TALLINN UNIVERSITY OF TECHNOLOGY

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ONLINE BANKING ADOPTION IN CENTRAL ASIA

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I hereby declare that I have compiled the thesis independently
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ABSTRACT

There is a significant swift development in the digitalization of financial sectors worldwide, which has drastically changed the image of current banking sectors, resulting in more flexible, transparent, and cost-effective banking services around the world. Consequently, digital banking has developed far beyond, then what we could have imagined a decade before, particularly in Europe. Whereas online banking is still one of the newly introduced spheres in Central Asia and is categorized as a steadily developing sector; thus, the information about people's awareness, thoughts, and expectations about its services are still relatively limited in contrast to Europe.

This research paper scrutinizes the adoption of online banking in five Central Asian countries (Uzbekistan, Kazakhstan, Kyrgyzstan, Turkmenistan, and Tajikistan). Despite all the developments in online banking spheres in the region, there is still a lack of information about the factors that affect and perhaps hinder the customers from considering using online banking services. This research aims to determine the important factors for Central Asian customers and the role of social media on customers preference in the adoption of online banking. Besides, the research employs a non-random sampling method with a quantitative approach by conducting a questionnaire to collect primary data from the residents of five Central Asian countries. The results showed that the following factors play a significant role for Central Asian customers to consider using online banking services, such as web-usability, trust, security, the reputation of the service provider (online bank), user-friendliness, protection from all forms of frauds, etc.

In addition, study results also showed that several social media channels were widely used across Central Asian countries, which indicates that those social media channels can be used as an effective and efficient marketing tool to reach customers. Besides, research results showed that to convince the customers to use online banking services and succeed in the market, the service providers (online banks) should incorporate with existing well-reputed banks, ensure all the factors highlighted in the research outcome tackle accordingly and keep a strong presence in social media.

Keywords: Online Banking, the Banking system in Central Asia, E-banking in Europe, Digital Marketing, Social Media, Central Asia.

INTRODUCTION

As technologies are becoming more advanced and new types of applications (app) are being introduced daily, the e-banking system is also taking advantage of this fast-growing process. The digitalization of financial services has transformed the interaction between financial service providers and their customers, both on a B2B and B2C level (Holmes, King 2019). Ten years ago, customers would have visited their local bank branch to manage all their financial affairs. Fast-forward ten years, and 49% of consumers now conduct their banking primarily on their desktop or smartphone, where they can access consolidated online services that offer a more seamless experience. Nowadays, online banking has become more popular than ever before, and it was mainly due to technological development that has made e-banking services available anywhere and anytime.

According to Dowling and Wignaraja (2015), Central Asia's economy has started to grow after a long pausing period, and the economist forecasting new market opportunities in all sectors, including in banking systems that will come along with these developments. According to Berdykulova and Mangysheva (2013), mobile banking is rapidly growing in Kazakhstan and spreading vastly across central Asian countries due to technological development in the region. Besides, most of the traditional banks are also adopting online banking services to meet their customer's expectations. Moreover, the quality and easy access to internet services across the regions have provided a good infrastructure and possibility to improve banking services and implement online banking services without any hindrances.

However, the adoption of online banking services depends not only on the region's technological and economic readiness but also on customers' willingness to accept the service. Thus, most people are reluctant to use online banking services, especially older people who might lack information about e-banking services and modern technologies in general. The studies showed that there could be several important factors that can be challenging in the adoption of online banking (Miranda *et al*. 2006; Loonam, O'Loughlin, 2008; Hertzum *et al*. 2004; Yousafzai *et al*. 2003; Shah, Siddiqui 2006; Poon 2008; Yang *et al*. 2009; Gurau 2002; Faisal, Haider 2012) pointed out some factors

that might have a direct effect on customers willingness to use online banking services. For example, the web-usability issue, where most people either not well aware of how to use online banking services or reluctant to use them as they find it too complicated to operate. The security and privacy-related concerns where most people believe that there is a high risk associated with online banking in terms of a data breach, fraud, etc. Besides, trust, information, and service quality-related issues were also believed to have a high impact on customer's views about online banking, as most people deem that services provided by online banking may not be as high quality as in traditional banks.

Problem statement of this study: There is a lack of information about what specifically hinders the development and broader usage of online banking in Central Asia from the customer's perspective. There have been several studies about online banking, Berdykulova *et al*. (2013) studied the effect of online banking systems on the country's economy, and Kurbon (2017) studied the effect of transferring banking sectors from traditional to online-based banking services into society. Thus, there have not been many studies conducted about online banking from the customers' perspective, for example, what people think about online banking, their concerns, expectations, etc. This research aims to determine the important factors for Central Asian customers in the adoption of online banking, and the research paper also seeks to determine the role of social media on customer's preferences concerning the adoption of online banking and its services.

The following research questions were formulated in order to fulfil the research aim:
RQ1: Which factors are important for Central Asian customers in the adoption of online banking?
RQ2: What is the role of SM (social media) in customers' choice to adopt online banking services?

The quantitative research method will be used to collect the primary data from the residence of five Central Asian countries. The survey questions are based on the factors that impact customers' behaviour towards adopting online banking services, and the outcomes of the questionnaire are presented in descriptive statistical expressions via charts and graphs. However, the sampling method used in this research is a non-random sampling, where the prepared questionnaire will be distributed through the author's personal and private social media channels with friends and through them to all other potential Central Asian inhabitants to collect primary data. Moreover, the targeted audience in this research were both professional expats and students from 18 to over 45

years old. People who fall into these age groups and professions were believed to be potential users of online banking.

This research thesis consists of three chapters, and the structure of the chapters as follows. Chapter one discusses theories of online banking; in this chapter, the author will provide detailed information about used theories in this research. In chapter two, the author will discuss research context and research methodology which includes, e-banking in Central Asia, the effect of online marketing in online banking industries, digital marketing channels, data collection and analyses method, sample and sampling. Finally, in chapter three, the author will demonstrate the research results, including the survey findings, outcome and recommendations.

Using this opportunity, the author would like to express his gratitude to all participants who contributed to this research paper. Most importantly author would like to extend his thankfulness to Ms Katrin Arvola and Ms Merle Küttim for their tremendous support, guidance, and valuable information throughout this thesis completion.

1. THEORETICAL BACKGROUND

The theoretical part explains the following theoretical models that have a direct connection to e-business sectors. Theories of online banking are important to the success of e-banking operations all over the world. Stakeholders that include the banks, government, customers, and the entire society must understand the importance of e-banking operations and why customers would not want to embrace online banking. Moreover, the following three theories have been widely used to understand user's behaviour and perceptions about online banking: the Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB), and Technology Acceptance Model (TAM).

1.1. Justification of the used theories

According to Fishbein and Ajzen (1980), the Theory of Reasoned Action helps to understand the factors motivating people and their attitudes towards actual behaviour of interest. Additionally, TRA is a model that has been used widely in social psychology, which is interpreted to understand the difference between consciously intended behaviour, attitudes, and intentions (*Ibid*). By using this model, the author aims to understand customers' behaviour towards information presented by someone they are familiar with (friends, family, etc.) and whether the information presented has any impact on customers intention's to adopt online banking services, which could be ultimately linked to the factor of trust. Also, TRA helps to examine customer's perceptions about online banking as it consists of model subjective norm, or the effect of surroundings can change individual perceptions of social pressures, which could be interpreted as people's behaviour towards particular things. However, the Theory of Planned Behaviour was initially developed from the TRA model by Ajzen (1985) to study all individual behaviours. This theory is used in the research as the completion model for TRA to analyze customers' behaviour towards online banking services, notably to support the questions related to social media and its role on customer purchasing behaviour. Besides, the TPB is an adaptable theory that has been successfully implemented in many different subjects like economics, finance, management, etc. (Yousafzai 2010; Faisal, Haider 2012). Finally, the Technology Acceptance Model by (Davis 1986) consists of two crucial components, perceived ease of use and perceived usefulness, which are meant to

measure the willingness of the person to accept and embrace new information technologies. This model also plays a crucial role in adopting online banking, as this model directly links to information technology acceptance, where people assume that using a particular system will alleviate their affairs. Therefore, the author used this model to support the factors like (web-usability, information quality, accessibility issues, user-friendliness, etc.) which were assumed to be the aspects that could hinder adopting online banking. Besides, all the theories mentioned above were used while analyzing survey outcomes as most of the questions have been developed based on these theories.

1.2. Theory of reasoned action

The purpose of the TRA is to explain the autonomies' behaviour of the individuals; hence its descriptive scope keeps out a wide range of attitudes like spontaneous, impulsive, habitual, the outcome of cravings, or easily scripted or mindless (Dillard *et al*. 2002). However, the TRA founder Ajzen and Fishbein (1980) created the TRA to anticipate and understand people's rational behaviours under their freewill control. Moreover, TRA is built upon the assumption that people are generally rational and make systematic use of information available (*Ibid*). Furthermore, the theory describes that human behaviour is not heedless as they contemplate the implications of their actions before deciding whether to engage or not engage in a particular manner. Therefore, it is recommendable to start from the final step (Figure 1), which is behaviour, and come back to the initial stages while describing the TRA (Ajzen, Fishbein 1980).

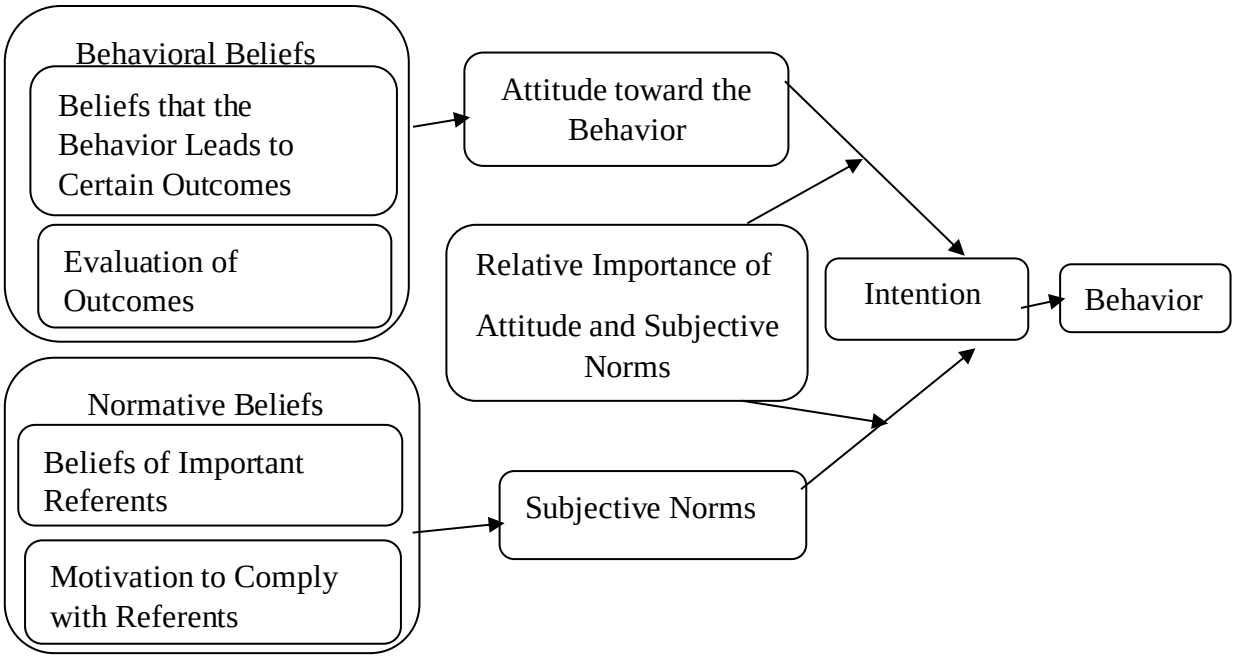

Figure 1. Theory of Reasoned Action
Source: Ajzen, Fishbein (1980), and flowchart by Author

In the context of the theory TRA, behavioural intention plays an important role in measuring the strength of the individual's preferences to perform or act according to their pre-thought feelings (Belleau *et al*. 2007; Faisal, Haider 2012). According to Ajzen and Fishbein (1980), the concept of behaviour has consisted of components such as action (specific action performed by an individual), target (who or what behaviour is targeted toward), context (in what occasion does behaviour happen), and the time (when the action happens). Nevertheless, the most commonly used behavioural intention (BI) is defined by two factors: the attitude towards the behaviour (AB), which is the crucial function of the theory (BI) that serves for behavioural attributes, and the estimation of those theories. The second factor is the subjective norm (SN), which assumes social groups with the following thoughts, what particular people or groups deem about what an individual should or should not do (*Ibid*).

Besides, "An individual's subjective norm (SN) as defined by a multiplicative function of his or her normative, i.e., perceived expectations of particular referent persons or groups, and his or her motivation to 21 comply (MCI) with these expectations" (Fishbein, Ajzein 1975, 302 quoted in Davis *et al*. 1989; Faisal, Haider 2012). Furthermore, some other external variables may also affect behavioural intention, for example, demographics, traditional attributes on aims, and personality traits; hence according to some researches, external variables could include the model for anticipating the behaviour like: past behaviour, experience, or engagement (Faisal *et al*. 2012). Additionally, TRA gives a clear vision and prediction about consumers' intention and behaviour (Armitage, Corner 2001; quoted in Belleau *et al*. 2007; Faisal, Haider 2012), stated that the theory of reasoned action could adequately anticipate behaviour that is relatively straightforward under freewill control.

1.3. Theory of planned behaviour

The theory of planned behaviour is developed initially based on (TRA) theory of reasoned action, which clarifies almost any individual's behaviour. Ajzen initially proposed improving prediction's power, built upon the theory of reasoned action by comprising perceived behavioural control (Ajzen 1991). While making any assumptions regarding human behaviour around different application contexts, the TBP has proven a successfully implemented method (Liao *et al*. 2007;

Faisal, Haider 2012). Furthermore, based on TRA, a human's behavioural intentions lead his/her actual manner of performing some specific actions and where the individual norm and attitudes toward the behavioural define the behavioural meaning (*Ibid*). According to Ajzen (1991), Liao *et al*. (2007, 2809), and Faisal and Haider (2012, 23), "behavioural intention is an evaluation of the strength of individuals willing to try while performing certain behaviours". There have been some limitations in the original model, TRA while dealing with an individual's behaviour indicating incomplete voluntary control. The TPB has been proposed to eliminate those limitations, and perhaps TPB distinguishes it from TRA due to its additional factor perceived behavioural control, which possibly influences behavioural intention (*Ibid*). Finally, the TPB suggests three independent factors of intention: attitude towards the behaviour, subjective norm, and perceived behavioural control (*Ibid*). The first determinant, "attitude", is developed from individuals' trust regarding the attitude's objectives. At the same time, subjective norm refers to "the perceived social pressure to execute or not to execute the behaviour," and the perceived behavioural control indicates "people's perception of ease or hardship to perform the behaviour of interest" (*Ibid., 23*). According to Fishbein and Ajzen (1980), the TRA helps to understand the factors motivating people and their attitudes towards actual behaviour of interest. Figure 2 below describes the steps of the TPB.

