems,
- c) Professional services (architecture, attorneyship, etc.)
- d) Services provided within the scope of tourism activities,
- e) Entertainment, arts and sports services,
- f) public services,
- g) Rental services, physical distribution and channel services,
- h) Research and education services,
- i) Maintenance and repair services,
- j) Communication services

2.1.1 Features of Services

When we examine the general characteristics of services, it is seen that they are difficult to comprehend, production and consumption are inseparable, heterogeneous and non-storable (Jones, & Kierzkowski, 2018: 233-253).

In order to better understand the concept of service, 4 features that differentiate service from products are examined. The first feature is that it is intangible. Although there are visible physical features at a limited level in the kind of service offered, it is the invisible features that create the main value and are the important point in evaluating the efficiency of the service. These properties cannot be tasted, smelled, or touched, felt, or valued without purchasing. The purchase and use of the service takes place in a short time, it is fully based on experience. If it is necessary to explain with an example, we can find thoughts and information about the play from different places without going to the theater. But without buying the ticket and watching the show, no evaluation can be made about the show. We can only watch the show we bought the ticket for a few hours and not take it home when it's over. Intangible features cause difficulties in

calculating the performance of services, making it difficult for users to compare and contrast with other competing services.

The second feature is the separation of services, production and consumption. Since the production and consumption of services occur at the same time, it is not possible to keep them separate. This feature of the service allows the buyer to take part in the production process.

Withdrawing money from ATMs, buying tickets for the show online are examples of this. As a matter of fact, the user can guide the service provider correctly and make the service applicable to their needs. For example, haircut. If the buyer does not share the correct information about the service he wants, dissatisfied results may occur. For this reason, it is necessary to create a valid environment for the consumers participating in the production to show the highest performance.

In this case, it is the establishment of general consumer support structures. Thus, users can operate comfortably, service quality increases by increasing the level of satisfaction gained, and even product prices can be reduced by reducing costs.

The third feature of services with high added value is that they are heterogeneous. In production, it is possible to observe the norms of the enterprise, the control of production conditions, the entire process that reaches the user, with quality control standards. However, in addition to the absence of most of these opportunities in service production, the final stage of assembly service is realized during the customer's use of the service. For this reason, it is not possible to collect information about service quality before it is used and to correct a mistake in the service efficiency stage. However, since the realization of services can differ from producer to producer, consumer to consumer, and day by day, it is very difficult to standardize them when compared to products. Thus, even if it is offered from the same supplier, the quality of a service received at

one time may differ at different times. In addition, the possibility of user involvement during production also contributes to the heterogeneity of the service (Vavrenyuk, 2019: 25-33).

The last feature is the non-storage, which is created from short-term performances, which emerges without being produced on demand. Although the equipment that makes use of the service is a hibernation place for the workforce, it is not possible to basically store the service.

When no demand is realized, unused capacity creates unnecessary costs and the business will not be able to get the desired benefit from these resources. In addition, if the need is above the capacity, it will cause the users to stay away or be asked to wait for a subsequent period, under these conditions, the customer will be dissatisfied. Therefore, it is necessary to be attentive to the fluctuations in demand (Lovelock & Patterson, 2015).

After defining the basic characteristics of the services, it should be noted that the quality of the service offered closely affects not only the service sector but also the manufacturing sector.

The operators in the manufacturing sector stated that it is difficult to establish competition against technology and they should take a targeted approach to increase the quality of complementary services to the product produced in the extra service category. Because the increasing service quality has become a factor that creates a competitive advantage in the goods they offer. With the quality service they provide, businesses will increase productivity, ensure customer loyalty, prevent wage competition, and be different by creating a positive brand image in the market.

The fact that service quality is very important not only in the service sector but also in the manufacturing sector has resulted in the work of many researchers and the examination of this concept for the evaluation of service quality.

2.1.2 Features of Banking Services

While the importance of banks for individuals and national economies and the services they provide are increasing day by day, banks also contribute to both their customers and their countries because they are commercial enterprises and they seek profit.

Banks are known for their contributions to the economy, mainly by providing loans to individuals and companies. In addition, they close the liquidity gap by discounting the bills of commercial enterprises and providing cash flow to the market. In addition, bank customers reduce the risk of carrying large amounts of cash to zero, thanks to the transfers made between banks or between their branches. Likewise, bank customers can both meet their cash needs and deposit money that they do not want to carry physically, with ATM devices that can be used to make transactions on their bank accounts outside of working hours. It is another service feature of banks that individuals open savings accounts and make their other investments securely through banks (Fenu & Pau, 2015. 26-33). In this context, banks undertake an important building block that contributes to the national economy as well as capital accumulation (Aithal, 2016: 46-55).

Banking services are basically examined in three groups; making loans, collecting deposits and other transactions. Credit services are the provision of a certain amount of cash to individuals, institutions/organizations or the government, provided that it is repaid at a certain interest rate and time. Credit services are divided into corporate and individual. Corporate loan services are examined in two groups as cash and non-cash. Personal loan services are loans given to real persons. Loans such as consumer loans, vehicle loans, consumer loans or housing loans are examples of individual loan services (Kaur & Kiran, 2015:74). Deposits include money offered to the public and optionally repaid within a certain period of time, while savings deposits include

time or demand deposit accounts belonging to real persons that are not subject to commercial transactions. Other services provided by banks include participation, fund acceptance, cash and dematerial payments and fund transfers, checking accounts and collection transactions, credit cards, foreign exchange transactions (Nguyen & Dang, 2018: 418-420).

Banking Services can also vary in terms of both the service offered and the customer. E.g; Service diversification and development in line with the customer's demand is another service concept. In this context, the shaping of banking services according to the customer's tendencies is divided into four as easy banking services, likable banking services, special banking services and non-requested banking services. In convenience, banking services are considered as transactions such as check-promissory notes, deposit transactions, money order and EFT transactions, and foreign exchange transactions. Enjoyable services include loan types, credit cards, interest rates and services such as ATMs. The criterion that makes the services like banking services is that they are customer-oriented, sometimes even individual-oriented services that can be used to increase satisfaction in a competitive environment. Specialized banking services, on the other hand, are high-cost and specialized services that require special time and effort for the service to be purchased by the customer. For example, consultancy services can be evaluated in this context. Unwanted banking services are also described as services that customers did not need or encountered before. Life insurance is shown as the biggest example of these services. Few of the bank customers use banks only to purchase life insurance.

The features and diversity of banking services have undoubtedly undergone many changes and developed since the establishment of the banking system. Banking services are also examined in three sub-fields in the literature today as individual, corporate and participation banking (Behr & Schmidt, 2016: 541-566). As the name suggests, retail banking services are considered as a type

of service that includes individual-oriented customer services. Retail banking services have emerged and continue to develop as a result of the increase in the competitive environment, the increase in the number and variety of actors in the system, and the increase in customer expectations. This type of service is the main building block of the banking sector due to the wide product range it offers and the convenience it provides. It consists of service activities such as personal loans, deposit accounts, credit cards, money order and EFT services, telephone banking services, internet banking services and even the appointment of a direct in-bank customer service officer. This type of service develops and diversifies itself depending on technological developments, because customer expectations are increasing with the developing technology.

Corporate banking, on the other hand, covers services such as meeting the loan needs of companies and providing financial consultancy services on a corporate basis. Corporate banking can appeal not only to private enterprises, but also to state-owned enterprises and government institutions.

Participation banking, on the other hand, is one of the modern banking services that has emerged in the last twenty years and is increasingly known. What is meant by this banking service is the institutions that do not have the authority to collect deposits, but grant the right to participate in special current accounts and profit and loss, and finance economic activities that collect funds in this way. The most distinctive feature of this type of banking service, which distinguishes it from others, is that it performs these transactions in return for participation shares, rather than providing funds against interest like traditional banking services. In general, those who prefer this banking service are more traditional customers who do not prefer the interest system and who invest in gold, foreign currency, and real estate.

2.2 The Concept of Customer

In the literature, in general terms, the customer is one of the indispensable elements for the business, coming to the business in line with their specific wishes and needs, waiting for respect with their feelings and expectations. Only those who regularly buy clothes of the same brand, work with the same bank or do their daily shopping using the same market are considered as customers. In general, it is defined as individuals, institutions and organizations that constantly shop from a particular business or company (Ishak, 2017: 280-291). In summary, the institution, company or person who buys products or services in line with their personal or commercial needs is called a customer. Although the institutions that purchase services with commercial motives are called commercial customers, the concepts of customer and commercial customer have become simultaneously and interchangeable with the diversification of individual-oriented marketing in the context of relations (Jain et. al., 2017).

2.2.1 Internal Customer

Each department within the company is considered as a customer of each unit or department that precedes it or works during the production process. Factors such as the layout of the department at the production stage, the respect for the opinions of the personnel, their contribution to the decision-making process, the improvement in working conditions, the organization and increase of social and cultural activities, and the increase of cooperation between units are factors that help internal customers to be both loyal and efficient to the company. Academic studies in the literature indicate that the satisfaction levels of internal customers have a direct and strong effect on external customer satisfaction. The peace and happiness of employees positively affect their behavior towards external customers. This

process also increases the empathy ability of the staff and helps to better understand external customers and work on their satisfaction. As a result, internal customer; It is explained as the business personnel involved in the process of presenting and selling the product marketed in the company to external customers (Cihuang et. al., 2015). In this context, the main factor for companies to be successful in a competitive environment is high personnel satisfaction (Mugridge & Poehlmann, 2015). For this reason, since the priority is customer satisfaction in large companies, the satisfaction of the personnel takes the first place.

2.2.2 External Customer

"External customer is defined as those who are not employees of the enterprise, but who buy the services and products offered by the enterprises" (Klochkov et. al., 2017: 729-732). In another definition; "External customer refers to the people who provide the service or product offered by the enterprises in line with their needs and pay a certain fee to those enterprises in return for the service, and enable the enterprises to pay their employees their salaries" (Park & Tran, 2018: 412-426).

2.3 The Concept of Customer Satisfaction

Satisfaction is the situation where the expectation created before the purchase of a product or service and the result of the experience after the purchase meet that expectation (Tsai, Chang & Ho, 2015). However, this definition of Vavra is often criticized on the grounds that it is only indexed to product performance. In this context, people or institutions that buy products or services do not only create expectations on the basis of product performance, but also the attitudes and behaviors of the personnel who offer the product.

By making frequent researches on the potential customer group, companies conduct studies on customer satisfaction, customer expectations and their demographic characteristics. Thus, they can review their product and service policies and conduct R&D studies for the target audience. The points to be considered together with the concept of customer satisfaction are briefly; The perspective of the customer and how the concept of satisfaction is revived in the minds can be listed as the fact that only providing service to the customer is not enough to create satisfaction, and that no complaints from the customers does not mean that the customers are satisfied (Lin et al., 2017).

It is both very costly and difficult for a firm to attract an already loyal customer of another firm (Suchánek et. al., 2015). When evaluated in this context, the success of the company is possible by offering products and services programmed to meet the needs and expectations of its customers. Today, in addition to the value given to them, customers expect products and services to meet their expectations, to have maximum quality with minimum cost, and to establish and maintain an honest, friendly and trust-based relationship (Bhakane, 2015: 1-7).

Since the most important condition in ensuring customer satisfaction is the satisfaction of the personnel and his training, the importance of working customer-oriented, gaining their trust, establishing and maintaining good relations with the customer should be emphasized and training should be given to the personnel.

Although it is tried to keep customer expectations and product service quality high in order to ensure customer satisfaction and to make improvements for developing technology, R&D studies for solving problems are just as important. A company's miscalculation, ignorance or failure to meet customer expectations despite knowing it creates both material and moral losses for that company. After all, the most important factor that must be present in order to correctly interpret

the existing research and studies in an individual-oriented system is that the customer should be included in the system and process in an interactive way. Thus, a customer-oriented culture should be developed and the customer's expectations, satisfaction levels, loyalty dimensions and their contributions to the promotion of the product or service to the target customer group should be analyzed and necessary evaluations and revisions should be made. Thanks to this culture that develops in the long term, the company, which has customers with high customer satisfaction and loyalty, can also continue its existence by having highly motivated and happy employees on the basis of personnel.

2.3.1 Causes of Customer Dissatisfaction

Understanding and responding to customer expectations and learning how the services offered are perceived by customers is an important, yet difficult, step for the real performance of the business. For this reason, it is necessary to monitor the real expectations and behaviors of the customer.

Measuring customer satisfaction in a way provides the basis for understanding customer expectations. The fact that the satisfaction measurement is handled by the customer is the basis of understanding the customer expectations correctly, as well as giving the right direction to the wrong course within the business.

It is difficult and not easy to investigate the reasons for the loss of customers of a business. Because it is usually a difficult event for the business to determine which customers are lost, when and why, and to track how much lost sales and losses. Since the majority of unsatisfied customers do not make any complaints, it is often not known why these customers cut off their relations (Felix, 2015: 584).

Although the search for new customers in such situations seems to be both easy and effortless for the company, the most important thing is to get to the core of the event that created the dissatisfaction. Because retaining old customers is less costly and labor-intensive than acquiring new customers.

The gap between the customer's expectations and their experience is the biggest cause of dissatisfaction. At the beginning of these dissatisfaction arising from both customer and internal reasons; Reasons such as the differences between service expectations and presentation, the manager's mistakes in perceiving customer expectations, and the inability to place customer expectations in appropriate processes and systems can be listed. The main deficiencies that cause dissatisfaction can be listed as gaps in promotion, understanding, process, behavioral and perception (Ro, 2015: 435-456).

Most of the time, the management process, which is based on customer satisfaction by the managers, cannot meet the customer's request, but misperceptions about the customer's expectations can result in losing customers to the company.

In addition, the inability to transform the products and services prepared to meet customer expectations into appropriate operational processes or systems can be counted as one of the reasons for customer dissatisfaction.

Another factor affecting service performance is the difference between the promises made to the customer regarding the service and the service provided. Promises made through the media or verbally can affect customer expectations. If there is a mismatch between the promises made and the service provided, the customer will find the performance insufficient. In order to avoid such situations, importance should be given to promotional activities and training of personnel who are in direct contact with the customer (Cameron et al., 2016).

The important thing is to consciously reveal the dimensions and causes of this dissatisfaction and difference in expectations in customers, and to develop strategies to eliminate them in the light of the results and to turn them into practice to ensure customer satisfaction. There are many methods developed to examine this and similar dissatisfactions (Kambo, 2015).

2.3.2 Importance of Customer Satisfaction

In order to carry out applications aimed at increasing customer satisfaction, which is at the most basic focus of modern marketing and high competition environment, it is necessary to have sufficient knowledge in the concept of customer behavior first. Product pricing is very important in terms of customer attitudes, in terms of providing high benefits with low budgets (Hill et al., 2017).

In order to maintain and increase customer loyalty, which is one of the most basic goals of enterprises for marketing, it is necessary to know the expectations of customers from products and services, and to update themselves without deteriorating product and service quality. In this direction, businesses with up-to-date marketing approach benefit from various customer satisfaction measurement techniques to obtain information such as customer satisfaction rates and customer expectations, which are necessary to increase customer satisfaction and thus customer loyalty.

Obtained customer satisfaction rates measurement results also determine the success rate of businesses. As a result, customer satisfaction has become one of the key criteria to be evaluated for the growth and development of businesses (Hamzah & Shamsudin, 2020).

2.3.3 Measuring Customer Satisfaction

Measuring and evaluating customer satisfaction provides benefits for both customers and businesses. Thanks to this measurement, businesses can evaluate performance and customers can compare products or services. In addition, with customer satisfaction measurement (Rangkuti, 2018);

- Customers have the opportunity to transfer their ideas to businesses.
- Customer value increases and their expectations are met.
- The product and service quality is followed up.
- Customer and customer needs are the focus in production.
- Businesses can determine their satisfaction levels by using national customer satisfaction indexes.
- By utilizing the measurement results, businesses can evaluate their current situation and the situation of competing businesses.
- They can identify the factors that hinder customer satisfaction and have information about the loyal customer profile.

