Thesis for the Degree of Master of Business Administration

Factors of UTAUT affecting the Use Behavior:

Based on Telegram application in Uzbekistan

by

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(통합기술수용이론 요인이 사용 행동에 미치는 영향: 우즈베키스탄 텔레그램 앱을 중심으로)

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Abstract

우즈베키스탄에서 가장 많이 사용하는 앱은 Mobile Instant Messaging(MIM) 앱 중 하나가 WhatsApp 앱이다. 그러나 우즈베키스탄 지역에서 본 앱에 대한 액세스가 제한되어 WhatsApp 앱을 대체할 수 있는 대안 앱으로 Telegram 앱을 선호한다. 최근에 우즈베키스탄에서 MIM 앱 중에서 가장 많이 사용되는 앱은 Telegram 앱이다.

본 연구의 목적은 우즈베키스탄에서 Telegram 앱의 사용자 수용에 영향을 미치는 요소를 연구하는 데 있으며, Unified Theory of Acceptance and Use of Technology (UTAUT) 모델을 적용하여 기존의 연구에서 수정된 연구모델을 개발하였다. 설문조사를 우즈베키스탄에서 Telegram 앱을 사용하는 사람들을 대상으로 온라인으로 실시하였고 137 명의 참가자 중 7 명의 미완성 샘플이 제거되었다. 데이터 분석은 다음과 같은 결과를 나타냈다. 첫째로, UTAUT 모델은 이 연구에 만족한다. 둘째로, 성과기대, 노력기대, 사회적 영향, 및 지각된 편재성이 사용의도에 긍정적인 영향을 미쳤다. 세 번째로, 촉진조건과 사용의도가 사용행동에 긍정적인 영향을 미쳤다.

또한, 결론에 기초하여, 본 연구는 우즈베키스탄에서 교육의 맥락에서 사용할 수 있는 도구로서 Telegram 앱 응용의 채택을 연구할 필요가 있음을 제시한다

Keywords: 통합기술수용이론, 성과기대, 노력기대, 사회적 영향, 지각된 편재성,

I. Introduction

1. Background

These last 3 decades, human life has been changed dramatically, with the development of mobile phones. To put it another way, the world of phones has brought large impact on human life, with its ability to make communication through distance a lot easier, access to the world, convenience to use, various of features. And the role of mobile phone in our life can be seen from the growth of number of mobile phone subscribers, as the number of mobile phone subscribers has reached 7.37 billion and already outpaced the amount of world population. Moreover, around 3.5 billion people - 40% of world population has an access to the internet (Statista, 2016).

When the first mobile phones were introduced, their only function was to make calls, and they were so bulky it was impossible to carry them in a pocket. Later, mobile phones belonging to the Global System for Mobile Communications (GSM) network were capable of sending and receiving text messages. As these devices evolved, they became smaller and more features were added. It seems that mobile phone has become the one device that replaces many other devices we use daily (such as wristwatches, calendars, alarms, GPS, cameras or even laptop), as its functions develop gradually (Businessteacher, 2011).

Smartphone, is a mobile phone which has the highly advanced features, meanwhile a regular mobile phone that does not includes those advanced features is known as a feature phone. Provided more detailed definition, feature phone is a cell phone that contains a fixed set of functions beyond the functions such as voice calling and text messaging, although it does not have the functions as extensive as a Smartphone. For example, feature phones may offer Web browsing and e-mail, but they generally cannot download applications from an online marketplace. Besides, the Smartphone is a mobile phone that can offer wide range of the advanced computing features and connectivity rather than a coexisting regular mobile phones. These advanced mobile devices possess powerful processors, abundant memory, larger multi-touch screen and a virtual keyboard with e-mail, web browsing and WiFi connectivity (Nimis P. L. et al. 2010). The main factor that distinguishes between a mobile phone and a Smartphone is that a Smartphone is a mobile phone that offers more advanced computing ability and connectivity than a contemporary basic feature phone (Litchfield, 2010).

Smartphone enables its users to download and install software, games and other programms provided by third-party providers. The third-party software, that is installed on most Smartphones, are also known as a mobile application (mobile app). These existing mobile applications run on mobile operations systems (mobile OS). There are several types of mobile platforms - mobile operating systems, most commons of which are Windows Phone, Android and iOS etc. Certain mobile applications only apply to the mobile operation system, of which, the Software Development Kit was used to develop the application, meanwhile some of these mobile applications can be reprogrammed into various

versions that can be launched on other different mobile operating systems. And as a result, mobile application distribution platforms, such as App Store, Google Play Store or Windows Phone Store etc. have emerged and through these platforms mobile applications are published and distributed. Initially, applications were applied to many domains, such as, media, entertainment, news and books etc. And nowadays, they are successfully used even in healthcare, study or business activities.

Shuo Mei et al. on their study of user acceptance of Wechat application, state some characteristics that feature Smartphones; Smartphones that support GSM under GPRS network, CDMA1X under CDMA network, 3G or 4G, now in some countries, even 5G networks - have wireless access to the Internet; Personal digital assistant functionality - web browser, task manager etc(all feature mobile phone functions); operating system - with independent CPU and RAM, with more applications potentially being able to be installed, the features of the Smartphones could be extended more infinitely; customization - features of the mobile phone are able to be expanded in relation to personal requirements, with expansile functions such as: built-in features real time extension, software upgrades and intelligent recognition of software compatibility; scalability, which can support a lot of third-party software.

Uzbekistan, as one of the developing countries, from the first days of independence also has paid great attention to the comprehensive development of information and communication technologies and their wide application in all spheres of life of state and society. Over a short period the authorities created the legal framework conducive to further

formation and progress of market of IT-technologies. By 2016, the number of mobile subscribers have reached 24 million people, 80% of total population of Uzbekistan. The growth of number was considerable, as the amount of mobile subscribers were only 5.8 million, as of 2007. Similarly, internet speed in Uzbekistan have increased almost six-fold during the past 10 years, as well. By early 2016, internet user penetration had reached an estimated 48% - 15 million internet users. This was well up from the 2005 figure, when internet user penetration stood at just over 4%.

One of the first MIM apps that has been widely used in Uzbekistan is WhatsApp app, which was founded by Jan Koum and Brian Acton who had previously spent 20 years combined at Yahoo. In these days WhatApp has more than 1 billion users in over 180 coumtries of the world. However, in 2013, in the result of restriction to the access to WhatsApp application for some reasons in the area of the Republic of Uzbekistan, people preferred Telegram app as the best alternative app to replace WhatsApp. Nowadays, most widely used application in Uzbekistan is Telegram app among mobile instant messaging apps.

2. Study purpose

The purpose of this research is to study the factors affecting the user acceptance of Telegram app in Uzbekistan. In order to comprehend user acceptance of this application, it is necessary to examine the determinants of behavioral intention to use the application. Thus, this study extended

and modified the Unified Theory of Acceptance and Use of Technology (UTAUT) model to develop research model. Specifically, this research will study following statements regarding the factors which affect user's acceptance of Telegram application, by applying UTAUT model to this research:

1. Performance expectancy will affect positively to behavioral intention to use telegram application;
2. Effort expectancy will affect positively to behavioral intention to use Telegram application;
3. Social influence will affect positively to behavioral intention to use Telegram application;
4. Perceived ubiquity will affect positively to behavioral intention to use Telegram application;
5. Facilitating condition will affect positively to use behavioral intention of Telegram application;
6. Behavioral intention to use application will affect positively to use behavior of Telegram application.

II. Theoretical background

The theoretical background of the research will be reviewed in three parts: 1. Mobile applications. 2. Unified Theory of Acceptance and Use of Technology. 3. User acceptance of mobile applications. In the first part, we will overview the mobile applications, and through them instant messaging applications as well, with particular review of Telegram app. In the second part, Unified Theory of Acceptance and Use of Technology will be explained, presenting brief reviews of studies that has applied either UTAUT model or some of factors incorporated by UTAUT model. And in the third part. several studies regarding the user acceptance of mobile phone applications will be introduced.