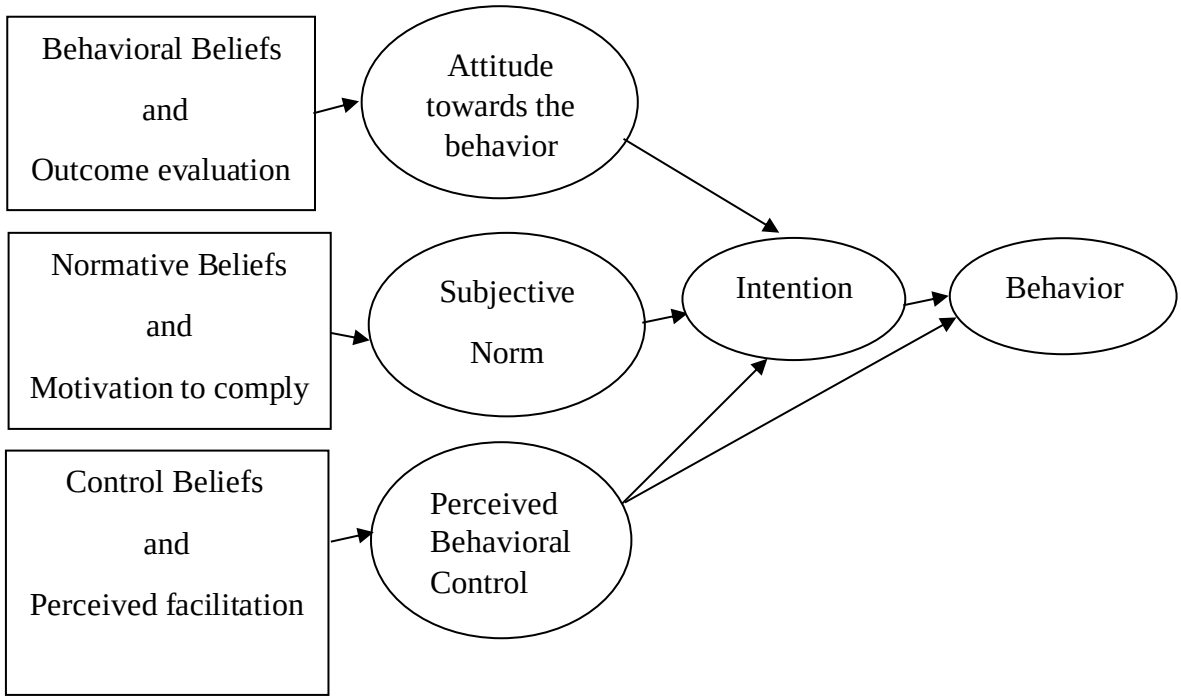

Figure 2. Theory of Planned Behavior
Source: Ajzen (1991), and flowchart by Author

As it has been stated in TPB, which was developed based initially on TRA, sometimes people make rational decisions that could differ from their actual intention, and one of the reasons for such behaviour is, they can be easily affected by external factors like public opinions (Liao *et al*. 2007; Faisal, Haider 2012). Considering the facts that TPB theory consists of important determinants of individuals' behaviour, this theory can be implemented in the research to study the role of social media on people's attitude towards online banking. However, one of the determinants of the theory linked to the factor trust, which plays a crucial role for all induvial in making decisions, which could also be another indication that it is essential to research and understand the factors that affect people's actual behaviour.

1.4. Technology acceptance model

Davis introduced the Technology Acceptance Model in 1986, an adaptation of TRA that was formulated mainly to deal with modelling user adoption of information technology; hence, TAM is relatively less general than TRA (Davis 1986). However, one of the primary purposes of the TAM is to define the determinants of information system (IS) acceptance across a wide range of IS and user populations (Davis 1986). The TAM explains the overall connection between perceived usefulness, system design features, ease of use, attitude towards using, and actual usage behaviour (*Ibid*). The TAM consists of two fundamental components that are crucial in the technology acceptance process, the first one is perceived usefulness (PU), and the second one is perceived ease of use (PEOU); hence TRA was used by TAM as a theoretical basis to identify causal relationships between these two key elements (*Ibid*).

Nonetheless, perceived usefulness (PU) is determined as a level where the potential user assumes that using specific systems may increase the productivity level of his/her work performance (Davis 1989). Additionally, Davis (1989) and Faisal and Haider (2012) stated that the term used is derived from the word useful, which indicates the benefits of using a particular technology. On the other hand, PEOU is defined as a level to which potential customer, assumes that using the specific system will be free of effort; hence the word "ease" means hardship or struggle, whereas ease of use means "user-friendliness" of information technology. According to Davis (1989), Lin and Lu (2000), Gefen *et al*. (2003), and Akgül (2018), PU has a significant effect on users' attitudes and intentions towards technological usage. Besides, the perceived usefulness can be a determinant factor for the user's in the process of accepting new technology and presume it is usefulness (*Ibid*).

Figure 3 below describes the steps of the TAM.

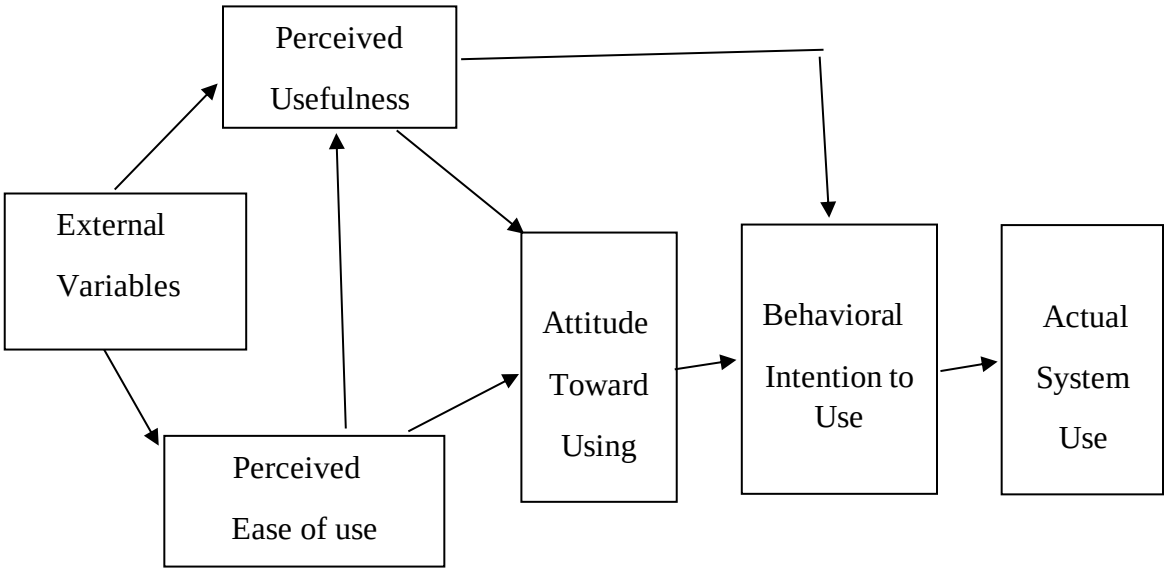

Figure 3. Technology Acceptance Model
Source: Davis (1986), and flowchart by Author

However, a perceived usefulness component is a crucial factor for customers in adopting information systems, and all the aspects related to security connected to the (PU) model (Shah, Siddiqui 2006; Faisal, Haider 2012). As described in the PEOU, people are more compassionate to use the services presented when they believe it will alleviate their struggles and simplify the process in general (*Ibid*). Besides, it was stated by many researchers that the TAM theory plays an essential role in the process of adopting information systems, and it defines how users can perceive and understands the benefits using of new technology.

Moreover, the TAM can be used in all sectors related to information systems or spheres where users need to acknowledge the positive effect of utilizing particular tools in their affairs. In addition, it is essential to notice that the two main components of TAM, PU, and PEOU play a crucial role for users to interpret whether to use a given service or not, as these components address the factors linked to convenience and usefulness. This theory will be helpful to analyse the research outcome mainly in the part where the author addresses the aspects related to information system, and it is a role in the adoption of online banking, particularly from customers perspectives.

2. RESEARCH CONTEXT AND RESEARCH METHODOLOGY

The following chapter describes the research context and research methodology used in this research paper, which consists of background information about online banking in Central Asia, online marketing and its effect on e-banking sectors and digital marketing channels. Besides, the research methodology includes the following sub-chapters, data collection and analysis methods, sample and sampling, including the demographical information of the participants.

2.1. Online banking in Central Asia

E-banking is becoming one of the fastest-growing sectors in Central Asia, and one of the main reasons for such a tremendous rise is undoubtedly technological developments in the region. Despite such rapid developments, e-banking sectors facing many challenges, particularly concerning customers' perceptions of online banking and security (Ruziev, Ghosh 2009). However, the region's banking systems slightly differ from country to country, where the countries with higher economy index show more openness and willingness to adopt new types of technology and services. According to Asrorova (2020), the online banking system in Uzbekistan is still relatively low, there have not been introduced completely online-based banking services in the country, and the online services that traditional banks offer are still limited. Thus, state-owned and even commercial banks have already implemented some form of online banking services, where customers could perform some basic financial transactions online; hence it still requires customers to visit physical branches to perform more complex financial services (*Ibid*). Besides, from the beginning of 2020, Georgian-based TBC bank got a license to operate in Uzbekistan and plan to provide online banking services.

Moreover, Kazakhstan's e-banking system is well developed compared to its neighbours due to its economy, as Kazakhstan is the largest economy in the region, which makes about 60% of the total economy of Central Asia (Berdykulova, Mangysheva 2013). As banking spheres continued to develop during the last decades, most traditional banks were already introduced online banking services to their customers (*Ibid*). Although online banking services are widely used across the country, most people are still hesitant to use online banking services, as people assume risk and threat associated with online banking in contrast to traditional banking (Litvishko *et al*. 2020). Thus, by the end of 2019, the online banking users have reached about 7 million, where Kaspi

bank has the most significant number of online banking users with nearly 2 million active customers every month (*Ibid*). Furthermore, Turkmenistan's banking system is relatively less developed than other neighbouring countries, mainly lack technological and telecommunication developments, as banking sectors, particularly online banking systems, depend on an exemplary telecommunication system internet (Export gov 2019). Nevertheless, Turkmenistan's economy is based on cash, and people prefer USD as a foreign currency, and operating with USD is way more effortless in the market than any other foreign currency (Transit report 2019).

According to Hug (2019), there is a limited number of ATMs in the country, which means people have always been forced to stay in long queues in their banks to take out some cash or to use some essential banking services such as paying for bills, cash withdrawal, etc. Nonetheless, online banking services are already being implemented in Turkmenistan by large state-owned banks Altyn Asyr, Halk bank, Turkmenbashy bank, etc. hence the service options are still limited (Neutrality gov, CBT 2020). The Turkmenistan president was also instructed to develop online banking and digitalize banking sectors in Turkmenistan, making tremendous changes in banking sectors, including e-banking (Migration gov Tm 2020). According to Hasanova (2018), Kyrgyzstan's banking system is a vastly developing sector in the country, and the banks have already adopted online banking services since 2012; hence, only 13 out of 23 commercial banks offered online banking services to their customers. In the beginning stage, the cost of online banking was significantly high, and most people were unaware of what online banking was all about.

However, by the end of 2018, most of the banks have adopted online banking services, and the cost associated with use has reduced due to cost related to the internet has been decreased and getting access to the internet has become more accessible than before; as a result, about 40% of the populations already using some form of online banking services (*Ibid*).On the other hand, Tajikistan's online banking system is categorized as the least developed sphere due to economic recessions and inadequate telecommunication systems (Kurbon 2017). Despite economic and infrastructural obstacles, both state-owned and private banks have already introduced online banking services to their customers (Kurbon 2017). According to Mogilevskii and Asadov (2018, 847), several banks and some microfinance companies offer online banking services; as of June 2017, the total number of customers who used the online banking services exceeded 67,600, the report from the National Bank of Tajikistan. Thus, the digitalization of banking sectors in

Tajikistan has remained relatively low compared to neighbouring countries, causing a limitation in online banking services (Skakova, Livny 2020).

2.2. The effect of online marketing in e-banking industries

According to Möckel (2010), private and cross European banking investment through the internet has become a reality since the last few years, and banks such as IngDiba (2008), ICICI (2008), and Rabobank entered the market by offering low costed internet banking services to their customers in both National and European basis. However, the role of online channels like social media, etc., in the banking industry became significantly popular in the last period and changed the image of the banks in the eyes of customers, and facilitated banking matters in e-commerce or e-business sectors (EBW 2008; Möckel 2010). Initial development stages, financial institutions mainly used online tools to increase brand awareness, provide more information about products and services, and cost optimization (Niemeyer, Rill 2006; Decker, Schögel 2001; Möckel 2010). Besides, it was also stated that there might be some negative effect to employ online channels like social media, etc., into e-banking sectors, as the higher risk associated with online channels such as frauds, data breach, etc. (*Ibid*). Thus, one of the main reasons for the evolving e-banking spheres in Europe was the legislation and implementation of SEPA (Single Euro Payment Area) throughout Europe, which helped the bank overcome cross-border (European Commission 2018).

According to Möckel (2010), since the beginning of the introduction of e-banks, many banks have obtained experience and developed all necessary skills to interact with customers to increase brand loyalty. Nevertheless, trust is a dynamic process, which could be developed gradually over the period (Rousseau *et al*. 1998; Lewicki, Bunker 1996; Van der Werff, Buckley 2017). The revolution in digital technologies affected customers' behaviour, but it has also increased the demand for new products and services from banking institutions (Avenue Media 2017). According to Avenue Media (2017), global expenses in digital ads have grown from $53,7 billion in 2008 to $168.4 billion in 2017, respectively, which has indicated that online marketing has become a crucial part of the financial sector. Furthermore, banking industries have become more sophisticated in the 21st century with the help of new technologies alongside the introduction of new concepts, such as anywhere in any time banking service (Sudha, Research Guru 2019). According to Yusuf (2016), by using digital marketing channels as a means of advertising tools, the companies could save a significant amount of money, bringing extra revenue for companies.

The studies also showed that by using digital channels, the companies could decrease the costs associated with transactions, as in traditional banks, the transactional prices are relatively high compared to online banks (*Ibid*). Moreover, once the companies use online channels to deliver their goods and services, it may increase their competitiveness in the market. By looking at existing literature, it can be seen that how ICT (information and communication technology) can effectively be used in banking sectors to develop financial products and their delivery through online marketing channels (DeYoung 2005; Delgado 2006; Belinda *et al*. 2020).

Moreover, studies indicated that digital marketing plays a significant role in the e-banking industry, increasing brand awareness and improving its quality and services. Importantly, to have profitable online banking, the companies should keep existing customers satisfied before onboarding new customers as acquisition expenditures in online banking are higher than traditional offline banks, and establishing an excellent long-term relationship with existing customers can generate a positive user value on the internet (Oliveira 2010). This theory has been implemented into practice by a company called Monese FinTech company established in the UK in 2015 by N Koppel "keep the existing customers satisfied; they will bring you new ones". Despite having many challenges, rules, and regulations, a company could create a unique bank that was not commonly used in the UK before. Monese provides an App-based current account for users and business-like offered by companies such as Monzo, N26, and Starling bank. However, it has differentiated itself from rivals by targeting people who struggle to access traditional banks, such as recent migrants who do not have local credit histories (Megaw 2020). As a result, in five years, the company could raise its value by about £1 billion and employ about 370 people across Europe. Moreover, Monese is one of the hundreds of successfully operating e-banks across Europe, and there are many other examples of how an online banking system is gradually taking over or substituting traditional banking services by implementing new technologies into the fintech environment.

2.3. Digital marketing channels

Digital marketing is the component of several digital channels that mainly operates through the internet and via digital technologies such as laptops, smartphones, desktop computers, and promoting products and services (Avantika 2020). However, the evolution of digital marketing goes back to 1971, when the American programmer Ray Tomlinson has firstly invented and sent his first, Email through different machines; hence the actual term digital marketing has coined by

dictionaries in 1990th when Archie search engine has been introduced as an index for FTP (File Transfer Protocol) (Tomlinson 1971; RPI 2016). Thus, during the last two decades, digital media platforms have changed radically, and it has affected the global market tremendously by implementing new concepts like engage, sell to, learn about, target audience, customer orientation, and brand awareness (Lamberton, Andrew 2016). According to Joe Chernov, "Good marketing makes the company look smart, whereas great marketing makes the customer feel smart." Thus, digital technologies have enabled an additional option for companies to eliminate the barriers between customers and companies and to keep transparency, which helps to gain customers' trust (Sudha, Research Guru 2019). There are several digital marketing channels, such as SEO, Social Media Marketing, Content marketing, Affiliate marketing, Email marketing, Viral marketing, etc. (Verma 2018). Nowadays, the most popular and perhaps the most efficient marketing channel is social media, including Facebook, Instagram, Twitter, LinkedIn, Pinterest, YouTube, Snapchat, OK (Odnoklassniki), VK, Telegram, WhatsApp, and so on (Baker 2020). However, many of these social media channels were already studied by many people and have been used in dozens of researches; therefore, in this study, the author will focus on mainly two the most famous social media channels, Ok (Odnoklassniki/Classmates) & Vk (Vkontakte/In Contact), as these social media platforms are still widely used in many post-soviet union countries, including Central Asia.

