Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economics

Bachelor Thesis

Telecommunication Services in Kazakhstan – Case study of Mobile Operators

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BACHELOR THESIS ASSIGNMENT

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Telecommunication Services in Kazakhstan – Case study of Mobile Operators

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Objectives of thesis

The aim of the bachelor thesis is to determine and evaluate the mobile services in Kazakhstan.
The aim will be fulfilled based on the partial aims. Then, several hypotheses will be defined and verified.
Based on the results of empirical analysis the final conclusions will be introduced.

Methodology

The bachelor thesis will cover both, theoretical and empirical part. Theoretical part will contain theoretical background of the selected topic as well as the methodological framework. Scientific literature will be used to prepare the literature overview. The empirical analysis will be based mainly on the time series analysis. Other suitable methods will be employed as well. Based on the empirical analysis the results will be presented and some recommendations will be suggested.

To fulfill the aim of the thesis the selected methods will be employed as following:

– index analysis (base index, chain index)

– own survey

The proposed extent of the thesis

30 – 40 pages

Keywords

Telecommunication, customers, consumer behaviour, index analysis, survey

Recommended information sources

CARNE, E.B (2012): Modern Telecommunication. Published: Springer-Verlag New York Inc. ISBN: 1468448730.

HATCHER, L. (2013): Advanced statistics in research : reading, understanding, and writing up data analysis results. Saginaw, MI: ShadowFinch Media, LLC. ISBN 978-0-9858670-0-3

JAYRAJ, U. (2010): The Essentials of Telecommunications Management. ISBN: 1434397254

SCHIFFMAN, L G. – KANUK, L L. – WISENBLIT, J. (2010): Consumer behavior. Boston: Pearson Prentice Hall. ISBN 978-0-13-700670-0

SOLOMON, M.R. (2010): Consumer Behaviour: A European Perspective. Harlow : Prentice Hall Europe

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Declaration

I declare that I have been using only the resources mentioned above to bring a topic of "As being an author of the diploma thesis, I declare the thesis doesn't break any copyrights and doesn't correspond to any plagiarism.

In Prague on _____

Anna Kolesnikova _____

Acknowledgement

I would like to thank all my teachers for the knowledge provided during the study, especially my supervisor Ing. Lenka Rumánková, Ph.D., who helped with writing and guidance during my diploma thesis.

I would also like to thank my family and close friends for their support throughout my studies.

Analysis of telecommunications services consumption in Kazakhstan and consumer behavior.

Abstract

The diploma thesis represents the telecommunication background in the Republic of Kazakhstan. The bachelor thesis consists of two main parts: theoretical part and practical part. The first part deals with the theoretical background of telecommunication services as well as their types and functions. There are, however, some mentioning regarding Kazakh's telecommunication services in general. The main aim is to analyze who is the better provider of mobile services and whether the price of mobile services is adequate. In order to identify such questions, I plan to gather the data thru the survey, where the number of participants will be limited. The implementation of a survey will help me analyze the responses and make a conclusion. The gathered data will help to create suggestions and comments.

Key words: Telecommunication, mobile internet, tariff, Internet, income, market share.

Analýza spotřeby telekomunikačních služeb v Kazachstánu a spotřebitelského chování.

Souhrn

Diplomová práce představuje telekomunikační zázemí v Republice Kazachstán. Bakalářská práce se skládá ze dvou hlavních částí. Teoretická část a praktická část. První část se zabývá teoretickými základy telekomunikačních služeb, jejich druhy a funkcemi. Existují však některé zmínky o kazašských telekomunikačních službách obecně. Hlavním cílem je analyzovat, kdo je lepším poskytovatelem mobilních služeb a zda je cena mobilních služeb adekvátní. Abych takovou otázku identifikoval, plánuji shromáždit data prostřednictvím průzkumu, kde bude počet účastníků omezený. Realizace průzkumu mi pomůže analyzovat odpovědi a učinit závěr. Získaná data pomohou vytvářet návrhy a komentáře.

Klíčová slov: Telekomunikace, mobilní internet, tarif, internet, příjem, podíl na trhu.

Contents

1 Introduction

The demand for telecommunication services keeps increasing around the world, due to an improvement of technology in that industry. Telecommunication service providers have a hard time to keep up. There are more vast services provided than before. Hence it attracts customers from different perspectives. The development in wireless and computer technology has also led to processors and different sensors being embedded into lots of objectives that people use in their daily lives. For building a smart environment, different advancements are supported and financed by huge development centers and industrial areas where most of the attention is spent on computing, wireless mobile communication, portable disks and devices, decision-making machines, and many more.

Internet of things is another popular thing that gets a lot of attention nowadays, some of them are being agricultural, transport and healthcare. Telecommunication technology development has changed the mind of people and their perception of things. It saved a lot of time on communication and information sharing processes. Therefore, different sectors of the economy such as smart homes, smart buildings, smart transportation, smart grid, smart agriculture, and smart industry in general. Basically, the development of telecommunication with the mix of other technological developments has brought people to the point of faster, easier, and more available exchange of information, actions, and other different procedures.

With the risethe of the internet, communication companies have dominated the business in information and communication technology indues, mainly dueo a high demand for communication media, especially the mean of transport information from a source to a destination. The main steam of revenues of any operator company are voice calls, SMS services. Especially In Kazakhstan Republic, for the past 5 years, the number of operators has increased due to such fact. It is, however, directly linked with a huge increase in the population-wise.

2 Main goals and methodology

2.1 Goals

The thesis aims to analyze the consumption of telecommunication services such as the Internet and calling options in the Republic of Kazakhstan. The goal is to define whether the adequate price for communication services, mobile services, in Kazakhstan is set according to the level of received income per month and how much customers are willing to pay for such services, based on the theory of consumption factors behavior. The author's opinion is that personal factors such as occupation, age and income might be vital factors which determine the willingness to pay for tariff services that the different operators provide. Other factors, such as quality of services, internet speed, price for tariffs, calls quality, SMS and MMS speed, are other factors to consider. Additionally, the author wants to find out who is the best operator of mobile services in Kazakhstan, based on the survey and its quantity of participants.

2.2 Methodology

In this bachelor thesis, the author considers the following methods to achieve the stated aims. The author plans to apply a survey of 12 questions, where 8 of them will be relating to the usage of telecommunications services, and 4 questions are set to either reject or accept the hypothesis which will be set-up. The data which will be gathered within a survey, where the sample size will be 240 people, the sample size will be random and will be processed in Excel Software and for analyzing and verifying the hypothesis that will be set. In order to answer the following question of who the better provider of mobile services is, the author plans to consider the online resources, and divide the user's proportion by the total population of Kazakhstan, as well as company's data of (Beeline, Kcell, Tele2 and Altel).

The bachelor thesis is divided into the following manner where described the literature review from different perspective of telecommunication services such as:

Theoretical Part:

- Definition
- Types of telecommunication services
- Quality of Telecommunication services

- Competition of Telecommunication services

Practical Part:

- Overview of GSM's mobile operators
- Product portfolio per mobile services of each GSM operator
- Market share of all operators in Kazakhstan
- Traffic usage of internet for the year of 2019-2021, quarterly data.
- Analysis of the data gathered thru the survey.
- Conclusion

Further on, the author will shortly take a literature reviews of Kazakh's telecommunication services and see, what are the concepts that prevail within a territory of Kazakh Republic. The author will consider the following methods to achieve my aims. As it has been mentioned, the survey which will be relating to the usage of mobile services. The data which will be gathered within a survey, will be processed in Excel Software for analyzing and verifying the hypotheses that are set below. In order to answer the following question of who the better provider of Telecommunication services is, the author plans to consider the online resources, and divide the user's proportion by the total population of Kazakhstan.

There are following hypothesis to set:

H0: There is no dependency between gender and usage of tariff services

H0: There is no dependency between occupation and usage of tariff services

H0: There is no dependency between age and usage of tariff services

H0: There is no dependency between salary and usage of tariff services

Therefore, the author assumes that the salary (monthly income) is highly dependent on a tariff usage as well as

In order to verify the model, the Chi-Square test will be used whereas:

Goodness of fit Test will be applied in the following manner:

Test = $(O-E) ^\wedge 2/E.$

O – observed frequencies

E – expected frequencies

The following formula will be used in the Excel Software: = **CHISQ.INV (0,95; Degree of Freedom).**

P-value = **1-CHISQ.DIST(X2; Degree of freedom; True)**

Alfa = 0,05 %.

3 Literature Review

3.1 Definition of telecommunication

Telecommunication services definition is treated like a network provider that are ingrained in a way of "dumb pipes", providing bandwidth. It usually requires a dramatic increase in strong, safe, and secure communication links, offering an opportunity to not only play a larger role but to create new value.

The word 'communicate' is historically related to the word 'common', It stems from the Latin verb communicare, which means 'to share'. The word "telecommunication", adding "tele" (which translate as "distance"), was created by Edouard Estaunié (1862-1942)' in 1904 in his book Traité pratique de télécommunication electrique (télégraphie-téléphonie) in which he defined telecommunication as "information exchange by means of electrical signals.". (Hardeman, 2002) For thousands of years, people have used various means of communication in space and time: wood and stone, paper; fire, smoke; electricity and electromagnetic waves. As new means of communication emerged, the old ways were not forgotten. People still write on paper when television was invented, radio was not forgotten (Rosgengren, 2000).

Communication in this case is perceived as an exchange of information, which is eventually important for both, social life of mankind and hence organizations and operators. Telecommunications affect almost all economic, social and scientific spheres of life. It enables to eliminate distance and gives a chance to exchange any type of information without personal presence. It enormously has reduced the price of transportation cost for messages, business transactions and surely improved human relations (Hardeman, 2002).

Acquisition and retention of new clients have always been a major concern of business for the mobile telecommunication service industry. Normally, for the mobile operators the cost of acquiring new clients is way more expensive and requires lots of promotional activities and advertising, rather than retaining existing clients. While recipient companies concentrate on acquiring new clients, more of a mature companies try to focus on a high retention rate of their existing customers in order to provide themselves with the opportunity of cross-selling and different competitive advantages (Lin & Wang, 2006). Hence the mature ones believe

that the most significant way to increase customer's value is to keep them for longer period of time.

The role of telecommunication infrastructure industry is so relevant for its technological development and industry growth in general. Old and new infrastructure in telecommunications have an impact of economic growth. Expanding of telecommunication infrastructure impacts the mobile services growth. This growth usually experiences the micro and macro level, at the micro level, telecom investment in low- and middle-income countries have tendencies to generate internal rates of return of approximately 20 percent and economic rate of return that are even bigger (World Bank, 2015).