1. Mobile applications

Mobile applications, also mostly referred to as an apps, are applications developed for small handheld devices, such as mobile phones, Smartphones, PDAs and so on. The most popular Smartphone platforms that support mobile apps today are Android, iOS, Windows Phone and BlackBerry etc (Priya Viswanathan 2016). Mobile apps can come preloaded on the handheld device as well as can be downloaded by users from app stores (Google Play Store, Apple's App Store, Windows Phone Store etc) or the Internet. *App store* is an online marketplace where users of Smartphones and other mobile devices can browse, purchase, and

download apps, that augment the capabilities of their devices. The App Store originally implies Apple's service for the iPhone, iPod Touch and iPad, which enables users to browse and download various mobile apps from their iTunes Store. Thus, Apple considers the "App Store" its trademark (Priya Viswanathan 2016). According to an online statistic journals, Google Play Store is leading on the numbers of available apps for download with amount of 2.2 million apps, followed by one of the largest company - Apple's App Store with 2 million apps available for download. By contrast, Apple's App Store is leading with number of 140 billion apps downloaded, compared to Google Play Store's indicators, that is 65 billion apps downloaded (Statista, 2016).

Currently applications are divided into three types; native apps, web apps and hybrid apps. Native apps live on the device and are accessed through icons on the device home screen. **Native apps** are the applications that can be installed through an application store (such as Apple's App Store or Google Play Store). This type of applications are developed specifically for one platform, and can utilize the entire advantages of all the device's features – such as the GPS, camera,the compass, the accelerometer, the list of contacts, and so on. They also can use the device's notification system and can work offline. **Hybrid apps** are applications that are developed as the part web apps and part native apps. Like native apps, they live in an app store and can take advantage of the many device features available. Like web apps, they rely on HTML being rendered in a browser, with the caveat that the browser is embedded within the app (Raluka Budiu 2013). Unlike the native

application **Web Apps** are not downloadable from traditional app stores such as the Apple App Store or the Android Market. Instead they are more akin to a website which has been specifically developed and highly optimised to look and feel similiar to a native app. This means – in theory at least – they can be accessed and run by anyone with a suitably modern Smartphone no matter which device or operating system they happen to be using (Jim Morrison).

2. Instant messaging applications

Instant messaging is an exchange of text messages in real time between two or more people logged into a particular instant messaging (IM) service. Additionally, instant messaging is more interactive and responsive than e-mail service, with the function of being able to send the messages immediately, yet the e-mail can take seconds or minutes to be queued up in a mail server. Instant messaging services may also provide video calling, file sharing as well as PC-to-PC or PC-to-phone calling. Some services can switch from "text chat" to "voice chat" for users with a headset or microphone. Not only these features, but also IM allows a user to maintain a list of people, e.g., “buddy list” or “contact list”, with whom to interact. IM became popular after Israeli-based ICQ introduced its service in 1996, which was later acquired by AOL. The major IM services are AOL's Instant Messenger (AIM), ICQ, Yahoo Messenger, Jabber, Skype etc (PCMag).

Mobile instant messaging (MIM) is a messaging service that uses

IM via mobile devices, employing various technologies such as text messaging, Wireless Access Protocol (WAP) and General Packet Radio Service (GPRS). Typical mobile instant messaging applications are Whatsapp, Telegram, KakaoTalk, Skype, Viber, WeChat etc. Unlike SMS, the utility of MIM is greatly enhanced by the addition of a service that will keep track of the online status and availability of your chat partners or "friends"; as well as notify you of changes to their status or availability. This type of service is called a "presence service". In general, presence can be considered containing various dynamic information on a user or client connected to the instant messaging service via various means. Examples of this information is reachability, availability and location of the user for communication. The combination of instant messaging and presence services is called an instant messaging and presence service (IMPS) (Salomaki 2003).

MIM applications nowadays are mostly based on Internet. It enables users communicate with other users not only through sending text messages, but also a voice video messages, as well as files. Moreover, those applications help users to efficiently avoid the waste of time and cost for both sender and receiver. Besides, instant messaging applications are not only tools for communication among mobile users. They have also become platforms for communications in the field of e-commerce, work, or even study (Shuo Mei et al. 2013).

Telegram app is a messaging app with a focus on speed and security, which was launched on August 14, 2013 for iOS and officially on October 20, 2013 the alpha version of Telegram for Android. Telegram is supported by

Pavel and Nikolai Durov. Pavel supports Telegram financially and ideologically while Nikolai's input is technological. It took a bit more than one year to reach the number of 50 million avtive users, after official launch of Telegram app. As of the February of 2016 Telegram has more than 100 million monthly active users as well as around 350,000 new users sign up each day. Also 15 billion messages are being delivered. daily

Unlike WhatsApp, Telegram is a cloud-based messenger with seamless sync. As a result, the user can access his/her messages from several devices at once, including tablets and computers, and share an unlimited number of photos, videos and files (doc, zip, mp3, etc.) of up to 1,5 GB each. And in case that user wouldn't like to store that data on that device, user can always keep it in the cloud. Likewise, user can create groups for up to 5000 people or channels for broadcasting to unlimited audiences and write to phone contacts and find people by their usernames. As a result, Telegram is like SMS and email combined – and can take care of all personal or business messaging needs. Furthermore, one more difference from WhatsApp is that Telegram is free and no ads, no subscription fees forever, while WhatsApp requires 0.99$ annual subscription fee, after one year of use. Moreover, there is green check service that shows the status a delivery of the message. One green check means message delivered to the Telegram cloud and user's friend has been notified if he/she allows notifications. Two green checks means message read (user's friend opened Telegram and opened the conversation with the message).

According to supporters of Telegram app, Telegram is more secure than mass market messengers like WhatsApp and Line. the app is based on the MTProto protocol, built upon time-tested algorithms to make security

compatible with high-speed delivery and reliability on weak connections and work with the community to improve the security of app's protocol and clients is continuously going. Moreover, Telegram app provides Secret chats service, which is meant for people who want more secrecy than the average users. All messages in secret chats use end-to-end encryption. This means only user and the recipient can read those messages – nobody else can decipher them, including the developers of Telegram. And when messages are deleted on users side of the conversation, the app on the other side of the secret chat will be ordered to delete them as well.

3. Unified Theory of Acceptance and Use of Technology

Unified Theory of Acceptance and Use of Technology (UTAUT) is the model that consolidates the eight theories and models about user acceptance and use behavior that has been previously presented and widely used. Ventkatesh et al. studied and compared these eight dominant models that have formerly been utilized to interpret technology acceptance behavior, including models such as Theory of Reasoned Action, Technology Acceptance Model, Motivational Model, Theory of Planned Behavior, a Combined Theory of Planned Behavior and Technology of Acceptance Model, Model of Personal Computer Use, Theory of Innovation Diffusion.

UTAUT suggests four dimensions that is supposed to have an effect

on behavioral intention: performance expectancy, effort expectancy, social influence and facilitating conditions, which are, as well, affected by the moderator variables such as age, gender, voluntariness of use and experience. These four main dimensions of UTAUT are related to the dimensions in those previous models or theories.

1. **Performance expectancy** is defined as the degree to which an individual believes that using the system will help him or her to attain gains in job performance. The term can be seen as an equivalent to the dimensions such as - Perceived Usefulness. from Technology Acceptance Model, Extrinsic Motivation from the Theory of Motivation and Relative Advantage from Diffusion of Innovation Theory.

2. **Effort expectancy** refers to the degree of ease associated with the use of the system. Effort expectancy is equivalent to the dimensions such as - Perceived Ease of Use from Technology Acceptance Model and Complexity in Innovation Diffusion Theory

3. **Social influence,** this dimension in UTAUT is defined as the degree to which an individual perceives that important others believe he or she should use the new system. The dimension is equivalent to Subjective Norm. from Theory of Reasoned Action and Theory of Planned Behavior.

4. **Facilitating conditions** is explained as the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system.. This can be an equivalent to the dimensions such as Perceived Behavioral Control in Theory of Planned Behavior; Self-efficacy in Social Cognitive Theory and Compatibility in

Innovation Diffusion Theory (IDT) (Venkatesh et al. 2003).