Odnoklassniki: is also known (Classmates) in English, is a Russian social media network, mainly used in Russia and all other former Soviet Republics (Altayeva 2018). Albert Popkov developed the platform on the 4th March 2006 and first introduced it within Russia and later spread to all other countries (*Ibid*). However, the platform gained popularity within a short period among millennials, and due to its functional language, which was Russian at the beginning, Odnoklassniki has become popular only among Former Soviet Union countries, hence nowadays platform has several language options (Guertin 2015). Furthermore, just like any other social media platform, such as Facebook, Twitter, or Snapchat, Odnoklassniki is also intended to be used as a means of communication with old friends and classmates (*Ibid*). According to Vostrov (2013), just one year after its foundation, Odnoklassniki became the most innovative social media platform in Russia, 2007 and 2008. Moreover, the platform has a unique logo (OK), shortened from Odnoklassniki, and more than 200 million users were registered with over 45 million daily users (*Ibid*)). The platform owns by another Russian social media platform called Mail.ru Group, which offers more than just chatting; Mail.ru offers personal emails like Gmail and chats (*Ibid*). According to Mail.ru group (2020) total revenue of the company is increased by 2.8% in 2019, and about 45 billion Rub has earned due to virtual gifts where users congratulated each other, and around 600 million Rub

came through via different games, as OK offer lots of different type of games. Moreover, the OK platform is not that popular in Europe or any other country except former Soviet Union countries; therefore, it is recommendable to use the Odnoklassniki platform only in the countries where people can speak and understand the Russian language. Odnoklassniki is the second-largest social media platform in Russia and some other neighbouring countries after VK (Vkontakte), a Russian-based social media platform. Therefore, most foreign investors prefer OK over Facebook or other platforms like VK when entering the Russian markets and some other post-soviet countries where the Russian language is still widely used (*Ibid*).

VK (Vkontakte): is a Russian-based social media platform established on the 10th of October 2006 in Saint Petersburg, Russia (Baran, Stock 2014). However, the platform has developed by Pavel Durov, who was the founder of Telegram messenger as well. Unlike any other Russian social media platforms, VK has become more successful in terms of market and market shares, as it has become second the most visited social media platform in Russia and also it has increased brand awareness all over the world by offering its services in 90 different languages (Melkadze 2019). According to Similar Web (2020), Vkontakte is ranked among the top 15 of the world's most visited websites. Moreover, VK could double its revenue to 8.9 billion Rub in 2016 compared to 2014, and total revenue was around 42 billion Rub (Interfax 2017). Thus, more than 500 million users signed up for the platform, and about 60 million people actively use the service every day, which is even higher than OK and Facebook users in Russia (Prins 2019). According to (Tilearcio, Synthesio 2016), VK has been a market leader for a long time, making it a perfect platform for marketers to increase brand awareness.

It has a good reputation with more active users than some other social media platforms in the market. Nonetheless, due to its simplicity and easy to get the concept, VK has spread rapidly all across Russia and worldwide, hence companies always preferred the VK marketing platform for internal advertisements due to several reasons: for instance, VK offers reasonable costs for its ads, it has a larger audience than any other social media platforms (Zolkin 2019). According to Prins (2019), about 21% of the Central Asian population is active on social media channels (Vk & OK), roughly 15 million people by 2019. Considering the facts that both social media channels are widely used across Central Asia, the companies can consider using these social media channels for marketing purposes, as it can provide cost-effective and time-efficient service, especially in terms of running targeted ads that are designed for a specific group of people within a particular time frame.

2.4. Data collection and analysis methods

According to Fisher (2007) and Faisal and Haider (2012), the questionnaire's design plays a significant role in quantitative-based studies, as it directly affects the research outcome; therefore, it is recommendable to design a logically and sequentially well-structured questionnaire so that respondents can easily follow the questions and understand it. By keeping these factors in mind, the author developed the questionnaire, which is logical and relatively easy to understand for respondents to answer. Nonetheless, Fisher (2007) stated different types of questionnaire formats commonly used in practice: Dichotomous, Multiple choice questions, Rating scales, Checklists, etc. The questionnaire is designed by taking into view factors that are the most relevant to the research problems. In this regard, eight elements have been selected, which are believed to be essential for adopting online banking. Table 1 below gives information about the structure of the questionnaire. More detailed information about survey questions can be found in Appendix 1.

Table 1. Research questions structure

Questions	**Contents**
Question 1 to 3	Account related questions
Question 4 to 5	Factor 1: Web-Usability
Question 6 to 7	Factor 2: Security
Question 8 to 9	Factor 3: Information Quality
Question 10 to 11	Factor 4: Trust
Question 12 to 13	Factor 5: Service Quality & Options
Question 14 to 16	Factor 6: Brand Awareness, Public opinion & Interest
Question 17 to 23	Factor 7: Social Media & (It's effect)
Question 24 to 28	Factor 8: General information about the respondent

Source: Compiled by the author based on Hertzum *et al*. (2004); Miranda *et al*. (2006); Loonam and O'Loughlin (2008); Poon (2008); Faisal and Haider (2012).

Furthermore, the research employs a quantitative method by making pre-coded questionnaires, such as tick box, multiple-choice, etc. (Fisher 2007). The Google form was used to design the questionnaire, which consisted of 28 questions, where the estimated time to answer all these questions expected to be between 7-10 minutes. The questionnaire was spread through the author's personal private social media channels such as Odnoklassniki, Vkontakte, Facebook, WhatsApp, Instagram, including (emails, messages, websites, etc.), with friends and through them to other people, where the participant's anonymity was guaranteed. The research's targeted age group was from 18 to 45+ as people who fall into these age groups are believed to be potential users of online

banking services. As a result, a total of 408 responses have been collected in two weeks from the residences of five countries, and out of those (408) responses, only 384 answers were completed and used in the final analysis. The most relevant questionnaire types used in the study include multiple-choice questions, dichotomous questions that offer two options to choose from, and rating scales, giving respondents a chance to rate or evaluate the service, product, or policy (Fisher 2007; Faisal, Haider 2012). Consequently, the five-point Likert scales used in the questionnaire measure the significance of the factors related to (web usability, security-related concerns, information quality, trust, quality of the service, convenience, privacy-related concerns, new service options, etc.). For example: for questions, how important are the following factors for you to consider using online banking (privacy protection, fraud, data breach, etc.)? participants had an option to choose from (1= Not important at all, 5 Very important). Whereas for questions like the following security aspects play a significant role in adopting online banking and its continued use (i.e. secure transactions, service, app security, and secure purchases)? the given options were (1= Strongly disagree, 5= Strongly agree).

Finally, the following TBP theory components play an essential role in understanding people's behaviour towards the subjective norm, attitudes towards behaviour, and perceived behaviour control. These components were primarily used in social media-related questions to determine social media's role in customers' decisions regarding adopting online banking. There were several questions related to attitudes towards online banking, like trust and reputation of the service provider. For example, the question related to public opinion or family, friends, etc., people who are familiar with influence people's decision regarding adopting online banking service and people tend to consider other's opinion before they make their final decisions. Besides, the subjective norm helps to understand whether people's decision changes based on certain things like external factors, etc. or attitudes towards behaviour and perceived behavioural control, which is important components of TBP theory to understand people's behaviour. For instance, questions related to trust and reputation of the bank, which was defined by attitudes towards online banking, tend to have relatively high significance for people to consider using online banking services, as these questions define people's attitudes towards online banking and it is adoption and further usage among people. Nevertheless, perceived behavioural control plays an essential role in understanding the factor that could affect people's behaviour; for example, the question related to recommend or receive recommendation positively impacted people's decision to adopt online banking and its services. Table 2 below describes some examples associated with TBP components, and it is a connection to research questions.

Table 2. TPB components and it is a connection to research questions.

How is it important for you to check what other people think about online banking services before you make any decision (1 = Not important at all, 5 = Very important)	
Subjective Norm SN	(0) Parents/other family member (1) Friends/other (2) People important to me in general
My trust in online-banking services is not as strong as contrasted with trusting in off-line services that have been provided by the bank (1= Strongly disagree, 5= Strongly agree)	
Attitudes towards online banking, AT	(0) My trust is not strong in online banking (1) My trust is stronger towards off-line banking (2) My trust is towards online banking is not in the same level as offline banking.
Does the reputation of the bank play an important role to you in the adoption of online banking service (1= Strongly disagree, 5= Strongly agree)	
Attitudes towards online banking	(0) The reputation of the bank is important to me (1) It is important to have a well-reputed service provider consider using online banking.
How often do you receive a recommendation or recommend somebody about new products and services via social media (1= Not at all, 5= Very often)	
Perceived behavioral control, PBC	(0) I do recommend very often (1)I receive recommendation often (2) Never receive recommendation or recommend somebody

Source: Compiled by author

The analysis results indicated several factors that have directly affected people's behaviour towards online banking were external factors, family, friends, etc. The service provider's reputation (online bank) and the action that user's take via recommending or receiving recommendation regarding online banking services. The collected data from the questionnaire were analysed using Microsoft Excel 2016 to convert the survey outcomes into pie charts and graphs. Finally, the author used inferential statistics to analyze and find the Spearman correlation coefficient in given factors by using the software IBM-SPSS (version 27) statistical analyses tool. Spearman's correlation coefficient is a statistical measure of the strength of a monotonic, and it is commonly used to understand the correlation between two variables in an ordinal scale (Morgan *et al*. 2011). The purpose of the analyses was to find the most significantly and moderately correlated factors which were important for customers to consider using online banking. In this regard, questions with the five-Likert scale were selected and converted into numerical form to run the analyses; thus, the most significantly correlated and relatively high correlated factors were introduced in the outcome.

2.5. Sample and sampling

As population size might differ from one country to another, it is relatively hard to conduct the survey and get an answer from everyone; therefore, Fisher (2007, 189) and Faisal and Haider (2012, 12) suggested that the sample size ought to be taken into consideration to those people who are the representative of the entire population. However, there is always a dilemma regarding the community's size; therefore, the following question must be answered before going into further steps, what sample size should be obtained from an entire population to get the sufficient length of the whole population's representatives? and the answer depends on the total size of the population and margin of error. The margins of error are the measure of uncertainty of how much should be taken as a sample to consider them representative of an entire population (*Ibid*). Besides, the author used Raosoft (2004) sample size calculator software to find out a suitable sample size to be able to conduct the survey, and the software result showed that for population size which is over 10 million with a 5% margin of error, required sample size would be about 384.

According to Stronski and Zanca (2019), Central Asia's population has reached nearly 72 million people, which is more than 10 million, resulting in that the required number of completed questionnaires in this research is going to be 384. Furthermore, a non-random sampling method was used in this research to collect the primary data from people aged 18 to 45+ who were believed to be the representatives of the five Central Asian countries. The study is aimed to address people from all the sectors, whether they were students or professional expats, since using banking services is equally essential for all people regardless of their professions. Consequently, people from all the sectors participated in the survey, and a total of 384 complete answers were collected in two weeks, whereas 202 or 52.6% of the respondents were males; in contrast, 178 or 46,4% were females, and only 4 or 1% of participants chose the other option. Also, most of the respondents, 219 or 57%, were aged between 18-28, followed by 149 or 38.8% of respondents were between 26-34 age groups. The least number of people, 14 or 3.6%, were between 35-44 years old, and only 2 or 0.6% of the respondents belonged to the 45-over age group, and the and average age rate of the participants was 28 years old.

The difference in the age group indicates that modern technologies are becoming more popular among younger generations, where the younger people find new technologies more effortless and more convenient to use than older people. Based on the TAM, the perceived ease of use model plays a crucial role in adopting information systems; people below 40 years old were believed to

have good knowledge about the internet, smartphones, and modern technologies. However, people aged over 45 plus, as the number of collected responses from this age group, were relatively low, indicating that people who fall into this age group might be less aware of e-technologies and their conveniences. Furthermore, the graph in Figure 4 represents the respondents' occupation; among 384 participants, 202 or 56.9% were students, managers 18 or 3.7%, and teachers 16 or 3.4%, while other professions had a similar number of people (accountant, dentist, driver, engineer, receptionist, web developer, designer, business owner, photographer, self-employed, influencer and seller) made up 160 or 36% of total respondents. Despite the most significant number of respondents being students, people who belonged to other professions were also active, which indicated how online banking is widely spread among various age groups and occupations.

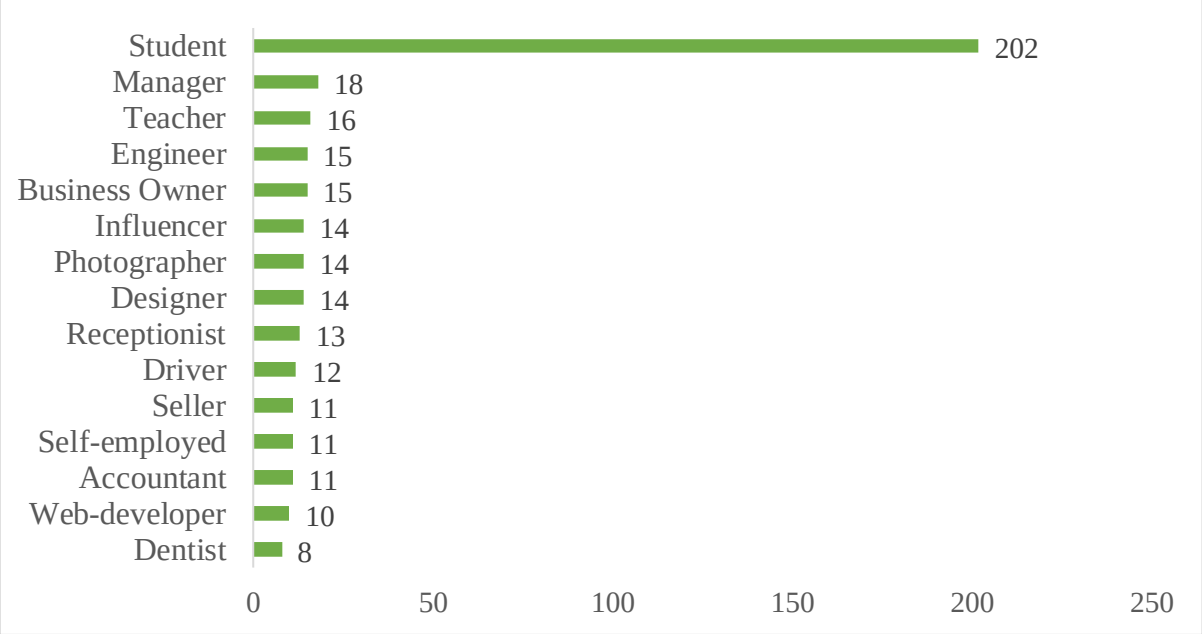

Figure 4. The occupations of the participants

Source: Compiled by the author

However, the graph in Figure 5 below shows that most of the respondents 237 or 61.7% average income per annual were from 1500$ to 5000$, followed by 59 or 15.4% of people's income were ranged between 11000$ to 20000$, and 50 or 13% of the respondents' average yearly income was from 6000$ to 10000$ respectively. Whereas the least number of peoples, 38 or 9.9%, responded that their annual income exceeds over 21000$. Interestingly, more than half of the participants had a lower income than the remaining part, mainly due to respondents' status, as most of the respondents who participated in the questionnaire were students.