In the light of all this information, businesses inevitably develop (Hill & Alexander, 2017).

The satisfaction process continues with the satisfaction measurement, and the transition to the improvement phase is ensured with the post-measurement evaluations. There are five measurement methods commonly used for customer satisfaction measurement, by using these methods, the information obtained by the enterprises as a result of the analysis can be used for development purposes. The most commonly used measurement techniques are:

- Survey Technique
- Benchmarking Technique
- Advisory Panels
- Critical Incident Technique
- Focus Group discussions (Parobek et al, 2015: 493-499).

2.4 Customer Satisfaction in The Banking Sector

Two important conditions for success in marketing are to provide quality service to customers and to maximize satisfaction with the goods or services received. It has gained importance with the increase in the share of the service sector in the economy and the understanding of the effect of customer satisfaction on customer loyalty (Ozatac, Saner & Sen, 2016: 870-878).

In banking, where goods are a service tool, it is very important to know how the service is perceived by the customers. Banks need to pay attention to being customer-oriented compared to the past in the services they offer in order to survive and compete. Therefore, it is an inevitable necessity for banks to continuously measure customer satisfaction and make improvements in the services where the problem arises.

Increasing competition conditions reveal the positive relations established between the business and the customer as an important factor that provides superiority. Ensuring customer satisfaction, loyalty and continuity significantly affects the current and future activities of the bank. On top of that, it is important to establish different channels that will provide regular relations with the customer (Murugiah & Akgam, 2015).

2.5 Major Factors Influencing Customer Satisfaction in The Banking Sector

2.5.1 Service Level in Branches

The objectives of the business are described as serving and serving customers. Some stages of physical goods until they reach the customers are within the scope of the service; broadened and complicated the definition of service. Services are goods that are offered directly from the intangible producer to the user, that cannot be transported, stored, and are instantly

perishable. Features of the service; it is abstract, indivisible, variable and perishable of service (Manusamy et al., 2010: 398).

Satisfaction; The characteristics of products and services are affected and change by factors such as the customer's expectations about the service, personal characteristics, perceptions and senses (Ozatac, 2016: 870-8788).

2.5.2 ATM Prevalence

Banks play an important role in activating and facilitating most of the activities of businesses. While providing services to customers, the innovations and conveniences offered by businesses are not enough. Banks should create policies that support these innovations and conveniences.

By developing various distribution channels, banks ensure customer satisfaction and customer loyalty and attract new customers to the bank. The banking sector should offer its customers opportunities to reach them more easily and complete their transactions in a short time. ATMs, ie cash machines, are alternative distribution channels, as banks provide both time and easy access to their customers with these machines (Islam, Kumar & Biswas, 2017).

2.5.3 Internet Banking

Today, the rapid change in technology has led to the rapid development of electronic commerce. Especially in a competitive market, it has made the use of technology important to gain new customers, improve relations with old customers and ensure their continuity. Customer orientation has gained importance by using the opportunities provided by technology in marketing strategies. The race to offer the best service to the customer has started with the

merger of the developing innovations in marketing and technology with the banking sector, which is a competitive market. Internet banking has come to the forefront for customer satisfaction in banks.

Internet banking, which is defined as making banking transactions through the internet, is becoming more and more widespread all over the world (Raza, et al., 2015).

Internet banking stands out as the most attractive distribution channel for both consumers and banks with its advantages such as ease, product variety, low transaction costs and rapid information exchange. Today, all kinds of banking transactions other than cash withdrawal can be carried out on the internet and in the so-called virtual branch.

The fact that the profitability in internet banking is higher than the profitability in classical branch banking is perhaps the most important of the results (Firdous and Farooqi, 2017).

In order for banks to survive in a competitive environment and to maintain their presence in the sector, they should constantly regulate their own services according to new conditions by following the developments in the field of internet banking in the world (Ramadhan, 2011: 261-269).

2.5.4 Complaints Management

Feedback is the information and notifications given by the system regarding the action taken by the customer regarding the product or service received. Businesses realize the defects in products and services through feedback and prevent the same mistakes from happening in the future (Zairi, 2000).

2.5.5 Trust Transferred by the Bank to the Customer

The Bank's ability to perform the promised service correctly and to deliver the service right the first time (Shanka, 2012).

2.5.6 Performance of the Bank

According to the satisfaction criteria, a performance evaluation showing the strengths and weaknesses of the bank can also be made. In addition, the success and qualifications of bank employees are determined and incentives can be provided for employees to improve their service quality (Grigoroudis et al., 2013: 5-27).

2.5.7 Customer Expectations

The change in the customer profile and the differences in customer expectations in social-economic and cultural areas expand the customer portfolio of the banks. It is a fact that banks will become one of the actors of the sector, as they develop service policies that will meet the characteristics and expectations of the customer base they serve by taking these expectations into account (Dutta & Dutta, 2009).

2.5.8 The Bank's Level of Adaptability to Innovation

The term innovation covers a wide spectrum, from small developments to important inventions that advance the industry. (Jahangir & Begum, 2008: 32-40).

Innovation is incremental improvement over existing innovations based on past experience and is enterprise specific, dependent on the enterprise's ability and learning.

According to Porter; Companies gain competitive advantage through innovation. It approaches innovation from a broader perspective, encompassing both new technologies and new ways of doing business.

Research and development (R&D) is one of the most important activities for innovation.

However, if there is no entrepreneurial innovation, in other words, if those who do R&D do not have entrepreneurial characteristics, R&D results cannot be transformed into innovation (YuSheng & Ibrahim, 2019).

The high level of competition in the banking sector has also played a role in the variety of services offered by banks. Banks are businesses that use technology intensively. For this reason, they have to renew a service they previously offered, depending on the technological development. When a new product is introduced to the market, the presentation of the same product by the competitors is not delayed. It is also important that the technological infrastructure used in the enterprises to have a high reaction rate is good. The purpose of renewal or new service is the change in customer behavior and the desire to meet the demand brought by these changes (Janahi & Al Mubarek, 2017).

2.6 Customer Satisfaction Models

Various models have been created about the extent to which customers are satisfied with the goods or services they benefit from and the factors affecting these measures. These models are; The Model of Disapproval of Expectations, Cognitive Dissonance Theory, Equivalence Model, Affinity Model, Affinity-Contrast Model and Comparison (Benchmarking) Level Model (Pakurar et al., 2019: 113).

2.6.1 The Expectation Disapproval Model

This model, developed by Oliver in 1980, has been applied and proven in many studies. According to the model, customers are in anticipation of the performance of the product or service before purchasing (Duygun et al., 2014: 159). After the product or service is purchased and used, the performance results and expectations are compared. If the customer's expectations are met as a result of the performance, the customer has approved. If there is a difference between the results and expectations, it is not confirmed. If the performance of the product or service is lower than the performance expected by the customer, negative disapproval occurs, and if it is high, positive disapproval occurs. While customer satisfaction occurs when the expectation is approved or positively disapproved, dissatisfaction occurs when the expectation is not approved negatively (Greenwell et al., 2008).

2.6.2 Cognitive Dissonance Theory

In this model, the perceived performance variable is considered instead of the expectation variable in the model of disapproval of expectations in the customer satisfaction process. In this model, it is argued that perceived quality with approval has a higher impact on customer satisfaction than expectations. This model has brought a different perspective to the theory of disapproval of expectations (O'Neill & Palmer, 2004).

The model was first introduced by Leon Festinger in 1957 (Demirgüneş & Avcılar, 2017: 57-72). This model explains the process of imbalance between two types of information. According to Leon, if a belief, knowledge or attitude that the person has requires the opposite of another belief, attitude or knowledge that the same person has, there is a cognitive conflict between these two beliefs, attitudes or knowledge. This is the focal point that is intended to be explained in the

contradiction model, namely the incompatibility between explicit behaviors (Marikyan et. al., 2020: 1-23).

Those working on the model focused on two main attitudes or behavior inconsistencies. The first of these two main issues is explained as cognitive dissonance after the decision and the other is the effects of performing a behavior contrary to the attitude. To give an example for the post-decision cognitive dissonance attitude, a person who made a decision to deposit his cash in the time deposit account of X bank by doing research in many bank ranges, has now changed his indecisive attitude towards X bank and decided on X bank, instead of doing bank research. After making an investment decision, the conflict will come to an end and determination will emerge, as it will harm him (financially) to return from this decision. Since the person will no longer turn from his decision, he will convince himself that he has made the wisest decision. The second main issue is the effects of engaging in a behavior that goes against the attitude. If the individual has made or made a discourse contrary to his actual attitude and cannot find a reasonable justification for doing this behavior such as pressure, coercion, the requirements of the situation or a reward, he may tend to change his real attitude in line with his behavior (Okeke, 2019).

2.6.3 Equality Model

It is a model in which the customer is thought to be treated equally and is satisfied if the customer's output (service) in exchange is proportional to the time, money, effort, experience (customer input) spent for the service. In the model, which is not the same as expectations theory, performance is compared to normative standards. The basis of this comparison is the perception of justice or equality, which is formed by comparing the inputs used by the customer

while receiving that service in return for the service provided. In other words, the customer expects a response equal to the input (Teeroovengadam, 2020).

According to the equality model, customers use a number of input elements such as effort, cost, time when they are going to buy a service or product and see these inputs as variables in the exchange relationship. He expects an equal amount of money from the goods or services he buys for the inputs he uses. If the result of this evaluation, in which the customer compares the input-output ratios, is positive, the customer has received the performance level that he deserves and thinks he should get at the perceived cost level. However, these results are not sufficient for customer satisfaction. Customer input-output result in order to create equality situation and customer satisfaction; The person selling the product compares it with other people he references, such as other sellers and his own environment. As a result of the comparison, the customer should determine the degree of equivalence between the change judgments of his own inputs and outputs and the change judgments of other people. Customer satisfaction emerges after the equivalence degree determination (Ting, 2018: 163-175).

2.6.4 Affinity Model

If consumers perceive a conflict between expectations and performance, they experience psychological conflict. As a result, they change their expectations and perceptions in order to minimize or eliminate this negativity. This change can be to change the existing company, to experience new consumption experiences. For this reason, the business creates a parallelism (similarity) between the expectations of the customer and the perceived performance (Abedi & Jahed, 2020: 165-176).

In this model, when customer expectations and perceived performance are compared, if the product's performance is at an acceptable level of expectation, expectations affect the level of satisfaction. Therefore, if the difference between performance and customer expectations is small, affinity occurs. However, in order to talk about similarity, the expectation-performance difference should be as small as the customer can accept. In this case, when there is no or small expectation-performance difference, performance and expectation are similar (Jham, 2018).

2.6.5 Affinity-Contrast Model

In this model, the difference between perceived product performance and customer expectations is too large for the customer to accept. That is, people may be reluctant to accept the new situation when confronted with a different situation they previously believed in. In this case, the opposite of affinity, the opposite effect, that is, disapproval occurs. This model, which was developed as an alternative to the affinity model, is explained as the opposite situation in the case of disapproval, where the difference between perceived product performance and expectations is too large for the customer to accept (González, 2004).

According to this model, perceived performance rather than expectations is effective on customer satisfaction. The contrast effect that occurs here defines awareness as exaggeration. The customer makes his evaluations exaggerated in case of positive disapproval or negative disapproval. If these exaggerated reactions work as defined, the customer affected by disapproval may give different reactions than the customer affected by expectations (Gil et. al., 2008: 921-939).

2.6.6 Comparison (Benchmark) Level Model

The level of comparison can be developed by comparing the similar products that the person has experienced before or by comparing the features of the products with which he has gained experience. For this reason, a person is affected by the perceived characteristics of other products rather than buying and using a product once. That is, one's present experiences are a perspective of future comparison levels. According to the model, satisfaction arises due to a certain level of comparison and the difference between outputs and is formed by the interaction of people. Therefore, not only expectations, but also the perceived characteristics of other products are used to compare (Johnson et. al., 1995: 695-707).

3. METHODOLOGY

3.1 Research Model and Hypotheses

In this research, it is aimed to determine the effects of mobile banking, which is a service of digital banking. The research model in this study was adapted from the research model of Nochai and Nochai in 2013. This study by Nochai and Nochai is the first to reveal that factors such as the credibility of the correct execution of the transactions, the effectiveness of the transactions, the support given to the service provided, the security of the service provided, the ease of use, the performance of the service and the content of the service provided affect customer satisfaction. The model is important in terms of determining the scales that reveal customer satisfaction in internet banking. However, not investigating the effects of usage habits, demographic and geographical factors in these scales has been identified as a deficiency. In this study, besides the satisfaction scales given in the hypotheses below, the effect of usage habits and demographic factors on customer satisfaction was investigated.

3.1.1 Research Model

Dependent variable:

- customer satisfaction

Independent variables:

- safety reliability,
- transactions efficiency
- customer support
- service security

- ease of use
- service performance
- service content and
- demographic variables (gender, age, marital status, education level, profession status, income level of customers, frequency of use, used period)

The research model is shown in Figure 3.1.

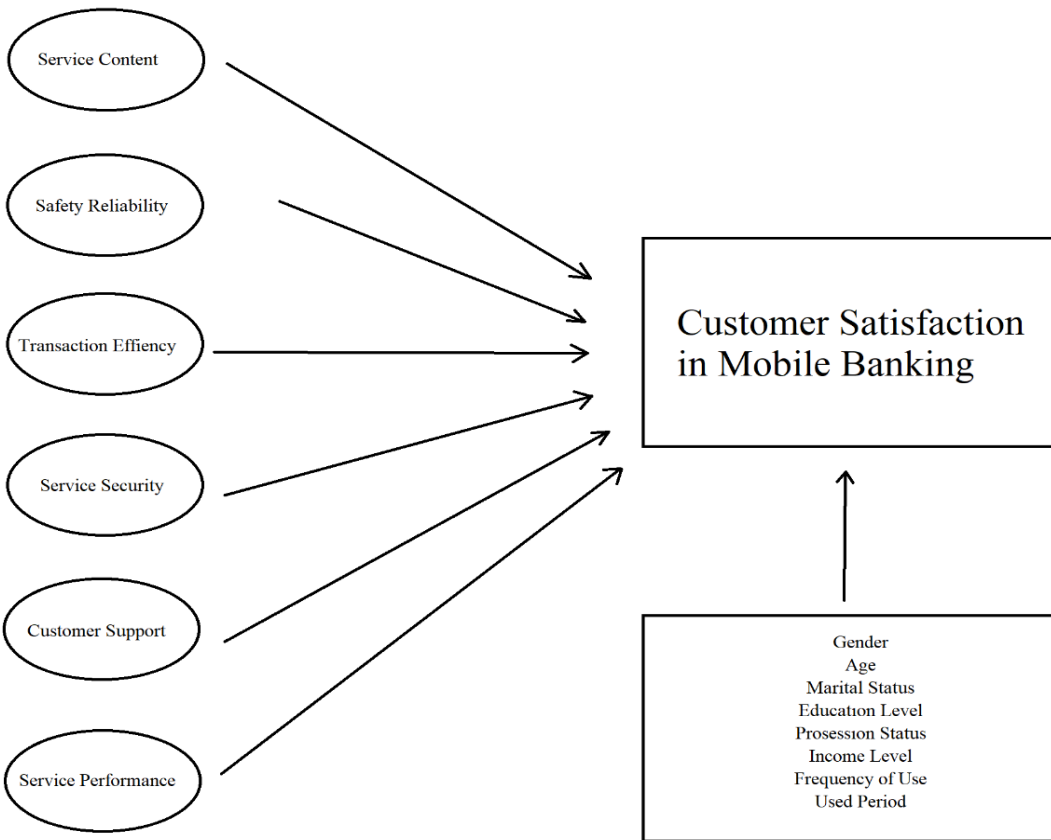


Figure 0-1 Research Model

3.1.2 Research Hypotheses

H₁: Safety reliability has a statistically significant effect on customer satisfaction in mobile banking.

H₂: Transactions efficiency has a statistically significant effect on customer satisfaction in mobile banking.

H₃: Customer support has a statistically significant effect on customer satisfaction in mobile banking.