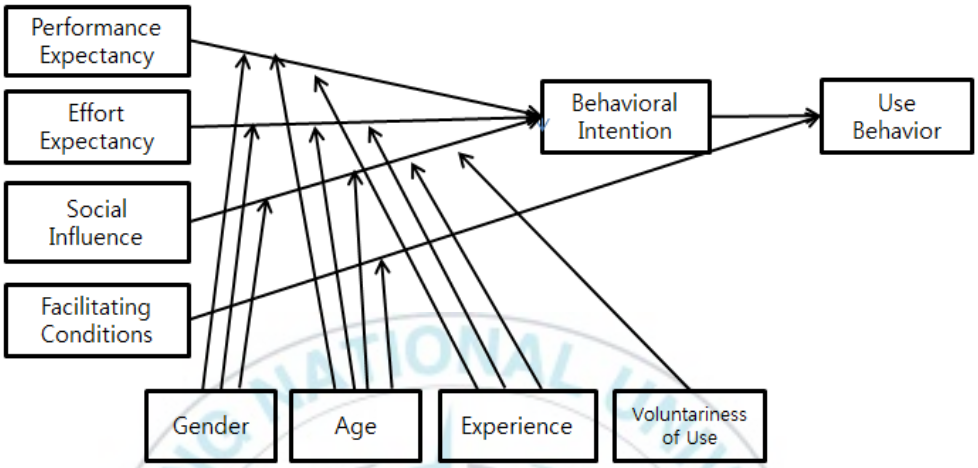


Figure 2-1 Unified Theory of Acceptance and Use of Technology

After development of UTAUT by Venkatesh et al. and being applied in research by many scholars, importance of this model has risen steadily in the field of information systems. According to the Professor Peter Rosen from University of California, the UTAUT model will provide the standard for technology acceptance behavior studies in the future, as well as the Technology Acceptance Model has proven its own significance in the same fields of study in the last decade. thus, several studies also has been conducted with the purpose to explain the effect that variables had on the entire model, and here below we will review some of those studies, that is provided as the sample researches that could help us to recognize more about the adoption of UTAUT in various fields of society.

3.1. Performance Expectancy

Performance expectancy is the first factor to determine whether it has either positive or negative effect on the behavioral intention in this model. Most scholars who applied UTAUT model to assess the user acceptance in their research, derived the original UTAUT model which was developed by Venkatesh et al. (2003), and modified to research by adding or removing some factors of the model, as well as associated these factors to the research.

Kuo-Ming Chu (2013) in his empirical study, which is focused to find out how internet impacted on collaborative innovation intermediaries, through validating UTAUT in the context of open innovation, pointed out that the performance expectancy has a significant influence on a behavioral intention to adopt the internet innovation intermediary platforms. In addition, the findings of the research confirm that the factor remains significant and strong predictor of behavioral intention. Another empirical study on adoption of Information and Communication Technologies was conducted by Babita Gupta in 2008 to enhance the government to employee in a government organization in a developing country. Similarly to other studies, researchers admit that the adoption behavior of ICT was examined by utilizing UTAUT model and all proposed factors including performance expectancy of UTAUT had a positive effect on the use of ICT.

Rakhi Takhur (2013), in his research work, purposed to investigate the factors involved in adoption of a new innovation by consumers specifically

in the mobile payment services context, and through the empirical findings they found out that all four factors of UTAUT, including performance expectancy, have significant impact in mobile payment service adoption among the consumers. another study regarding the mobile service was conducted by Thao Zhou (2008). In his research, Thao Zhou studied the factors user acceptance of mobile commerce and combined it with contextual offering – one of the characteristics of mobile commerce, as a result of which, as Thao Zhou explained, it is more appropriate to explain the use behavior based on the UTAUT model. The results data collected from 250 respondents in China and analyzed through the SEM software tool, revealed that performance expectancy affected the behavioral intention to use mobile commerce.

Azlina Abu Bakar et al. (2013) utilized UTAUT model to investigate the factor that can motivate students to continue to utilize student portal system in University College SHahPutra. Results of a total sample of 279 student respondents from UCSA (University College ShahPutra), revealed that two of the factors did not have any statistically significant influence on continuance intention to use UCSA student portal, including performance expectancy. Moreover, researchers suggest a conclusion that the lack of applications in student portal system could be an explanation for why the variable – performance expectancy not positively and significantly related to continuance intention to use student portal. another similar research was directed by Adnan Jamaludin et al (2011) which was purposed to investigate the factors that are expected to influence the intention of postgraduate students to use digital library based on modified

UTAUT model. The results of the analyses indicated that some variables including the performance expectancy were positively related to the behavioral intention to use digital library.

On his paper, James Bierstaker et al. (2014) used UTAUT to identify and examine factors, potentially influencing auditors' use or non-use of computer-assisted audit tools and techniques (CAATs). Results obtained from 181 auditors representing national, regional, local and Big four firms indicate that the variable - Performance expectancy had a positive influence on the use of CAATs, which means that it may increase the likelihood that auditors will accept CAATs. In addition, researches also suggest that 2 variables including performance expectancy are more important than other variables, in the audit context.

Wenhao David Huang and Sun Joo Yoo conducted a study among students of Public Midwestern University, targeting Web 2.0 applications and investigated a relationship between the usage and technology acceptance of Web 2.0 apps. Results obtained from the survey, which included the responds of 449 students, indicated that the students were more strongly influenced by perceptions of two determinants including performance expectancy, on the use of blogs, wikis, and virtual communities. Additionally, it can be seen from the results of the utilization level of web 2.0 tills, that on average, participants had higher level of performance expectancy. Farooq Alam Khan and Basheer Ahmad (2015) also utilized UTAUT with all its moderators in their study to determine which factors influence mobile web applications' adaptability of users in Pakistan. Thus, the findings of the research demonstrated that all

factors including performance expectancy, strongly influenced the behavioral intention to use web based applications. Hence, the scholars also suggest that conducted study implies that mobile web users in Pakistan tend to agree with system performance requirements. In the next study of the similar context, Din Jong and Tzong-Song Wang modified UTAUT model to the study to examine the technology acceptance of web-based learning of Taiwan Technical University students. Also, scholars used cluster sampling to select the students from four technical universities for the survey, and responds of 606 students were found to be valid samples for the analysis. Results of the set of these analyses showed that performance expectancy significantly and positively affected the behavioral intention of students use the web-based learning.

According to the research on the internet banking adoption in Kuala Lumpur, performance expectancy showed positive effect to use the internet banking among Malaysian users. Yeoh Sok Foon and Benjamin Chan Yin-Fah (2011) in this study, aimed to investigate the factors and determinants of internet banking adoption among Malaysian users and results revealed that all proposed factors of UTAUT, including performance expectancy, were positively correlated with behavioral intention to use internet banking in Malaysia. Kamal Ghalandari (2012) also studied the effects of proposed factors of UTAUT on acceptance of internet banking in Iran. Similarly to the study of Yoeh Sok Foon, the results of this study indicated that performance expectancy had significant and positive effect on users' behavioral intention to use e-banking services. which according to the suggestion of Kamal Ghalandari means

that users in Iran are more motivated to use the services of e-banking, if they find it useful to increase their performance. Another study on e-banking was conducted by Emad AbuShanab et al. (2010), after the fact that most Jordanian banks have adopted some form of internet usage and launched their own web-sites to save their customers, which resulted the rapid development of internet banking in Jordan. The analysis of survey results obtained from total of 523 respondents revealed that three factors of UTAUT including performance expectancy were significant as a predictor of behavioral intention to use e-banking. Yaobin Lu et al. focused on studying the user adoption of mobile banking on their research, based on the mobile banking user adoption model, which was proposed by integrating the TTF - Task Technology Fit model and UTAUT model. The results of data analysis, which was collected in China from 250 respondents, including working professionals and students, revealed that performance expectancy showed significant effect on user adoption of mobile banking.

Julian Lin et. al (2004) made a research on instant messaging acceptance and use among college students. Researchers note that the study validated UTAUT model in a new environment which was not work related. as the study was on the acceptance of IM among college students, undergraduate students in Singapore, which was mostly composed of teenagers and young adults were selected as the target subject for the survey. Results of this study show that performance expectancy did not affect behavioral intention as it was hypothesized, unlikely other studies. The conductors of the study supposed that it might

be attributed to non-work environment.