While assessing the telecommunication infrastructure, the World bank recommends analyzing such indicators as: Mobile cellular subscriptions per 100 people, fixed telephone subs for 100 people, 1fixed broadband subscribers per 100 people and individual internet population which is measured in percentage. The same report evidenced that a survey of a cross-country demonstrated that number of telephones per 100 people had an impact on GDP, increased wages and macroeconomic growth. Hence, the higher the users of telephones, the higher the income and growth rates, the lower the number of telephone accessibility and density per 100 people, obviously the lower the growth rate and subsequently the slow economic growth is expected (World Bank, 2018).

3.1.1 Telecommunication within a power infrastructure

Traditionally, power networking has been developing as centralised system where power generation source is placed far away from the users/customers. An electrical grid is used to transfer the power further on to the user's through a high voltage transmission grid and lower voltage distribution grid. Telecommunication in this case plays a major role in operation and control of power grids, specifically high voltage power lines and substations. Such transmission grids are equipped with optical fibre, that eventually used to operate and monitor the power transmission. The distribution grid therefore doesn't equip the optical fibre, hence communication on this distribution grid works on the base of wireless technology. In these cases, such networks as: metering for industrial customers, commercial telecommunications are used to provide an effective service of communication, whereas other operators should keep it private, within the usage of wireless network. However, such

a power infrastructure as KEGOC (in Kazakhstan, has an upgrading metering infrastructure where on the distribution grid, additionally on others telecommunication technology for substation control. It is likely that the installation of optical fibre will be processed on parts of distribution grids (Suleimenov, 2019). However, he compares that off-grid infrastructure where widespread availability of wireless coverage of mobiles is utilized in order to facilitate the development of off grid power solutions are usually provided my micro utilities or energy service companies in rural areas. He described the Modi research group, which was done in Columbia University where, existing wireless mobile services provide an interface over which customers are able to access electricity on demand. It gives customers an option to be able to pay for an electricity when it is needed with the help of mobile phone based on applications and its optional interface. An enterprise system of management is used to control various generation sites which utilises network infrastructure cellular.

3.1.2 Type of telecommunication services

Telecommunication means transferring signals over a distance. Telecommunication means transferring signals over a distance. Services that offer voice, internet, television, networking, and data services over a large area are known as telecom services. They can either be wired or wireless. A lot of Telecom Consulting companies provide these services. The prices differ considerably depending on the type of service, plan, area of living, and from one company to another. From the times of using drums to communicate to electromagnetic waves now, this sector has seen a drastic change over the years. Some of the types of telecom services were described by (Subrata, 2020).

POTS, landline is used for voice calls around the world. Consists of a large bandwidth, where its coverage reaches more than 52 kilobits per second. One bit has a value of "0" or "1" in the binary language. 52 kilobits are the maximum data moved in this circuit.

T1 Lines, T1 lines are able to carry more information of around 1.54 megabits per second. Which is the maxim data that can be moved in that circuit.

Metro Ethernet has a wider bandwidth as they use fiber instead of copper for delivery in their circuit.

Wired and Wireless Network, Landlines is a clear example of wired telecom services. There are used for voice calls and transferring information through calls. Therefore, there are many landline services available, and some also have internet facilities. Some companies offer landline and wireless services. Subrata (2020) claimed however, most of the companies provide both things that might only be different in speed, reach and range of coverage, however the prices are also based on these criterions. Companies offer internet services that are much cheaper and sell it with a higher price relatively. It also made information transfer more accessible. People don't need to rely on voices and calls every time.

Radio Telecommunication Systems, allow wireless communication and that can also reach more distances and locations. The system was introduced in 20th century communication technology. It still uses radio television as one of the communication methods, to pass messages, weather prognosis, and extra.

Fixed-Data Services are usually the services that include a packet so called switched-circuit (Integrated Services Digital Network, frame relay, asynchronous transfer mode, IP, DSL, multichannel multipoint distribution service [MMDS]. And satellite), retail revenue and dedicated/private line.

Suleimenov (2019) concluded that there is no difference between the traffic type or application carried by these services. All kind of transmissions linked the non-voice data, image, video, fax interactive services and voice can be taken by these services regardless of the source format is analog or digital. For all revenues that reflect the service provider to annualized retail revenue paid for the service's business and residential end-user, no wholesale or carrier-to-carrier payment in these kinds of services.

Fixed voice Services, reflects the voice service revenue for all services that are sold as such to end-users. These types of services include local and long-distance provision related to voice, such as: line rental/subscription services, calling charges and connection fees are included in this category. Enhanced voice services, data, fix transmission over a circuit switched PSTN, and retail voice over an IP revenue. It is paid for the service's business and residential end-user; no wholesale or carrier-to-carrier payment is included in these services.

Mobile Telecom Services, it includes all the revenue from mobile data usage and mobile/telephone calls and SMS. Although, consumer chargers are not a part of these services, they do not include the above mentioned calling, SMS, and Data access. There are, however, other charges such as rental/subscription and connection fees. Wholesale/carrier services are not included as a component of business IT spending.

According to Kuanishev (2018), these all types of communication services prevail in the republic of Kazakhstan, he stated that the most important of all are the MTS, FVS among the population. Therefore, for industrial objectives, the Republic of Kazakhstan must obtain an outsourcing company from Germany and Czech Republic. Wired and Wireless network is being supported by Austrian company (Telekom Valentek) and Czech Company (2N Telekomunikace a,s) which is based in Prague. However, Kazakhstan lacks behind in the development of industrial telecommunication services because its potential mostly focused on the natural wealth, such as oil and gas, and metals.

3.1.3 Quality of Telecommunication Services

This part is dedicated to theoretical background that relates with the telecommunication services. Therefore, telecommunication services have a vas tariff services t meaning proliferates in many industries, the author personally will be focusing on the mobile telecommunication services and its providers within the Republic of Kazakhstan.

Since 1990, telecommunication services and its sector has been increasing in its popularity, as the whole industry became more of a dynamic capability, performing in technological, economic, and productive development in any economy state (Jurisic & Azevedo, 2011).

The telecommunication sector is divided into fixed sector of telecommunication and mobile telecommunication sector (MarketLine, 2016), where it has grown in the last 20 years, because of the rapid technological growth.

The rapid growth of the mobile telecommunications sector brought to the point that in Kazakhstan Republic, the new operators have appeared. A market when properly managed, will not let more operators to settle down, especially of foreign origin operators. The state would prefer its domestic operators for the most part (Kuanishev, 2018).

There is a direct correlation between quality of services provided and client satisfaction level, hence when there is a high speed of services of internet, customers feel way happier (Kothari, Sharma & Rathore, 2011). On behalf of operators, there was found an interesting fact that, quality rendered is not only beneficial for the client, therefore it helps companies to gain market-share, to recover their investment projects and (ROI).

In a competitive market such services as mobile telecommunications, where companies constantly trying to attract more clients and obtain new market share, but also keep the ones who are already signed up. It is crucial that the service has the most quality than the rest of providers.

"Quality is never an accident, it will be always a result of high, intention, sincere effort, intelligent approach and skillful execution, it represents a high choice of many alternatives"   -   *William A. Foster*

Mobile services and its contribution to economy of states.

The quality of mobile services contributes to the economic development depending on the industry objectives and its goods and services produced. (Kothari, 2011). However, he mainly focused on the mobile telecommunications industry and its services provided to its clients. He claimed that the quality of a service has a great influence on the client when he/she chooses a mobile operator. His colleague (Sharma, 2011) concluded the same, the quality of TV and internet providers, impact customer's decision. The base their concept of quality for mobile, TV and internet services on the following criterion, See Figure 1.

Figure 1: Service quality concept

Source	Quality defined as	Perspective
Berry *et al.* (1980)	The customer's impression of the service provided	Customer's idea
Lehtinen and Lehtinen (1982)	Service quality is the result of the comparison that customers make between their expectations about a service and their perception of the way the service has been performed.	Perceptions-Expectations
Lewis and Booms (1983)	Service quality involves comparing customer expectations to the performances obtained from the service provided.	Perceptions-Expectations
Gronroos (1984)	Service quality is a perceived judgment, resulting from an evaluation process where customers compare their expectations with the service they perceive to have received.	Perceptions-Expectations
Buzzell and Gale (1987)	Quality is whatever the customer say it is, and the quality of a particular product or service is whatever the customer perceives it to be.	Customer's judgment
Parasuraman *et al.*(1988)	Perceived service quality is a global judgment, or attitude, relating to the superiority of the service.	Customer's judgment

Source: Dugglas & Verma, 2013.

Additionally, they focus on different dimensions of service quality, such as: Reliability, Assurance, Tangibility, Empathy, Responsiveness, Communication, Availability Information and Tariff used.

Reliability stays for an ability to provide a promised service which strictly depend on employees of network operators to customers, where security and provision of information is a priority, et., el. (Dugglas, 2013).

Assurance, a certain knowledge that employees have within their operator services and products, to provide a support with brevity and accuracy. Furthermore, this dimension includes the problem-solving skills of employees in response to customers problem. Tangibility stands for appearance of the staff, physical facilities, equipment and communication materials, clarity instructions on the product/ services, as well as entertaining activities for kids when a client is waiting in line with his/her family. Empathy is an ability to provide an individualized attention to a customer with a care, and eventually solve his/her problem with a special care. Responsiveness, total availability of network operator's staff to serve customers, tailoring their problems to a certain customer's needs and respond their questions promptly and clearly. Communication, service quality check, which is based on the existence of a good network coverage and quality of voice calls. Moreover, the

availability of sufficient network operators and stores at the service of customer to facilitate communication. Availability of information, proper accessibility of information and in various formats, as well as advance notice of the tariff changes. Tariff is measured by adequate value of money for services as well as payment plans and its suitability (Zeithaml, 2006).

3.1.4 Competition policy in Telecommunication Industry

The paradigm shift from monopoly to liberalization of telecommunications between 1990 and 1999 laid the foundation for the development of competition policy. Competition policy is based on expanding the entry of new entrants into the market, and then on the elimination of bureaucratic and monopolistic formations. Increasing competition in the industry requires customers to prefer products and services through innovation. This increases consumer demand, allowing operators to innovate to meet the needs and global paradigm shifts in mobile technology. This creates a favorable environment for competition to flourish (Whiteman, 1990).

More of free industry increases competition with new entrants who position themselves to transform the industry with new ideas and strategies for industry growth and diversification (Lal and Strachan, 2014). Competition and innovation are critical to the survival of network operators. Innovation in the telecommunications industry is a key factor in increasing competition and expanding the industry. The competitiveness of the telecommunications industry is largely determined by financial performance and technology innovation. A firm's market share and continuous introduction of new products and services determine profitability and market penetration (Lee et al., 2011).