H₄: Service security has a statistically significant effect on customer satisfaction in mobile banking.

H₅: Ease of use has a statistically significant effect on customer satisfaction in mobile banking.

H₆: Service performance has a statistically significant effect on customer satisfaction in mobile banking.

H₇: Service content has a statistically significant effect on customer satisfaction in mobile banking.

H₈: Customer satisfaction in mobile banking varies according to demographic variables.

H_{8a}: There is a statistically significant difference between customer satisfaction in mobile banking and the age of customers.

H_{8b}: There is a statistically significant difference between customer satisfaction in mobile banking and the age of customers.

H_{8c}: There is a statistically significant difference between customer satisfaction in mobile banking and the marital status of customers.

H_{8d}: There is a statistically significant difference between customer satisfaction in mobile banking and education levels of customers.

H_{8e}: There is a statistically significant difference between customer satisfaction in mobile banking and the profession status of customers.

H_{8f}: There is a statistically significant difference between customer satisfaction in mobile banking and income level of customers.

H_{8h}: There is a statistically significant difference between customer satisfaction in mobile banking and the frequency of customers using mobile banking.

H_{8h}: There is a statistically significant difference between customer satisfaction in mobile banking and the duration of customers using mobile banking.

3.2 The Universe and Sample of the Research

The universe of the research consists of customers using the mobile banking service of banks and residing in Azerbaijani, in Bakü. The sample of the study is formed by convenience sampling method, one of the non-probability sampling methods in the main mass. However, considering that the sample should represent the population well, it was tried to reach customers with different socio-cultural and socio-economic characteristics as much as possible. Considering that they reflect the characteristic demographic structure of Baku province, customers who receive service from branches of Azerbaijan Banks Association were chosen as samples in the study. Within the scope of the survey, 406 customers using the mobile banking application were reached. The answers given were examined, and questionnaires with extreme values and missing data entry were excluded from the analysis. As a result of this elimination process, the research sample consists of 399 bank customers selected by the convenience sampling method of the bank in question.

3.3 Data Collection Tool in Research

Questionnaire technique, which is one of the quantitative methods, was used in the research. The questionnaire form consists of three parts in total. In the first part of the form, there are ten questions in total, including the demographic information of the thoughts of the participants on mobile banking use. The second part of the survey is about measuring customer satisfaction in mobile banking. The “Customer Satisfaction in Internet Banking” scale used by Nochai and Nochai (2013) was used. The scale consists of 31 statements and seven sub-dimensions. These dimensions are the credibility of the transactions performed correctly, the effectiveness of the transactions performed, the support provided to the service provided, the security of the service provided, ease of use, service performance and the content of the service provided. On the scale with a five-point Likert rating (1=strongly disagree, 5=I strongly agree) as the scores from 1 to 5 increase, the participant's customer satisfaction in mobile banking increases. The third part of the questionnaire includes the demographic information of the participants.

3.4 Data Analysis Techniques

The 25.0 version of the SPSS statistical package program was used in the analysis of the data. Before the data were analyzed, tests were conducted to determine to what extent the scale used was valid and reliable. The structural validity of the scale used was also tested with the factor analysis applied. In addition, it was checked whether the data showed a normal distribution or not. First of all, demographic findings of the participants were included in the study. Descriptive statistics of the variables were presented later. Regression analysis was performed to test the hypotheses determined in the study using this program. Finally, in order to

determine whether customer satisfaction in mobile banking differs according to some variables, the independent sample T-Test and ANOVA test were used to compare the quantitative continuous data between two independent groups.

3.4.1 Normal Distribution Test

In the study, Kolmogorov-Smirnov (normality) test was used to see the normal distribution of the data. As a result of the normal distribution test, the hypothesis that the data were normally distributed was rejected ($p < 0.05$). However, when the skewness and kurtosis (skewness and kurtosis) values of the data were examined, it was seen that these values remained between +3 and -3 (Table 3.1) and it was accepted that the data were normally distributed (Morgan et al., 2004).

Table 0-1 Skewness and Kurtosis Values

	N	SD	Skewness	Kurtosis
Safety Reliability	399	0,58915	-1,011	0,213
Transactions Efficiency	399	0,50318	-0,696	-0,086
Customer Support	399	0,40418	-1,268	1,699
Service Security	399	0,45129	-1,761	2,96
Ease of Use	399	0,46638	-1,757	2,907
Service Performance	399	0,53864	-1,393	2,066
Service Content	399	0,57258	-0,823	0,11
Customer Satisfaction	399	0,2669	-1,294	1,684

The skewness coefficient takes a value between $+\infty$, $-\infty$, but if this coefficient is in the range of ± 3 , the distribution is assumed to be normal, and it can be said that the data are normally distributed. In addition, it can be said that the values are skewed to the right when they are negative. In this direction, parametric hypothesis tests were created by assuming that the variables are normally distributed.

3.4.2 Reliability Analysis

The results of the reliability analysis of the study are given in Table 3.2. As a result of the reliability analysis, the total Cronbach's Alpha value of the customer satisfaction scale in mobile banking was 0.8, and this value shows that the scale used is quite reliable (Kalaycı, 2005: 405; Akgül & Çevik, 2003). Also the Cronbach's Alpha values of the sub-dimensions of the customer satisfaction scale used in the research range from 0,62 to 0,78.

Table 0-2 Reliability Analysis Results

	Cronbach's Alpha	N of Items
Safety Reliability	0,62	3
Transactions Efficiency	0,63	3
Customer Support	0,78	6
Service Security	0,76	5
Ease Of Use	0,75	7
Service Performance	0,73	4
Service Content	0,64	3
Customer Satisfaction	0,80	31

3.4.3 Factor Analysis

The KMO and Bartlett's Test results showing the construct validity of the customer satisfaction scale in mobile banking are shown in Table 3.3.

Table 0-3 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0,696
Bartlett's Test of Sphericity	Approx. Chi-Square	4330,941
	df	465
	Sig.	0

Determinants of customer satisfaction in mobile banking services (Azerbaijan)

The KMO value on the customer satisfaction scale in mobile banking was calculated as 0.696 (Table 3.3). The second test is the Bartlett test. In the Bartlett test, Sig. value of 0.000 is significant, that is, there are high correlations between the variables. Since the KMO value exceeded 0.50 and the Sig value in Bartlett's test was significant, the data set was found suitable for factor analysis.

Table 0-4 Factor Analysis Findings Regarding the Customer Satisfaction Scale in Mobile Banking

Factors	Statements	Factor weights
Safety reliability	It is important that mobile banking provides the required service in the first use and in a complete manner.	0,536
	It is important that the service provided in mobile banking is presented exactly as advertised.	0,613
	In mobile banking, it is important to complete a transaction correctly until the end.	0,544
Transactions Efficiency	It is important that the information is up-to-date in mobile banking.	0,5
	It is important that it provides an option to help with any problems that may arise when using mobile banking.	0,628
	Transactions in mobile banking are recommended to be executed quickly.	0,61
Customer Support	It is important that mobile banking includes a sufficient number of transaction types.	0,66
	It is important that I can reach an authorized person in case of any problems in transactions.	0,454
	It is important that mobile banking has a rich "Frequently Asked Questions" content regarding common problems.	0,891
	It is important to solve the problems that arise in mobile banking quickly.	0,918
	It is recommended to employ knowledgeable personnel to solve the problems that arise in mobile banking.	0,881
	It is important that the mobile banking support line personnel explain the solution of the problem step	0,919

Determinants of customer satisfaction in mobile banking services (Azerbaijan)

	by step and clearly.	
	It is important that transactions made in mobile banking are maintained correctly.	0,367
	It is important that mobile banking somehow preserves data and personal information regarding transactions.	0,772
Service Security	It is important not to encounter any security problems while using mobile banking.	0,705
	It is important that mobile banking is secure and that you feel safe when using mobile banking.	0,568
	It is important that you can always check whether your transactions have been fulfilled and the details of the transactions you have made in the past.	0,488
	It is important that I can easily find the information I am looking for in the mobile banking system.	0,269
	It is important that the mobile banking website is quite easy.	0,276
	It is important that the language used on the mobile banking website is understandable..	0,527
Ease Of Use	It is important that the output format of the transactions regarding the transactions is understandable.	0,509
	It is important that information and texts are understandable and clear.	0,592
	It is important that the mobile banking system offers understandable learning.	0,645
	It is important to reveal the results of the transaction made in mobile banking quickly.	0,442
	It is important that mobile banking provides services in more than one language.	0,807
Service Performance	It is important that mobile banking provides 24/7 service.	0,835
	It is important to allow transfers between banks.	0,402
	It is important to be able to register/apply via mobile banking.	0,54
Service Content	It is important that the mobile banking website contains the information that will fully meet the required information.	0,606

Determinants of customer satisfaction in mobile banking services (Azerbaijan)

It is important that the mobile banking website contains all the necessary information.	0,644
It is important that the mobile banking website contains information that can be trusted.	0,519

4. FINDINGS AND ANALYSIS

In this section, the findings obtained as a result of the analysis of the data collected through scale from 399 customers in 14 companies in Azerbaijan participating in the research for the purpose of revealing the relationship and the effect between the factors that make the customers using mobile banking satisfied with the service they receive, are included.

4.1 Information on Participants

4.1.1 Gender Distribution

The distribution of mobile banking users participating in the survey study by gender was examined and the result is given in Table 4.1. 64,4 % of the participants were male and 35,6 % of them female. (Table 4.1).

Table 4-1 Distribution of People Participating in the Study by Gender

Gender	n	Percent
Male	257	64,4
Female	142	35,6
Total	399	100

The gender distribution of people participating is shown in the figure below.

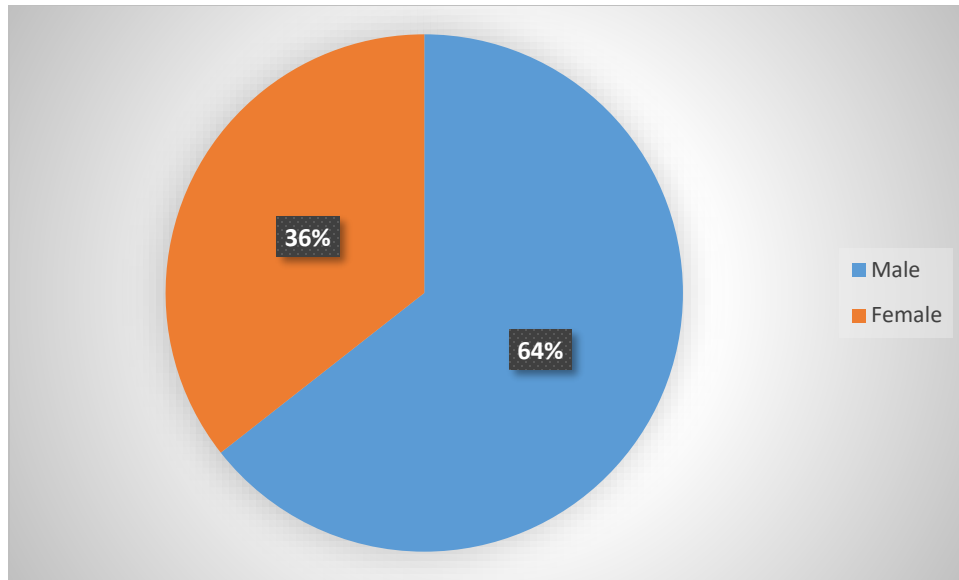


Figure 4-1 Gender Distribution of People Participating in the Study

4.1.2 Age Range Distribution

The age distribution of the participants in the study is given in Table 3.2. 45,6 % of participants were between 15-24 age, 43,6 % of participants were between 25-34 age, 7,3 % of them between 35-44 age and 3,5 % of them were between 45 and more age (Table 4.2).

Table 4-2 Distribution of People Participating in the Study by Age Range.

Age Range	n	Percent
15-24 age	182	45,6
25-34 age	174	43,6
35-44 age	29	7,3
45 and more age	14	3,5
Total	399	100

The age range distribution of people participating is shown in the figure below.

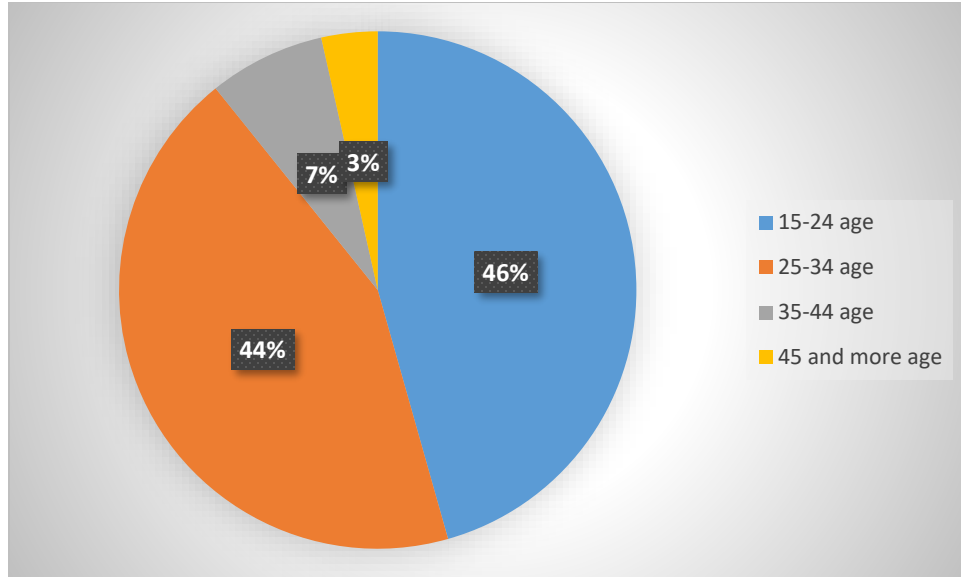


Figure 4-2 Age Range Distribution of People Participating in the Study

4.1.3 Distribution by Marital Status

The distribution of the marital status of the participants in the study is given in Table 4.3. % 89,2 % of the participants were single and the others were married (Table 4.3).

Table 4-3 Distribution of People Participating in the Study by Marital Status

Marital Status	n	Percent
Single	356	89,2
Married	43	10,8
Total	399	100

The marital status distribution of people participating is shown in the figure below.

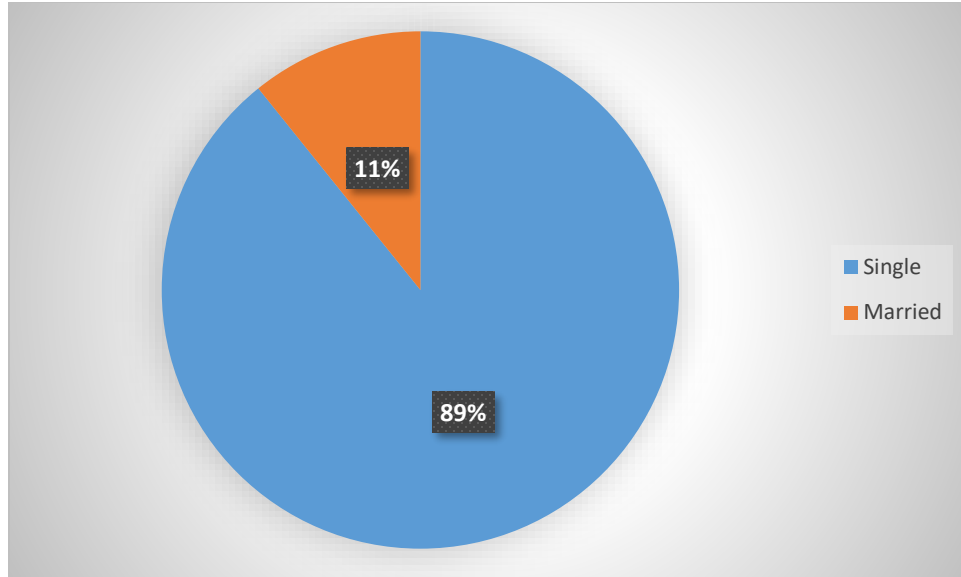


Figure 4-3 Marital Status Distribution of People Participating in the Study

4.1.4 Distribution by Educational Level

The distribution of the educational level of the participants in the study is given in Table 4.4. The vast majority of the participants were at the university level, with 89,7 %.(Table 4.4).