Aiming to provide a better understanding to citizens' adoption of e-government services through conceptualizing the role of intermediary organizations within e-government, Faris Al-Sobhi et al. (2011) examined the importance of intermediaries in the adoption of e-government from a citizens' perspective and the potential influence they have on bridging digital divide in societies in Saudi Arabia. In contrast to other most studies, the results indicated that performance expectancy did not have any unique significant influence to the prediction of behavioral intention to use e-government services in the Saudi Arabia e-government context. Mohammed Alshehri et. al (2012) also examined citizens' acceptance of e-government services in Kingdom of Saudi Arabia by collecting data from total of 400 citizens of the country. Research applied the UTAUT model to the study and examined the key factors based on the model, Based on collected data and the results of the analysis, researchers concluded that Performance Expectancy had positive influence on user's behavioral intention to use e-government services. The next research on adoption of e-government in Kuwait by utilizing the UTAUT model, was conducted by Suha AlAwadhi and Anne Morris in 2008. After analyzing data, gathered from 880 respondents, consisting of only students, scholars admit that the results revealed that the performance expectancy along with other factors had a positive significant effect on behavioral intention to use e-government services in Kuwait.

John Anderson and Paul Schwager (2004) in their research, utilized the UTAUT model to enhance the explanation of the adoption of wireless

technologies and Small and Medium Enterprises (SME) adoption. After conducting a survey as well as gathering all the data and analyzing, researchers found out that performance expectancy positively related to behavioral intention use wireless technologies and SME. Similarly, Yu Lung Wu et al. (2007) conducted a research which was directed on the explanation of how telecommunication companies in Taiwan design the marketing tactics closer to the consumers' need under the dual influences of the decreasing individual's contribution and the low utility rate, as well as how to improve customers' willingness to adopt 3G mobile telecommunication services. researchers gathered data from total of 394 respondents and investigated that performance expectancy significantly and positively influenced the behavioral intention in the context of adoption of 3G mobile telecommunication services.

3.2 Effort Expectancy

The next factor of UTAUT model to find out if it is related to the behavioral intention either positively or negatively is effort expectancy. Most researches confirmed that effort expectancy had a significant and positive affect towards the technology acceptance, whereas several other works reveal that the effect of effort expectancy was not significant, in technology acceptance context.

Matthew Wills et al. (2008) purposed to examine nurse's and certified nurse practitioners', as well as the physician assistants' acceptance of electronic medical records, by applying the UTAUT model to the study

along with PLS software to estimate the variables. after analyzing all the data collected from several nurse associations in South Dakota, researchers admit that some factors of UTAUT model including effort expectancy played a significant role in the healthcare professionals' acceptance of EMRs. Boonchai Kijsanayotin along with his research team (2009) also purposed in their study to understand the factors that influence health IT adoption in community health centers (CHC) in Thailand. Scholars applied the UTAUT model to the study and gathered data for the analyses from total of 1607 CHCs of twelve provinces. results revealed that the effect of effort expectancy on the behavioral intention to use health IT was significant and positive. Another study that intended to investigate the factors affecting the acceptance of information systems and technologies by health professional was conducted by Princely Ifinedo (2012) in Canada. The model was developed by using the UTAUT model with a minot modification and the set of analyses of the data collected from a survey of 227 healthcare professionals, confirmed significant and positive effect of the effort expectancy, followed by other factors.

Hsing-I Wang and Heng-Li Yang (2005) combined the UTAUT model with the theory of personality traits, aiming to examine the roles that personality traits play in the UTAUT model under the context of online stocking. After the data of the survey from total of 196 respondents was analyzed, results showed that the effort expectancy did not have any effect on behavioral intention under the context of online stocking.

In 2010, Gregor Polancic et al. conducted a research, where scholars studied the factors that affected the acceptance and use of technologies

and services of virtual - internet learning by students and their teachers, through applying the UTAUT model to the study. After the data was collected and analyzed, the results showed that effort expectancy did not relate positively to the behavioral intention to use e-learning technologies. Next study on e-learning was administered by Jian-Liang Cheng in 2011. Jian-Liang Cheng noted that both technological and learning expectancies should be taken into consideration while investigating the acceptance of e-learning. Therefore, Jian-Liang Cheng proposed a new model by integrating UTAUT model and e-learning systems with the unique leaning expectancies of the students, and data was collected by gathering valid samples of survey from 626 users of the e-learning systems. Results of set of all analyses indicated that all factors of UTAUT model including effort expectancy showed a significant and positive effect on behavioral intention in the context of e-learning acceptance. Marjan Hericko et al. (2010) also used the UTAUT model to develop appropriate measurement instrument in the research to examine students' and teachers' acceptance and use of Moodle, also known as an open source web-based virtual learning environment. In the survey 235 samples, which consisted of only undergraduate students, were found to be valid for data analysis. Thus, results indicated that effort expectancy did not have a significant relationship with the behavioral intention of undergeaduate students to use e-learning technologies and services. Another similar research was conducted by Din Jong and Tzong-Song Wang in 2009. Scholars modified UTAUT model to the study to examine the technology acceptance of web-based learning of Taiwan Technical University students. Also,

scholars used cluster sampling to select the students from for technical universities for the survey, and responds of 606 students were found to be valid samples for the analysis. Results of the set of these analyses showed that performance expectancy significantly and positively affected the behavioral intention of students use the web-based learning. Thamer Alrawashdeh et al. (2012), which was directed to understand the factors affecting the employees' intention to use web based training system. with this purpose the scholars conducted survey from total of 290 employees for data collection, and analyzed all the data through the model which was developed based on the UTAUT model. Results indicate that all factors including the effort expectancy and others had positive relationship with employees' intention to use web based training system.

Jung Kun Park et al. (2007) also utilized the UTAUT model in their research in order to attain a better understanding of China as a potentially highly mobile valuable communication technology market. Thus, for this reason, the data was collected by conducting the survey from 221 Chinese nationals and analyzed by utilizing Structural Equation Modeling (SEM) software. It can be seen from results that effort expectancy played a significant and positive role in the adoption of mobile technology by Chinese consumers. In context of communication technologies, Saleh Alwahaishi and Vaclav Snasel (2013) also conducted a research where they aimed to explain the factors affecting consumers' acceptance and use of information and communications technologies, by involving the UTAUT model to the study. Survey comprised total of 238 usable sample of respondents from Saudi Arabia, for the data analysis, and the results

demonstrated a significant affect of effort expectancy on the behavioral intention in ICT acceptance context. Bens Pardamean and Mario Susanto in 2012 also conducted a similar study that was aimed to investigate the student populace's acceptance of the blog technology through utilizing the UTAUT model in research. for the data collection only total of 49 entry units were found to be valid, after administrating the survey from students. According to the results of the analyzed data, effort expectancy was reported to have no any significant affect on the behavioral intention towards using the blog technology.

Ayankunle Adegbite (2013) studied a meta-analytic review of set of empirical findings. the purpose of the research was to conduct a meta-analysis in order to harmonize the empirical evidence, based on 37 selected set of empirical studies. Therefore, based on the results of analyses, researchers suggested that the relationship between effort expectancy and the behavioral intention was weak, that is to say that the effort expectancy did not have a significant effect on the behavioral intention. Another study on meta-analysis of the UTAUT model was conducted by Yogesh Dwivedi in 2011. The purpose of the research was to assume the statistical meta-analysis of findings described in 43 researches that have actually utilized UTAUT model, in order to understand whether the performance of the theory was consistent well across various studies. After the set of the analyses, results indicated that the effort expectancy had a significant effect on the user's behavioral intention.

Kung-Teck Wong et al. (2013) on their research focused on the

explanation of the factors affecting student teachers' intention to use the interactive whiteboards. Conducted survey for the data collection was composed of the responds of 159 student teachers, and findings of these data analyzed demonstrated the significant effect of effort expectancy in interactive whiteboard adoption amongst student teachers. Arumugam Raman et al. also conducted a similar research, aiming to determine the factors that affect the acceptance of smartboard among teachers of schools in Terengganu, based on the construct presented by the UTAUT model. and 68 teachers of five schools were selected as the target respondents for the survey. The empirical analyses of the study demonstrated insignificant relationship between the effort expectancy and behavioral intention of school teachers to use whiteboard.

Similarly to the researches of Faris Al-Sobhi et al. (2011) or Mohammed Alshehri et. al (2012), Yi-Shun Wang et al. (2006) also administered the research that was focused on understanding the factors which affect the acceptance of e-government services in Taiwan. Result of the assessed data collected from total of 244 respondents, revealed that the effort expectancy had a significant effect on behavioral intention to use e-government services. Paul Juinn Bing Tan conducted a research on another electronic service, where he intended to explain students' attitude and willingness to use electronic placement tests, by utilizing the UTAUT model. While gathering the data, 196 samples of survey from total of 230 were found to be valid for analysis. Results of the analyses set confirm that four constructs of the model, including effort expectancy had significantly positive effect on behavioral intention to e-placement

tests.