3.2 Concept of development of telecommunication services in Kazakhstan

In the modern economy, the telecommunication industry belongs to one of the most rapidly growing sectors of the Kazakh economy. Performing the infrastructural functions of ensuring the needs of population in order to exchange with any type of information. Advanced development of telecommunications is a pre-step of launching a business infrastructure and make favorable conditions for investment attractions.

The concept for the development of the Telecommunication services in Kazakhstan has the main segments of the telecommunication services market:

- The mobile communication services, leading to the total volume of Telecommunication services and to a high level of competition. There is a steady growth of the number of mobile subscribers in Kazakhstan on one hand and a steady decrease of the tariffs for the corresponding services on the other hand.

- The focus of telephone service providers and operators are to attract the most solvent customers, offering a wide range of services and sets of functions.

- Long distances and telecommunication services that are mostly monopolized by KazakTelecom in Kazakhstan, however, operators of other communication networks can use some elements of the infrastructure of KazakTelecom company.

- The transmission of data and services (including the Internet), developing very quickly compared to other segments of the telecommunication market, in terms of a number increase of subscribers and development of infrastructure.

The Kazakh's market of telecommunication services reached a volume of 1.3 trillion EUR for the year of 2015, which equals to 700 billion of KZT. (Samruk-Kazyna ,2016). (See Figure 2).

However, companies started to experience challenging times for the first time in 2000. Most of the companies experienced declines in sales, EBITDA, and operating profits. Companies started to cut-off its tariffs due to a high competition environment. The growth rate of subscribers in 2016 was about 3% vs 13% average between 2010 – 2015, as the market reached over 20 million subscribers in 2016.

Figure 2: Volume of telecommunication services in Millions of KZT
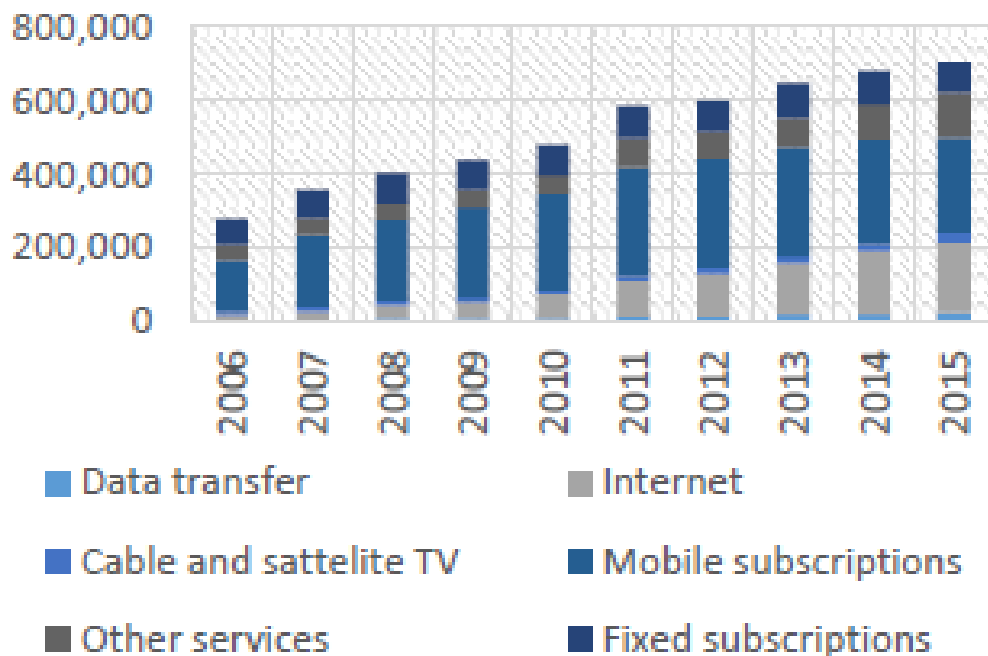
Source: Samruk - Kazyna Report (2016).

Provision of 4G licenses to all operator and new introduction of (MNP) Mobile Number Portability, significantly intensified competition on the largest market segments. Two companies started their development strategies such as merging into one, in order to sustain the economic burden and competitive environment. Altel and Tele2 merging happened in 2015 (See Table 1) – Market Share of GSM Operators in Kazakhstan.

Obviously, with a massive increase in population, the number of customers will be increasing with years. Especially, the users of internet of things, voice messages and different apps users. Technological development is a crucial thing which influences the development of used services, in particular it shows a perfect shift from fixed connection lines to more of a comfortable usage of telecommunication services. As more of a young population are used to have mobile phones. Internet is not an exception; it should be a part of daily life. Hence there is a positive correlation between the population of a state and users of a particular operator (Lee, 2011).

The total population of Kazakhstan for the year of 2016 is close to 19 million people, hence See the Figure 3, of a Market share of each operator.

Figure 3: GSM Operators in Kazakhstan

Source: GoIP (2016).

Therefore, Kcell and Beeline have lost its market share, while Tele2 and Altel increased the number of users.

Both traditional and new segments as described above, the telecom sector will experience the significant change in the coming years, new operating models will be developed due to digitization, pricing pressure, cost containment and rising competition within the telecom industry. For the most part, companies will be focusing on increasing their focus on business expansion in existing market, new product development and improving the quality of operational efficiency. GoIP (2020) warns that keeping network costs low and manage exponential growth of data will be the most challenging task for operating companies.

Traditional telephone calls continue to be the biggest revenue generator, but the recent trends suggest that new segments, such as 5G networks is going to lurk a lot of attention. Mobile services growth will surpass the fixed line services, and the internet starts to replace lots of main businesses activities. Additionally, In Kazakhstan, the number of fixed connection subscribers have decreased by 14,4 percent between 2005 and 2015 and it will keep decreasing till the point where internet and new networking technologies will replace it fully (Samruk - Kazyna Report, 2016). As a proof of that, see the Figure (4).

Figure 4: Volume of fixed subscription services, share of total telecom services in KZT Million
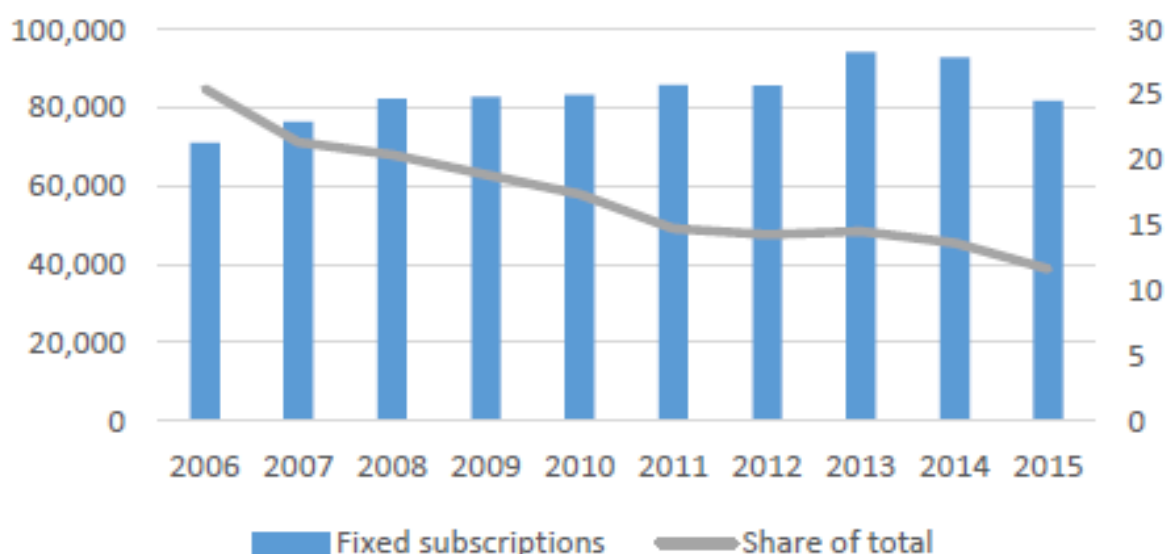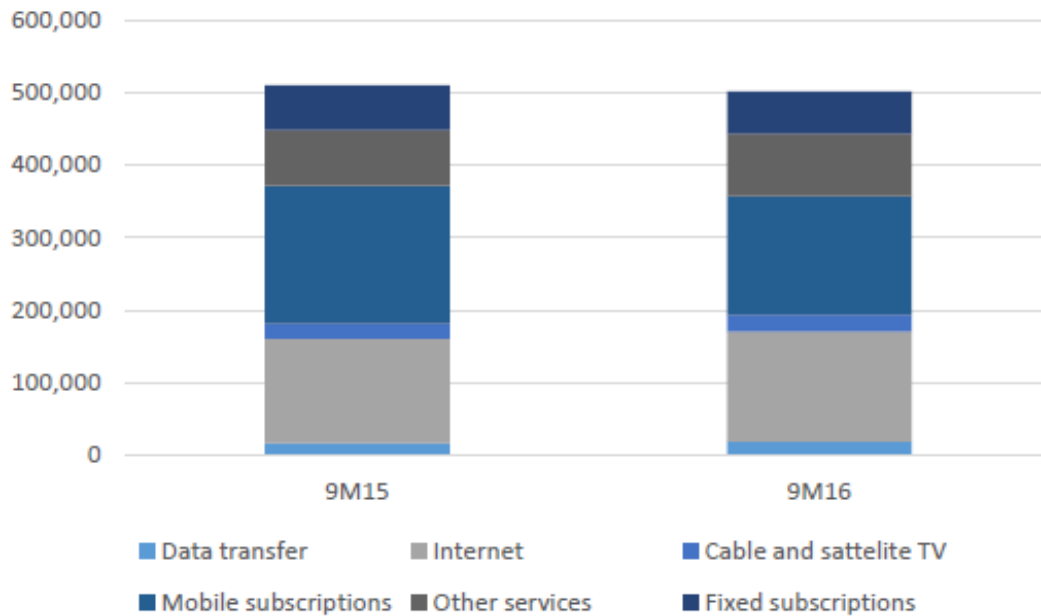

Source: Samruk - Kazyna Report (2016).