Table 4-4 Distribution of People Participating in the Study by Educational Level

Educational Level	n	Percent
High School	35	8,8
University	358	89,7
Master-PhD	6	1,5
Total	399	100

The educational level distribution of people participating is shown in the figure below.

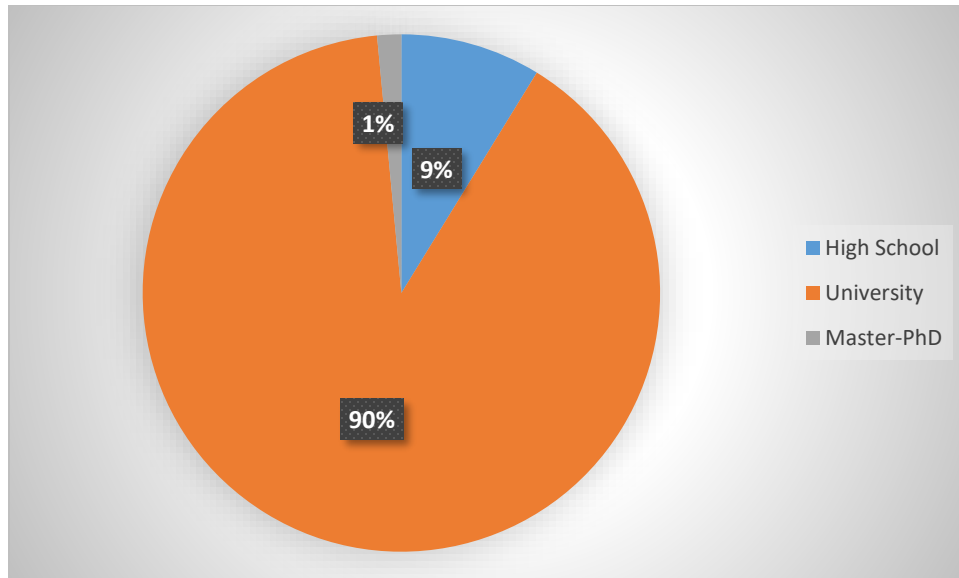


Figure 4-4 Educational Level Distribution of People Participating in the Study

4.1.5 Distribution by Profession Status

The distribution of the profession status of the participants in the study is given in Table 4.5. The vast majority of the participants were student, with 89,2 %.(Table 4.5).

Table 4-5 Distribution of People Participating in the Study by Profession Status

Profession Status	n	Percent
Civil servant	37	9,3
Housewife	3	0,8
Student	356	89,2
Retired	3	0,8
Total	399	100

The profession status distribution of people participating is shown in the figure below.

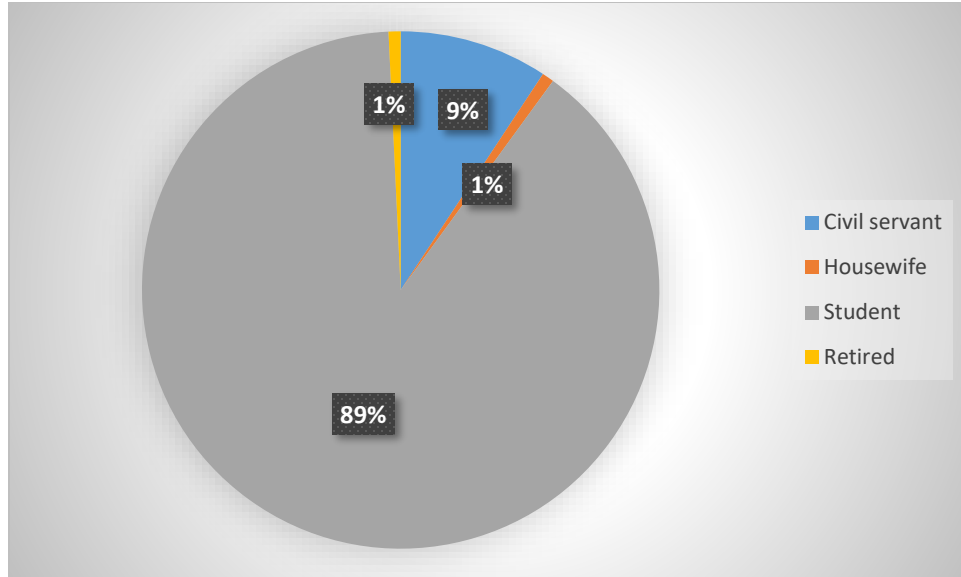


Figure 4-5 Profession Status Distribution of People Participating in the Study

4.1.6 Distribution by Income Level

The distribution of the profession status of the participants in the study is given in Table 4.6. 87,5% of the participants had an income level of 1000 manat, % 10 of the participants had an income level of 10001-2000 manat and 2ü3 % of them had 2001-3000 manat income level. (Table 4.6).

Table 4-6 Distribution of People Participating in the Study by Income Level

Income Level	n	Percent
0-1000 manat	349	87,5
1001-2000 manat	41	10,3
2001-3000 manat	9	2,3
Total	399	100

The income level distribution of people participating is shown in the figure below.

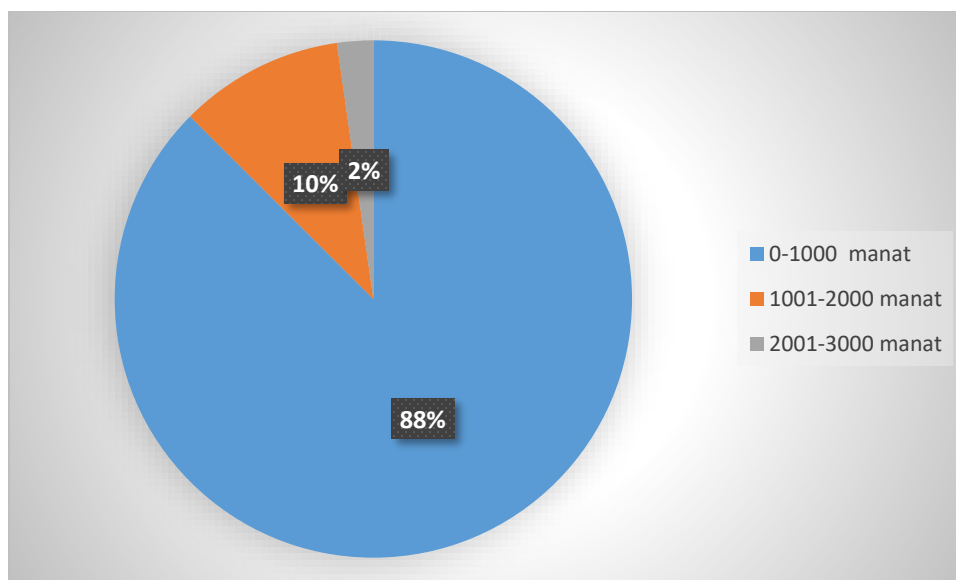


Figure 4-6 Income Level Distribution of People Participating in the Study

4.1.7 Distribution According to the Model of the Mobil Device Used

The distribution of the model of the mobil device used of the participants in the study is given in Table 4.7. According to Table 4.7, it was determined that 56,9 % of the mobile phones used by the participants were android and 20% of I phone and 2,8 % of windows phone 8.

Table 4-7 Distribution of People Participating in the Study by Income Level

Income Level	n	Percent
I phone	161	40,4
android	227	56,9
Windows Phone 8	11	2,8
Total	399	100

4.1.8 The Status of the Start Time of Using Mobile Banking

The distribution of the start time of using mobile banking of the participants in the study is given in Table 4.8. According to Table 4.8, it has been determined that 58,9 % of the participants have been using mobile banking for 2-3 years, 17,3 % of them for the last 1 year and 17 % of them for the last 6 months and 5.8 % of them more than 3 years.

Table 4-8 Distribution of People Participating in the Study by the Model of the Mobil Device Used

Usage Period	n	Percent
Last 3 months	4	1
Last 6 months	68	17
Last 1 year	69	17,3
2-3 year	235	58,9
More than 3 years	23	5,8
Total	399	100

4.1.9 Distribution by Frequency of Using Mobile Banking

The frequency of using mobile banking by the customers participating in the research is given in Table 4.9. According to Table 4.9, it has been determined that 27,1 % of the customers have been using mobile banking several times in a week, 26,3 % of them several times in a month, 24,8 % of them everyday and 21,3 % of them once a week.

Table 4-9 Distribution of Frequency of Customers Using Mobile Banking

Frequency of Use	n	Percent
Everyday	99	24,8
Several times a week	108	27,1
Once a week	85	21,3
Several times a month	105	26,3
Once in a month	2	0,5
Total	399	100

4.1.10 Problems Encountered while Using Mobile Banking in the Last 6 Month

Problems encountered while using mobile banking by the customers participating in the research is given in Table 4.10. According to Table 4.10, 83 % of the customers had no problems in using mobile banking in the last 6 months.

Table 4-10 Distribution of Problems Encountered in Using Mobile Banking

Problems	n	Percent
Yes	68	17
No	331	83
Total	399	100

4.1.11 Applications Used in Mobile Banking

The applications used in mobile banking by the customers participating in the research is given in Table 4.11. According to Table 4.11, the customers used ABB – Mobile in mobile banking with a rate of 32,1 % at most and then BirBank with a rate of 23,6 % and DostBank with a rate of 22,1 %.

Table 4-11 Distribution of Channels Used in Banking Transactions

Application Used	n	Percent
ABB - Mobile	128	32,1
BirBank	94	23,6
DostBank	88	22,1
Express24	53	13,3
Ubank	36	9
Total	399	100

4.1.12 Channels Used in Banking Transactions

The channels used in banking transactions by the customers participating in the research is given in Table 4.12. According to Table 4.12, the customers used mobile banking in banking transactions with a rate of 87,2 % at most and then internet banking with a rate of 10,3 %.

Table 4-12 Distribution of Channels Used in Banking Transactions

Most Used Channel	n	Percent
Mobile banking	348	87,2

Internet banking	41	10,3
ATM	7	1,8
Branch	3	0,8
Total	399	100

4.1.13 The Status of Using Mobile and Internet Banking by Transaction Type

The frequency of the types of transactions in using mobile and internet by the customers participating in the research is given in Table 4.13. It is understood that the participants use mobile banking mostly for opening an account (% 100), remittance (% 98,7), payment of invoices (% 96,5), credit card processing (% 96,2), credit transactions (% 96,2), sending money via SMS (% 96,2), and respectively. It is seen that internet banking is mostly used in fund buying and selling (99,2 %), Foreign exchange trading (99,2 %), Treasury bills/government bonds (98,7 %), VIOB (derivatives exchange) transactions (98,5 %), Repo (98,2 %) and Stock purchase/sale (97,5 %) (Table 4.13).

Table 4-13 Distribution of Using Mobile and Internet Banking by Transaction Type

	Mobile Banking		Internet Banking	
	n	Percent	n	Percent
Getting information	381	95,5	18	4,5
Opening an account	399	100	0	0
Deposit transactions	383	96	16	4
Payment of invoices	385	96,5	14	3,5
Credit card processing	384	96,2	15	3,8
Credit transactions	384	96,2	15	3,8
Remittance	394	98,7	5	1,3
EFT	390	97,7	9	2,3
Sending money via SMS	384	96,2	15	3,8
Foreign exchange trading	3	0,8	396	99,2
Buying/selling funds	3	0,8	396	99,2
Stock purchase/sale	10	2,5	389	97,5
VIOB (derivatives exchange) transactions	6	1,5	393	98,5
Repo	7	1,8	392	98,2

Treasury bills/government bonds	5	1,3	394	98,7
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4.1.14 The Status of the Most Common Transaction Performed in Mobile Banking

According to Table 4.14 the most frequent transactions of the customers participating in the research with mobile banking were money transfer 87,2%, checking accounts (10,3%), credit card transactions (1,8%) and payment transactions (0,8%).

Table 4-14 Distribution of the Most Common Transaction Performed in Mobile Banking

The Most Common Transaction	n	Percent
Money transfer (Remittance, EFT)	348	87,2
Checking accounts	41	10,3
Credit card transactions (Application, Viewing statement information, Debt payment)	7	1,8
Payment transactions (TAX, SSI payments, Rent Payment, Top-up Loading, etc.)	3	0,8
Total	399	100

4.1.15 The Status of the Satisfaction Level in Mobile Banking

Considering the most frequently used mobile banking service of the customers participating in the research, their satisfaction levels in mobile banking are shown in Table 4.15. According to Table 4.15, it is seen that the majority of the participants are satisfied with mobile banking (89.7%), Also, it was determined that 77,7 % of the participants were at the level of continuing to use the mobile banking service, and 93,2 % of them were at the level of recommending mobile banking to their friends.

Table 4-15 Satisfaction Level in Mobile Banking

	Extremely high		Very high		High		Not very high	
	n	Percent	n	Percent	n	Percent	n	Percent
Satisfaction	140	35,1	218	54,6	41	10,3	0	

Level with Mobile Banking									
Rating of Recommending the Mobile Banking Service	293	73,4	79	19,8	27	6,8	0		
Rating of Continuing to Use the Mobile Banking Service	153	38,3	197	49,4	47	11,8	2	0,5	

4.2 Descriptive Statistics

Descriptive statistics obtained from the survey study are given in Table 4.16. In mobile banking, the participation in the provided service security variable of the customer satisfaction scale (4.55) is higher than the other variables. The average of the customer support variable (4.46) is in the second place, while the average of the ease of use variable (4.37) and service performance (4.37) are in the third place. In general, it was determined that the lowest level of participation was in the variable of transactions efficiency (4.08) that the transactions were done correctly. In addition, when the average of customer satisfaction regarding mobile banking usage of customers (4,35) is considered, it is possible to say that this value is quite high. (Table 4.16).

Table 4-16 Descriptive Statistics of Customer Satisfaction Scales

	N	Mean	Std. Deviation
Safety Reliability	399	4,23	0,58915
Transactions Efficiency	399	4,08	0,50318
Customer Support	399	4,46	0,40418
Service Security	399	4,55	0,45129
Ease Of Use	399	4,37	0,46638
Service Performance	399	4,37	0,53864
Service Content	399	4,13	0,57258
Customer Satisfaction	399	4,35	0,26587

In addition, the graphic image of Table 4.16 is given in Figure 3.2.

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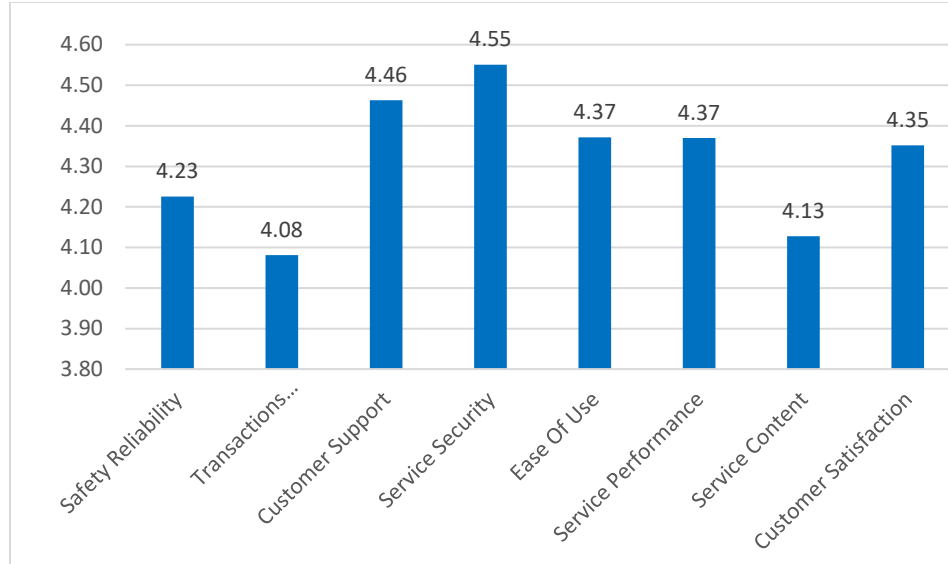


Figure 4-7 Distribution of Sub-Dimensions of Customer Satisfaction in Mobile Banking by Average

4.3 Correlation Analysis

The findings regarding the correlation between the scores of the variables in the mobile banking customer satisfaction scale of the participants in the research are given in Table 4.17.