Mei Ling Keong also involved the UTAUT model to the research to study the influence of the selected factors on the usage of enterprise resource planning (ERP), as well as the evaluated some of the existing theoretical models in ERP implementation. Results of the data analyses demonstrated the significant effect of all six factors of the modified model, including effort expectancy on the behavioral intention in the acceptance and use of ERP systems.

3.3 Social influence

In this part, we will review the relationship between social influence and behavioral intention from previous studies that used UTAUT model in the technology acceptance context. Although many researches confirm that social influence has a significant and positive effect on technology acceptance, there are several studies with the contrasting findings, that is social influence does not have any significant and positive effect on the acceptance of technology.

Chian-Son Yu (2012) conducted a research, the purpose of which was to investigate the factors that affect people's adoption of mobile banking, by employing the UTAUT model to the study. While conducting survey, samples of 441 students were considered to be valid for data analysis, and results demonstrated that social influence had the most significant effect on individual's intention to use mobile banking. Another study of the same context which has been conducted by Tao Zhou et al in 2010, was

intended to explain the aspects affecting user's adoption of mobile banking. Proposed model to assess the factors' affect was modified by integrating the UTAUT model and the TTF model. Survey was composed of 250 valid samples of out of 265 respondents. Results of data analyses revealed that the social influence had significant relationship with user's behavioral intention to use internet banking service. Tiago Oliveira et al. (2014) also administered a research regarding the mobile banking adoption in Portugal. the proposed model of the study was modified by combining the UTAUT model and TTF model and ITF model. Data based on valid samples of 194 respondents was analyzed and unlikely to other studies showed that social influence was found to have no significant effect on behavioral intention. Also similar study was conducted by E. AbuShanab and J.M. Pearson (2007) in Jordan. This study also employed UTAUT model as the proposed model. Results after set of data analyses indicated that social influence along with performance expectancy and effort expectancy significantly affected individual's adoption of internet banking. In the next study on context of internet banking was conducted by Kholoud Ibrahim Al-Qeisi (2009), proposed research model was tested in two countries (UK and Jordan) to examine the factors of UTAUT model which affects the internet banking adoption in both countries. results of data analysis revealed that there was not any significant impact of social influence towards user's acceptance of internet banking.

Don Jyh-Fu Jeng and Gwo-Hshiung Tzeng (2011) conducted a study to determine whether social intention affects medical professionals'

behavioral intention to use clinical decision support system (CDSS). Study utilized Decision-Making Trial and Evaluation Laboratory (DEMATEL) technique to investigate the significance of relationship between variables of UTAUT model. set of analyses provided the result that social influence had the significant affect on behavioral intention to use DCSS by medical professionals. Another study on medical field was conducted by Nisakorn Phichitchaisopa and Thanakorn Naenna in 2013 in Thailand. Scholars applied the UTAUT model to explain the components influencing the acceptance of healthcare IT services by medical professionals. physicians, nurses and healthcare staff members of hospitals were selected as the target subject of the study, and 400 samples out of 437 respondents were found to be valid for data analysis. Results demonstrated a positive and significant impact of social influence on medical professionals' behavioral intention to use healthcare IT. Supasit Pannanurothai et al. (2009) also administrated the research on the same context, the purpose of which was directed to identify the factors that has effect on healt IT adoption in community health centers in Thailand. Randomly sampling the provinces for the survey resulted the selection of 1607 community health centers from twelve provinces. Results of data analysis confirmed that the factors of UTAUT model, including social influence had a positive and significant relationship with behavioral intention under the context of health IT adoption in community health centers. Next study regarding the health care was conducted by I-Chiu Chang et al. (2006) in Taiwan. Research team utilized UTAUT model to investigate physicians' acceptance of pharmacokinetics-based clinical decision supprt system (CDSS). 147

physicians from three hospitals, where pharmacokinetics-based CDSS is utilized, participated in survey for data collection. Results obtained from the set of analyses indicated that physicians' intention to use pharmacokinetics-based CDSS was not significantly affected by social influence.

Christer Carlsson et al. (2006) directed a study to explain the acceptance of mobile devices/services by employing UTAUT model to the research. Scholars distributed the questionnaire to 300 consumers through regular mail, and only 157 valid samples obtained for the data analysis. Results revelaed that social influence did not have a significant role in explaining the user acceptance of mobile device/services.

Aman Kumar Sharma and Dinesh Kumar (2012) directed a study to determine the elements which affects user acceptance of desktop-based computer software, using modified UTAUT model. MS-Word, Tally, Adobe Photoshop and MS-Access were selected as the target software for the research. Data for analysis was collected from 120 respondents including several college students. Results of the study revealed that had a negative influence on students' behavioral intention to use desktop-based computer softwares, such as MS-Word, Tally, Adobe Photoshop and MS-Access. Another research on the application of UTAUT model for explaining the students' perceptions of using course management software was conducted by Jack T. Marchewka and Kurt Kostiwa (2007). A web-based tool - Blackboard® was the target software of study on the acceptance of course management software. Results attained from analyses of data that was collected from 132 respondents

comprising of half of undergraduate and half of graduate students, demonstrated significant relationship between social influence and behavioral intention of students' behavioral intention to use Blackboard® software. Paul Juinn Bing Tan (2013) also directed a students related research aiming to study the aspects that influence to the use of english e-learning websites in Taiwan. As we said that the research was students related, the target objects of survey were students of college, and 147 students from ten colleges were involved to fulfill the questionnaire for data analysis. Results of these analysis showed that students' use behavior of english e-learning depends on social influence along with two other factors. Similarly, Omar F. El-Gayar and Mark Moran (2006) studied college students' acceptance of PCs, by applying UTAUT model to the study. 263 university students participated in the survey for data collection from tablet PC using web based survey instrument. According to the results obtained from analyses, social influence was demonstrated to have insignificant contribute towards students' behavioral intention to use Tablet PC. Keller Christina et al. (2007) conducted a comparative study on students' acceptance of e-learning environment targeting master course students of Nordic School of Public Health in Sweden and Kaunas university of Medicine in Lithuania. For data analysis, scholars gathered data from 32 students of Nordic School master course and 35 master course students from Kaunas University. Set of results revealed that social influence had a significant affect on behavioral intention of students in Nordic University after three factors respectively, whereas social influence had fifth significant affect

on behavioral intention of students to use e-learning service in Kaunas University, that is to say that students of Nordic university are impacted more significantly than the students of Kaunas University.

Joel Samson Mtebe and Roope Raisamo (2014) applied UTAUT model to the study to examine the dimensions that affect the intention of higher learning institutions' instructors to adopt and use open educational resources. survey for the data collection for the analysis was conducted among the instructors of five institutions, and samples of only 104 respondents out of 512 randomly selected instructors were found to be valid for analysis. Results indicated that most variables of UTAUT, including social influence did not have significant impact on instructors' behavioral intention to use OER. Another study conducted by Velma Lee and Shin-Jeng Lin was aimed to explain the acceptance of podcasting in higher education. Proposed model of the study was modified by integrating UTAUT model with TAM model. Valid samples for data analysis included 190 respondents out of 213 students. results of the study confirmed that social influence positively affects students' behavioral intention to use podcasting in higher education. Carmen C. Lewis et al. also conducted a higher education related research, purposed to explain the conditions that is likely to emerge the use of classroom technology, by utilizing UTAUT model. The data which included samples of 46 respondents comprising only instructors of higher education classes, was valid for analysis. Hence, the results indicated that performance expectancy, effort expectancy and social influence were most significant elements in respective order.

3.4 Perceived ubiquity

There are numbers of researches that applied perceived ubiquity to the studies the part of proposed model, as well as by adding the element to the proposed model. Therefore, this research also considered perceived ubiquity as one of the dimensions of the proposed model that affect behavioral intention, in the purpose to modify UTAUT model to the users' acceptance of Telegram application. Similarly to the other reviewed factors, researches confirm that perceived ubiquity also has both significant and insignificant effects towards user's acceptance of technolog, due to the variety of technologies.