At the same time, the growth of fixed subscription market between 2000 and 2015 was mainly because of the local telephony services growth, increased a number of telephone lines and regulations of tariffs. Over the past 10 years, the minimum cost of class within all destinations have decreased from 7 tenge per minute, to 3 tenge. From 2010 up to 2018, interconnection rate was also decreased by 120 percent, from 20 tenge to 8 tenge per minute. Mobile operators adopted to the 3G data transfer standard, consequently, by the end of 2014, all villages with its population more than 15 000 thousand, were covered by the 3G network. Kazakhstan's market reached penetration of 55 percent, with the broadband and internet connections services. Therefore, the fixed market still remains quite underdeveloped and there is a reason of dominant position of the mobile broadband, which in driven by the dominance of mobile sector.

Value of telecommunication services have increased by 3 %, between 2018 and 2019. Most companies started to cut-off its costs and experienced lower sales, operating profits. The main reason that mobile companies started to loss its revenue is due to voice calls. (See Figure 5). Certainly, there is a small increase in the profit, however considering the broad services provided by operators, it is considered very small and not even significant to conclude that as increase (Suleimenov, 2019).

Figure 5: Yearly Change of 2018 and 2019, KZT billion.

Source: Samruk – Kazyna (2019).

In the cellular communications market of the CIS countries, Kazakhstan ranks fourth in terms of the spread of mobile communications. The leader in terms of the number of subscribers and the level of penetration is Russia - 101% of the population. Further settled: Ukraine - 84%, Belarus - 56%, Kazakhstan - 46%, Azerbaijan - 33%, etc. Proceeding from this, we can conclude that good conditions for the development of mobile communications will remain in Kazakhstan in 2018.

The leading role in the development of communications in Kazakhstan is played by the national operator Kazakhtelecom. On the one hand, he is a major shareholder of a number of mobile operators - he owns 49% of shares in GSM Kazakhstan, and at the end of January 2019, the company's shareholders approved transactions for the acquisition of a 100% stake in the authorized capital of Mobile Telecom Service LLP, the remaining 50% shares of Altel JSC (before that, Kazakhtelecom owned another 50% stake), as well as 54% of Nursat JSC (before that, Kazakhtelecom owned 41.25% of the company) for a total amount of about $ 220 million. Thus, after completion of the purchase of these stakes, Kazakhtelecom became the full owner of all CDMA telecom operators in Kazakhstan.

4 Practical Part

In the practical part, the author is about to describe each company individually, shortly compare their product portfolio as my survey is linked with the monetary factors of how much do people spend a month per mobile internet services. Nevertheless, it will give a reader a clearer picture of how the market is being shared by the major mobile operators.

Kcell

The biggest mobile provider in Kazakhstan, is Kcell with 41 percent of subscribers. The operators provide the following network:

- 2G, covers an overall territory of the county.
- 3G, network is available for 75 percent of subscribers.
- 3G/LTE was launched in 2016, mostly provided in big cities such as Almaty, Aktau, Atyrau and Shymkent.

Tariff options of Kcell

For smartphones	For smartphones	For smartphones
UNLIM MAX **UNLIMITED INTERNET**	**UNLIM ULTRA** **UNLIMITED INTERNET**	**UNLIM PRO** **35 GB**
• **Unlimited** on-net calls	• **Unlimited** on-net calls	• **Unlimited** on-net calls
• mobi Doctor mobi Doctor	• **250 minutes** to other mobile providers of the RK	• **350 minutes** to other mobile providers of the RK
• **500 minutes** to other mobile providers of the RK	• **30 minutes** to KZ landlines	• **10 minutes** to KZ landlines
• **50 minutes** to KZ landlines	• mobi Doctor mobi Doctor	• Social media, messengers, video conferencing, YouTube and entire Kaznet!
• **1 GB** Internet in Roaming		• **1 GB** Internet in Roaming
10000 ₸/month	**8000 ₸/month**	**5000 ₸/month**

PRESTIGE 9+
35 GB

- Unlim on-net calls
- 1000 minutes to other mobile providers of the RK
- 1000 SMS on-net
- 100 minutes international calls
- 40 minutes of calls in roaming
- Unlimited to educational sites of Kazakhstan

9590 ₸/month

PRESTIGE 7+
30 GB

- Unlim on-net calls
- 700 minutes to other mobile providers of the RK
- 1000 SMS on-net
- 70 minutes international calls
- 40 minutes of calls in roaming
- Unlimited to educational sites of Kazakhstan

7590 ₸/month

PRESTIGE 5+
25 GB

- Unlim on-net calls
- 500 minutes to other mobile providers of the RK
- 1000 SMS on-net
- 50 minutes international calls
- 30 minutes of calls in roaming
- Unlimited to educational sites of Kazakhstan

5590 ₸/month

Mobile Circle S
25 GB

- Unlim on-net calls
- 500 SMS on-net
- 120 minutes to other mobile providers of the RK
- Unlimited to educational sites of Kazakhstan

2900 ₸/month

Mobile Circle M
35 GB

- Unlim on-net calls
- 180 minutes to other mobile providers of the RK
- 700 SMS on-net
- Unlimited to educational sites of Kazakhstan

3900 ₸/month

Mobile Circle L
45 GB

- Unlimited on-net calls
- 240 minutes to other mobile providers of the RK
- 800 SMS on-net
- Unlimited to educational sites of Kazakhstan

4900 ₸/month

Source: Kcell (2022).

Kcell offers affordable tariff plans and the internet with daily and monthly packages from 0.75$. Detailed information about the prices for all tariffs as well as instructions for device registration is available on the official website of the provider. The website is in Russian and English.

Beeline

It is the second-largest mobile communication provider in Kazakhstan with lower prices and full coverage. 4G/LTE was launched in 2016 and is now available for about 50% of users across the country. A few years ago, Russian-based Beeline SIM cards were available without registration, however in the beginning of 2019. All operators require device registration. SIM cards are sold in the service shops and distributional shops of mobile phones. Beeline also is very diverse in terms of offering different tariffs and with a lower price.

Tariffs of Beeline

Smartphone tariffs

DIY   5990   4990   3990   3290   2590   Unlimited

Internet

| 12 GB | eighteen GB | 32 GB |

You can connect the tariff that you create yourself only in the My Beeline application

Calls to other mobiles within the Republic of Kazakhstan

| 0 min | one hundred min | 300 min |

Price

2 790 ₸ per month

TRY

Turn on unlimited for 800 ₸

Source: Beeline (2022)

A couple of years ago the Russian-based Beeline SIM cards were available without registration but since the beginning of 2019, all the operators are requiring device registration. Beeline SIM cards are sold in the service centers and shops. For tourists Beeline mobile operator offers five internet packages with 4, 8, 12, 20 and 30GB internet respectively

for 3.86$, 4.89$, 6.19$, 7.74$ and 10.33$. You can find out more information on the official website of the provider.

Tele2

The third mobile operator started providing services on the territory of the Republic of Kazakhstan since 2010 with low prices. Starting from 2016 Tele2 was merged with the local Altel and know has an even wider coverage of 4G/LTE in major cities and North Kazakhstan.

Tele2 offers three main tariff plans with unlimited on-net calls, fixed minutes for calls to other providers and internet. There are 5, 10 and 20GB internet packages for 3.60$, 4.90$ and 6.70$.

Tariffs of Tele2

"Preferential" 1090 ₸ / 30 days			"Bilim" 990 ₸ / Month			"Turn On-2" 2490 ₸ / 31 days		
50 Min to other networks	**200 SMS** on Tele2/ALTEL	**7 GB** Internet	**1 GB** educational	**18 ₸** / Min to all RK numbers	**18 SMS** outgoing	**50 Min** to other RK numbers	**50 SMS** on Tele2/ALTEL	**5 GB** Internet
MORE						MORE		

"Your Calls" 1790 ₸ / 30 days		"Call Everyone" No monthly fee			"Native land" 990 ₸ / 30 days		
100 Min Min on other networks	**UNLIM** Tele2 and ALTEL	**9 ₸** / Min within the network	**9 ₸** / SMS within the network	**9 ₸** / SMS to all RK numbers	**UNLIM** Calls in the region	**1 GB** Internet	**2 GB** Internet in the region

"Your rules" 2490 ₸ / 30 days			"Your rules" 3190 ₸ / 30 days			"Your rules" 3890 ₸ / 30 days		
50 Min to other RK numbers	**0 SMS** on Tele2/ALTEL	**6 GB** Internet	**100 Min** to other RK numbers	**0 SMS** on Tele2/ALTEL	**12 GB** Internet	**200 Min** to other RK numbers	**0 SMS** on Tele2/ALTEL	**17 GB** Internet
∞ Within the Tele2 and ALTEL networks			∞ Within the Tele2 and ALTEL networks			∞ Within the Tele2 and ALTEL networks		
↻ Save unspent GB and minutes			↻ Save unspent GB and minutes			∞ Unlimited messengers, social networks, video		
X2 Double GB when reconnecting			X2 Double GB when reconnecting			↻ Save unspent GB and minutes		
🎁 Easily transfer your GBs and minutes			🎁 Easily transfer your GBs and minutes			↩ Change minutes, SMS to GB and vice versa		
↩ Change minutes, SMS to GB and vice versa			↩ Change minutes, SMS to GB and vice versa			🎁 Easily transfer your GBs and minutes		
📲 Double unused GB and minutes			📲 Double unused GB and minutes			X2 Double GB when reconnecting		
% Join and get up to 15% discount			% Join and get up to 15% discount			📲 Double unused GB and minutes		
						% Join and get up to 15% discount		

Source: Tele2 (2022).

4.1 Market Share of mobile operators

Those are the major players within telecommunication industry of Kazakhstan. However, KazakhTelecom is the largest player who works closely with all the operators, because it is a fixed line provider, which is also a state-owned company. The company consists of following shareholders:

- National Welfare Fund Samruk - Kazyna – 52,02 %.
- Sobrio Limited – 24,47 %.
- Bodam B.V – 17,21 %.
- Deran Services Limited – 7,75 %.

The government has announced that KazakhTelecom is an opened company for privatization thought public share offers. Altel is a subsidiary company of KazakhTelecom, as reported by Altel's company, KazakhTelecom grew by 160 %, which is accounted for 28,291 KZT million (81,547 million). In 2018.

However, the market share for 2021 looks like that, See (Figure 6).