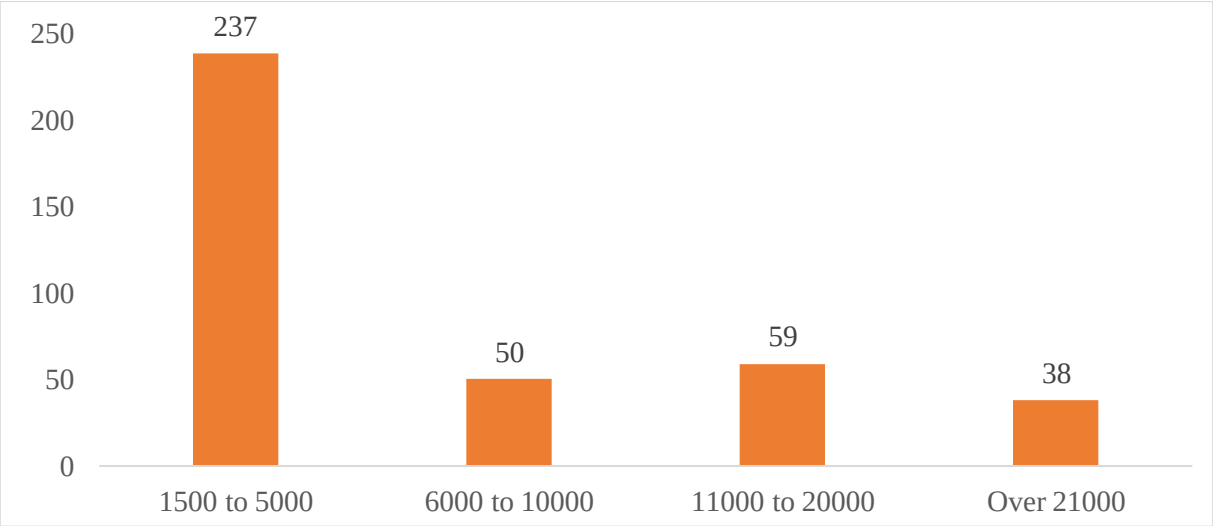

Figure 5. The average income of the respondents in ($)

Source: Compiled by the author

Last but not least, the pie chart in Figure 6 represents the nationality of the participants, among 384 people, were 91 or 23.7% of them were from Uzbekistan, 77 or 20.1% were from Kazakhstan, 76 or 19.8% were from Turkmenistan, 71 or 18.5% were from Tajikistan, and 69 or 18% of the respondents were from Kyrgyzstan. The majority of the participants were from Uzbekistan, followed by Kazakhstan, due to the population rate of these two countries, as these countries have the highest population rate compare to the rest of the three Central Asian countries.

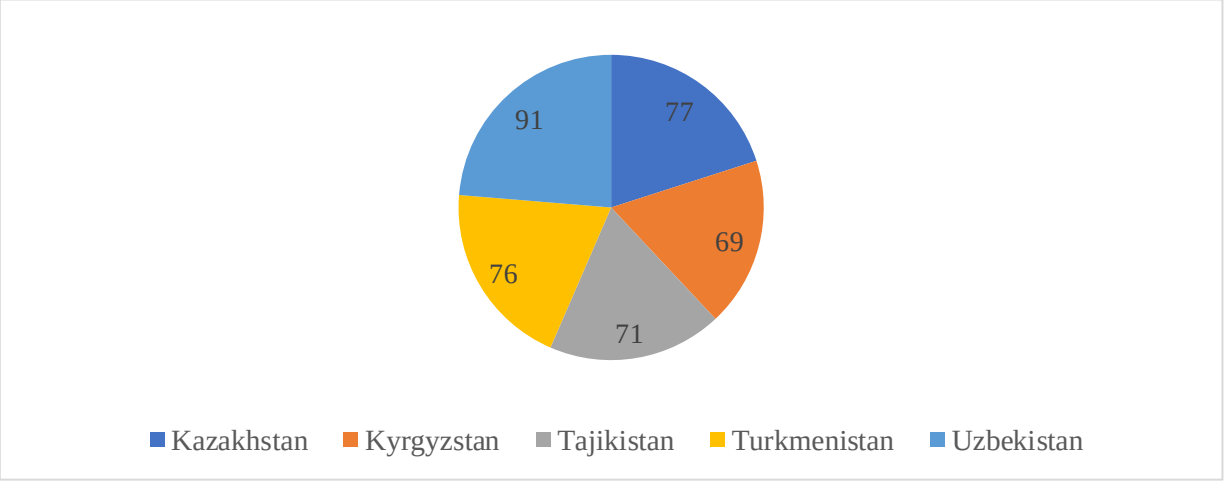

Figure 6. The nationality of the respondents

Source: Compiled by the author

Although the population rate in Uzbekistan and Kazakhstan are significantly higher in contrast to Kyrgyzstan, Tajikistan and Turkmenistan, people from all the countries were actively participated in the questionnaire and based on the survey results, the average rate of the participants was 76.8.

3. DATA PRESENTATION AND FINDINGS

In this chapter, the research outcome will be presented in the form of line and bar graphs. The questionnaire has been conducted based on the most significant factors regarding online banking adoption and the factors that have been discussed in many studies and assumed to be the most important elements in the adoption of online banking. However, as shown in the theory chapter, many researchers believed that the following factors could play an important role in adopting online banking, such as (web-usability, security and privacy, information quality, trust, service quality, and accessibility issues). Therefore, it was essential for the author to get a practical answer for all those theoretical views and see whether the factors mentioned above affect customers (choice and decision) in the adoption of online banking.

Moreover, as online banking is still a new concept and not a well-developed sphere in Central Asia, it was also essential to find an effective marketing channel that helps to build a trust bridge between customers and online banks. Concerning this, a second question has been raised in the research and included in the questionnaire: What is the role of social media on customers' choice to adopt online banking services? The research findings showed that several social media channels were widely used across Central Asian people indicating that those social media channels can be used as an effective marketing channel to reach out to potential customers in Central Asia.

3.1. Survey findings

The following chapter demonstrates the survey outcomes through descriptive statistical expressions like charts and describes the correlation analyses. When the question was asked about whether people have any information or knowledge about online banking, most of the people who have participated in the survey responded that they did have preliminary information about what online banking is.

The survey results indicated that about 376 or 97.9% of participants either heard or knew some form of online banking services before filling in the questionnaire. In comparison, only 8 or 2.1% of people replied that they either do not know or never heard about online banking and its services, which indicates despite slow economic and technological growth in the region, people are becoming more aware of online banking services, which is widely trending in Western and

European countries. However, to understand how well people were familiar with online banking services, the following question was included in the questionnaire, have you used online banking (services)? Based on the survey outcomes, about 372 or 96.9% of participants have used online banking services, whereas only 12 or 3.1% responded that they have never used any types of only banking services. Additionally, Figure 7 gives information about people who were familiar with online banking services and even used its services. For instance, about 178 or 46.5% responded that they used to use online banking services 3 to 5 times a month, whereas 158 or about 41% of people used 1 to 2 times a week. Thus, only 31 or about 8.1% of respondents used online banking every day, followed by 10 or 2.6% of customers who used it several times a year. Only 7 or 1.8% of people used online banking 6 to 10 times in a six month.

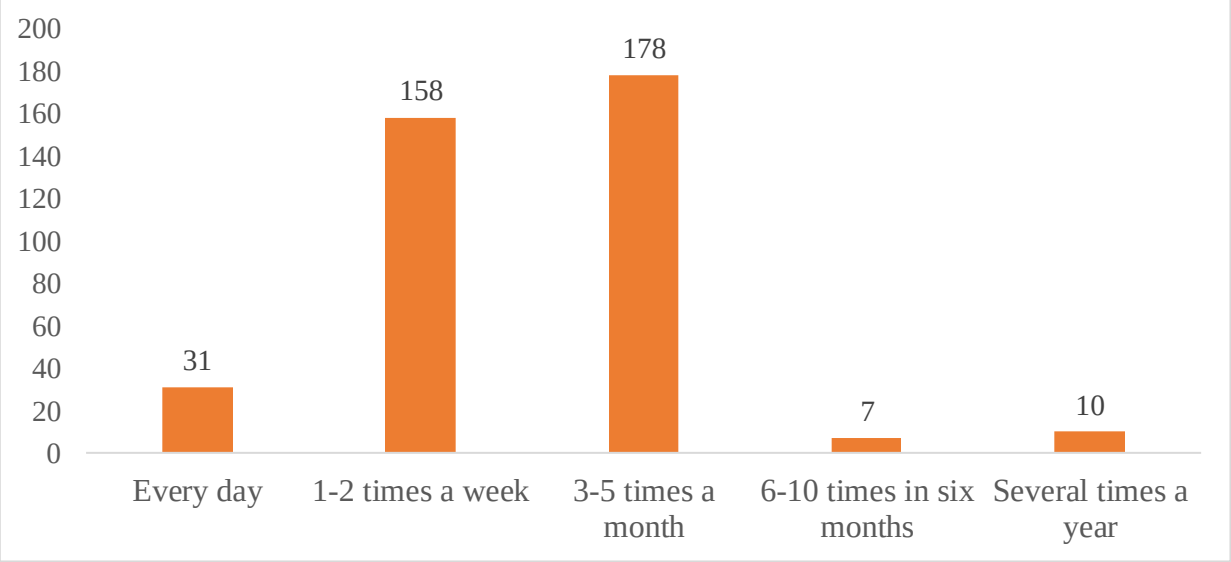

Figure 7. Frequency of using online banking services

Source: Compiled by the author

Web-usability was one of the important factors that could affect customers' choice to adopt online banking services. The survey outcomes in Figure 8 depicted that web-usability and user-friendliness have a high impact on customer's decisions. The graph represents how user-friendliness is an essential factor for Central Asian customers to consider using online banking services. Most people, 289 or 75.1%, strongly agreed that it is important to have a useful and user-friendly website to adopt online banking; in comparison, 89 or 23.1% of users agreed that the companies should have user-friendly services. However, the least number of people, 5 or 1.3%, answered that user-friendliness is not a crucial factor for them considering using online banking, followed by only 1 or 0.3% of respondents who strongly disagreed with the concept user-friendliness is an essential factor to adopt online banking.

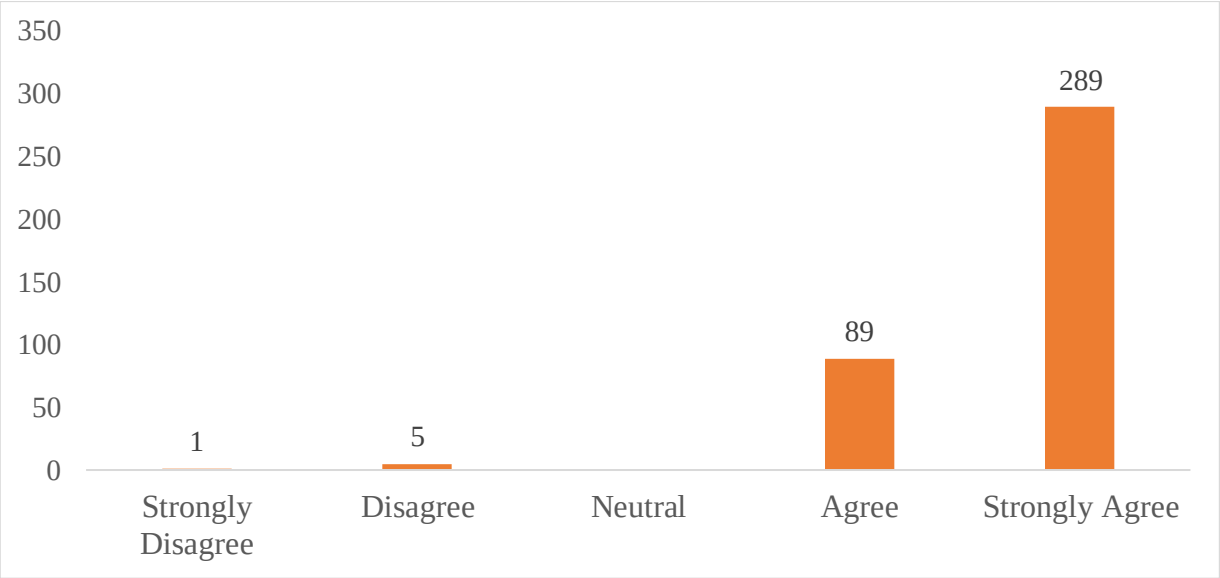

Figure 8. The importance of user-friendliness and web-usability to customers considering using online banking services.

Source: Compiled by the author

The survey results in Figure 9 showed that about 289 or 75.3% responded that they avoid visiting online banking websites with poor navigation, slowly downloaded webpages, and poor design. About 82 or 21.3% of respondents agreed they try to abstain from poorly designed websites. Thus, only 6 or 1.6% of people were neutral, and 6 or 1.6% disagreed, followed by only 1 or 0.3% strongly disagreed with the given statement that they can still visit websites that have poor navigation and design.

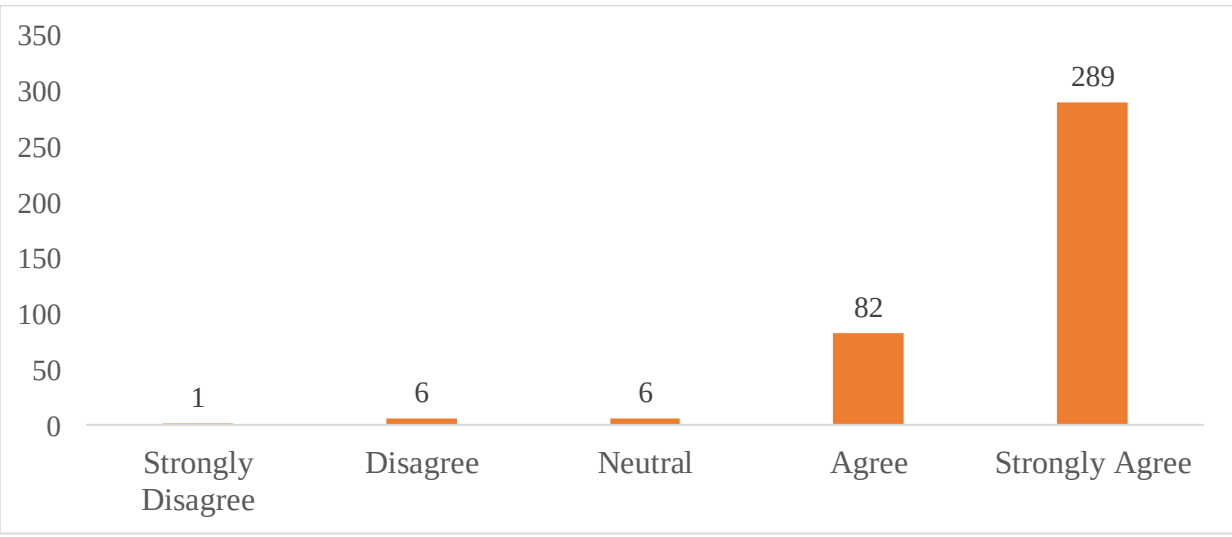

Figure 9. The importance of the factors related to (website's, poor navigation, and, etc.) to adopt online banking services from customers perspectives

Source: Compiled by the author

The survey outcome in Figure 10 below showed that 321 or 82% of respondents believe that the security factor plays a fundamental role in adopting online banking. Additionally, 53 or 14.6% of respondents agreed that security is an essential factor in adopting online banking. Whereas only 4 or 1.3% of people believed it's somewhat important, 6 or 2.1% thought security does not affect or play an important role in adopting online banking. Consequently, 375 or 97.4% response strongly indicates that security plays a significant role in adopting online banking.