Sang Hyun Jim and Gary Garrison (2008) conducted a research on the investigation of mobile wireless technology adoption. Researches developed a proposed model, which they referred to as the Mobile Wireless Technology Acceptance Model, to test the relationship between theoretical constructs spanning technological influence processes and cognitive influence processes, and their impact on Behavioral Intention. In the survey for data analysis, samples of only 242 respondents out of 862 individual employees of one of companies in South Korea, were found to be valid. Results of analyses showed that perceived ubiquity significantly and positively influenced employees' behavioral intention to use mobile wireless technology. another mobile service related research was directed by Shintaro Okazaki et al. (2012). Scholars on their research aimed to examine the effects of perceived ubiquity on consumers' acceptance of mobile advertising. survey was conducted in Japan, involving 135 undergraduate business major students from metropolitan universities of Tokio, as the target

respondents for the data collection. Set of analyses of the data revealed results that confirmed that perceived ubiquity had a statistically significant and negative influence on customers' intention to delete the ad, which researches explained that ubiquity of mobile device actually will only weaken customers' intention to delete the ad. Tao Zhou (2012) also conducted a study in context of mobile services, aiming to examine the factors affecting user's acceptance of mobile banking. Proposed model was modified by integrating perspectives of trust and flow experience, which included perceived ubiquity. For data analysis, samples of 200 respondents were collected at the service halls of China Mobile and China Unicorn, companies which Tao Zhou admits that represent two main telecommunication operators in China. Results obtained from analysis revealed that ubiquity has significant influence on the flow experience, which consequently affects customers' intention to use mobile banking. Thus, due to this finding, Tao Zhou also suggested that users always expect to use mobile banking to conduct payment anytime from anywhere. Another research on regarding the service of mobile payment was directed by Hong Yang and Zhonghua Yang in 2015. the research focused on the factors influencing the user's adoption of mobile payment from the perspective of trust. The data for analysis was obtained from valid samples of 193 bachelor and graduate students of university located in central China city, which were selected as target respondents for the survey of the study. set of analysis gave the results confirming the significant effect of ubiquity on user's trust which further influences student's intention to mobile payments. Similarly, Haejung Yun et al. (2011) also administered a research on understanding the factors that determine mobile web browsing services in South Korea. for the data analysis of this

study, reliable samples of 198 respondent were collected in South Korea out of 500 randomly selected people among subscribers of a mobile web browser “Oz” offered by Lg Telecom. According to the results of the study, ubiquity was found to be one of important determinants of attitude towards the use of mobile web browsing services.

3.5 Facilitating conditions.

Facilitating conditions in UTAUT model is the dimension that is examined whether what effect it has on use behavior in technology acceptance context. Unlikely to other factors of UTAUT model (including performance expectancy, effort expectancy and social influence), facilitating conditions has the direct influence on use behavior of technology.

Samuel NiiBoi Attuquayefio and Hillar Addo (2014) conducted a research to provide further understanding of main factors that influence acceptance of information and communication technologies by students of tertiary universities in Ghana. 400 students of the Social Studies and business Administration faculties of Methodist University in Ghana were involved to participate in the survey, with 345 valid samples for data analysis. Results implied that the effect of facilitating conditions towards the use behavior of information and communication technologies was positive and significant. Another research in similar context which was directed by Kallaya Jairak et al. (2009) was aimed to study main factors that affect students’ m-learning acceptance by utilizing UTAUT model, mostly focusing on higher education students Thailand. The data for the study analysis was collected by random sampling from 390

respondents out of 400 participated students from five universities in Thailand, including private and public universities. And research results obtained from the set of analysis revealed that facilitating condition has significant and positive relationship with use behavior of mobile learning by university students. Next research was directed by Yu Lung Wu et al. (2007) to investigate whether how telecommunication companies in Taiwan design the marketing tactics closer to customer's need, as well as how to improve customer's intention to use 3G mobile telecommunication services, by applying UTAUT model to the study. The results of the empirical analysis indicated that facilitating conditions played a significant role in 3G mobile telecommunication service adoption by Taiwanese customers. And other similar research was directed by Christer Carlsson et al. (2006) to explain the factors that impact user's acceptance of mobile device and services, based on UTAUT model. Survey was conducted in Aland islands by randomly selecting Finnish consumers from Finnish Population Register center, hence samples of 157 repondents out of 300 consumers are considered to be reliable to use for data analysis. Results demonstrated that facilitating conditions did not have any relationship to the use behavior of mobile services.

Vassilios P. Aggelidis (2006) administered a study to test the applicability of UTAUT model in health care context in Greece and examined the factors that affect to the intention of public health institutions' professionals to use information technology and services. survey was carried out in the Region of East Macedonia and Thrace, involving 341 users of hospital information system for questionnaire, valid sample of which consisted of 283 respondents. results

indicated that facilitating conditions significantly and positively affected the use behavior of hospital information technology and systems. Another research with the similar purpose was conducted by Princely Ifinedo (2012) in Canada. Princely Ifinedo also used UTAUT model with minor modification to study the factors that has effect on information systems acceptance of professionals of five healthcare associations. Survey data for analysis was obtained from 227 healthcare professional in Nova Scotia. thus, it can be seen from results that healthcare professionals' use behavior of information systems was significantly influenced by facilitating conditions. Louise K. Schaper and Graham P. Pervan also carried out the research in context of IT acceptance by medical professionals in Australia. the purpose of the study was to determine the dimensions that has an effect on acceptance and utilization of information and communication technologies by Australian occupational therapists. in order to achieve this purpose researchers conducted a survey among 6453 Australian occupational therapists, including 600 valid responses for data analysis. hence, according to results of analyses, facilitating conditions are revealed to have insignificant direct effect on use behavior of information technologies by therapists in Australia.

Hsiao-Hui Hsu 2012 administered a research to investigate students' acceptance of Moodle, also known as Course Management System in Taiwan. research employed UTAUT model as a proposed model to conduct study. Survey was carried out in Taipei city and data for analysis was collected from 47 students of EFL University. Results obtained from set of analyses revealed that facilitating condition did not have significant relationship with use behavior of Moodle. Arumugam Raman et al. (2014) also studied the elements that

affect students' acceptance of Moodle in Malaysia, based on UTAUT model. In this study, 65 postgraduate students of Universiti Utara Malaysia participated as target respondents for data collection. Results of the study contradicts the results of previous research demonstrating significant role of facilitating conditions in context of Moodle acceptance by students. Another research on this learning and teaching tool – Moodle was conducted by Naifa E. Saleem et al. (2016) in Oman. Study applied UTAUT model to examine the factors that has an influence on acceptance of Moodle by faculty membars. Only 14 faculty members of the Information Studies department of Sultan Qaboos University in Oman participated in survey, and nine samples were available to use for data analysis. Results of the study indicated that facilitating condition is positively and significantly related with use behavior of Moodle.

Rita Oluchi Orji (2010) studied the impact of dimensions such as gender and nationality on acceptance of electronic library system. Rita Oluchi Orji suggested that users of ELS were divided into different groups based not only on gender, but also on nationality. Thus, she developed nationality based UTAUT model as the proposed model for the research. Data was collected from 116 students for the analysis, results reveal that facilitating conditions significantly influenced us behavior of ESL for all groups, including the groups of national men and national women, as well as international men and international women. Another study regarding the electronic library was conducted by Chang-Chiao Chan (2013). this research aimed to study user's behavioral intention to use library mobile applications in university libraries, by applying proposed model that was developed by integrating UTAUT model with Task-Technology Fit model. 363 undergraduate and graduate students took participation in survey, all saples of

which were valid for use in data analysis. Results of the analysis indicated that the significance of facilitating conditions' effect was weaker that the other factors of UTAUT model, in context of library mobile application acceptance.

The research of Shafi Al-Shafi et al. (2009) was directed on citizens' adoption and diffusion of e-government services in the state of Qatar, by employing UTAUT model. For data collection for analysis, researchers conducted survey by distributing questionnaire to a total of 1500 citizens who use e-government services, and samples of 1179 respondents out of 1250 returned questionnaire were valid to use. Study analysis gave the results confirming the significant and positive influence of facilitating conditions on citizens' use behavior of e-government services. Another research on acceptane of e-government services was conducted by Ayankunle Adegbite Taiwo et al. in 2012. Proposed model that was applied to examine the factors of e-government services acceptance, was developed by integrating trust dimensions and risk taken propensity to UTAUT model. Survey was conducted in state of Perak, Malaysia by distributing the questionnaire to 200 students of Universiti Technologi Petronas, and valid samples of 101 respondents were collected for analysis. results demonstrated the significant effect of facilitating conditions on students' acceptance of e-government services, through the factor of risk taken propensity.