Table 4-17 Correlation Values of the Variables

	1	2	3	4	5	6	7
1-Safety Reliability	1						
2-Transactions Efficiency	,54**	1					
3-Customer Support	,13**	,20**	1				
4-Service Security	0,08	,10*	,23**	1			
5-Ease Of Use	,15**	,19**	,16**	,23**	1		
6-Service Performance	0,10	,15**	0,09	,15**	,32**	1	
7-Service Content	0,07	,12**	,10*	0,05	,19**	,32**	1

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

According to Table 4.17, medium and positive relationships were found between the Safety Reliability and Transactions Efficiency in the mobile banking customer satisfaction scale of the participants (.54 $p < 0,01$). Also, low and positive relationships were found between the following variables in the mobile banking customer satisfaction scale of the participants.

- safety reliability with transactions efficiency (.29 $p < 0,01$),
- safety reliability with customer support (.13 $p < 0,01$),
- safety reliability with ease of use (.15 $p < 0,01$),
- transactions efficiency with customer support (.20 $p < 0,01$),
- transactions efficiency with service security (.11 $p < 0,01$),
- transactions efficiency with ease of use (.14 $p < 0,01$),
- transactions efficiency with service performance (.15 $p < 0,01$),
- transactions efficiency with service content (.12 $p < 0,01$),
- customer support with service security (.23 $p < 0,05$),
- customer support with ease of use (.16 $p < 0,01$),
- customer support with service content (.10 $p < 0,05$),
- service security with ease of use (.23 $p < 0,01$),
- service security with service performance (.15 $p < 0,01$),
- ease of use with service performance (.32 $p < 0,01$),
- service performance with service content (.19 $p < 0,01$),
- ease of use with service content (.32 $p < 0,01$).

4.4 Regression Analysis

In Table 4.18 the results of the multiple regression analysis regarding the customer satisfaction of the participants are given. The multicollinearity problem is examined in the model. In order to avoid multiple connection problems, the tolerance value should be greater than 0.10 and the VIF value should be less than 4 (Kalaycı, 2008: 224-226). When Table 3.23 is examined, it is seen that the model is in these ranges. In other words, it is understood that there is no multi-

connection problem.

Table 4-18 The Multiple Regression Analysis Regarding the Customer Satisfaction of the Participants

Dependent variable ; Customer Satisfaction								
Independent variables	B	Std. Error	Beta	t	p	Tolerance	VIF	
(Constant)	0,039	0,025		1,573	0,117			
Safety Reliability(X ₁)	0,071	0,003	0,156	23,712	0	0,706	1,417	Accepted
Transactions Efficiency(X ₂)	0,102	0,004	0,192	28,534	0	0,677	1,476	Accepted
Customer Support(X ₃)	0,198	0,004	0,3	51,446	0	0,903	1,108	Accepted
Service Security(X ₄)	0,164	0,003	0,278	47,629	0	0,901	1,11	Accepted
Ease of Use(X ₅)	0,225	0,003	0,394	64,761	0	0,832	1,202	Accepted
Service Performance(X ₆)	0,133	0,003	0,269	43,88	0	0,818	1,223	Accepted
Service Content(X ₇)	0,096	0,003	0,206	35,016	0	0,884	1,131	Accepted

As seen in Table 4.18, a statistically significant relationship was found between the independent variables of the participants and their customer satisfaction scores.(p =0). Considering the beta value, it is seen that all of them are positive. This shows that the significance value of each independent variable has a positive effect on customer satisfaction. Therefore, the hypotheses H₁, H₂, H₃, H₄, H₅, H₆ and H₇ are supported.

According to the values of Table 3.23, the regression equation can be written as follows:

$$Y=0,039+0,0715X_1+0,102X_2+ 0,198X_3+ 0,164X_4+ 0,225X_5+ 0,133X_6+ 0,096X_7$$

4.5 T-Test and F-Test Results of Customer Satisfaction in Mobile Banking by Some Variables

In this section, there are T and F-test results that test whether the satisfaction levels of customers in mobile banking differ according to some variables such as gender, age, marital status, educational, level, profession status, income level, usage period and frequency of usage.

4.5.1 Results of Customer Satisfaction in Mobile Banking by Gender Variable

H_{8a}: There is a statistically significant difference between customer satisfaction in mobile banking and the gender of customers.

In order to test the H_{8a} hypothesis, the effect of gender on customer satisfaction was examined and T-test results of customer satisfaction in mobile banking according to the gender are shown in Table 4.19.

Table 4-19 Results of Customer Satisfaction in Mobile Banking by Gender

	Gender	N	Mean	SD	t	p
Customer Satisfaction	Male	257	4,37	0,2548	1,384	0,164
	Female	142	4,33	0,2868		

As seen in Table 4.19 there was no significant difference between customer satisfaction in mobile banking and the gender of customers ($t_{.05} = 1.384$; $p > 0.05$), In this case, hypothesis H_{8a} is rejected.

4.5.2 Results of Customer Satisfaction in Mobile Banking by Education Level Variable

H_{8b}: There is a statistically significant difference between customer satisfaction in mobile banking and the age of customers.

In order to test the H_{8b} hypothesis, the effect of age on customer satisfaction was examined and One-way ANOVA results of customer satisfaction in mobile banking according to the age are shown in Table 4.20.

Table 4-20 One-way ANOVA Results of Customer Satisfaction in Mobile Banking by Age

	Age	N	Mean	SD	Welch	p	Difference
Customer Satisfaction	15-24 age	182	4,37	0,249	45,462	0,06	A > D B > D
	25-34 age	174	4,37	0,250			
	35-44 age	29	4,30	0,326			

45 and more age	14	4,02	0,356
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A = 15-24 age, B = 25-34 age, C= 35-44 age, D = 45 and more

As seen in Table 4.20 there was significant difference between customer satisfaction in mobile banking and the age of customers (Welch $F_{3,395} = 45,462$, $p < 0.05$). It was determined that the age variable were not homogeneously distributed at the end of the Levene Test, ($F_{(3,395)} = 3,513$, $p = 0,15$). Because of this, to determine which groups had the significant difference provided, the Post Hoc–Dunnett's T3 test applied from the unequal variance assumptions.

As a result of the Dunnett's T3 test, it has been determined that the customer satisfaction of the 15-24 age group ($\bar{X} = 4.37 \pm 0,249$) is higher than the 45 and more age group ($\bar{X} = 4.02 \pm 0,356$), and 25-34 age group ($\bar{X} = 4.37 \pm 0,250$) is higher than the 45-54 age group ($\bar{X} = 4.02 \pm 0,356$). It can be said that customer satisfaction in mobile banking is higher in young customers than in older customers. In this case, hypothesis H_{8b} is accepted.

4.5.3 Results of Customer Satisfaction in Mobile Banking by Marital Status Variable

H_{8c}: There is a statistically significant difference between customer satisfaction in mobile banking and the Marital Status of customers.

In order to test the H_{8c} hypothesis, the effect of marital status on customer satisfaction was examined and T-test results of customer satisfaction in mobile banking according to marital status are shown in Table 4.21.

Table 4-21 The Results of Customer Satisfaction in Mobile Banking by Marital Status

	Marital Status	N	Mean	SD	t	p
Customer Satisfaction	Single	356	4,37	0,249	2.919	0,005
	Married	43	4,21	0,357		

As seen in Table 4.21 there was significant difference between customer satisfaction in mobile banking and the marital status of customers ($t_{.05} = 2,919$; $p < 0.05$). It has been determined that

customer satisfaction in mobile banking is higher in single customers ($\bar{X}= 4.37 \pm 0,249$) than in married customers ($\bar{X}= 4.21 \pm 0,357$). In this case, hypothesis H_{8c} is rejected.

4.5.4 Results of Customer Satisfaction in Mobile Banking by Education Level Variable

H_{8d}: There is a statistically significant difference between customer satisfaction in mobile banking and the education level of customers.

In order to test the H_{8d} hypothesis, the effect of age on customer satisfaction was examined and One-way ANOVA results of customer satisfaction in mobile banking according to the education level are shown in Table 4.22.

Table 4-22 One-Way Anova Results of Customer Satisfaction in Mobile Banking by Education Level

	Education Level	N	Mean	SD	Welch	p	Difference
Customer Satisfaction	High School	35	4,28	0,277			
	University	358	4,36	0,265	12,660	0,019	A < C
	Master-PhD	6	4,56	0,169			

A = High School, B = University, C= Master-PhD

As seen in Table 4.22 there was significant difference between customer satisfaction in mobile banking and the education level of customers (Welch $_{2,396}= 12,260$, $p < 0.05$). It was determined that the education level variable were homogeneously distributed at the end of the Levene Test, ($F_{(2,396)} = 0777$, $p = 0,461$). Because of this, to determine which groups had the significant difference provided, the Post Hoc–LSD test applied from the equal variance assumptions.

As a result of the LSD test, it has been determined that the customer satisfaction of the Master-PhD group ($\bar{X}= 4,56 \pm 0,169$) is higher than the High School group ($\bar{X}= 4.28 \pm 0,277$). It can be said that high level of education customers' customer satisfaction in mobile banking is higher than low education level of customers. In this case, hypothesis H_{8d} is accepted.

4.5.5 Results of Customer Satisfaction in Mobile Banking by Profession Status Variable

H_{8e}: There is a statistically significant difference between customer satisfaction in mobile banking and the profession status of customers.

In order to test the H_{8e} hypothesis, the effect of profession status on customer satisfaction was examined and One-way ANOVA results of customer satisfaction in mobile banking according to the profession status are shown in Table 4.23.

Table 4-23 One-way ANOVA Results of Customer Satisfaction in Mobile Banking by Profession Status

	Profession Status	N	Mean	SD	Welch	p	Difference
Customer Satisfaction	Civil servant	37	4,25	0,340	3,133	0,127	-
	Housewife	3	3,95	0,318			
	Student	356	4,37	0,249			
	Retired	3	3,91	0,485			

As seen in Table 4.23 there was no significant difference between customer satisfaction in mobile banking and the profession status of customers ($F_{3,395} = 3,133, p > 0.05$). In this case, hypothesis H_{8e} is rejected.

4.5.6 Results of Customer Satisfaction in Mobile Banking by Income Level Variable

H_{8f}: There is a statistically significant difference between customer satisfaction in mobile banking and income level of customers.

In order to test the H_{8f} hypothesis, the effect of income level on customer satisfaction was examined and One-way ANOVA results of customer satisfaction in mobile banking according to the income level are shown in Table 4.24.

Table 4-24 One-way ANOVA Results of Customer Satisfaction in Mobile Banking by Income Level

	Income Level	N	Mean	SD	Welch	p	Difference
Customer Satisfaction	0-1000 manat	350	4,36	0,259	1,511	0,246	-
	1001-2000	40	4,29	0,317			

manat				
2001-3000	9	4,25	0,316	
manat				

As seen in Table 4.24 there was no significant difference between customer satisfaction in mobile banking and the income level of customers (Welch $_{2,396} = 1,511$, $p > 0.05$). In this case, hypothesis H_{8f} is rejected.

4.5.7 Results of Customer Satisfaction in Mobile Banking by the Frequency of Use Variable

H_{8g} : There is a statistically significant difference between customer satisfaction in mobile banking and the frequency of customers using mobile banking.

In order to test the H_{8fg} hypothesis, the effect of the frequency of customers using mobile banking on customer satisfaction was examined and One-way ANOVA results of customer satisfaction in mobile banking according to the frequency of use are shown in Table 4.25.

Table 4-25 One-way ANOVA Results of Customer Satisfaction in Mobile Banking by the Frequency of Use

	Frequency of Use	N	Mean	SD	Welch p	Difference
Customer Satisfaction	Everyday	99	4,34	0,282		
	Several times a week	108	4,32	0,302		
	Once a week	85	4,40	0,212	6,300	0,222 -
	Several times a month	105	4,36	0,249		
	Once in a month	2	4,03	0,091		

As seen in Table 4.25 there was no significant difference between customer satisfaction in mobile banking and the frequency of customers using mobile banking (Welch $_{4,394} = 6,300$, $p > 0.05$). In this case, hypothesis H_{8g} is rejected.

4.5.8 Results of Customer Satisfaction in Mobile Banking by Used Period

H_{8h}: There is a statistically significant difference between customer satisfaction in mobile banking and the duration of customers using mobile banking.

In order to test the H_{8h} hypothesis, the effect of the duration of customers using mobile banking on customer satisfaction was examined and One-way ANOVA results of customer satisfaction in mobile banking according to the used period are shown in Table 4.26.

Table 4-26 One-way ANOVA Results of Customer Satisfaction in Mobile Banking by the Used Period

	Used Period	N	Mean	SD	Welch	p	Difference
Customer Satisfaction	Last 3 months	4	4,18	0,578			
	Last 6 months	68	4,36	0,264			
	Last 1 year	69	4,39	0,261	1,107	0,38	-
	2-3 year	235	4,34	0,269			
	More than 3 years	23	4,41	0,190			

As seen in Table 4.27 there was no significant difference between customer satisfaction in mobile banking and the duration of customers using mobile banking (Welch $F_{4,394} = 1,107$, $p > 0.05$). In this case, hypothesis H_{8h} is rejected.

5. CONCLUSION

This study was carried out in order to reveal the relationship and the effect between the factors that make the customers using mobile banking satisfied with the service they receive. In addition, it has also been examined whether customer satisfaction in mobile banking services differs according to some demographic variables. The study was realized with the participation of 399 customers in Azerbaijan.

According to the results of the study, the demographic characteristics and mobile banking usage of the customers participating in the research were as follows:

- 64,4 % of the participants were male and 35,6 % of them female.
- 43,6 % of participants were between 25-34 age, 7,3 % of them between 35-44 age and 3,5 % of them were between 45 and more age.
- % 89,2 of the participants were single and the others were married.
- 89,7 % of the participants were at the university level, 8,8 % of the participants were at high school level and 1,5 % of the participants were at the Master-PhD.
- 89,2 % of the participants were student, 9,3 % of the participants were civil servant, 0,8 % of the participants were housewife and 0,8 % of the participants were retired.
- 87,5% of the participants had an income level of 1000 manat, 10,3% of the participants had an income level of 10001-2000 manat and 2,3% of them had 2001-3000 manat income level.
- 56,9 % of the mobile phones used by the participants were android and 20% of I phone and 2,8 % of windows phone 8.
- All of the participants used mobile banking and among them, 58,9 % of the participants have been using mobile banking for 2-3 years, 17,3 % of them for the last 1 year and 17 % of them for the last 6 months and 5.8 % of them more than 3 years.
- 27,1 % of the customers have been using mobile banking several times in a week, 26,3 % of them several times in a month, 24,8 % of them everyday and 21,3 % of them once a week.
- 83 % of the customers had no problems in using mobile banking in the last 6 months.

Determinants of customer satisfaction in mobile banking services (Azerbaijan)

- 32,1 % of the customers used ABB – Mobile in mobile banking 23,6 % of them used BirBank 22,1 %. of them used DostBank, 13,3 %.of them used Express24 and 9 % of them used Ubank.
- In banking transactions, 87,2 % of the customers used mobile banking mostly and then 10,3 % them used internet banking.
- The participants use mobile banking mostly for opening an account (% 100), remittance (98,7%), payment of invoices (96,5%), credit card processing (96,2%), credit transactions (96,2%), sending money via SMS (96,2%), and respectively. It is seen that internet banking is mostly used in fund buying and selling (99,2%), foreign exchange trading (99,2%), treasury bills/government bonds (98,7%), VIOB (derivatives exchange) transactions (98,5%), repo (98,2 %) and stock purchase/sale (97,5 %).
- The most frequent transactions of the customers participating in the research with mobile banking were money transfer (87,2%), checking accounts (10,3%), credit card transactions (1,8%) and payment transactions (0,8%).
- 89.7% the customers were satisfied with mobile banking, 77,7 % of the participants were continuing to use the mobile banking service and 93,2 % of them recommended mobile banking to their friends.