Figure 6: Market Share of operators.
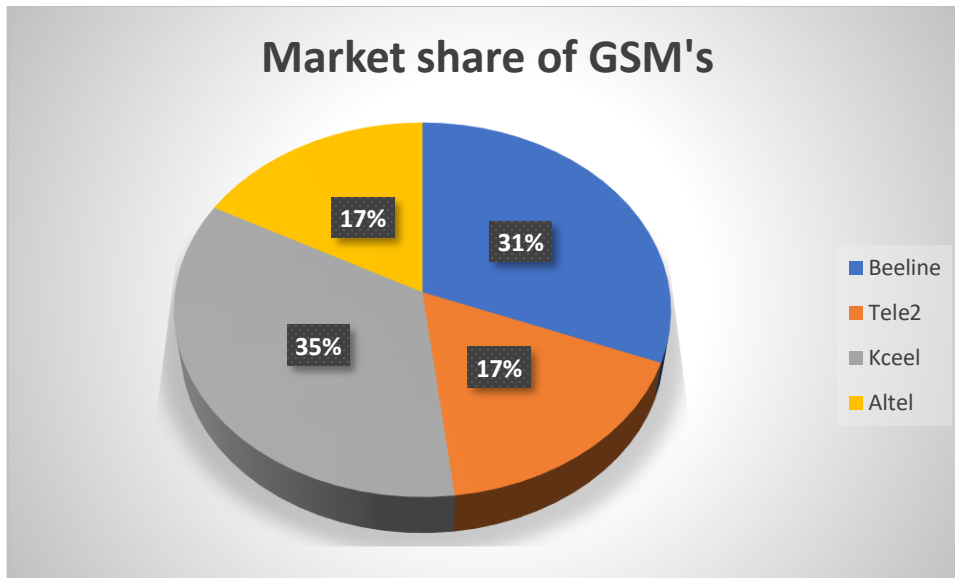
Source: Own calculation, based on the data retrieved from official operators' sites (2022).

4.2 4G services

4G services came after Kazakhstan has joined World Trade Organization (WTO) in December. Kazakh Government has also undertaken to revoke a restriction around 49 % on foreign equity in the telecom sector, with exception of KazakhTelecom company. The move was intended to increase a competition in the sector, leading to an overall improvement and development of technical capacities and quality of services, which eventually will allow the large number of subscribers to benefit from 4G services. The maxim population that will receive the potential services, should be populated with 500 people.

Increased competition and active progression of 3G and 4G technologies poses a big threat for operators, since there is a huge difference between the growth rate of network traffic volume and income. Hance, could be half-way concluded, that the traffic is highly related to the income. Therefore, Kcell recorded a traffic growth in 2019, compared to 2018. Tele2 and Beeline, concluded the same dynamic (See Figure n).

Figure 7: Traffic used by users in thousands
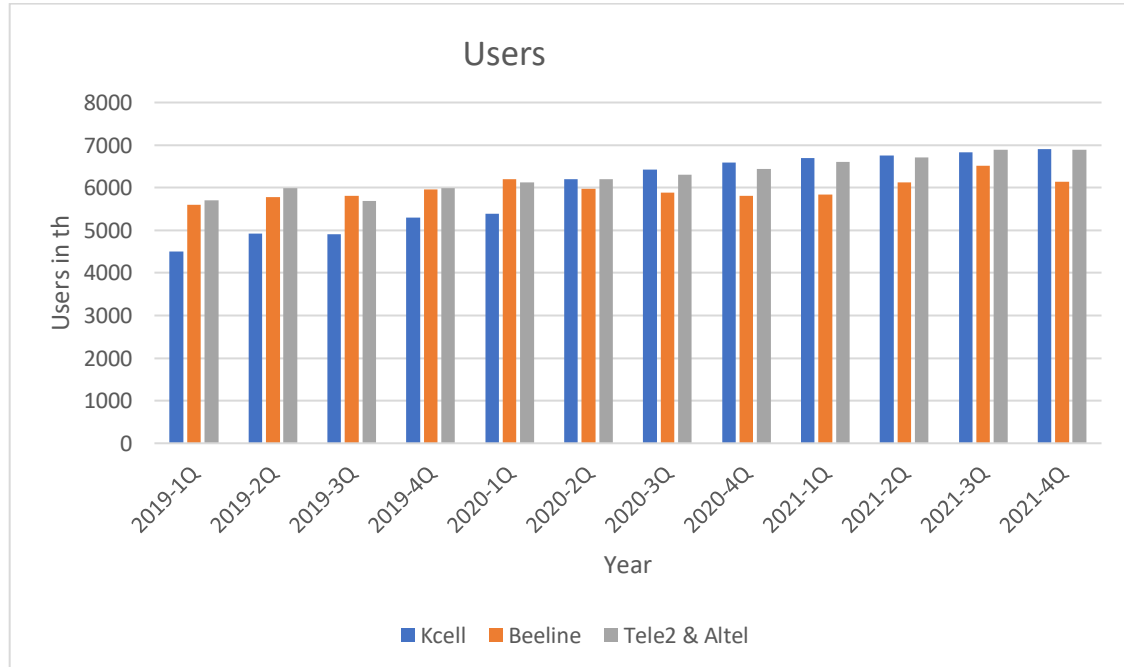
Source: Own calculation in Excel.

4.3 Evaluation of personal questions

From the data which the author has obtained, there is a total of 240 participants, who took part in the survey. Their names are anonymous, and the data was available for processing only for author. The participants had an option to stop a survey at any time they wanted to, in this case all the responses were deleted, and the participant's answers would be cancelled.

There were 99 male and 141 female, who participated, accounted for 41 % and 59 % respectively, See, Figure – 8.

Figure 8: Gender category
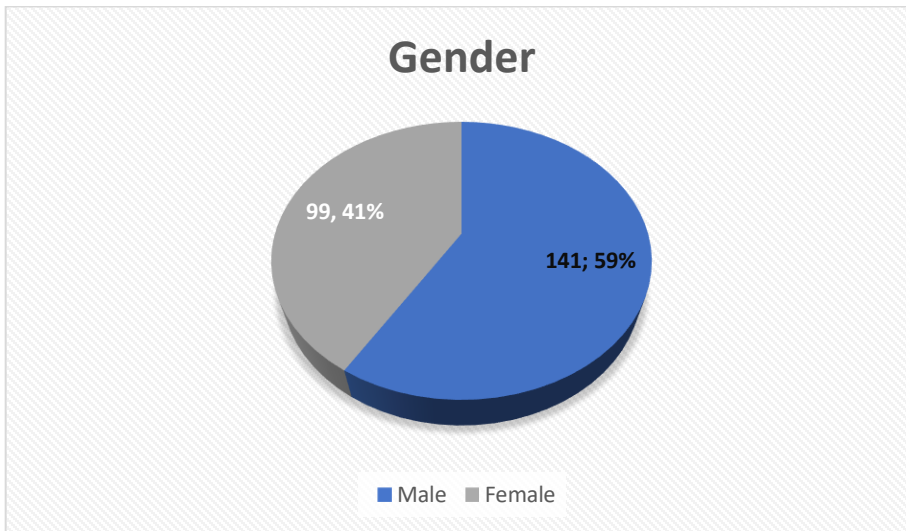
Source: Own processing.

Figure 9: Age category
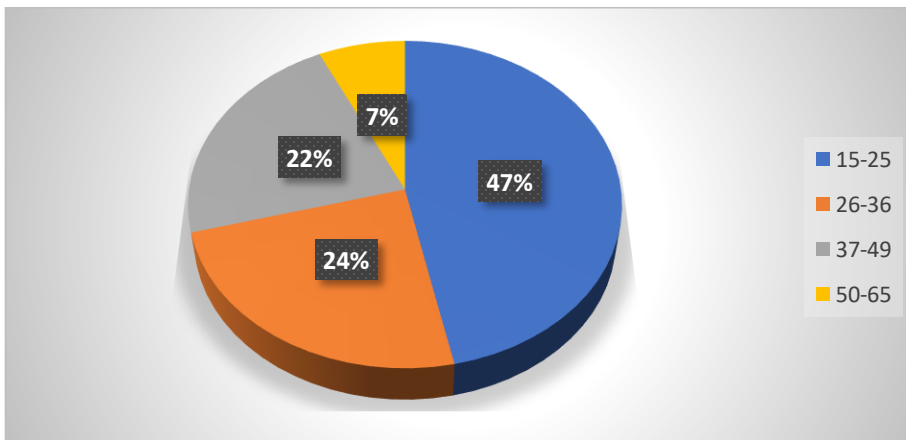
Source: Own processing.

The survey was mostly taken by the youngest age category (See Figure – 9), 15-25 years old, which accounted for 47 %. The next group is 26-36 years old, 24 %, 37- 49 years old accounted for 22 % and the rest were the people of over 50 years old. However, the category of people who participated was absolutely random and luckily all of them were using mobile phones and had an idea of how to use it.

Figure 10: Occupation category
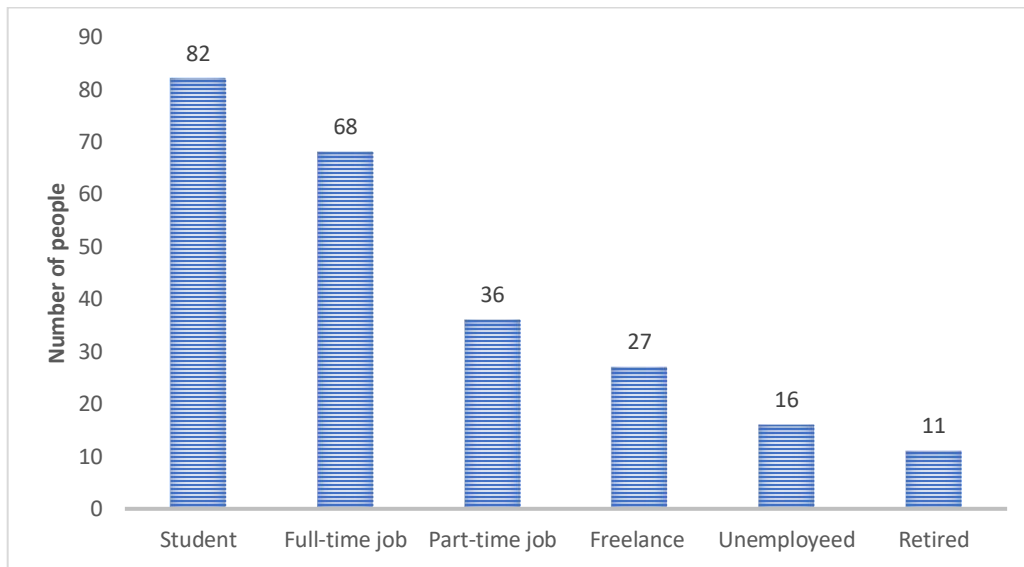
Source: Own processing.

Following the next question, it helped the author to understand, who are the people who participated in the survey. It is clearly seen that "Student" group was the majority of people, accounted for 34 %, followed by "Full Time" people, accounted for 28 %, both groups were accounted for 62 % of total sample (See Figure – 10).

However, the sample size is too small, and cannot represent the whole population.