3.6 Behavioral intention.

The second dimension of UTAUT model that affects use behavior of technology is behavioral intention. Behavioral intention is considered to be one

of the main factors of UTAUT, for the reason that the behavioral intention is influenced by three factors, such as performance expectancy, effort expectancy and social influence, and simultaneously affects the use behavior. Influence of three factors of UTAUT model on behavioral intention has already been reviewed in foregoing sections. Moreover, positive and significant effect of behavioral intention on use behavior was confirmed by almost all researches that applied UTAUT model.

Researchers, such as Bostjan Sumak et al. (2010); Peng-Chun Lin et al. (2013); Paul Juinn Bing Tan (2013); Ursula Paola Torres Maldonado (2011); Din Jong and Tzong-Song Wang (2009); Hossein Mohammadi (2015) and Thanh D. Nguyen et al. (2014) conducted various studies on users' acceptance of e-learning service and applied UTAUT model to investigate the factors including behavioral intention, that affect users' acceptance of e-learning service. All these studies revealed the positive influence of behavioral intention on users' actual use behavior of e-learning service.

In context of e-government acceptance, several studies have been directed by Suha Al-Wadhi and Anne Morris (2008); Sevgi Ozkan and Irfan Emrah Kanat (2011); Shafi Al-Shafi and Vishanth Weerakkody (2010); Jyoti Devi Mahadeo (2009) and Ramzi El-Haddadeh et al. (2013). All these researches applied UTAUT model to determine the user's e-government acceptance. thus all these mentioned studies except the one study of yoti Devi Mahadeo (2009), confirmed that behavioral intention has a significant and positive affect on use behavior of e-government services.

And another set of researches on technology acceptance in health care system has been directed by Matthew J. Wills et al. (2008); Boonchai

Kijsanayotin et al.(2008); Amy Hennington and Bryan D. Janz (2007); Princely Ifinedo (2012); James Tetteh Ami-Narh and Patricia A. H. Williams (2012); Nisakorn Phichitchaisopa et al. (2013) and I-Chiu Chang et al. (2006). All aforesaid researches used (modified) UTAUT model to explain the dimensions that influence the technology acceptance in health care system. Hence all studies demonstrated the significant relationship between behavioral intention and use behavior in the context of technology acceptance in healthcare system.

Acceptance of mobile and e-banking services was also studied by several researches, such as Kamal Ghalandari (2012); Samaneh Barati and Shahriar Mohammdi (2009); Felix O. Bankole et al. (2011); Gancola Baptista and Tiago Oliveira (2015); Omolola Bankole and Eric Cloete (2011); Carolina Martins et al. (2014); Elena Gorbacheva et al. (2011) and Lee Dong Man et al (2010). All of these studies utilized UTAUT model aiming to understand the factors that influence acceptance of mobile and internet banking services and results of all studies except Gancola Baptista and Tiago Oliveira (2015), showed that behavioral intention has significant impact on use behavior of mobile and internet banking.

4. User acceptance of mobile applications.

In previous sections, a brief reviews of an acceptance and use of technology in a various types of context with results have been introduced. In this part, we shall particularly review some studies on users' acceptance of social network sites (SNS) and mobile instant messaging (MIM) applications.

Moon-Bong Lee (2012) studied the influence or the innovativenes on the

intention to use SNS, employing UTAUT model. proposed model of the research was modified by adding innovativeness as the moderating variable. survey was conducted in Busan city distributing the questionnaire to 540 students, and after three weeks 403 respondents returned the questionnaire with valid samples for data analysis. Results pf the empirical analysis validated the application of modified UTAUT model's application to the research. Moreover, results of data analyses revealed that behavioral intention to use SNS is influenced by performance expectancy, effort expectancy, social influences and innovativeness, with the most significant effect of effort expectancy. And gender was found to have moderating effect, whileas innovativeness did not have any moderating effects on the factors that affected the intention to SNS by students.

Indrawati and Gusti Ayu Made Mas Marhaeni (2015) conducted a study on acceptance of instant messenger applications. Research was directed on predicting the factors that affect behavioral intention and use behavior of customers towards using the instant messenger application in Indonesia. Study employed UTAUT 2 model which is comprised of UTAUT model factors and additionally, dimensions such as hedonic motivation, price value and habit. Survey for the data analysis of the study was conducted by collecting questionnaire from 1026 random users, in a result of which 928 samples were valid to use for analysis. Hence results obtained from set of analysis indicated that habit, hedonic motivation, facilitating conditions, price value, effort expectancy and social influence had significant and positive effect on behavioral intention and use behavior, with respective order of significance.

Tomas Escobar-Rodriguez (2014) applied UTAUT model to determine factors that influence the perceived advantages and relevance of Facebook as a learning

tool. A proposed model was developed including dimensions derived from previous models of UTAUT and adding two more variables such as perceived advantages and perceived relevance of Facebook, to get more understanding of students' behavioral intentions, so that faculty members could test their assumptions on the role of social media technology in teaching and learning process. 1200 students of Business Administration in Spanish public university, were involved for study survey, and samples of 956 respondents out of 1034 collected questionnaires were found to be valid for analysis.. Thus, results of data analysis validated a proposed model to the study on factors that affect perceived advantage and relevance of Facebook. additionally, results obtained from the analyses revealed that all factors including constructs adapted from UTAUT model, as well as additional two Facebook related variables had positive relationship with students behavioral intention to use Facebook as the learning tool.

Aaron Bere (2014) directed a study on exploring dimensions that has an influence on mobile learning usin mobile instant messaging application WhatsApp. Aaron bere emplooyed UTAUT model including factors such as performance expectancy, effort expectancy, social influence, student-centric learning and hedonic motivation, and marital status was added as the moderating variable for all five constructs that influence students' behavioral intention to use WhatsApp application for academic purposes. 196 students, all including valid samples, participated in survey which was carried out in University of Technology in South Africa. Set of analysis after data collection verified the validation of proposed model that is applied to the study and also indicated that all elements were positively related to students' behavioral

intention to use WhatsApp as a mobile learning tool.

Shin Mei et al. (2013) also studied the dimensions that impact user's acceptance of mobile instant messaging application, targeting WeChat application. Researcher applied UTAUT model to determine the factors and modified the model by adding factors of cost and privacy. Total number of participants in online survey consisted of 200 respondents and 11 of the responds were removed due to their incompleteness. Results of data analysis of 189 respondents demonstrated that all factors excluding performance expectancy showed significant and positive affect on users' behavioral intention to use WeChat application.

III. Research model and hypotheses

1. Research model and Hypotheses

This study applied the UTAUT model proposed by Venkatesh et al. (2003), the purpose of which is to find out if the dimensions such as performance expectancy, effort expectancy, social influence and facilitating conditions has an effect on the behavioral intention to use Telegram application. And perceived ubiquity was added as the independent variable which affects the behavioral intention, as the ubiquity of mobile application is expected to affect the behavioral intention to use. The proposed research model for this study is presented in Figure 3.1

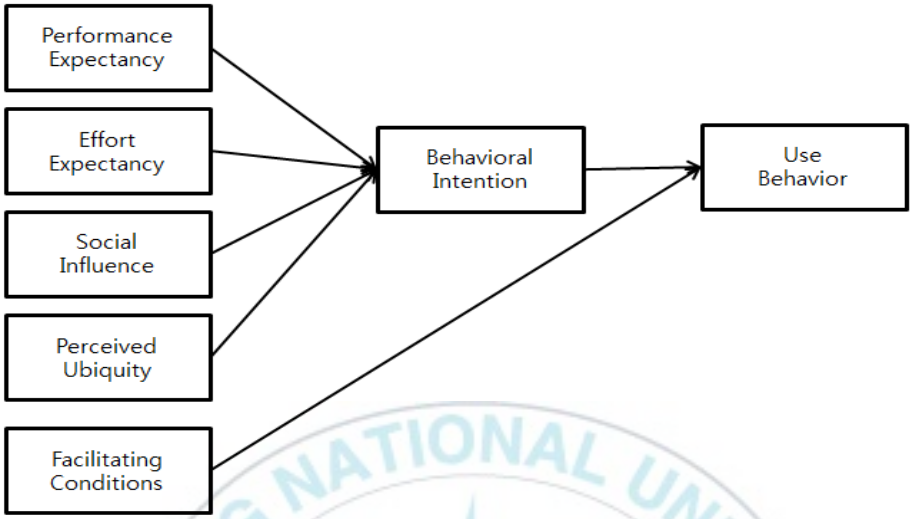


Figure 3-1 - Proposed research model.