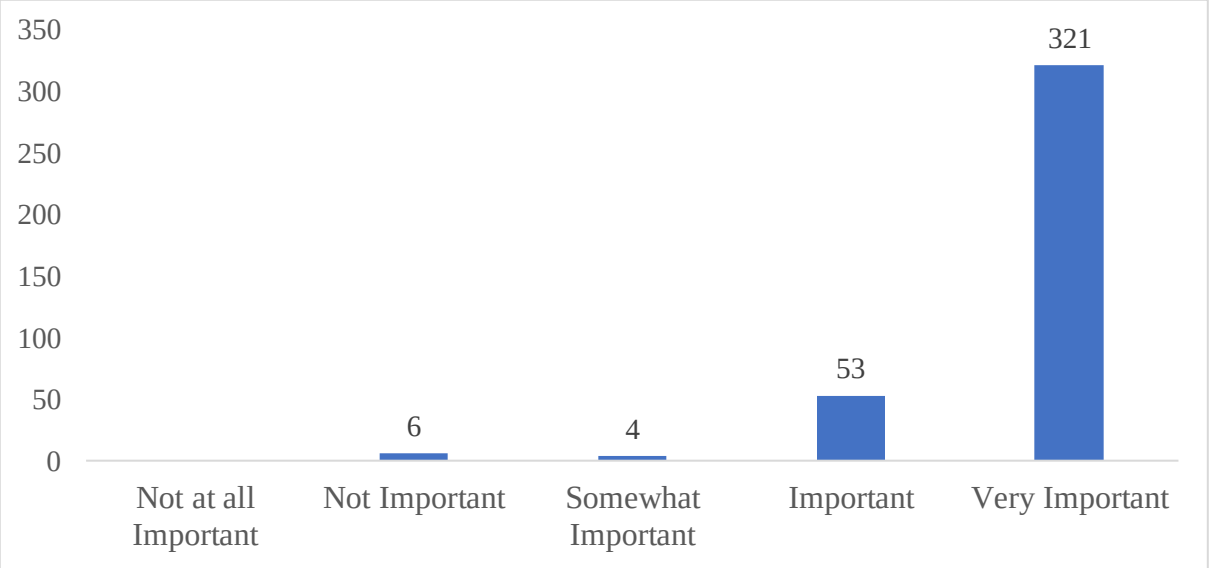

Figure 10. The security and safety-related factors in the adoption of online banking services
Source: Compiled by the author

The following bar graph in Figure 11 below indicates the importance of (privacy protection, fraud, data breach, and secure transactions) factors in adopting online banking. About 327 or 85.2% of respondents strongly agreed that secure transaction, protection from scams, etc., are essential factors to adopt online banking services and their continued use. Followed by 45 or 11.7%, people also agreed that the elements mentioned above are crucial for considering online banking services. While 6 or 1.6% of people were in a neutral position, and 5 or 1.3% believed the elements mentioned above do not affect their decisions in the adoption of online banking, and only 1 or 0.2 % of the respondents strongly disagreed.

The survey results indicated that the factors related to customer's privacy, data breach, protection from all possible frauds, etc., were significantly important for customers to consider using online banking services. Over 95% of respondents presumed that all the factors mentioned above essential for them in the adoption of online banking and its further usage as those elements are directly linked to the aspect of trust and safety.

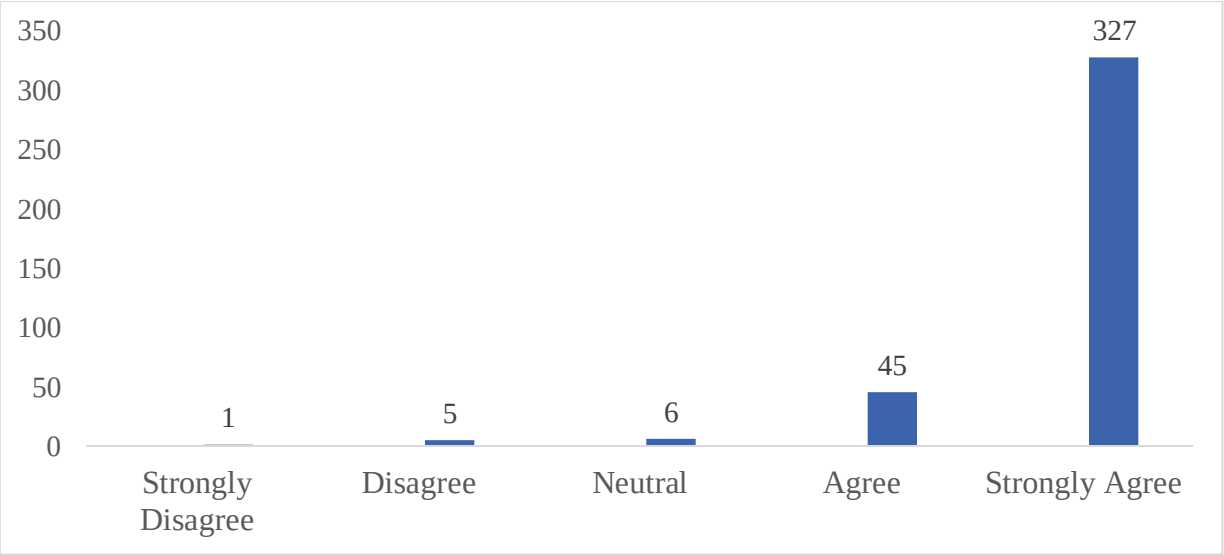

Figure 11. The significance of the factors related to privacy, protection from frauds, etc., in the adoption of online banking services

Source: Compiled by the author

The bar graph in Figure 12 demonstrates the importance of how short, precise, and comprehensive information could lead to the adoption of online banking among Central Asian people. About 141 or 36.7% of people strongly agreed that lengthy statement creates difficulty for them to view, understand and follow the given information; therefore, they mostly avoid checking such extended information. Besides, 217 or 56.5% of respondents agree that lengthy statements are challenging to view; consequently, they would prefer to avoid it and not view such information.

On the other hand, 12 or 3.1% of respondents answered neutral, followed by 13 or 3.4% who disagreed with the statement that lengthy information's do not make any difficulties for them to view. Only 1 or 0.3% of respondents strongly disagreed with the statement and believe that lengthy information does not affect or creates any difficulties to view. Since most people, 358 or 93.2%, believed that comprehensive texted information creates a difficulty for them, in contrast to 26 or 6.8% of respondents who say that extended texted information does not make any difficulties for them to view.

The questionnaire results indicated that most people consider using online banking services when service providers online banks provide information that is easy to understand, precise, etc., which was illustrated by respondent’s rate through the graph below.

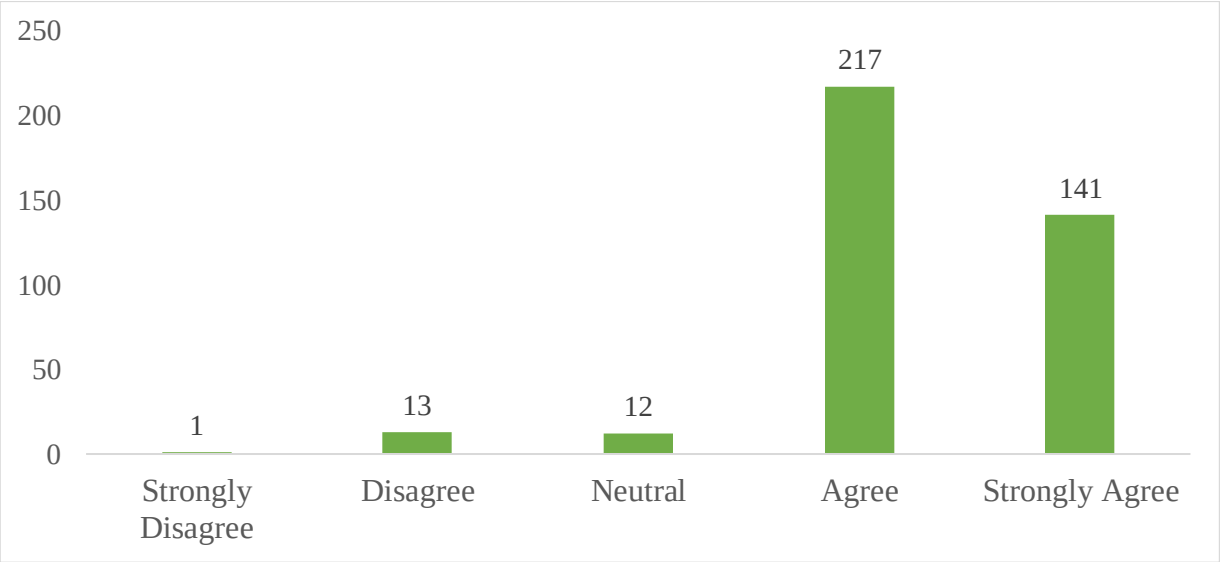

Figure 12. The factor's related to data quality and its importance in the adoption of online banking
Source: Compiled by the author

The graph in Figure 13 below represents the survey result regarding the trust factor. About 374 or 97.4% of the respondents believe that trust in banks plays a significant role in adopting online banking. Out of 97.4% of the respondents, 251 or 65.4% strongly agreed, followed by 123 or 32% people also agreed, whereas 3 or 0.8% of the respondents were neutral and solely 7 or 1.8% disagreed with the statement the factor trust does not play an essential role in the adoption of online banking. Trust was believed to be one of the critical factors in adopting online banking because people in Central Asia get used to more traditional banks where all bank-related affairs are initiated through face-to-face with bank representatives, whereas in online banking, it's vice versa.

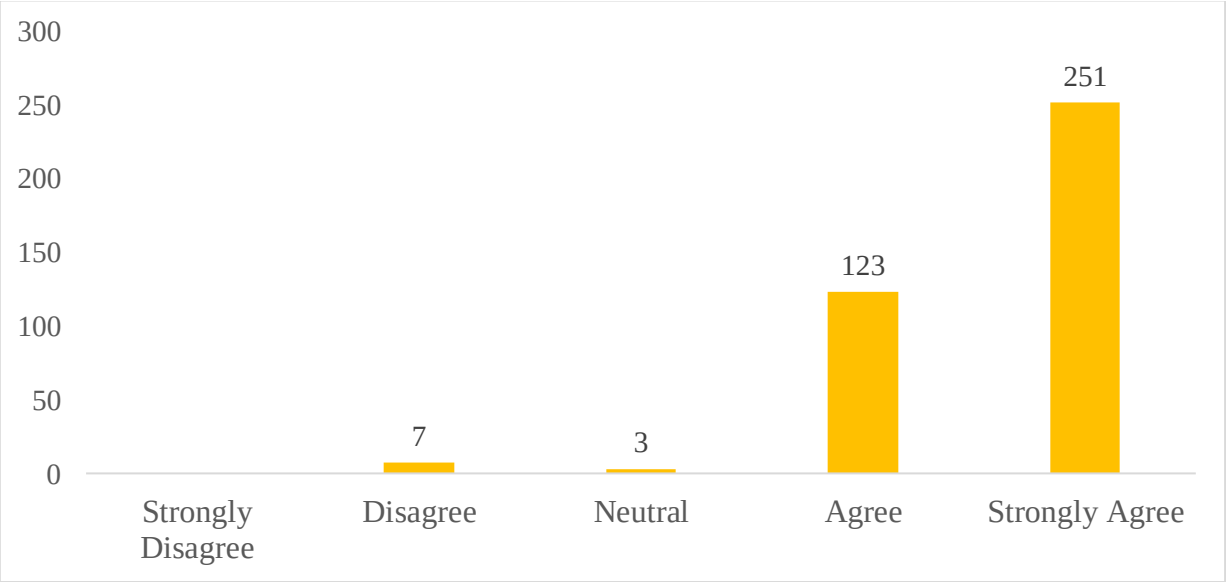

Figure 13. The factor related to trust and its significance for customers to adopt online banking
Source: Compiled by the author

The following graph in Figure 14 depicts the customers' trust between online and offline banking services. About 277 or 72.1% of the respondents believe that their faith towards online banking services is not strong compared to off-line banking services, followed by 31 or 8.1% people strongly agreed. Besides, 32 or 8.3% of people responded neutral, 30 or 7.8%, and 14 or 3.6% of the respondents believe that their trust in online banking services is as strong as off-line banking services.

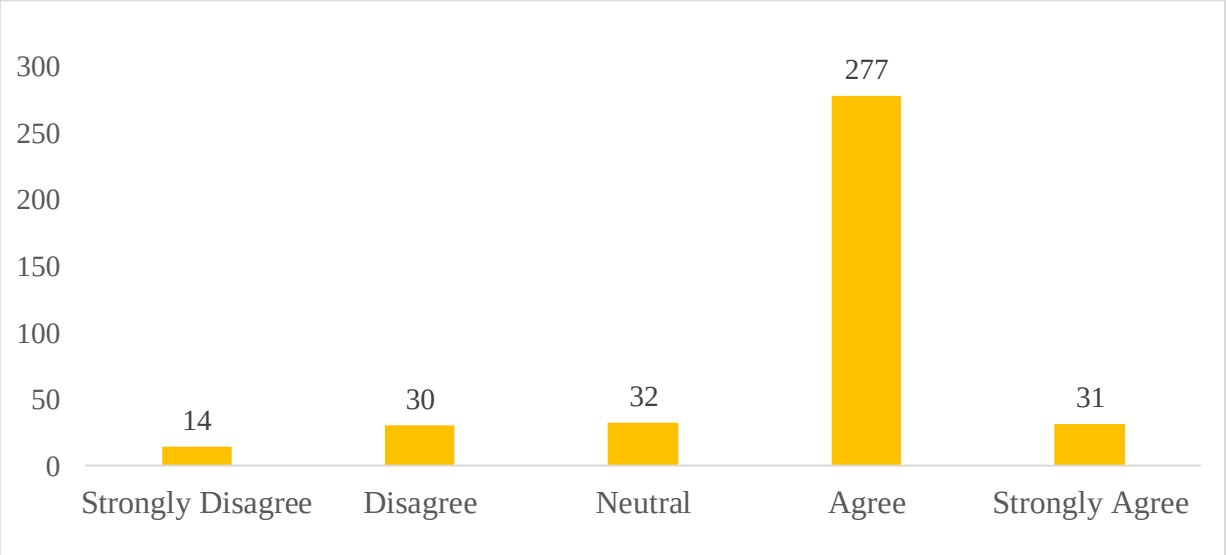

Figure 14. The level of trust between traditional vs online banking services in Central Asia, from the customers perspective
Source: Compiled by the author

The bar graph in Figure 15 below illustrates the important aspects for customers to consider using online banking. According to survey results, about 345 or 90% of the respondents believe that the following factors were significant in the adoption of online banking, for example (lower transactions cost, physical security both an app & card, protection from frauds, wider acceptance of cards, more ATMs, 24/7 support & access to the bank, multi-currency exchanges with real rate). However, on average, 25 or 7.6% of people believe that it is important to have the services mentioned above in adopting online banking, followed by 8 or 1.6% of people who considered it somewhat important. Thus, only 4 or 0.8% of the respondents believe differently; according to the results, the service options mentioned earlier were not crucial for them to consider using online

banking. Consequently, about 99% of the respondents believed that it is important to have all the service mentioned above options to consider using online banking services.