Figure 11: Monthly income in KZT
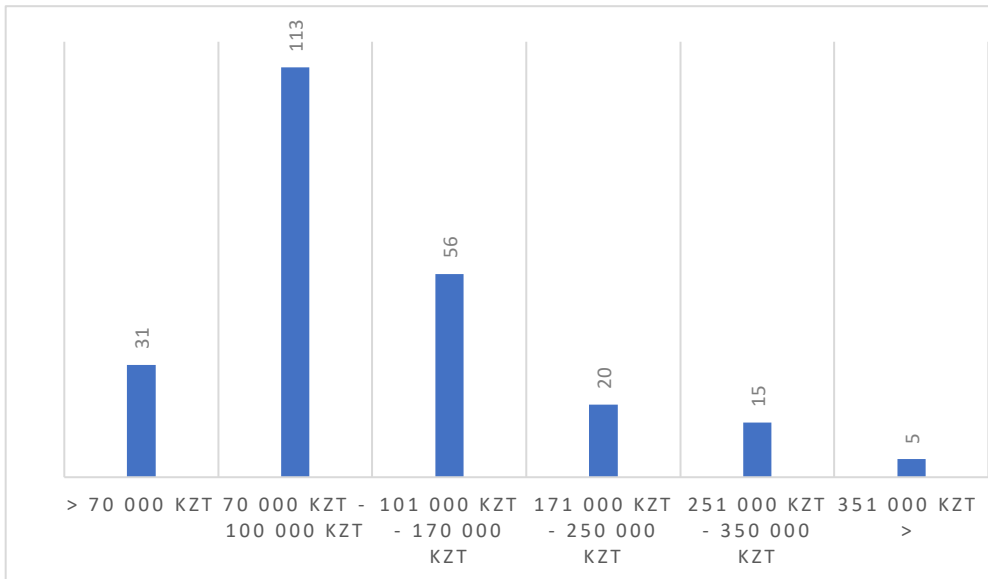
Source: Own processing.

Most of the participants fall into the group of a middle-income group and accounted for 47 % of the whole sample size and it is followed by 56 participants of 23 %. The author believes that this particular category will have a dependency with the mobile tariff, since both of these factors are concerned with a monetary point of view.

Out of 240 participants, 209 of them use a monthly tariff, and 31 didn't.

Figure 12: Usage of tariffs
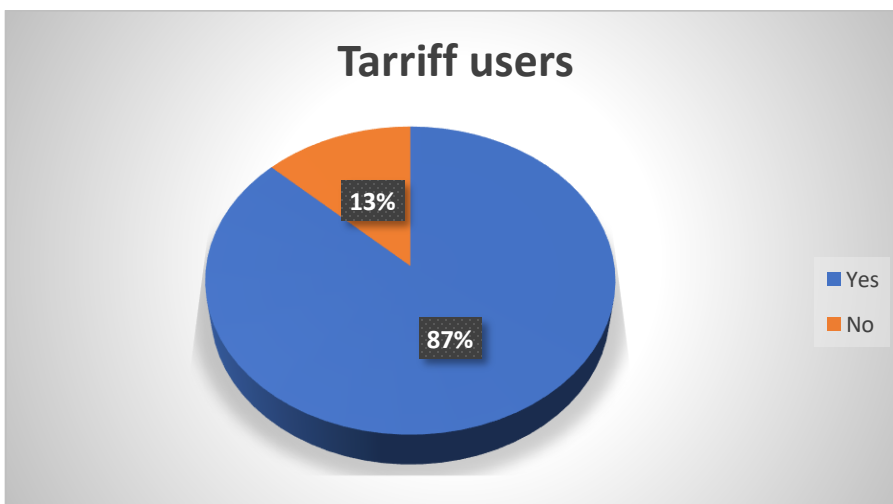
Source: Own processing.

Figure 13: Mobile operators among the sample size
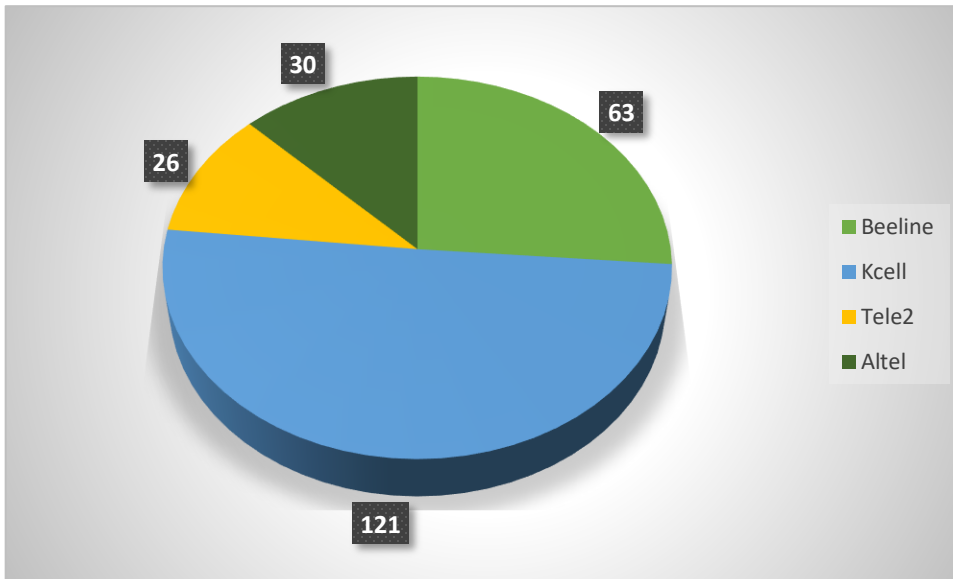
Source: Own processing.

Based on the answers of participants, "Kcell" has covered 51 % of the sample size ration. Followed by "Beeline" 26 %, and the rest is taken by "Tele2 & Altel" which accounted for 24 % together, because from the year 2016, it is a one company.

Figure 14: Costs of tariffs in KZT
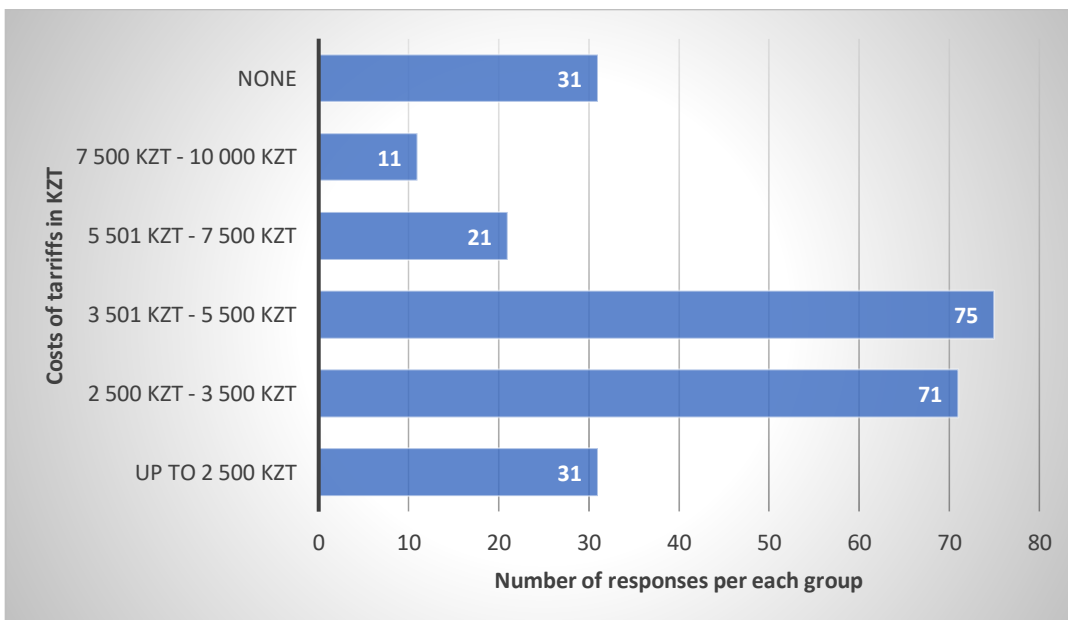
Source: Own processing.

The majority of respondents prefer to spend around 2500 up to 5000 thousand of Tenge monthly on different tariffs, which all together accounted for 61 % (146 respondents). Here it is seen that there are still 31 people, who do not use any tariff on a monthly basis (See Figure – 14.)

Figure 15: The feature preferences of the random sampled group.
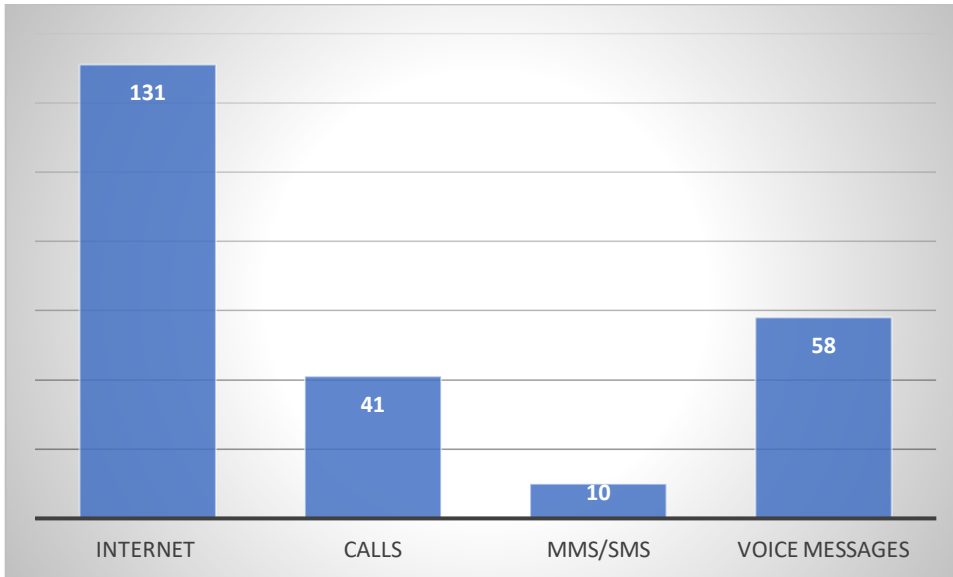
Source: Own processing.

Figure 15, demonstrated that more than a half of respondents (131) which accounted for 55 %, prefer to use internet the most, out of all available features, which makes total sense. Because with an access to the internet, any individual is able to use different apps for calls, voice messages, MMS/SMS and extra. With the internet access, all options would be available. In truth, internet is the mostly used feature according to Reports of Beeline-KZ (2021) and Vodafone-UK (2019). (See Figure – 15.)