According to the results of the study, descriptive statistics of customer satisfaction scales of the customers participating in the research were as follows:

- The average of customer satisfaction regarding mobile banking usage of customers is 4,35 and it is possible to say that this value was quite high. The participation in the provided service security variable of the customer satisfaction scale (4.55) was higher than the other variables. The lowest level of participation was in the variable of transactions efficiency (4.08) that the transactions were done correctly.

The conclusions about the research model are as follows:

- A statistically significant relationship was found between the independent variables of the participants and their customer satisfaction scores. This means that, the variables of "safety reliability", "transactions efficiency", "customer support", "service security", "ease of use", "service performance" and "service content" had a positive effect on

customer satisfaction. Therefore, the hypotheses H₁, H₂, H₃, H₄, H₅, H₆ and H₇ are supported.

- No significant difference was found between customer satisfaction in mobile banking and the gender of customers and hypothesis H_{8a} is rejected.
- A statistically significant difference was found between customer satisfaction in mobile banking and the age of customers. It was seen that customer satisfaction in mobile banking was higher in young customers than in older customers and hypothesis H_{8b} is accepted.
- No significant difference was found between customer satisfaction in mobile banking and the marital status of customers and hypothesis H_{8c} is rejected.
- A statistically significant difference was found between customer satisfaction in mobile banking and the education level of customers. It was seen that high level of education customers' customer satisfaction in mobile banking was higher than low education level of customers and hypothesis H_{8d} is accepted.
- No significant difference was found between customer satisfaction in mobile banking and the profession status of customers and hypothesis H_{8e} is rejected.
- No significant difference was found between customer satisfaction in mobile banking and the income level of customers and hypothesis H_{8f} is rejected.
- No significant difference was found between customer satisfaction in mobile banking and the frequency of customers using mobile banking and hypothesis H_{8g} is rejected.
- No significant difference was found between customer satisfaction in mobile banking and the duration of customers using mobile banking and hypothesis H_{8h} is rejected.

In short, according to the research model, the variables of "safety reliability", "transactions efficiency", "customer support", "service security", "ease of use", "service performance" and "service content" has been found to be effective on customer satisfaction in mobile banking. has been found to be effective. In addition, it has been observed that customer satisfaction in mobile banking differs according to age and education level.

6. SUGGESTIONS

According to the results of the research, the following suggestions can be made for the banking sector:

- In order to have faster processes and increase transactions efficiency in customer satisfaction in mobile banking, banks should invest more in robust reliable systems.
- In order to ensure customer satisfaction in mobile banking services, banks should pay attention to providing ease of use of mobile banking services.
- Banks should increase the support given to these services in addition to the mobile banking services they offer.
- Banks should also show the necessary sensitivity about the security of mobile banking services.
- Providing more accurate information and providing simple instructions for older groups or those with lower educational levels who need assistance will help further increase satisfaction as customers have different understanding abilities.

According to the results of the research, the following suggestions can be made for future scientific studies:

- A study can be conducted to determine the effects of digital banking accessibility among different customer groups.
- Research can be conducted on transactions efficiency, which determines customer satisfaction in mobile banking.

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Tables

Table 1-1 General Outlook of Azerbaijan Banking Sector

Number of Banks	: 30
State Banks	: 2
Private Banks	: 28
Foreign banks	: 15
50% - 100% banks with foreign capital	: 8
llocal branches of foreign banks	: 2
Banks with less than 50% foreign capital	: 7
Number of bank branches	: 508
Number of ATMs	: 2.510
Number of Employees	: 17.588

Source: (FIMSA, 2019).

Table 1-2 Assets of the Balance Sheet of the Azerbaijan Banking Sector (Million AZN)

ACTIVITIES	31.01.2019
Cash and cash equivalents	1.190,6
CBAR receivables, total	1,887.5
Correspondent accounts in other banks	2,433.4
Deposits in financial institutions including banks	6,504.4
Securities	3.903.8
Payables to financial institutions including banks	260.0
Loans to Customers	12,541.0
Fixed assets	948.8
Intangible assets	146.5
Other assets (less specific reserves)	1,294.3
Total assets	29.602.9

Source: FIMSA 2019.

Table 1-3 Asset Size of Azerbaijan Banks (Million AZN)

2018-Q4			2018
			-Q4
Azarbaycan	7	AFB Bank ASC	417,
Beynalxalq Bankı ASC	932,8	6	5

Determinants of customer satisfaction in mobile banking services (Azerbaijan)

	PAŞA Bank ASC	4 695,7	7	Nikoil Bank İKB ASC	417, 0
	Kapital Bank ASC	37 16,5	8	Expressbank ASC	395, 2
	Xalq Bank ASC	20 08.2	9	Azar Türk Bank ASC	368, 3
	Bank Respublika ASC	98 3,1	0	Bank BTB ASC	314, 8
	AccessBank QSC	87 8,7	1	Bank of Baku ASC	300, 1
	Azərbaycan Sənaye Bankı ASC	82 2,3	2	NBCBank ASC	283, 4
	Rabitabank ASC	77 2,1	3	Amrahbank ASC	230, 3
	Unibank KB ASC	69 3,9	4	Ziraat Bank Azərbaycan ASC	227, 9
0	Premium Bank ASC	64 6,3	5	Naxçıvanbank ASC	196, 5
1	AtaBank ASC	58 1,1	6	Günay Bank ASC	191, 2
2	Muğanbank ASC	55 1,7	7	Bank Avrasiya ASC	167, 6
3	AGBank ASC	49 6,2	8	Bank VTB (Azərbaycan) ASC	135, 3
4	TuranBank ASC	49 2,6	9	Bank Melli İran Bakı filialı	110, 4
5	Yapı Kredi Bank Azərbaycan QSC	42 6,7	0	National Bank of Pakistan NBP Bakı filialı	11,5

Source: ABA, 2019.

Table 1-4 Liabilities of the Balance Sheet of the Azerbaijan Banking Sector (Million AZN)

PASSIVES	31.01.2019
1. Deposits (excluding financial institutions)	18. 547,4
1.1 Individual Accounts	7. 980,7

Determinants of customer satisfaction in mobile banking services (Azerbaijan)

J1.2 Corporate Accounts	10.	566,7
2. CBAR's bank claims		369,5
3. Loro accounts		280,5
4. Deposits of financial theories		1.460,2
5. Banks' Loans		87,1
6. Loans of other financial institutions	2.	008,4
7. Security securities issued by banks	1.	840,0
8. Other debts	1.	492,5
9. Total debt	25.	485,6
<hr/>		
CAPITAL		
10. Equity	3.	835,8
11. General reserves		281,5
12. Total capital	4.	117,3
13. Total debt and capital	29.	602,9

Source: FIMSA, 2019.

Table 1-5 Total Loan Size of Azerbaijan Banks (Million AZN) (2018-Q4)

Azarbaycan					
Beynalexalq	3,0	192	6	Expressbank ASC	222,2
Bank ASC					
Kapital Bank ASC	0,9	150	7	NBC Bank ASC	204,5
Xalq Bank ASC	2,6	138	8	Bank of Baku ASC	200,4
PAŞA Bank ASC	0,9	132	9	AFB Bank ASC	194,3
Premium Bank ASC	584,6		0	Bank BTB ASC	175,2

Determinants of customer satisfaction in mobile banking services (Azerbaijan)

	AccessBank QSC	542,5	1	Yapı Kredi Bank Azarbaycan QSC	17 4
	AtaBank ASC	428,6	2	Azar Türk Bank ASC	165,6
	Unibank KB ASC	387,7	3	Günay Bank ASC	146,1
	Muğanbank ASC	371,6	4	Amrahbank ASC	111,9
0	Bank Respublika ASC	343,6	5	Ziraat Bank Azarbaycan ASC	105,5
1	Rabitabank ASC	317,8	6	Bank Avrasiya ASC	99, 0
2	TuranBank ASC	313,1	7	Naxçıvanbank ASC	64, 9
3	Azarbaycan Sanaye Bank ASC	285,9	8	Bank VTB (Azarbaycan) ASC	49, 4
4	Nikoil Bank İKB ASC	282,7	9	Bank Melli İran Bakı filialı	3,6
5	AGBank ASC	245,7	0	National Bank of Pakistan NBP Bakı filialı	1,3

Source: ABA, 2019.

Table 1-6 Outlook of Loans in Azerbaijan Banking Sector

Indica tor	1	2	3	4	5	6	7
2009	8.407,5 99	2.35 81	2	6.047,5	71,9	303,5	3, 6
2010	9.163,4 7,1	2.56 8,0	2	6.596,3	72,0	492,9	5,4
2011	9.850,3 1,2	2.95 0,0	3	6.899,1	70,0	633,8	6,4
2012	12.243,7 8,3	3.50 8,7	2	8.735,4	71,3	748,8	5,9

Determinants of customer satisfaction in mobile banking services (Azerbaijan)

2013	15.422,9	5,5	3.33	2	12.087	78,4	792,8	5,1
			1,6	,5				
2014	18.542,6	1,3	3.93	2	14.611	78,8	976,3	5,3
			1,2	,3				
2015	21.730,4	7,3	5.29	2	16.433	75,6	1.508	6,9
			4,4	,1		,5		
2016	16.444,6	8,0	3.47	2	12.966	78,9	1.472	9,0
			1,1	,6		,6		
2017	11.757,8	1,3	2.10	1	9.656,5	82,1	1.626	1
			7,9			7		3,8

* 1-) Loan Investments (Million AZN),

* 2-) Short Term Loan Investments (Million AZN),

* 3-) Rate of Short Term Loans (%),

* 4-) Long Term Loan Investments (Million AZN),

* 5-) Long Term Loan Rate (%),

* 6-) Overdue Debts (Million AZN),

Table 1-7 Banks Operating in Azerbaijan

Ye	Pu	Private	Foreign	Total
19	4	1		2
04		05	1	10
19	4	1		1
05		65	1	80
19	4	1		1
06		19	3	36
19	4			
07		2	3	9
19	4			
08		3	2	9
19	4			
09		3	3	0
20	4			
00		1	6	9
20	2			
01		5	6	3
20	2			
02		9	5	6
20	2			
03		7	7	6
20	2			
04		7	5	4
20	2			
05		4	8	4

Source: AMB, 2006.

Table 1-8 Functions of the Banking Sector

For the Money Market

Accepting deposits

Open a loan

Create money

Towards the Capital Market

Securities brokerage

Investment consulting

International Functions

Fund transfer

Opening foreign currency deposits and lending

To finance foreign trade

Source: Mukhtrav, Yüksel and Mammadov, 2018.

Table 2-1 Differences between service and goods

Evaluation Criteria	Service	Goods
Transactions	People oriented	Technical
	Uncertain, undecided	Decisive
	Labor intensive	Capital intensive
	The customer is part of the process	The customer is disconnected from the process
	Short response time	long response time
Outputs	Simultaneous production and consumption	It is produced first and then consumed.
	Cannot be stocked	Storable
	immovable	Portable

Determinants of customer satisfaction in mobile banking services (Azerbaijan)

	There is wholesale production	no wholesale production
	Unpatented	Patent
	Abstract and flimsy	physical and durable
	Not standard	It is standard
Employees	Not easy to control	Easy to control
	It has to impress people	Only technical mastery is expected
	Deals with personal decisions	There is an exchange of ideas
	Intense relationship with the customer	Little or no contact with the customer

Source: (Høgevold et. al., 2016: 20-26).

Table 2-2 Historical change of service

Physiocrats, 1750	All activities other than agricultural production
Adam Smith, 1723	All activities that do not result in a tangible product
J.B. Say, 1767	All non-manufacturing activities that add benefits to products
Alfred Marshall, 1842-1924	Products and services that come into existence from the moment they are
Western countries 1925-1950	Services that cause a product to change in form
Contemporary	Services that do not cause a formal change in a good

Source: (Renard et al., 2015)

Table 3-1 Skewness and Kurtosis Values

	N	SD	Skewness	Kurtosis
Safety Reliability	399	0,58915	-1,011	0,213
Transactions Efficiency	399	0,50318	-0,696	-0,086
Customer Support	399	0,40418	-1,268	1,699
Service Security	399	0,45129	-1,761	2,96
Ease of Use	399	0,46638	-1,757	2,907
Service Performance	399	0,53864	-1,393	2,066
Service Content	399	0,57258	-0,823	0,11
Customer Satisfaction	399	0,2669	-1,294	1,684

Table 3-2 Reliability Analysis Results

	Cronbach's Alpha	N of Items
Safety Reliability	0,62	3
Transactions Efficiency	0,63	3
Customer Support	0,78	6
Service Security	0,76	5
Ease Of Use	0,75	7
Service Performance	0,73	4
Service Content	0,64	3
Customer Satisfaction	0,80	31

Table 3-4 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0,696
Bartlett's Test of Sphericity	Approx. Chi-Square	4330,941
	df	465
	Sig.	0

Table 3-4 Factor Analysis Findings Regarding the Customer Satisfaction Scale in Mobile

Banking

Factors	Statements	Factor weights
Safety reliability	It is important that mobile banking provides the required service in the first use and in a complete manner.	0,536
	It is important that the service provided in mobile banking is presented exactly as advertised.	0,613

Determinants of customer satisfaction in mobile banking services (Azerbaijan)

	In mobile banking, it is important to complete a transaction correctly until the end.	0,544
Transactions Efficiency	It is important that the information is up-to-date in mobile banking.	0,5
	It is important that it provides an option to help with any problems that may arise when using mobile banking.	0,628
	Transactions in mobile banking are recommended to be executed quickly.	0,61
Customer Support	It is important that mobile banking includes a sufficient number of transaction types.	0,66
	It is important that I can reach an authorized person in case of any problems in transactions.	0,454
	It is important that mobile banking has a rich "Frequently Asked Questions" content regarding common problems.	0,891
	It is important to solve the problems that arise in mobile banking quickly.	0,918
	It is recommended to employ knowledgeable personnel to solve the problems that arise in mobile banking.	0,881
	It is important that the mobile banking support line personnel explain the solution of the problem step by step and clearly.	0,919
Service Security	It is important that transactions made in mobile banking are maintained correctly.	0,367
	It is important that mobile banking somehow preserves data and personal information regarding transactions.	0,772
	It is important not to encounter any security problems while using mobile banking.	0,705
	It is important that mobile banking is secure and that you feel safe when using mobile banking.	0,568
	It is important that you can always check whether your transactions have been fulfilled and the details of the transactions you have made in the	0,488
Ease Of Use	It is important that I can easily find the information I am looking for in the mobile banking system.	0,269
	It is important that the mobile banking website is quite easy.	0,276
	It is important that the language used on the mobile banking website is understandable..	0,527
	It is important that the output format of the transactions regarding the transactions is understandable.	0,509

Determinants of customer satisfaction in mobile banking services (Azerbaijan)

	It is important that information and texts are understandable and clear.	0,592
	It is important that the mobile banking system offers understandable learning.	0,645
	It is important to reveal the results of the transaction made in mobile banking quickly.	0,442
	It is important that mobile banking provides services in more than one language.	0,807
Service Performance	It is important that mobile banking provides 24/7 service.	0,835
	It is important to allow transfers between banks.	0,402
	It is important to be able to register/apply via mobile banking.	0,54
	It is important that the mobile banking website contains the information that will fully meet the required information.	0,606
Service Content	It is important that the mobile banking website contains all the necessary information.	0,644
	It is important that the mobile banking website contains information that can be trusted.	0,519

Table 4-1 Distribution of People Participating in the Study by Gender

Gender	n	Percent
Male	257	64,4
Female	142	35,6
Total	399	100

Table 4-2 Distribution of People Participating in the Study by Age Range.