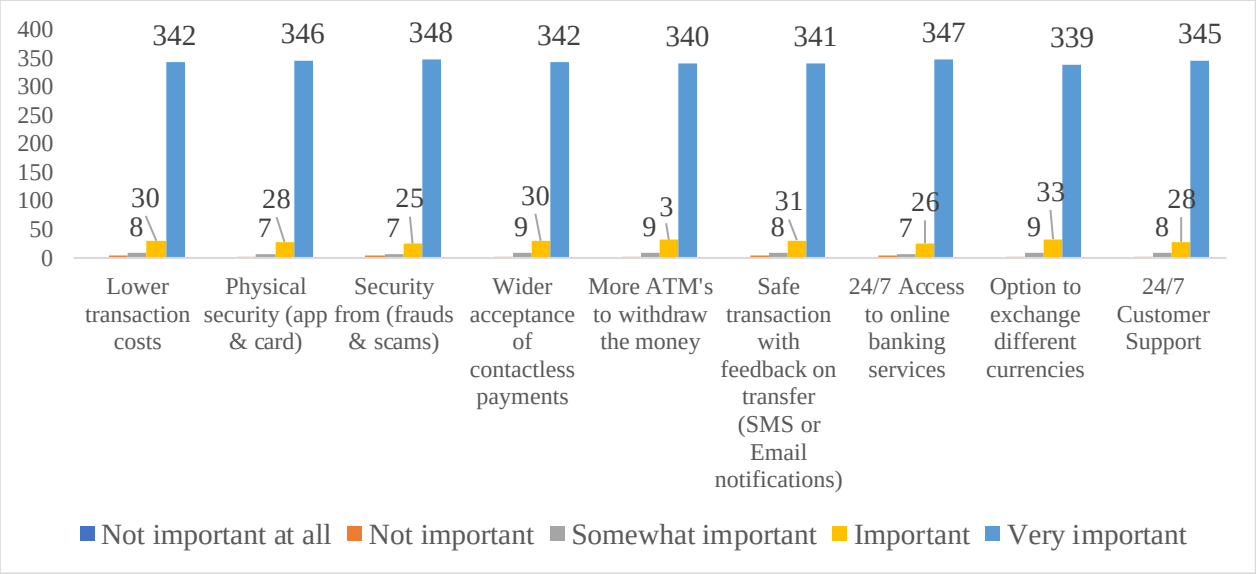

Figure 15. The importance of the following services in the adoption of online banking

Source: Compiled by the author

The following graph in Figure 16 represents the respondents' interests in using proposed online banking services. On average, 248 or 63% of the respondents showed very high interest in using offered online banking services, such as (international money transfers, instant top-ups, bill payments, cash-withdrawals, savings, and online purchases and microloans). About 115 or 29% of people showed a high interest in using the services mentioned earlier, followed by 20 or 6.7% of people who were averagely interested in using the listed services. In contrast, 4 or 1.4% of the respondents showed a low interest to use proposed online banking services.

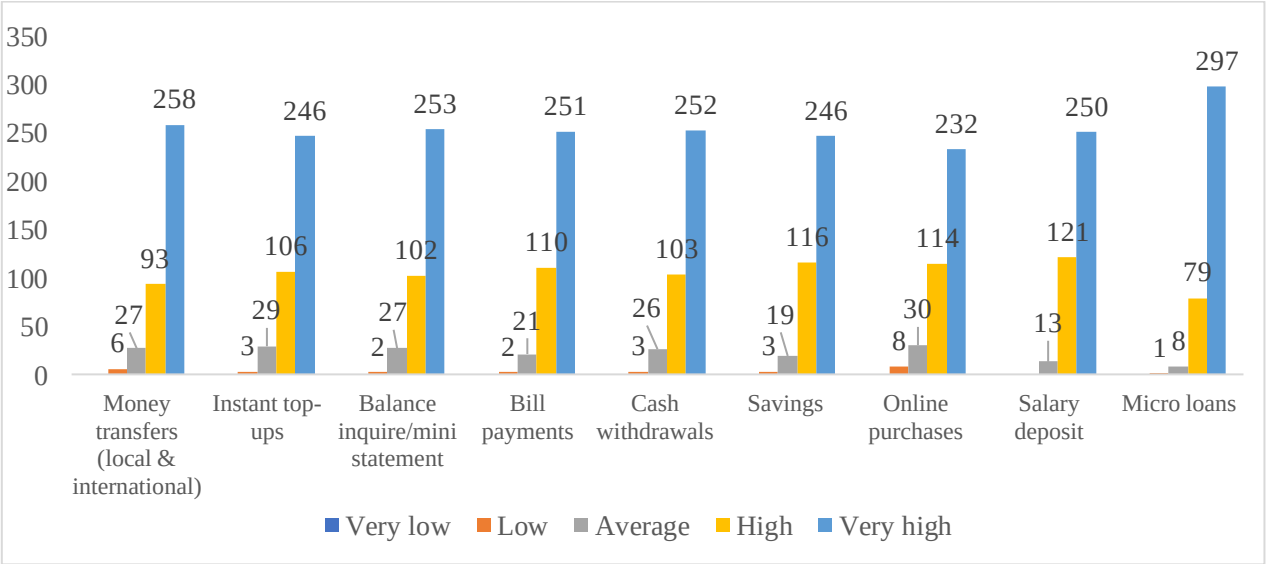

Figure 16. The level of interest to use a variety of online banking services
Source: Compiled by the author

According to the bar graph in Figure 17, the majority of the respondents, 203 or 52.9%, unanimously agreed that the reputation of the banks plays a significant role in the adoption of online banking, followed by 172 or 44.8% of people who firmly believed that the reputation of the bank is an essential element considering to use online banking. However, the least number of people had different thoughts about this matter. For instance, 6 or 1.6% of the respondents answered neutral, and only 3 or 0.7% of people disagreed that the bank's reputation does not affect the adoption of online banking. Moreover, the most considerable portion of respondents, 375 or 97.7%, confirmed that the bank's reputation has a significant effect on customers' behaviour; increasing brand awareness and creating a good image are crucial factors in adopting online banking.

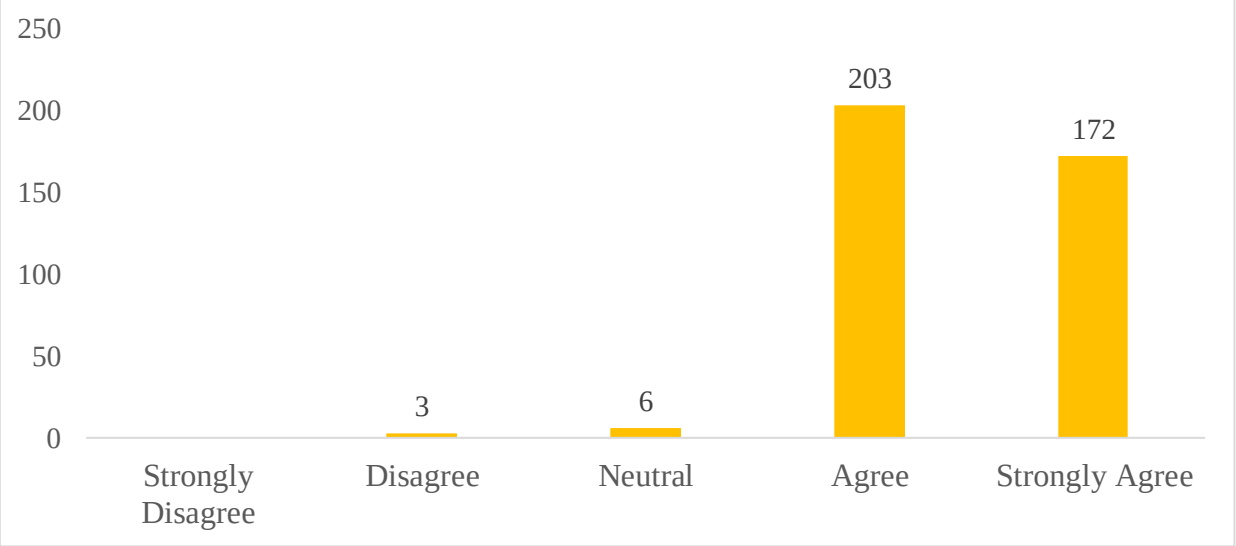

Figure 17. The significance of the reputation of the bank to adopt online banking
Source: Compiled by the author

Additionally, the survey outcome in Figure 18 indicated that about 228 or 59.4% of the respondents believe it is essential for them to check what other people think about online banking before making any decisions. About 97 of 25.3% of people believe that it is very important to consider other's view regarding online banking services. Besides, 35 or 9.1% of people thought it's somewhat important to check what others think about online banking. Whereas 16 or 4.2% of participants answered, it is not important for them to review what others had thoughts about online

banking, followed by 8 or 2.1% of people who believe it is not important at all for them what others deem about online banking services.

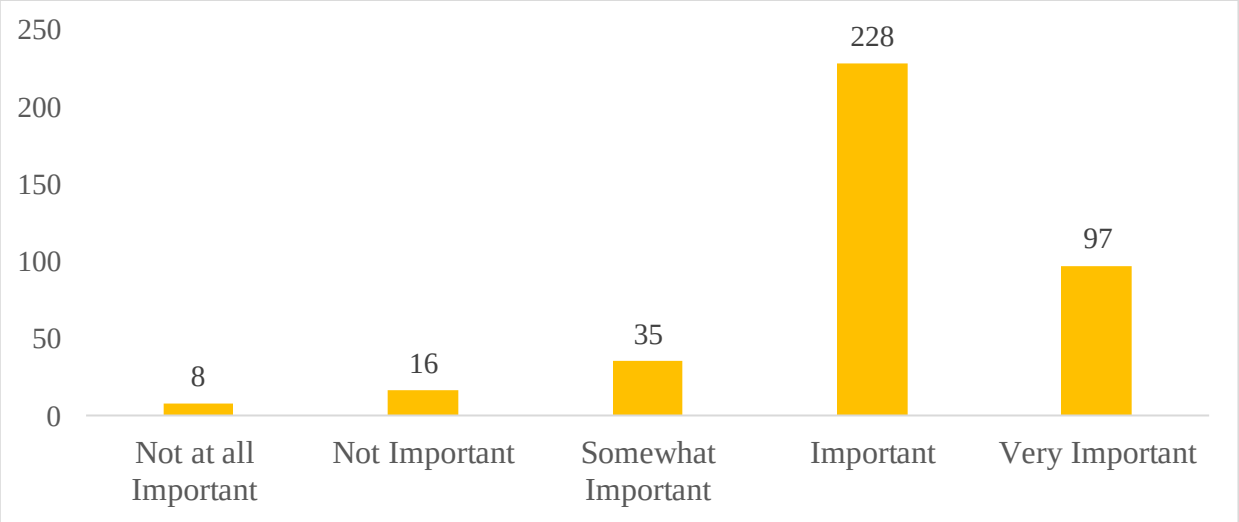

Figure 18. The significance of other's opinion to make one's final decision to adopt online banking
Source: Compiled by the author

The graph in Figure 19 represents the data collected from the questionnaire regarding social media and its role in adopting online banking. There were three the most preferred social media platforms in Central Asia; Instagram was the most popular among all other platforms about 314 or 77% of people uses Instagram every day, followed by Facebook 261 or 64% and OK (Odnoklassniki) 189 or 46.3% of users were active in this platforms. Hence even Vk (Vkontakte) 179, or 43.9%, was still a popular social media platform in the region. However, TikTok 10 or 2.4% and WhatsApp 17 or 4.1% were the least preferred social media platforms in Central Asia.

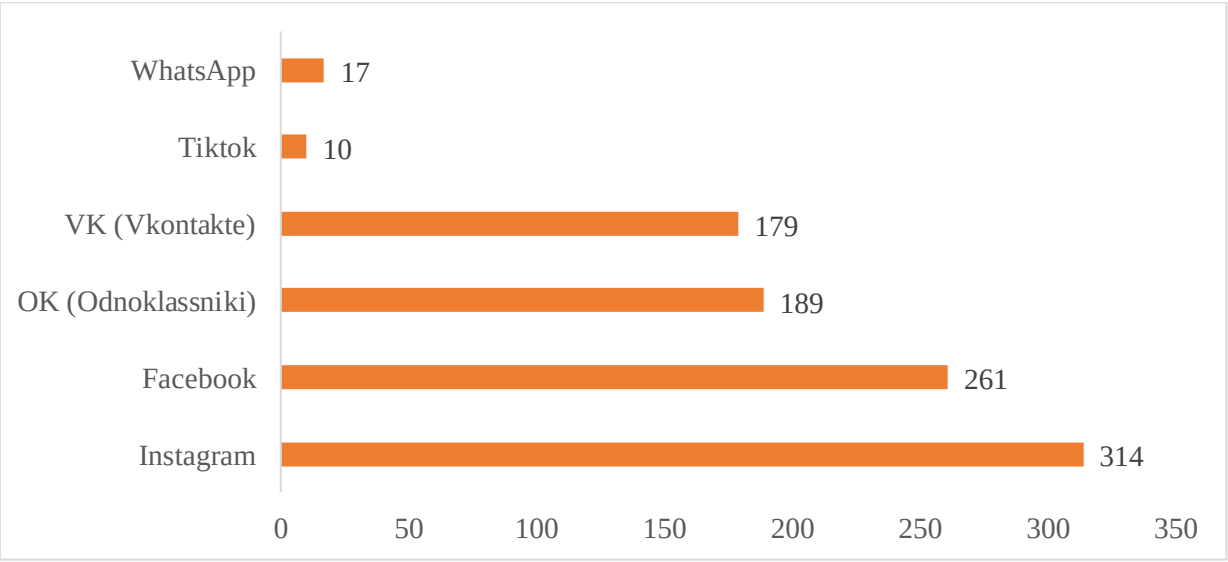

Figure 19. The most widely used social media channels among respondents
Source: Compiled by the author

The bar graph (Figure 20) represents how often users receive a recommendation or recommend somebody about new products and services through social media. About 194 or 50.5% of the respondents believe that they do receive or send recommendations 3 to 4 times a week, and 125 or 32.6% of people recommend or receive recommendations several times a month. Whereas 59 or 15.4% of people get once a day and only 6 or 1.6% of the respondents receive or share recommendations several times a year.

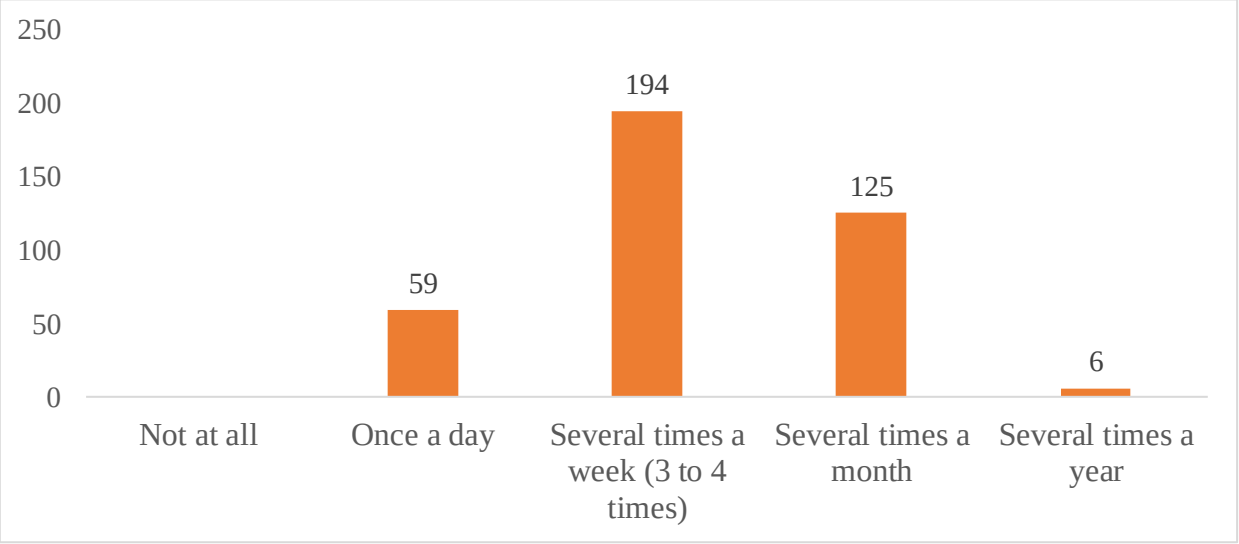

Figure 20. The frequency of recommending or receive recommendation via social media
Source: Compiled by the author

Besides, several factors were significantly correlated; for example, the analyses showed that people who considered the factor security from online frauds, scams, etc., also valued the physical security, app, cards, etc. as in important factors to consider using online banking, the result *x* (security-related elements) was found to be positively correlated with *y* (physical security, etc.) at a statistically significant level 0.01 (2-tailed), ($r(384) = .909$, $p = .000$), where *r* is Spearman rho statistic, (N=384) and *p* is significance level. Moreover, the correlation between different types of bill payments and wide range of top-ups options were substantial, as people who showed great enthusiasm to use various kinds of bill payments were also wanted to have a wide range of top-ups possibility; as a result, *x* (bill payments) was found to be positively correlated with *y* (top-ups) at a statistically significant level 0.01 (2-tailed), ($r(384) = .739$, $p = .000$). It was prescribed in a component of the TRA theory; perceived usefulness people would consider using given product

and services if they believe that it will be useful and more convenient for them, which was reflected in the analyses that people assume that the service options provided above will be useful and more convenient to use. Nonetheless, there was a medium correlation between two factors people who believed user-friendliness and web-usability plays an important role in the adoption of online banking also admitted that the factors related to information quality and comprehensibility of the data have a high impact on them, resulting in x (user-friendliness and web-usability) was found to be positively correlated with y (comprehensibility of the data) at a statistically significant level 0.01 (2-tailed), (r(384) = .364, p=.000).