Figure 16: Frequency of calls per day

Frequency of call per day

Category	Value	Percentage
MORE THAN 15	21	9%
10 - 15 TIMES A DAY	31	13%
7 - 10 TIMES A DAY	87	36%
3 - 6 TIMES A DAY	88	37%
1 - 3 TIMES A DAY	13	5%
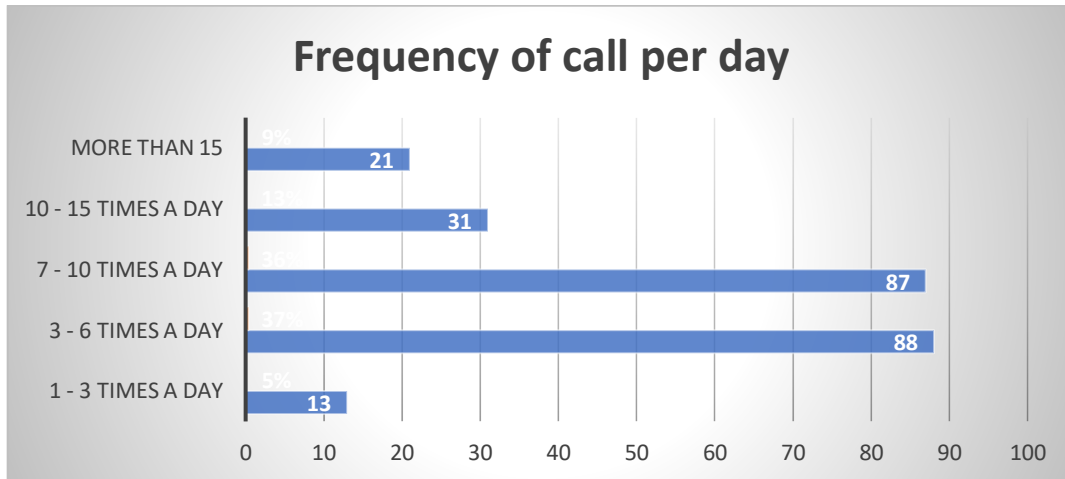
Source: Own processing.

Figure 16 demonstrates that, it takes around 3 – 6 and 6 – 10 calls a day, for the majority of my sampling, to use the feature of calls on a daily basis, which all together accounted for 73 %. Interesting to see, that some people make more than 15 calls a day consistently, which accounted for 9 % of the whole sample size. (See Figure – 16).

Figure 17: Data needed per 1 month

INTERNET DATA NEEDED PER 1 MONTH

Category	Value
LESS THAN 1 GIGABYTE	13
1 - 2 GIGABYTES	42
2 - 4 GIGABYTES	41
4 - 8 GIGABYTES	101
8 - 20 GIGABYTES	21
I HAVE LIMITLESS FARIFF.	22
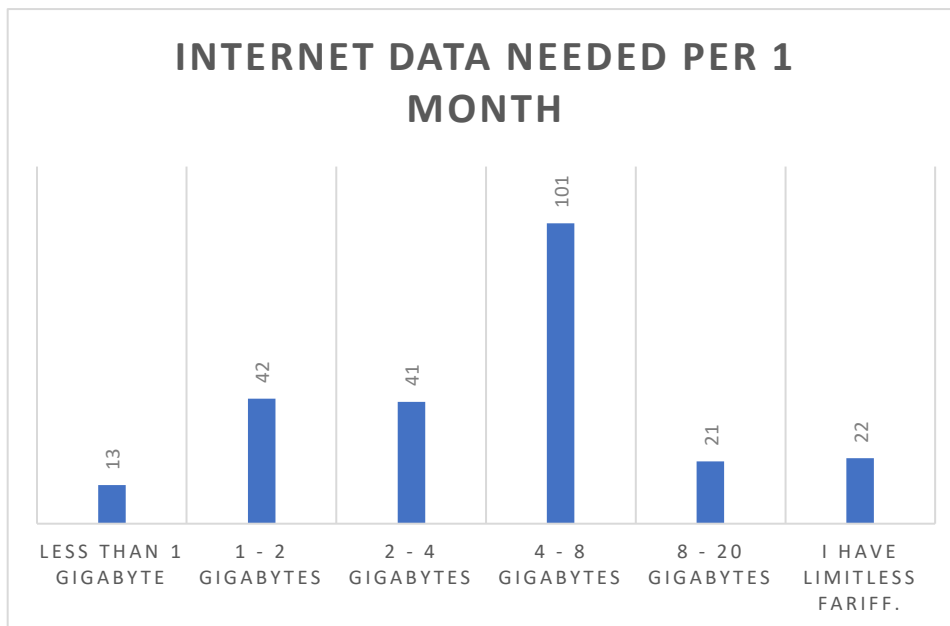
Source: Own processing.

Most of the people need around 4 – 8 Gigabytes of internet per month to be fully set. (See Figure – 17). Therefore, the prices of each operator differ for data services, that's why this question could not be considered as reliant. With the stable prices for internet, the user would most probably answer the same, however the author cannot deny the fact of preferences which was mentioned in the theoretical part, consumer tend to satisfy their wants and needs based on what they want. It is obvious, that for elderly people, there is no need so much data as for more of a younger generation. However, it might highly be correlated with the income fact.

Figure 18: Reason of using your mobile operator
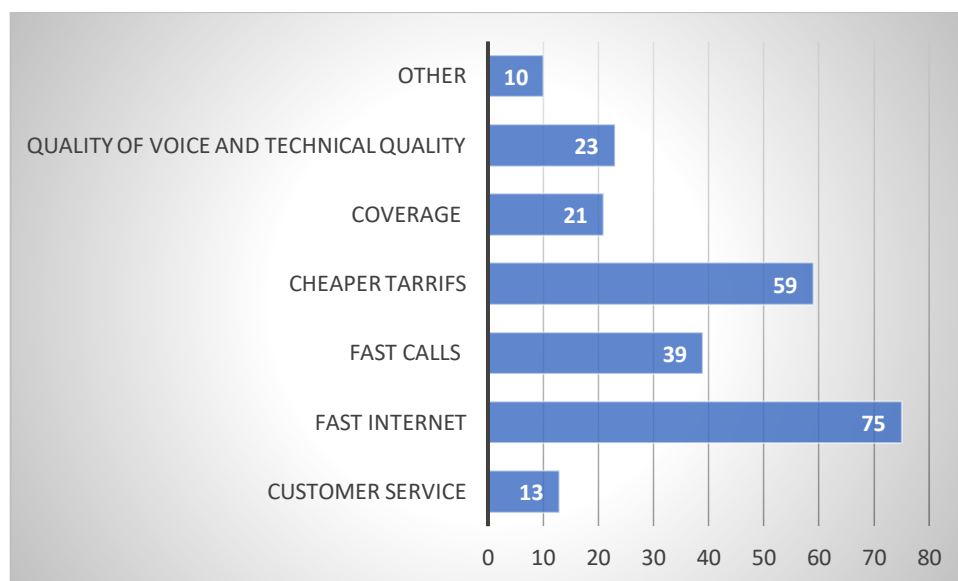
Source: Own processing.

Based on the Figure 18, the author confirms again that most of the respondents (75) which accounted for 31 %, decided to choose their operator due to a high quality of internet connection, "Cheap tariffs" took second place with (59) respondents, accounted for 25 %.

Figure 19: Promotion of operators.
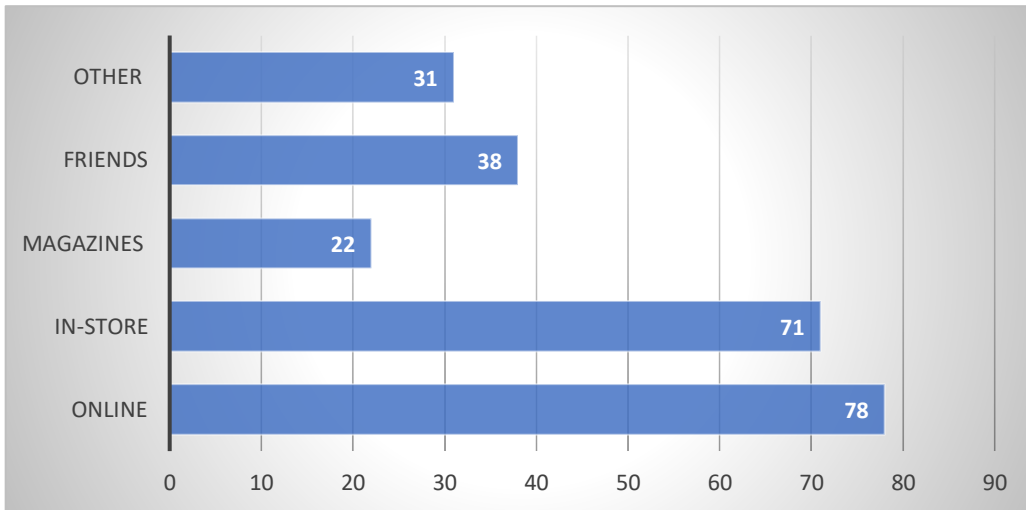
Source: Own processing.

Figure 19 demonstrates that the best ways of catching customer's attention is either In-Stores or thru online marketing, (71) and (78) participants respectively, which accounted for 30 % and 33 % respectively.

4.4 Hypothesis Testing

To verify what factors, influence the purchase of a monthly tariff, 4 hypotheses were proposed.

H0: There is no dependency between age and usage of tariff services.

H0: There is no dependency between occupation and usage of tariff services.

H0: There is no dependency between income and usage of tariff services.

H0: There is no dependency between gender and usage of tariff services.

4.4.1 Age and usage of tariff services

H0: There is no dependency between age and usage of tariff services.

HA: There is a dependency between age and usage of tariff services.

Alfa = 0,05.

Table 1: Age and usage of tariff services

Age	Usage of Tarrifs		
	Yes	No	Total
15-25	99	13	112
26-36	56	2	58
37-49	44	9	53
50-65	5	12	17
Total	209	31	240

Expected frequency			
Age	Yes	No	Total
15-25	97,53333333	14,46666667	112
26-36	50,50833333	7,491666667	58
37-49	46,15416667	6,845833333	53
50-65	14,80416667	2,195833333	17
Total	209	31	240
DF	9	(R-1)*(C-1)	

X2	Usage of Tarrifs		
Age	Yes	No	Total
15-25	0,02205514	0,14869432	112
26-36	0,59709756	4,02559325	58
37-49	0,10054204	0,67784794	53
50-65	6,49288043	43,774581	17
Total	209	31	55,8392916

Output of the testing:

X2	55,83929164	
Chi.Square	16,9189776	
P-value	8,4242E-09	Reject H0

Source: Own processing.