Age Range	n	Percent
15-24 age	182	45,6
25-34 age	174	43,6
35-44 age	29	7,3
45 and more age	14	3,5
Total	399	100

Table 4-3 Distribution of People Participating in the Study by Marital Status

Marital Status	n	Percent
Single	356	89,2
Married	43	10,8
Total	399	100

Table 4-4 Distribution of People Participating in the Study by Educational Level

Educational Level	n	Percent
High School	35	8,8
University	358	89,7
Master-PhD	6	1,5
Total	399	100

Table 4-5 Distribution of People Participating in the Study by Profession Status

Profession Status	n	Percent
Civil servant	37	9,3
Housewife	3	0,8
Student	356	89,2
Retired	3	0,8
Total	399	100

Table 4-6 Distribution of People Participating in the Study by Income Level

Income Level	n	Percent
0-1000 manat	349	87,5
1001-2000 manat	41	10,3
2001-3000 manat	9	2,3
Total	399	100

Table 4-7 Distribution of People Participating in the Study by Income Level

Income Level	n	Percent
I phone	161	40,4
android	227	56,9
Windows aPhone 8	11	2,8
Total	399	100

Table 4-8 Distribution of People Participating in the Study by the Model of the Mobil

Device Used		
Usage Period	n	Percent
Last 3 months	4	1
Last 6 months	68	17
Last 1 year	69	17,3
2-3 year	235	58,9
More than 3 years	23	5,8
Total	399	100

Table 4-9 Distribution of Frequency of Customers Using Mobile Banking

Frequency of Use	n	Percent
Everyday	99	24,8
Several times a week	108	27,1
Once a week	85	21,3
Several times a month	105	26,3
Once in a month	2	0,5
Total	399	100

Table 4-10 Distribution of Problems Encountered in Using Mobile Banking

Problems	n	Percent
Yes	68	17
No	331	83
Total	399	100

Table 4-11 Distribution of Channels Used in Banking Transactions

Application Used	n	Percent
ABB - Mobile	128	32,1
BirBank	94	23,6
DostBank	88	22,1
Express24	53	13,3
Ubank	36	9
Total	399	100

Table 4-12 Distribution of Channels Used in Banking Transactions

Most Used Channel	n	Percent
Mobile banking	348	87,2
Internet banking	41	10,3
ATM	7	1,8
Branch	3	0,8

Total	399	100
-------	-----	-----

Table 4-13 Distribution of Using Mobile and Internet Banking by Transaction Type

	Mobile Banking		Internet Banking	
	n	Percent	n	Percent
Getting information	381	95,5	18	4,5
Opening an account	399	100	0	0
Deposit transactions	383	96	16	4
Payment of invoices	385	96,5	14	3,5
Credit card processing	384	96,2	15	3,8
Credit transactions	384	96,2	15	3,8
Remittance	394	98,7	5	1,3
EFT	390	97,7	9	2,3
Sending money via SMS	384	96,2	15	3,8
Foreign exchange trading	3	0,8	396	99,2
Buying/selling funds	3	0,8	396	99,2
Stock purchase/sale	10	2,5	389	97,5
VIOB (derivatives exchange) transactions	6	1,5	393	98,5
Repo	7	1,8	392	98,2
Treasury bills/government bonds	5	1,3	394	98,7

Table 4-14 Distribution of the Most Common Transaction Performed in Mobile Banking

The Most Common Transaction	n	Percent
Money transfer (Remittance, EFT)	348	87,2
Checking accounts	41	10,3
Credit card transactions (Application, Viewing statement information, Debt payment)	7	1,8
Payment transactions (TAX, SSI payments, Rent Payment, Top-up Loading, etc.)	3	0,8
Total	399	100

Table 4-15 Satisfaction Level in Mobile Banking

	Extremely high		Very high		High		Not very high	
	n	Percent	n	Percent	n	Percent	n	Percent
Satisfaction Level with	140	35,1	218	54,6	41	10,3	0	

Mobile Banking								
Rating of Recommending the Mobile Banking Service	293	73,4	79	19,8	27	6,8	0	
Rating of Continuing to Use the Mobile Banking Service	153	38,3	197	49,4	47	11,8	2	0,5

Table 4-16 Descriptive Statistics of Customer Satisfaction Scales

	N	Mean	Std. Deviation
Safety Reliability	399	4,23	0,58915
Transactions Efficiency	399	4,08	0,50318
Customer Support	399	4,46	0,40418
Service Security	399	4,55	0,45129
Ease Of Use	399	4,37	0,46638
Service Performance	399	4,37	0,53864
Service Content	399	4,13	0,57258
Customer Satisfaction	399	4,35	0,26587

Table 4-17 Correlation Values of the Variables

	1	2	3	4	5	6	7
1-Safety Reliability	1						
2-Transactions Efficiency	,54**	1					
3-Customer Support	,13**	,20**	1				
4-Service Security	0,08	,10*	,23**	1			
5-Ease Of Use	,15**	,19**	,16**	,23**	1		
6-Service Performance	0,10	,15**	0,09	,15**	,32**	1	
7-Service Content	0,07	,12**	,10*	0,05	,19**	,32**	1

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 4-18 The Multiple Regression Analysis Regarding the Costumer Satisfaction of the Participants

Dependent variable ; Costumer Satisfaction							
Independent variables	B	Std. Error	Beta	t	p	Tolerance	VIF
(Constant)	0,039	0,025		1,573	0,117		
Safety Reliability(X ₁)	0,071	0,003	0,156	23,712	0	0,706	1,417 Accepted
Transactions Efficiency(X ₂)	0,102	0,004	0,192	28,534	0	0,677	1,476 Accepted
Customer Support(X ₃)	0,198	0,004	0,3	51,446	0	0,903	1,108 Accepted
Service Security(X ₄)	0,164	0,003	0,278	47,629	0	0,901	1,11 Accepted
Ease of Use(X ₅)	0,225	0,003	0,394	64,761	0	0,832	1,202 Accepted
Service Performance(X ₆)	0,133	0,003	0,269	43,88	0	0,818	1,223 Accepted
Service Content(X ₇)	0,096	0,003	0,206	35,016	0	0,884	1,131 Accepted

Table 4-19 Results of Customer Satisfaction in Mobile Banking by Gender

	Gender	N	Mean	SD	t	p
Customer Satisfaction	Male	257	4,37	0,2548	1,384	0,164
	Female	142	4,33	0,2868		

Table 4-20 One-way ANOVA Results of Customer Satisfaction in Mobile Banking by Age

	Age	N	Mean	SD	Welch	p	Difference
Customer Satisfaction	15-24 age	182	4,37	0,249	45,462	0,06	A > D B > D
	25-34 age	174	4,37	0,250			
	35-44 age	29	4,30	0,326			
	45 and more age	14	4,02	0,356			

A = 15-24 age, B = 25-34 age, C= 35-44 age, D = 45 and more

Table 4-21 The Results of Customer Satisfaction in Mobile Banking by Marital Status

	Marital Status	N	Mean	SD	t	p
Customer Satisfaction	Single	356	4,37	0,249	2.919	0,005
	Married	43	4,21	0,357		

Table 4-22 One-Way Anova Results of Customer Satisfaction in Mobile Banking by

Education Level

	Education Level	N	Mean	SD	Welch	p	Difference
Customer Satisfaction	High School	35	4,28	0,277	12,660	0,019	A < C
	University	358	4,36	0,265			
	Master-PhD	6	4,56	0,169			

A = High School, B = University, C= Master-PhD

Table 4-23 One-way ANOVA Results of Customer Satisfaction in Mobile Banking by

Profession Status

	Profession Status	N	Mean	SD	Welch	p	Difference
Customer Satisfaction	Civil servant	37	4,25	0,340	3,133	0,127	-
	Housewife	3	3,95	0,318			
	Student	356	4,37	0,249			
	Retired	3	3,91	0,485			

Table 4-24 One-way ANOVA Results of Customer Satisfaction in Mobile Banking by

Income Level

	Income Level	N	Mean	SD	Welch	p	Difference
Customer Satisfaction	0-1000 manat	350	4,36	0,259	1,511	0,246	-
	1001-2000 manat	40	4,29	0,317			
	2001-3000 manat	9	4,25	0,316			

Table 4-25 One-way ANOVA Results of Customer Satisfaction in Mobile Banking by the

Frequency of Use

	Frequency of Use	N	Mean	SD	Welch	p	Difference
Customer	Everyday	99	4,34	0,282	6,300	0,222	-

Determinants of customer satisfaction in mobile banking services (Azerbaijan)

Satisfaction	Several times a week	108	4,32	0,302
	Once a week	85	4,40	0,212
	Several times a month	105	4,36	0,249
	Once in a month	2	4,03	0,091

Table 4-26 One-way ANOVA Results of Customer Satisfaction in Mobile Banking by the

Used Period

	Used Period	N	Mean	SD	Welch	p	Difference
Customer Satisfaction	Last 3 months	4	4,18	0,578			
	Last 6 months	68	4,36	0,264			
	Last 1 year	69	4,39	0,261	1,107	0,38	-
	2-3 year	235	4,34	0,269			
	More than 3 years	23	4,41	0,190			