Based on the perceived ease of use model, people are more likely to adopt online banking services when it is easy and convenient to use, and the test results validated it in practice. Also, the analyses showed a relatively high correlation between the factor's public opinion through social media and the service provider's reputation (online bank). People who believed external factors have a significant impact on their decision concerning online banking were also considered the reputation of the service providers equally crucial as public opinion. The *x* (public opinion) was found to be moderately positively correlated with *y* (reputation) at a statistically significant level 0.01 level (2-tailed), (*r*(384) =.251, p=.001). As stated in TBP theory, which was initially developed from TRA, the external factors could play an important role in making decisions based on public opinions, preferences, etc., people's intended decision can be different from their actual decision, and the practical analyses showed that external factors have a significant effect on people's decisions. The research results also indicated that the following components of TBP theory, subjective norm, attitudes towards and perceived behavioural control were equally important for people to consider using online banking. For example, questions related to trust and reputation linked to attitudes towards online banking tend to have high importance for people to consider using online banking. Followed by the public, family, friends opinions, etc., connected to the subjective norm and giving and receiving recommendations related to perceived behavioural control were also equally important for people in Central Asia to adopt online banking.

3.2. Outcomes and recommendations

The purpose of this research paper was to study and find the most important factors that could affect and hinder the adoption of online banking services in Central Asia. As it has been stated in the earlier stages of this research paper that there were several studies repeatedly addressed the

factors that could cause and hinder the adoption of online banking, such as web usability, security-related concerns, information quality, trust-related concerns, quality of the service, convenience, privacy-related concerns, etc. Based on these factors, the questionnaire was structured, and questions were spread to collect primary data from Central Asian customers. Additionally, the author is also aimed to find out the most effective and efficient way to reach potential customers, increase brand awareness, and strengthen brand loyalty concerning online banking. The studies showed that social media had become one of the most effective and efficient marketing tools to reach a targeted audience due to its easy accessibility and many users. To find the most widely used social media channels among Central Asian people and its role in adopting online banking, the author designed a list of questions that could help get a practical answer.

The research paper consisted of two questions that are believed to have a link to online banking and its adoption among Central Asian customers. As an answer to the first research question: which factors are important for Central Asia customers in the adoption of online banking, the author found out that the following factors had a direct impact on customers adoption of online banking in Central Asia:

- The research outcome indicated that web-usability and user-friendliness play a significant role for customers in Central Asia to consider using online banking services; about 98% of the respondents unanimously agreed that the factors mentioned above play an essential role for them to consider using online banking services.
- The research outcome also showed that the following factors (security, information quality, quality of the service, convenience, and privacy-related concerns) played an essential role in adopting and further usage of online banking among Central Asian customers. About 90% of the participants in the survey responded that all the factors mentioned above were indeed important for them to consider using online banking services.
- However, the following security factors were the most crucial for customers in adopting online banking (secure transactions, physical card, app, virtual accounts, online and offline purchases, data protection, and fraud protection), indicating the importance of security factors in adopting online banking. The people believe there is a higher risk associated with online banking in contrast to traditional banks due to lack of human interactions; therefore, it is important for service providers (online banks) to ensure all these factors are adequately covered to be able to convince the customers to adopt online banking services in Central Asia.

- The research results also showed how customers are enthusiastic and eager to use new online banking services, such as 24/7 support and 24/7 transaction possibilities, worldly accepted debit cards, utility payments, live currency exchanges, microloans, internet payments, instant top-ups, etc. About 90% of people showed great interest and willingness to use these services, indicating that people will be more likely interested in using and adopting online banking services when service providers (online banks) proposes and presents new types of services to customers.
- Last but not least, more than 80% of people responded that the bank's reputation plays a crucial role in the adoption of online banking, and this could be another valuable outcome of this research that the reputation of the service providers (online banks) is a pivotal factor for customers to adopt online banking.

However, the second research question aimed to study the role of social media in adopting online banking services. As a result of the second research question: what is the role of SM (social media) on customers' choice to adopt online banking services, the author found that several social media channels played an important role for Central Asian people in the adoption of online banking:

- The questionnaire results showed that about 90% of participants unanimously agreed that it is essential for them to check others' opinions through social media before making any decisions. These participants believed that previous experiences could help them avoid repeating the same mistakes as others might have done by choosing irresponsible and unsecured service providers (online bank).
- Moreover, the effect of social media on customers' decisions was also significant; the survey result showed that people who participated in the questionnaire responded that they either have received a recommendation about new product and services or recommended somebody through social media regularly.
- The research outcome showed that there were four widely used social media channels in Central Asia; Instagram was the most popular among all other platforms about 77% of people uses Instagram every day, followed by Facebook 64% and OK (Odnoklassniki) 46.3% of people uses these social media channels daily. Thus, VK (Vkontakte) was also a widely used social media platform making up 179 or 43.9% fourth-largest social media channel in Central Asia. As the research outcome depicted, social media channels mentioned above have many active users, which can be interpreted as these social media

channels could be used as effective and efficient tools to reach both existing and potential customers.

Based on research results, the following recommendations can be made for service providers (online banks), fintech companies that plan to invest, implement and start completely online-based banking services in Central Asia. Besides, the research outcome can be helpful to researchers, students, academics, etc. to get a broader vision about Central Asian customers, their thoughts and preferences about online banking, the current condition of online banking, and customers expectations:

- The survey outcome indicated that the most important factors affecting customers in adopting online banking in Central Asia are transparency, user-friendliness, convenience, the banks' reputation, trust, privacy protection, etc. Therefore, online banking websites should provide simple and transparent information, as websites with complicated and misleading information are usually avoided by customers resulting in the loss of the most valuable asset customers.
- The security-related concerns were also listed as essential factors to adopt online banking services among Central Asian customers; therefore, it is important to provide secure online banking services to encourage the customers to use online banking services.
- Besides, research outcomes showed that trust plays a significant role in adopting online banking since most people only adopt online banking and benefit from it when it's reliable. To eliminate the fear, mistrust and build a trust bridge with customers, online banks should collaborate with existing and well-reputed banks in the market.
- Online banks should constantly update and offer new services to keep existing customers interested and attract new ones. Research results indicated that people are more interested in using new services, which are more convenient and easy to use.
- The companies (online banks) should not underestimate the power of social media and word of mouth while operating in the Central Asian market, as research outcome showed that social media has a strong presence and influence on customers' purchasing decisions.
- The top four most widely used social media channels in Central Asia were (Instagram, Facebook, Odnoklassniki, and Vkontakte) which can be ideally used as effective and efficient marketing channels to reach potential customers, and strengthen the relationship with existing customers, as these social media channels have the largest audience and active daily users in Central Asia.

CONCLUSION

This research paper aimed to find the most important factors that could affect and hinder customers from adopting online banking in Central Asia. The research paper consisted of two questions regarding the factors that could affect customers and the role of social media in the adoption of online banking. However, after studying online banking adoption articles, the author collected information about the most important factors affecting customers' behaviour and attitude towards online banking. According to previous studies related to online banking and its adoption, the following factors played a significant role in considering using online banking services: web usability, security-related concerns, information quality, trust-related concerns, quality of the service, convenience, privacy-related concerns, etc.

The following theories have been used to support this thesis: Theory of Planned Behaviour, Theory of Reasoned Action and Technology Acceptance Model. These theories have high relevancy to research problem, questions and even used in many previous studies related to online banking and its adoption in various markets. Based on the factors mentioned earlier, the questionnaire was structured using Google form, and questions were spread through the author's personal private social media channels to collect primary data from Central Asian customers. As a result, 408 responses have been collected within two weeks from five different countries: Uzbekistan, Kazakhstan, Kyrgyzstan, Turkmenistan, and Tajikistan, whereas only 384 answers were completed and used in the final analysis. The targeted age group in this thesis was 18 to 45+ as people who fall into this age group believed to be potential users of online banking services. However, this thesis aimed to collect data from people with different backgrounds; therefore, people who participated in the questionnaire were from different spheres, students, and professional expats. The non-random sampling method was used in this thesis to get primary data from Central Asian customers. The collected results were analyzed using Microsoft Excel 2016 to convert the survey outcomes into pie charts and graphs. Besides, inferential statistics were employed to analyze and find the Spearman's correlation coefficient in given factors by using the software IBM-SPSS (version 27) statistical analyses tool.

It was discovered that the most important factors affecting customers to adopt online banking in Central Asia were security, web-usability, trust, the reputation of the service provider (online bank), user-friendliness, protection from all forms of frauds, etc. A significant number of people (about 80% of them) responded that their trust in online banking is not as strong as traditional

banks due to lack of human interaction as in traditional banks; all the affairs conduct through face-to-face interaction between customers and bank representatives. This is believed to be important in such collective societies in contrast to online banking; all transactions occur through the web or internet without human interference. To eliminate this barrier and increase trust towards online banking, the service providers should focus on building a good image, increasing their presence in the market, and improving their reputation by collaborating with existing, well-reputed banks. As the survey result was depicted, about 80% of people responded that the bank's reputation plays a crucial role in online banking services. Although most people respond that they use online banking, their trust in online banking is not strong compared to traditional banks; once again, security and lack of faith, as people presume there is a high risk associated with online banking. The study outcome also showed that the security factor plays an important role in adopting online banking since online banking could only be useful when it is secure. According to the component of TRA, perceived usefulness, the customers will be more likely to adopt the services associated with ease and conveniences; therefore, it is essential to have secured and user-friendly services to encourage the customers to use online banking. Moreover, research results also indicated that people were eager to use new types of online banking services with a broader range of options. By considering this, online banks should constantly update and upgrade their services; this could be a pivotal factor in encouraging and increasing online banking services among people.

Furthermore, as online banking was listed as a newly entered sector in Central Asia, it was also important to the author to find out the most effective and efficient way to reach potential customers, increase brand awareness, and strengthen brand loyalty. The second research question aimed to study the role of social media in customer's decisions towards online banking. The results showed that social media has become extremely popular and has a tremendous effect on customers purchasing decision in Central Asia: which indicates that online banking services can effectively and efficiently be spread through social media channels like Instagram, Facebook, OK (Odnoklassniki), and Vkontakte as these social media channels were widely used all across Central Asian countries. Based on the study results, it can be concluded that social media is indeed an effective and efficient marketing channel to reach both existing and potential customers, increase brand awareness, improve relationships between companies and customers due to strengthening brand loyalty. Last but not least, after reviewing previous studies and conducting his practical research, the author concluded that web usability, security, information quality, trust, quality of the service, transparency, user-friendliness, convenience, reputation, all-around services, etc. are the most important factors influencing online banking adoption in Central Asia. The research outcome

indicated that the following social media channels Instagram, Facebook, OK (Odnoklassniki), and Vkontakte, can be used to eliminate most of the factors that hinder customers from adopting and using online banking services, particularly trust, reputation, transparency, etc. Finally, it is hoped that the aim of the thesis is achieved, as there have not been many studies before this thesis about the factors that could affect to adoption of online banking in Central Asia, specifically from the customer's perspective.

This thesis is covered the most important aspects for customers to consider using online banking and its broader usage across Central Asia. The next steps would be more market analyses and practical implementation of given suggestions in this thesis. Besides, as social media and its role in online banking adoption are a broad topic, it can be studied further in details in future by students, researchers, etc., with more focus on both positive and negative effects on customers and companies, as in this research, the author solely looked it in more generally rather going into specifics. The author would propose that any given online banking service providers who wish to operate in this market should incorporate with already existed well-reputed banks. Ensure all the factors highlighted in this thesis handles accordingly, provide the latest online banking services, and keep a strong presence in social media.

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APPENDICES

Appendix 1. Survey questions

Online Banking in Central Asia

Dear Participant(s),
My name is Nuriddin, a bachelor's student from Tallinn University of Technology studying International Business Administration. I am researching about online-banking services in Central Asia, specifically on the factors that affect customers' adoption of online banking services.

E-banking is also known as online banking or mobile banking, is one of the vastly growing financial sectors, where modern technologies combined with the internet have raised the banking industry to another level, and the concept of banking services anytime & anywhere has enabled 24/7 access to financial services for users.

The questionnaire consists of 28 questions and answering takes approximately 7-10 minutes. This questionnaire is anonymous and completely confidential. All the answers are kept private regarding the research. Your participation is highly appreciated, and I am grateful for your help.