We reject H0, hance the author can conclude that at 5 % of alfa, there is a dependency between age category and usage of tariff.

4.4.2 Occupation and usage of tariff services

H0: There is no dependency between occupation and usage of tariff services.

HA: There is a dependency between occupation and usage of tariff services.

Alfa = 0,05.

Table 2: Occupation and usage of tariff services

	Usage of Tarrifs		
Occupation	Yes	No	
Student	76	6	82
Full-time job	61	7	68
Part-time job	31	5	36
Freelance	20	7	27
Unemployeed	16	0	16
Retired	5	6	11
Total	209	31	240

Expected frequency	Usage of Tarrifs		
Occupation	Yes	No	
Student	71,40833333	10,59166667	82
Full-time job	59,21666667	8,783333333	68
Part-time job	31,35	4,65	36
Freelance	23,5125	3,4875	27
Unemployeed	13,93333333	2,066666667	16
Retired	9,579166667	1,420833333	11
Total	209	31	240
DF		25 (R-1)*(C-1)	

X2	Usage of Tarrifs		
Occupation	Yes	No	
Student	0,29525129	1,99056517	2,28581647
Full-time job	0,05370579	0,36208096	0,41578675
Part-time job	0,0039075	0,02634409	0,03025158
Freelance	0,52472754	3,53767921	4,06240675
Unemployeed	0,30653907	2,06666667	2,37320574
Retired	2,18899703	14,7580767	16,9470738
Total	3,37312822	22,7414128	26,1145411

Source: Own processing.

Output of the testing:

X2	26,11454105	
Chi.Square	37,65248413	
P-value	0,401506445	Accept

The p value is greater than 0,05 alfa, so hypothesis is accepted, there is no dependency between occupation and usage of tariff services.

4.4.3 Monthly income and usage of tariff services

H0: There is no dependency between monthly income and usage of tariff services.

HA: There is a dependency between monthly income and usage of tariff services.

Alfa = 0,05.

	Usage of Tarrifs		
Monthly Income	Yes	No	
> 70 000 KZT	15	16	31
70 000 KZT - 100 000 KZT	102	11	113
101 000 KZT - 170 000 KZT	53	3	56
171 000 KZT - 250 000 KZT	19	1	20
251 000 KZT - 350 000 KZT	15	0	15
351 000 KZT >	5	0	5
Total	209	31	240

Expected frequency	Usage of Tarrifs		
Monthly Income	Yes	No	
> 70 000 KZT	26,99583333	4,004166667	31
70 000 KZT - 100 000 KZT	98,40416667	14,59583333	113
101 000 KZT - 170 000 KZT	48,76666667	7,233333333	56
171 000 KZT - 250 000 KZT	17,41666667	2,583333333	20
251 000 KZT - 350 000 KZT	13,0625	1,9375	15
351 000 KZT >	4,354166667	0,645833333	5
Total	209	31	240
DF	25	(R-1)*(C-1)	

X2	Usage of Tarrifs		
Monthly Income	Yes	No	
> 70 000 KZT	5,33045287	35,9375694	41,2680222
70 000 KZT - 100 000 KZT	0,13139705	0,88587044	1,0172675
101 000 KZT - 170 000 KZT	0,3674869	2,47757296	2,84505986
171 000 KZT - 250 000 KZT	0,14393939	0,97043011	1,1143695
251 000 KZT - 350 000 KZT	0,28738038	1,9375	2,22488038
351 000 KZT >	0,09579346	0,64583333	0,74162679
Total	6,35645006	42,8547762	49,2112263

Source: Own processing.

Output of the testing:

X2	49,21122628	
Chi.Square	37,65248413	
P-value	0,002662639	Reject H0

The p value is less than alfa at 5 %, the author can conclude that there is a dependency between monthly income and usage of tariff services.

4.4.4 Gender and usage of tariff services

H0: There is no dependency between gender and usage of tariff services.

HA: There is a dependency between gender and usage of tariff services.

Alfa = 0,05.

	Usage of Tarrifs		
	Yes	No	
Male	120	21	141
Female	89	10	99
	209	31	240

Expected frequency			
Gender	Yes	No	
Male	122,7875	18,2125	141
Female	86,2125	12,7875	99
	209	31	240
Degree.F		1 (R-1)*(C-1)	

X2	Usage of Tarrifs		
Gender	Yes	No	
Male	0,06328133	0,42663864	141
Female	0,09012795	0,60763685	99
	209	31	1,18768478

Source: Own processing.

Output of the testing:

X2	1,187684777	
Chi.Square	3,841458821	
P-value	0,275797062	Accept H0

Based on the p-value > alfa at 0,05 %, we accept H0, which means that there is no dependency between age and usage of tariff serivces.

4.5 Analysis

Based on the data obtained, first of all, the market share of GSM operators, in my opinion is divided very equally. Each provider has gov over 30 % of market share, which might indicate that prices are somewhat distributed and set equally among all of them. However, based on the survey results, there were 141 males and 99 female users, where 31 of them didn't used any tariff on the monthly basis. Most of the respondents were students and people of full-time job. Where, an average income for most of the respondents was averaged between 100 000 th to 170 000 thousand KZT, which seem right. Most the respondents were customers of Kcell operator, followed by Beeline and Tele2 & Altel group. The most participants belonged to the group that spend an average of 3 500 thousand KZT up to 7500 thousand KZT per mothn for their tarrifs. Which is accounted of 3 - 4 % of the income, on average. Which seem to very fair, it temrs of price setting. The feature that most of the participants prefer having internet as a main feature of why they buy tariffs, however, if considered voice messages and internet together, as voice messages cannot be transferred witout internet, I can say that almost 79 % prefered internet out of optional features within a survey, and it even relates to the "data needed" per month, as majority use more than 1 gigabyte per month, which accounted for 91 % out of all participants.Based on the product porfolio of Kcell, who seem to be the favourite out of all operators, they have the most options for tariff usage, which clearly explains why people, who participanted in the survey have Kcell network and seem to be satisfied.

5 Conclusion

Based on all the supporting material from theoretical background and collected data based on a survey, most participants were students and full-time job people, who used mobile network of any kind. However, based on the tariff usage and occupation as well as gender and tariff usage, there is a dependency. The price which is set for different tariffs ranges between 2500 thousand KZT up to 20 000 thousand of KZT, which is quite high. However, my participants belonged to the grow of lower-than-average spending on tariff services, and based on the data, the author can conclude that within the sampling of 240 participants, most of them preferred Kcell mobile network, which is fair, based on their product portfolio, customer services, range of covering and extra. Nevertheless, the market is divided in such a way, that all GSM operators seem to be aware about the equality among competitors, customers on the other hand would love to get more services for cheaper price, however in my survey, the author can see a correlation of income earned per month and data usage per month. People who tend to receive more income, tend to spend more money on tariffs as well. Which is confirmed by the Chi-Square test and dependency between income and tariff usage. More than 80 % of participants would love to learn about different sales and promotions of their providers thru online platforms, Magazines and even In-store directly, which can be concluded that people are satisfied with the services provided to them. However, based on the scaling question, 88 % of participants consider price as a very important factor for mobile services and only 4 % didn't care about the price at all, 9 % were indifferent to the price. The rest of the scaling questions were equally distributed, such as quality of calls, customer support and internet speed, some participants didn't consider such factors as important. Therefore, the goal of the thesis has been reached, the price is set-up adequately, but only within the sampling group, the wider range of participants might have given me the different results and even demonstrate the other operator as being favorite. However, for the further research, the author would most probably extent the sampling size and gather more data to be more precise.

The recommendation would be for Kcell and Tele2&Altel to add an optional tariff, such as Beeline does (See, Tariffs of Beeline) where customers can build their own tariff and based on their preferences, they will use tariff as they prefer. Unfortunately, Kcell and Tele2&Altel

do not have such options, which in turn, could have increased their sales and attract more customers, as Kcell has the most quality services in the Republic of Kazakhstan.

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Appendix

1) What is your gender?

   a) Male

   b) Female

   c) Prefer not to answer

2) Are you using any tariff monthly?

   a) Yes

   b) No

3) What your age?

   a) 15-25

   b) 26-36

   c) 37-49

   d) 50-65

4) What your occupation?

   a) Student

   b) Full-time job

   c) Part-time job

   d) Freelance

   e) Unemployed

   f) Retired

5) What is your monthly income?

   a) > 70 000 KZT

   b) 71 000 – 100 000 KZT

   c) 101 000 – 170 000 KZT

   d) 171000 – 250 000 KZT

   e) 251 000 – 350 000 KZT

   f) 351 000 KZT >

6) What is your mobile operator?

   a) Beeline

   b) Kcell

   c) Tele2

d) Altel

7) What is an average money spent per month on mobile services?
   a) > 2 500 KZT
   b) 2 500 – 3 500 KZT
   c) 3 501 – 5 500 KZT
   d) 5 501 – 7 500 KZT
   e) 7501 – 10 000 KZT

8) What is the main feature that you use the most?
   a) Internet
   b) Calls
   c) SMS
   d) MMS
   e) Voice messages
   f) Everything

9) How often do you call a day?
   a) 1 – 3 times a day
   b) 3 – 6 times a day
   c) 7 – 10 times a day
   d) 10 – 15 times a day
   e) More

10) How much of Internet data you need a month?
   a) Less than   1 Gigabyte
   b) 1 – 2 Gigabytes
   c) 2 – 4 Gigabytes
   d) 4 – 8 Gigabytes
   e) 8 – 20 Gigabytes
   f) I have limitless tariff.

11) What is the main reason you decided to go with your operator?

    a) Customer service

    b) Fast Internet

    c) Fast Calls

    d) Cheaper tariffs

    e) Coverage

    f) Quality of voice and technical quality

    g) Other

12) How do you prefer to learn about the operator's promotions?

    a) Online

    b) In-Store

    c) Magazines

    d) Friends

    e) All of it

13) How important for you the following criterion

SMS, speed of SMS/MMS

1.Very important 2. Important 3. Indifferent 4. Not important 5.Don't care

Internet Speed

1.Very important 2. Important 3. Indifferent 4. Not important 5.Don't care

Call Quality

1.Very important 2. Important 3. Indifferent 4. Not important 5. Don't care

Customer Support

1.Very important 2. Important 3. Indifferent 4. Not important 5. Don't care

Price for tariffs

1.Very important 2. Important 3. Indifferent 4. Not important 5. Don't care