Figures

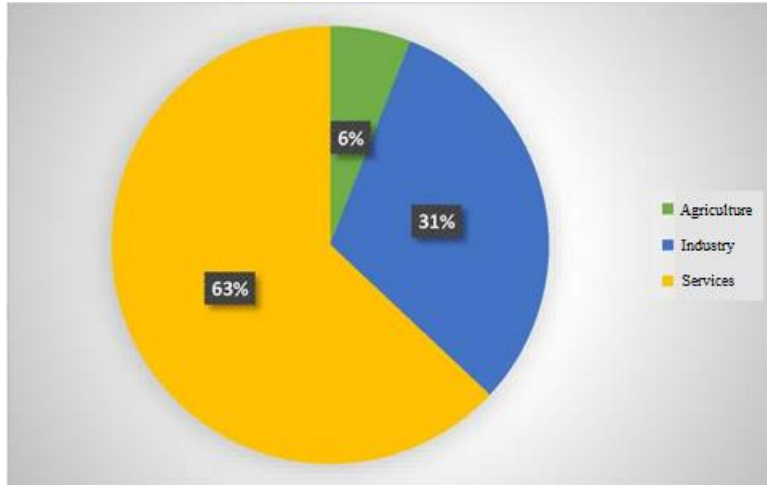


Figure 2-1 The global state of the service industry

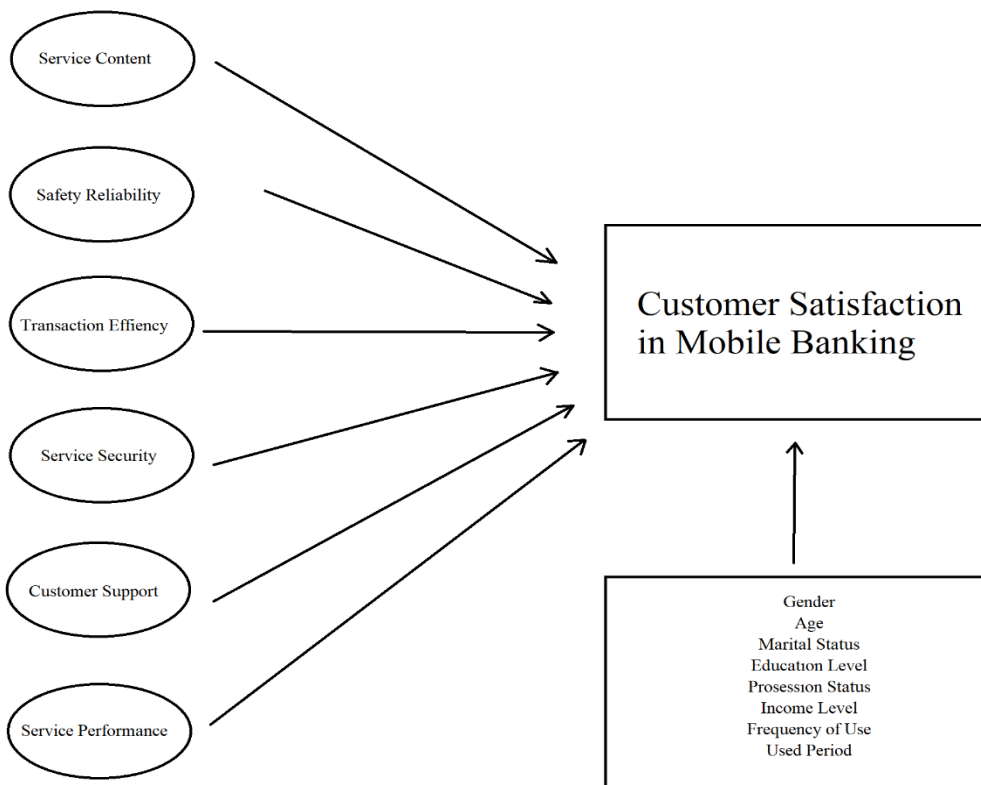


Figure 3-1 Research Model

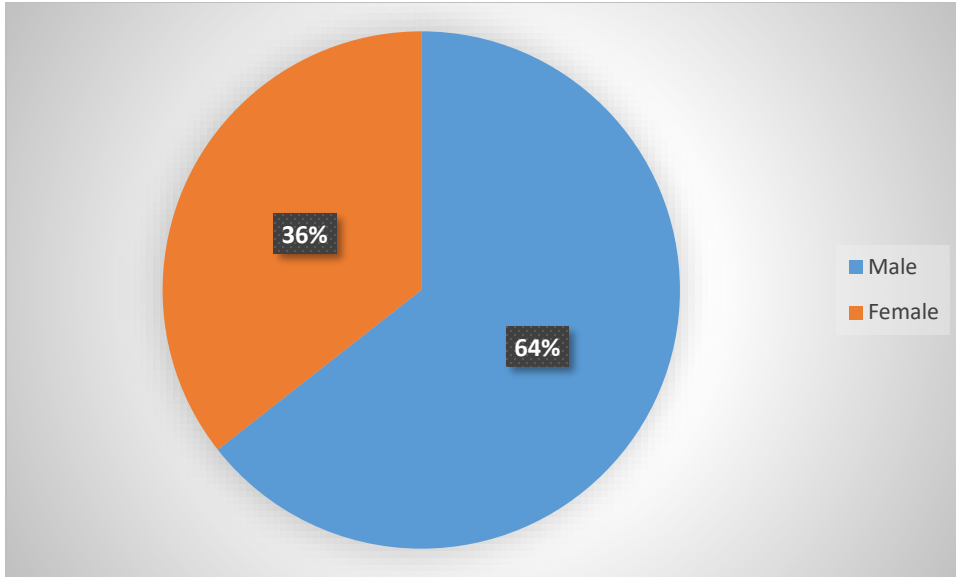


Figure 4-1 Gender Distribution of People Participating in the Study

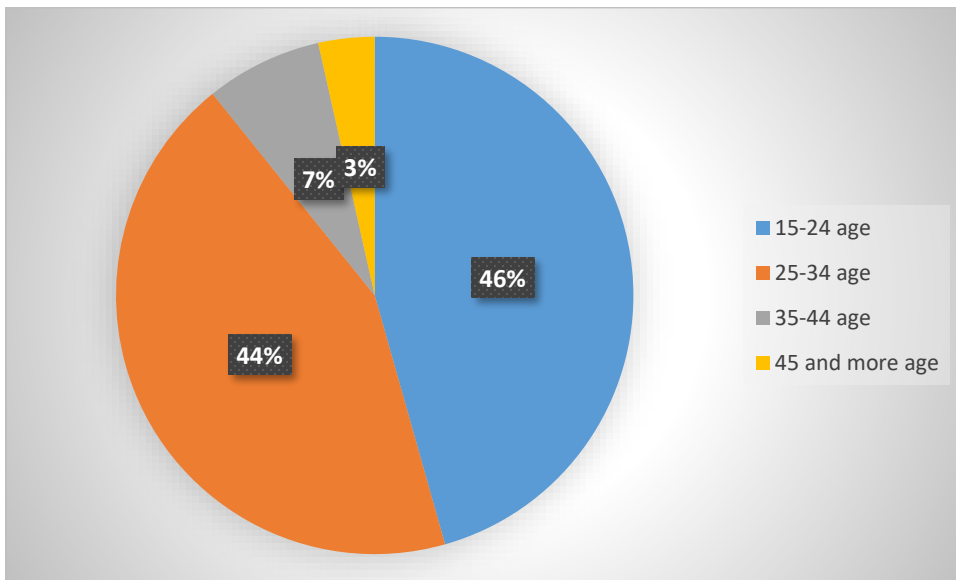


Figure 4-2 Age Range Distribution of People Participating in the Study

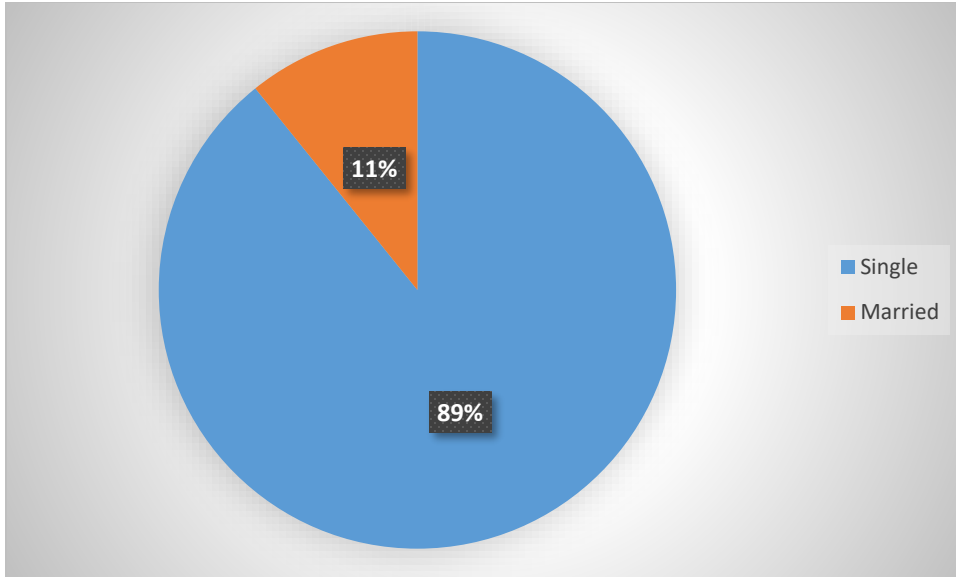


Figure 4-3 Marital Status Distribution of People Participating in the Study

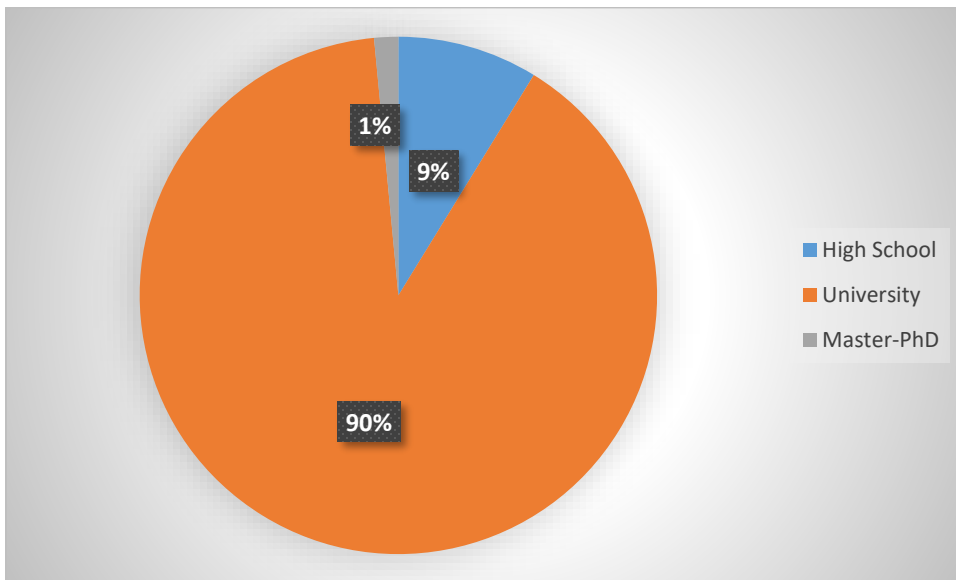


Figure 4-4 Educational Level Distribution of People Participating in the Study

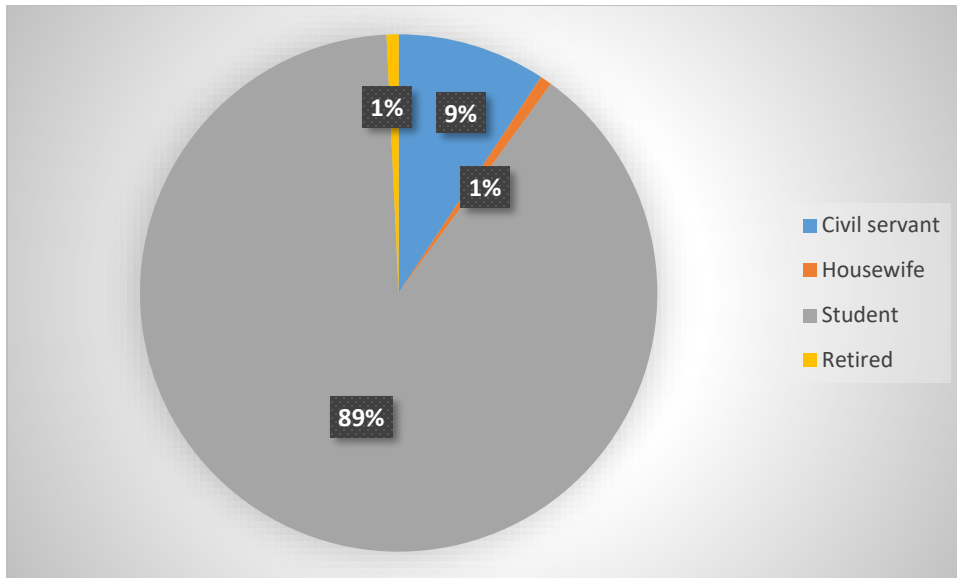


Figure 4-5 Profession Status Distribution of People Participating in the Study

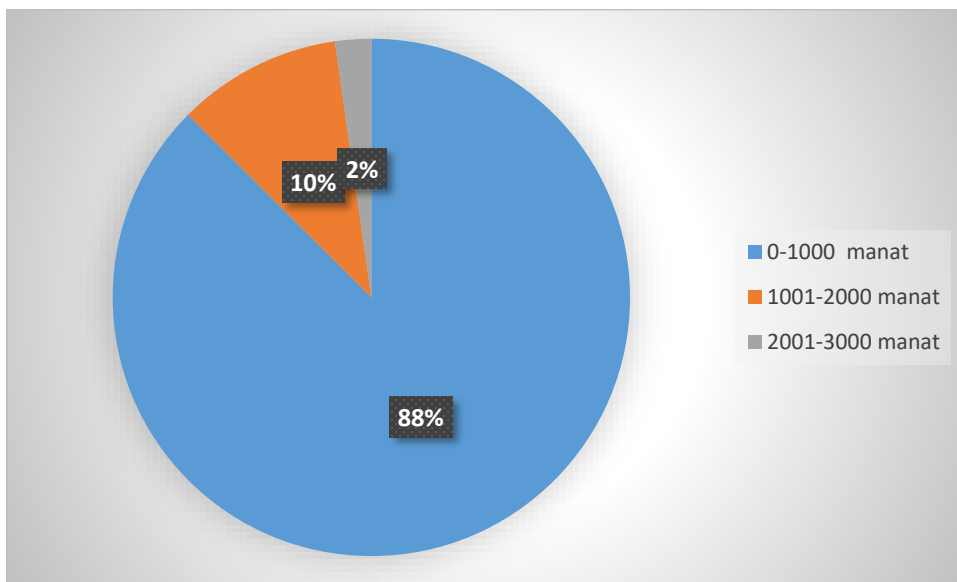


Figure 4-6 Income Level Distribution of People Participating in the Study

Determinants of customer satisfaction in mobile banking services (Azerbaijan)

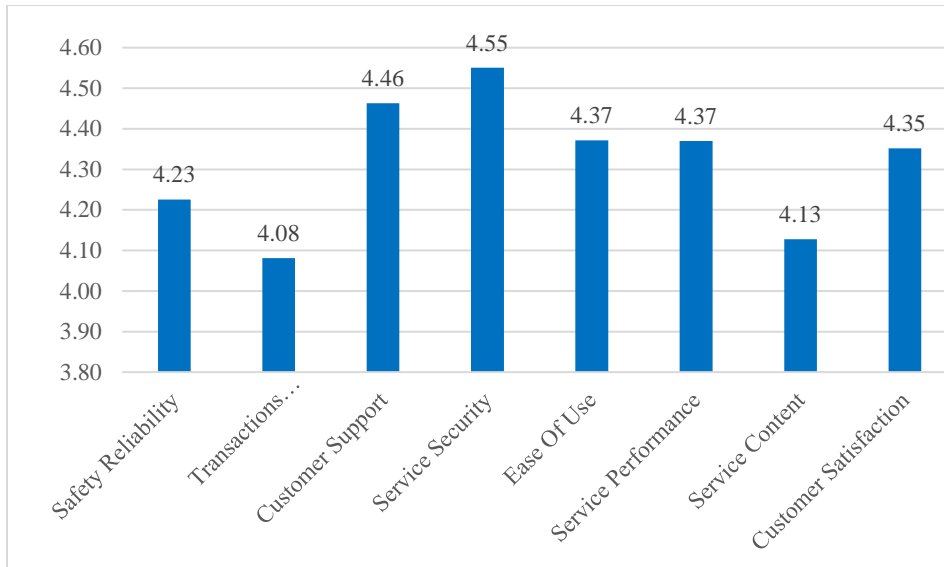


Figure 4-7 Distribution of Sub-Dimensions of Customer Satisfaction in Mobile Banking by Average

Appendix 1- Survey questions

1. Do you use a smartphone?

Yes

No

2. What is the model of your mobile device?

Iphone

Ipad

Android Phone.

Android tablet

Windows Phone 8

Blackberry

Others

3. Do you use mobile banking? If the answer is no, end the survey, and if yes, continue.

Yes

no

4. Since when do you use mobile banking?

Last 3 months

Last 6 months

Last 1 year

2-3 year

More than 3 years

5. How often do you use mobile banking?

Everyday

Several times a week

Once a week

Several times a month

Once in a month

6. Have you had any problems with the mobile banking branch in the last 6 months?

Yes

() No

7. Which channel do you prefer most for banking transactions?

- () Mobile banking
- () Internet banking
- () Telephone banking
- () ATM
- () Branch

8. Write the name of your most used mobile banking application.

- () ABB - Mobile
- () BirBank
- () DostBank
- () Express24
- () Ubank

8. Please indicate separately for which of the following transactions you use mobile and internet banking.

	Mobile Banking	Internet Banking
Getting information		
Opening an account		
Deposit transactions		
Payment of invoices		
Credit card processing		
Credit transactions		
Remittance		
EFT		
Sending money via SMS		
Foreign exchange trading		
Buying/selling funds		
Stock purchase/sale		
VIÖB (<u>derivatives exchange</u>) transactions		

Determinants of customer satisfaction in mobile banking services (Azerbaijan)

Repo		
Treasury bills/government bonds		

9. Which is the most common transaction in mobile banking.

- Money transfer (Remittance, EFT)
- Checking accounts
- Credit card transactions (Application, Viewing statement information, Debt payment)
- Payment transactions (TAX, SSI payments, Rent Payment, Top-up Loading, etc.)
- Investment transactions (Purchase and Sale of Shares, Deposits, Funds, Opening and Closing of Repo Accounts)
- Credit transactions (Application, Debt payment)
- Gold transactions

10. Please answer the following questions by considering the mobile banking service you use most often.

	Extremely high	Very high	High	Not very high	None
Your satisfaction level with mobile banking					
Your rating of recommending the mobile banking service to your friends					
Your rating of continuing to use the mobile banking service					

			I	I disagree	I neither agree nor	I absolutely agree	I absolutely agree
		Please indicate your degree of satisfaction with the following aspects regarding the mobile banking service..					
Safety reliability	1.	It is important that mobile banking provides the required service in the first use and in a complete manner.	1	2	3	4	5
	2.	It is important that the service provided in mobile banking is presented exactly as advertised.	1	2	3	4	5
	3.	In mobile banking, it is important to complete a transaction correctly until the end.	1	2	3	4	5
Transactions Efficiency	4.	It is important that the information is up-to-date in mobile banking.	1	2	3	4	5
	5.	It is important that it provides an option to help with any problems that may arise when using mobile banking.	1	2	3	4	5
	6.	Transactions in mobile banking are recommended to be executed quickly.	1	2	3	4	5
Customer Support	7.	It is important that mobile banking includes a sufficient number of transaction types.	1	2	3	4	5
	8.	It is important that I can reach an authorized person in case of any problems in transactions.	1	2	3	4	5
	9.	It is important that mobile banking has a rich "Frequently Asked Questions" content regarding common problems.	1	2	3	4	5
	10.	It is important to solve the problems that arise in mobile banking quickly.	1	2	3	4	5
	11.	It is recommended to employ knowledgeable personnel to solve the problems that arise in mobile banking.	1	2	3	4	5
	12.	It is important that the mobile banking support line personnel explain the solution of the problem step by step and clearly.	1	2	3	4	5

Determinants of customer satisfaction in mobile banking services (Azerbaijan)

Service Security	13.	It is important that transactions made in mobile banking are maintained correctly.	1	2	3	4	5
	14.	It is important that mobile banking somehow preserves data and personal information regarding transactions.	1	2	3	4	5
	15.	It is important not to encounter any security problems while using mobile banking.	1	2	3	4	5
	16.	It is important that mobile banking is secure and that you feel safe when using mobile banking.	1	2	3	4	5

Determinants of customer satisfaction in mobile banking services (Azerbaijan)

	17.	It is important that you can always check whether your transactions have been fulfilled and the details of the transactions you have	1	2	3	4	5
Ease Of Use	18.	It is important that I can easily find the information I am looking for in the mobile	1	2	3	4	5
	19.	It is important that the mobile banking website is quite easy.	1	2	3	4	5
	20.	It is important that the language used on the mobile banking website is understandable..	1	2	3	4	5
	21.	It is important that the output format of the transactions regarding the transactions is	1	2	3	4	5
	22.	It is important that information and texts are understandable and clear.	1	2	3	4	5
	23.	It is important that the mobile banking system offers understandable learning.	1	2	3	4	5
	24.	It is important to reveal the results of the transaction made in mobile banking quickly.	1	2	3	4	5
Service Performance	25.	It is important that mobile banking provides services in more than one language.	1	2	3	4	5
	26.	It is important that mobile banking provides 24/7 service.	1	2	3	4	5
	27.	It is important to allow transfers between banks.	1	2	3	4	5
	28.	It is important to be able to register/apply via mobile banking.	1	2	3	4	5
Service Content	29.	It is important that the mobile banking website contains the information that will fully meet the required information	1	2	3	4	5
	30.	It is important that the mobile banking website contains all the necessary information.	1	2	3	4	5
	31.	It is important that the mobile banking website contains information that can be trusted..	1	2	3	4	5

Determinants of customer satisfaction in mobile banking services (Azerbaijan)

Gender	Male () Female ()
Age	15-24 () 25-34 () 35-44 () 45-54 () 55-64 () 65 and over ()
Marital Status	Single () Marriage ()
Educational Level	Primary School () Middle () High School () University () Master-PhD ()
Profession Status	Worker () Civil servant () Housewife () Student () Self-employed () Retired ()
Personal Income	0-1000 () 1001-2000 () 2001-3000 () 3001-4000 () 4001 and over ()