Questions	Options				
Do you know any online banking service?	Yes	No			
Have you used online banking services?	Yes	No			
How frequently do you use online banking?	1 to 2 times a week	3 to 5 times a month	6 to 10 times in six months	Every day	Several times a year
User-friendliness is an important factor in the adoption of online banking? [Web-usability]	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I abstain visiting online banking websites which have poor navigation, such as slow downloading of web-pages and poor design (in general)? [Web-usability]	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
The following security aspects play a significant role to me in the adoption of online banking and its continued use (i.e. secure transactions, service, app	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree

security, and secure purchases). [Security]					
How important are the following factors for you to consider using online banking (privacy protection, fraud, data breach, etc.)? [Privacy]	Not important at all	Not important	Somewhat important	Important	Very important
How important are the following factors for you to consider using online banking services, (fast transaction's, transparency, preciseness, and comprehensible information)? [Information quality]	Not important at all	Not important	Somewhat important	Important	Very important
Lengthy information creates difficulty for me and is mostly avoided and not viewed by me? [Information quality]	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Trust on the bank plays an important role in the adoption of online-banking services? [Trust]	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
My trust in online-banking services is not as strong as contrasted with trusting in off-line services that have been provided by the bank? [Trust]	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
On a scale of 1 to 5, (1 being the Not at all Important and 5 being Very Important), please rate how important the following reasons are for you to consider using online banking? [Lower transaction costs]	Not important at all	Not important	Somewhat important	Important	Very important
On a scale of 1 to 5, (1 being the Not at all Important and 5 being Very Important), please	Not important at all	Not important	Somewhat important	Important	Very important

rate how important the following reasons are for you to consider using online banking? [Physical security (app & card)]					
On a scale of 1 to 5, (1 being the Not at all Important and 5 being Very Important), please rate how important the following reasons are for you to consider using online banking? [Security from (frauds & scams)]	Not important at all	Not important	Somewhat important	Important	Very important
On a scale of 1 to 5, (1 being the Not at all Important and 5 being Very Important), please rate how important the following reasons are for you to consider using online banking? [Wider acceptance of contactless payments]	Not important at all	Not important	Somewhat important	Important	Very important
On a scale of 1 to 5, (1 being the Not at all Important and 5 being Very Important), please rate how important the following reasons are for you to consider using online banking? [More ATM's to withdraw the money]	Not important at all	Not important	Somewhat important	Important	Very important
On a scale of 1 to 5, (1 being the Not at all Important and 5 being Very Important), please rate how important the following reasons are for you to consider using online banking? [Safe transaction with feedback on transfer (SMS or Email notifications)]	Not important at all	Not important	Somewhat important	Important	Very important
On a scale of 1 to 5, (1 being the Not at all Important and 5 being Very Important), please rate how important the following reasons are for	Not important at all	Not important	Somewhat important	Important	Very important

you to consider using online banking? [24/7 Access to online banking services]					
On a scale of 1 to 5, (1 being the Not at all Important and 5 being Very Important), please rate how important the following reasons are for you to consider using online banking? [Option to exchange different currencies]	Not important at all	Not important	Somewhat important	Important	Very important
On a scale of 1 to 5, (1 being the Not at all Important and 5 being Very Important), please rate how important the following reasons are for you to consider using online banking? [24/7 Customer Support]	Not important at all	Not important	Somewhat important	Important	Very important
On a scale of 1 to 5, (1 being the lowest and 5 being the highest). Please indicate your interest in using the following e-banking service(s)? [Money transfers (local and international)]	Very low	Low	Average	High	Very high
On a scale of 1 to 5, (1 being the lowest and 5 being the highest). Please indicate your interest in using the following e-banking service(s)? [Instant top-ups]	Very low	Low	Average	High	Very high
On a scale of 1 to 5, (1 being the lowest and 5 being the highest). Please indicate your interest in using the following e-banking service(s)? [Balance inquire/mini statement]	Very low	Low	Average	High	Very high
On a scale of 1 to 5, (1 being the lowest and 5 being the highest). Please indicate your interest in using the following e-banking service(s)? [Bill payments]	Very Low	Low	Average	High	Very high

On a scale of 1 to 5, (1 being the lowest and 5 being the highest). Please indicate your interest in using the following e-banking service(s)? [Cash withdrawals]	Very low	Low	Average	High	Very high
On a scale of 1 to 5, (1 being the lowest and 5 being the highest). Please indicate your interest in using the following e-banking service(s)? [Savings]	Very low	Low	Average	High	Very high
On a scale of 1 to 5, (1 being the lowest and 5 being the highest). Please indicate your interest in using the following e-banking service(s)? [Online purchases]	Very low	Low	Average	Low	Very high
On a scale of 1 to 5, (1 being the lowest and 5 being the highest). Please indicate your interest in using the following e-banking service(s)? [Salary deposit]	Very low	Low	Average	High	Very high
On a scale of 1 to 5, (1 being the lowest and 5 being the highest). Please indicate your interest in using the following e-banking service(s)? [Micro loans]	Very low	Low	Average	High	Very high
Does the reputation of the bank play a vital role to you in the adoption of online banking service? [Brand Awareness]	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
How is it important for you to check what other people think about online banking services before you make any decision? [Public opinion]	Not important at all	Not important	Neutral	Important	Very important
On a scale of 1 to 5, (1 being the lowest and 5 being the highest), how interested are you to use online banking service?	1	2	3	4	5

Which of the following Social Media platforms do you use the most on your daily basis? (please choose 3 the most used ones)	Instagram	Facebook	Odnoklassniki (OK)	(Vkontakte) VK	TikTok WhatsApp
What are the main activities you do on SM (social media)?	Chatting with friends and families	Watching News and Videos	Review new products and Services	Reading news	All above
How many hours do you spend on social media (per day)?	0,5 to 2 hours	3 to 4 hours	5 to 6 hours	Over 6 hours	Over 10 hours
At what time are you most active on social media?	In the morning (6 am to 11 am)	In the afternoon (12 pm to 4 pm)	In the evening (5 pm to 11 pm)	In the early morning (12 am to 5 am)	
On a scale of 1 to 5, (1 being the lowest and 5 being the highest), how does the following information that you get through social media affects your purchasing decision (news about product/service, advertisings, advises, etc.)?	1	2	3	4	5
How often do you receive a recommendation or recommend somebody about new products and services via social media?	Not at all	Once a day	Several times a week (3 to 4 times)	Several times a month	Several times a year
When was the last time you purchased a product or service that you have seen it via social media?	Yesterday	1 week ago	1 month ago	6 months ago	Never
Gender?	Male	Female	Other		
What is your current age?	18-25	26-34	35-44	45 over	
What is your occupation?	Option to comment				
What is your average income per annual ($)?	1500 to 5000	6000 to 10000	11000 to 20000	Over 21000	
What is your nationality?	Kazakhstan	Kyrgyzstan	Tajikistan	Turkmenistan	Uzbekistan

Appendix 2. Questionnaire results

Variable		Frequency	Percentage
Do you know any online banking service?	No	8	2.1
	Yes	376	97.9
Have you used online banking services?	No	12	3.1
	Yes	372	96.9
How frequently do you use online banking?	1 to 2 times a week	158	41.1
	3 to 5 times a month	178	46.4
	6 to 10 times in six months	7	1.8
	Every day	31	8.1
	Several times a year	10	2.6
User-friendliness is an important factor in the adoption of online banking? [Web-usability]	Strongly Disagree	1	0.3
	Disagree	5	1.3
	Neutral	1	0.3
	Agree	89	23.2
	Strongly Agree	288	75.0
I abstain visiting online banking websites which have poor navigation, such as slow downloading of web-pages and poor design (in general)? [Web-usability]	Strongly disagree	1	0.3
	Disagree	6	1.6
	Neutral	6	1.6
	Agree	82	21.4
	Strongly Agree	289	75.3
The following security aspects play a significant role to me in the adoption of online banking and its continued use (i.e. secure transactions, service, app security, and secure purchases). [Security]	Strongly disagree	1	0.3
	Disagree	5	1.3
	Neutral	6	1.6
	Agree	45	11.7
	Strongly Agree	327	85.2
How important are the following factors for you to consider using online banking (privacy protection, fraud, data breach, etc.)? [Privacy]	Not important at all	0	0
	Not important	6	1.6
	Somewhat important	4	1.0
	Important	53	13.8
	Very important	321	83.6
	Not important at all	4	1.0

How important are the following factors for you to consider using online banking services, (fast transaction's, transparency, preciseness, and comprehensible information)? [Information quality]	Not important	5	1.3
	Somewhat important	4	1.0
	Important	43	11.2
	Very important	328	85.4
Lengthy information creates difficulty for me and is mostly avoided and not viewed by me? [Information quality]	Strongly disagree	1	0.3
	Disagree	13	3.4
	Neutral	12	3.1
	Agree	217	56.5
	Strongly agree	141	36.7
Trust on the bank plays an important role in the adoption of online-banking services? [Trust]	Strongly disagree	0	0
	Disagree	7	1.8
	Neutral	3	0.8
	Agree	123	32.0
	Strongly agree	251	65.4
My trust in online-banking services is not as strong as contrasted with trusting in off-line services that have been provided by the bank? [Trust]	Strongly disagree	14	3.6
	Disagree	30	7.8
	Neutral	32	8.3
	Agree	277	72.1
	Strongly agree	31	8.1
On a scale of 1 to 5, (1 being the Not at all Important and 5 being Very Important), please rate how important the following reasons are for you to consider using online banking? [Lower transaction costs]	Not important at all	2	0.5
	Not important	4	1.0
	Somewhat important	8	2.1
	Important	40	10.4
	Very important	330	85.9
On a scale of 1 to 5, (1 being the Not at all Important and 5 being Very Important), please rate how important the following reasons are for you to consider using online banking? [Physical security (app & card)]	Not important at all	1	0.3
	Not important	3	0.8
	Somewhat important	7	1.8
	Important	39	10.2
	Very important	334	87.0
On a scale of 1 to 5, (1 being the Not at all Important and 5 being Very Important), please rate how important the following reasons are for you to consider using online banking? [Security from (frauds & scams)]	Not important at all	1	0.3
	Not important	4	1.0

	Somewhat important	9	2.3
	Important	34	8.9
	Very important	336	87.5
On a scale of 1 to 5, (1 being the Not at all Important and 5 being Very Important), please rate how important the following reasons are for you to consider using online banking? [Wider acceptance of contactless payments]	Not important at all	2	0.5
	Not important	3	0.8
	Somewhat important	9	2.3
	Important	40	10.4
	Very important	330	85.9
On a scale of 1 to 5, (1 being the Not at all Important and 5 being Very Important), please rate how important the following reasons are for you to consider using online banking? [More ATM's to withdraw the money]	Not important at all	0	0
	Not important	3	0.8
	Somewhat important	7	1.8
	Important	46	12.0
	Very important	328	85.4
On a scale of 1 to 5, (1 being the Not at all Important and 5 being Very Important), please rate how important the following reasons are for you to consider using online banking? [Safe transaction with feedback on transfer (SMS or Email notifications)]	Not important at all	1	0.3
	Not important	3	0.8
	Somewhat important	8	2.1
	Important	43	11.2
	Very important	329	85.7
On a scale of 1 to 5, (1 being the Not at all Important and 5 being Very Important), please rate how important the following reasons are for you to consider using online banking? [24/7 Access to online banking services]	Not important at all	1	0.3
	Not important	1	0.3
	Somewhat important	7	1.8
	Important	40	10.4
	Very important	335	87.2
On a scale of 1 to 5, (1 being the Not at all Important and 5 being Very Important), please rate how important the following reasons are for you to consider using online banking? [Option to exchange different currencies]	Not important at all	2	0.5
	Not important	2	0.5
	Somewhat important	9	2.3
	Important	44	11.5
	Very important	327	85.2
On a scale of 1 to 5, (1 being the Not at all Important and 5 being Very Important), please rate how important the following reasons are for you to consider using online banking? [24/7 Customer Support]	Not important at all	1	0.3
	Not important	2	0.5
	Somewhat important	8	2.1
	Important	40	10.4

	Very important	333	86.7
On a scale of 1 to 5, (1 being the lowest and 5 being the highest). Please indicate your interest in using the following e-banking service(s)? [Money transfers (local & international)]	Very low	3	0.8
	Low	4	1.0
	Average	24	6.2
	High	111	28.9
	Very high	242	63.0
On a scale of 1 to 5, (1 being the lowest and 5 being the highest). Please indicate your interest in using the following e-banking service(s)? [Instant top-ups]	Very low	6	1.6
	Low	7	1.8
	Average	28	7.3
	High	113	29.4
	Very high	230	59.9
On a scale of 1 to 5, (1 being the lowest and 5 being the highest). Please indicate your interest in using the following e-banking service(s)? [Balance inquire/mini statement]	Very low	1	0.3
	Low	8	2.1
	Average	24	6.2
	High	114	29.7
	Very high	237	61.7
On a scale of 1 to 5, (1 being the lowest and 5 being the highest). Please indicate your interest in using the following e-banking service(s)? [Bill payments]	Very Low	26	6.8
	Low	9	2.3
	Average	26	6.8
	High	114	29.7
	Very high	235	61.2
On a scale of 1 to 5, (1 being the lowest and 5 being the highest). Please indicate your interest in using the following e-banking service(s)? [Cash withdrawals]	Very low	0	0
	Low	8	2.1
	Average	30	7.8
	High	110	28.6
	Very high	236	61.5
On a scale of 1 to 5, (1 being the lowest and 5 being the highest). Please indicate your interest in using the following e-banking service(s)? [Savings]	Very low	1	0.3
	Low	8	2.1
	Average	43	11.2
	High	114	29.7
	Very high	218	56.8
On a scale of 1 to 5, (1 being the lowest and 5 being the highest). Please indicate your interest in using the following e-banking service(s)? [Online purchases]	Very low	0	0
	Low	4	1.0
	Average	11	2.9
	Low	4	1.0
	Very high	273	71.1
On a scale of 1 to 5, (1 being the lowest and 5 being the highest). Please indicate your interest in using	Very low	1	0.3
	Low	5	1.3
	Average	30	7.8

the following e-banking service(s)? [Salary deposit]	High	114	29.7
	Very high	234	60.9
On a scale of 1 to 5, (1 being the lowest and 5 being the highest). Please indicate your interest in using the following e-banking service(s)? [Micro loans]	Very low	6	1.6
	Low	3	0.8
	Average	22	5.7
	High	72	18.8
	Very high	281	73.2
Does the reputation of the bank play a vital role to you in the adoption of online banking service? [Brand Awareness]	Strongly disagree	0	0
	Disagree	3	0.8
	Neutral	6	1.6
	Agree	203	52.9
	Strongly agree	172	44.8
How is it important for you to check what other people think about online banking services before you make any decision? [Public opinion]	Not important at all	8	2.1
	Not important	16	4.2
	Neutral	97	25.3
	Important	228	59.4
	Very important	35	9.1
On a scale of 1 to 5, (1 being the lowest and 5 being the highest), how interested are you to use online banking service?	1		
	2		
	3	9	2.3
	4	85	22.1
	5	290	75.5
Following Social Media platforms do you use the most on your daily basis?	Instagram	314	77.0
	Facebook	261	64.0
	Odnoklassniki (OK)	189	46.3
	(Vkontakte) VK	179	43.9
	WhatsApp	17	4.1
	TikTok	10	2.4
What are the main activities you do on SM (social media)?	Chatting with friends and families	213	53.2
	Watching News and Videos	83	22.6
	Review new products and Services	39	10.6
	Reading news	29	7.6
	All above	20	6.0
	All above and some other things	10	0.0
	All in one	10	0.0
	0,5 to 2 hours	90	23.4

How many hours do you spend on social media (per day)?	3 to 4 hours	239	62.2
	5 to 6 hours	47	12.2
	Over 6 hours	8	`2.1
	Over 10 hours	0	0
At what time are you most active on social media?	In the morning (6 am to 11 am)	49	12.8
	In the afternoon (12 pm to 4 pm)	84	21.9
	In the evening (5 pm to 11 pm)	200	52.1
	In the early morning (12 am to 5 am)	51	13.3
On a scale of 1 to 5, (1 being the lowest and 5 being the highest), how does the following information that you get through social media affects your purchasing decision (news about product/service, advertisings, advises, etc.)?	1	2	0.5
	2	4	1.0
	3	58	15.1
	4	288	75.0
	5	32	8.3
How often do you receive a recommendation or recommend somebody about new products and services via social media?	Not at all	0	0
	Once a day	59	15.4
	Several times a week (3 to 4 times)	194	50.5
	Several times a month	125	32.6
	Several times a year	6	1.6
When was the last time you purchased a product or service that you have seen it via social media?	Yesterday	58	15.1
	1 week ago	192	50.0
	1 month ago	113	29.4
	6 months ago	17	4.8
	Never	4	0.7
Gender?	Female	178	46.4
	Male	202	52.6
	Other	4	1.0
What is your current age?	18-25	219	57.0
	26-34	149	38.8
	35-44	14	3.6
	45 over	2	0.5
What is your occupation?	Student	202	56.9
	Manager	18	3.7
	Teacher	16	3.4
	Engineer	15	3.3
	Business owner	15	3.3

	Influencer	14	3.3
	Photographer	14	3.2
	Designer	14	3.2
	Receptionist	13	3.1
	Driver	12	3.0
	Seller	11	2.9
	Self-employed	11	2.9
	Accountant	11	2.9
	Web-developer	10	2.8
	Dentist	8	2.6
	Dfk	6	2.4
What is your average income per annual ($)?	1500 to 5000	238	61.7
	6000 to 10000	50	13.0
	11000 to 20000	59	15.4
	Over 21000	38	9.9
What is your nationality?	Kazakhstan	77	20.1
	Kyrgyzstan	69	18.0
	Tajikistan	71	18.5
	Turkmenistan	76	19.8
	Uzbekistan	91	23.7

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