Hypothesis 1-1: User's performance expectancy will affect positively to behavioral intention to use Telegram app

Hypothesis 1-2: User's effort expectancy will affect positively to behavioral intention to use Telegram app

Hypothesis 1-3: User's social influence will affect positively to behavioral intention to use Telegram app

Hypothesis 1-4: App's perceived ubiquity will affect positively to behavioral intention to use Telegram app

Hypothesis 2: User's facilitating conditions will affect positively to use behavior of Telegram app

Hypothesis 3: User's behavioral intention will affect positively to use behavior of Telegram app

2. Survey design and data collection

After the research model specification and hypotheses, we designed the survey and carried out data collection. Survey questionnaire was designed in Uzbek language, as the all respondents which were target population of the study, were users in Uzbekistan. On the first step of this part, we specified the questions to the variables forming factor constructs of the model. The specification of the construct variables was derived basically from the previous studies (Venkatesh et al., 2003; Venkatesh and Davis, 2000; Davis et al., 1989) and adapted to the particular context of this study. The first factor, performance expectancy, indicates in this study that the user believes that Telegram application will help him or her to attain gains in job performance or study, the present society. It was constructed using four items in the questionnaire. The second factor, effort expectancy, measures the perception of usefulness, and ease of learning and use of Telegram app. It was constructed using three items. According to the next factor – social influence, users perceive that other important persons believe that the he or she should use the app. This question was constructed with two variables. The next factor is facilitating conditions which indicates that the individual believes that there is organizational and technical structure to support the use of the system of Telegram app. The question related to this factor was constructed with four items. And perceived ubiquity that is defined as the reason that individual believes that he or she can reach the app at any time anywhere, through several devices at once. And the

questions related to this factor included three items. Table 3.1 represents more details regarding variables and relevant questions mentioned above. Questionnaire also included behavioral intention and use behavior, each of which had from one items. All of the items related to these factors were measured using five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). In addition to the questions related to the factors of the research model, the questionnaire contained a more questions to find out the gender and the age of the user. The survey was implemented as an online form through the e-surv.com website, with the purpose of reaching the respondents of the target population more efficiently. Users in Uzbekistan, who has an access to the network, and is able to use Telegram app, were chosen as the target population of the study, in order to investigate the acceptance and the use of Telegram application. A link to the online form of the survey, was advertised to the target population including more than 300 users, through different communication channels, such as personal e-mail, various groups on social media web sites, and mostly Telegram app. The survey was open in January of 2017 for one month. During that time 137 responses were received and 7 unfinished samples were removed. Thus, 130 samples were valid for data analysis.

Construct	Definition	Sources
Performance Expectancy (PE)	The extent to which an individual believes that this system will help to improve working performance	Venkatesh et al. (2003)
Effort Expectancy (EE)	The extent to which an individual perceived that the system will be easy to use	Venkatesh et al. (2003)
Social Influence (SI)	The extent to which an individual perceived that people who are important to him or her think he or she should use the system	Venkatesh et al. (2003)
Perceived Ubiquity (PU)	The extent to which an individual perceived that will get a universal and unison access to information and services.	Nysveen et al. (2005)
Facilitating Conditions (FC)	The extent to which an individual believes existing organization or technical infrastructure will support the use of the system	Venkatesh et al. (2003)
Behavioral Intention (BI)	The extent of individual's willingness to use system	Venkatesh et al. (2003)
Use Behavior (UB)	Whether an individual's will to keep using the system in the future	Venkatesh et al. (2003)

[Table 3-1] Operational Definition of variables

Construct	Measurement Items
Performance Expectancy (PE)	- I would find the Telegram app as a useful tool to stay in touch with my family/relatives/friends - Using the Telegram app enables me to accomplish tasks more quickly. - Using the Telegram app increases my productivity. - I would find Telegram app useful for my job/study
Effort Expectancy (EE)	- It would be easy for me to become skillful at using the Telegram app than other apps. - I would find the Telegram app easy to use. - Understanding the system of Telegram app is easy for me.
Social Influence (SI)	- People who influence my behavior think that I should use the Telegram app. - People who are important to me think that I should use the Telegram app.
Perceived Ubiquity (PU)	- : I can use Telegram app any time I want. - : I can use Telegram app any place I am located. - : I can log in to Telegram app from any device I want.
Facilitating Conditions (FC)	- I have the resources necessary to use the Telegram app (such as Internet). - I have the knowledge necessary to use the Telegram app - The Telegram app is compatible with mobile OS I use. - A specific person (or group) is available for assistance with Telegram app difficulties.
Behavioral Intention (BI)	- I have an intention to use Telegram app
Use Behavior (UB)	- I predict that I will keep using Telegram app these next 12 months

[Table 3-2] Measurement scales for questionnaire

IV. Results and analysis

1. Descriptive statistics

First of all, we will review descriptive statistics, in order to get further understanding about the result of the survey regarding to behavior intention of users of Telegram application in Uzbekistan. Thus, according to the survey, this study reveals that there was not considerable difference between male and female users, as the rate of respondents consisted 52% and 48%, respectively. Most of the respondents were users aged from 20 to 40, with nearly 76% proportion of the whole respondents. With only 25 respondents, the young generation group of users with age of less than 20 held only 19% of the total amount of target respondents. as of the group of users aged more than 40, respondents of this age consisted only 5% of entire amount.

2. Analysis

2.1 Reliability analysis

In any research, which is based on a survey, reliability, correlation and discriminant validity are considered to have an important role. Thus, the initial goal of the process of analysing the measurement items in this

research is to test the reliability, correlation and discriminant validity through utilizing SmartPLS 2.0 version. In the first step, measurement of the model was evaluated in order to make sure that all relevant construct measures indicated in the valid structural model are acceptable. Therefore, all factor loadings of each item on the variables were examined to test the composite reliability and validities. According to the study of Tabachnick and Fidell (2001), the least degree value of the factor loadings should be 0.5 or higher to be valid. It can be seen from Table 4.1 that, no factor has been removed, since all of them showed a greater loading than suggested threshold. Bagozzi and Yi (1988) and Hair et al(1998) stated on their study that the construct can be considered to be reliable when the composite reliability exceeds 0.7 degree. In the process of examining all factors, the reliability of these factors were found to have higher degree than the scale mentioned above. Moreover, Cronbach's alpha and Average Variance Extracted (AVE) were added and tested. Cronbach's alpha refers to the extent that measures how closely a set of items are related as a group and is used to assess the internal consistency, it can be seen from Table 4.1 that Cronbach'a alpha is above the criterion of 0.7 (Nunnally and Bernstein 1994). AVE is used to test the level of shared variance between the latent variables and Table 4.1 shows that the value of AVE exceeds the value of 0.5 (Fornell and Larcker 1981).

Name of variables		Factor loading	AVE	Composite Reliability	Cronbach's Alpha
PE	PE1	0.764	0.648	0.761	0.888
	PE2	0.747			
	PE3	0.613			
	PE4	0.729			
EE	EE1	0.655	0.683	0.727	0.782
	EE2	0.809			
	EE2	0.767			
SI	SI1	0.811	0.553	0.710	0.896
	SI2	0.670			
PU	PU1	0.729	0.553	0.710	0.896
	PU2	0.961			
	PU3	0.961			
FC	FC1	0.625	0.580	0.709	0.757
	FC2	0.706			
	FC3	0.628			
	FC4	0.645			
BI	BI	1.000	1.000	1.000	1.000
UB	UB	1.000	1.000	1.000	1.000

[Table 4-1] Reliability and Internal Consistency

2.2 Validity analysis

In this step, two subtypes of Construct validity, Convergent validity and Discriminant validity will be tested. Construct validity is one of three main types of validity evidence, along the side of content validity and criterion validity and refers to the extent to which the measure of the construct adequately evaluates the proposed concept. in other words, it is the degree to which a test measures what it actually claims to measure (Brown 1996).

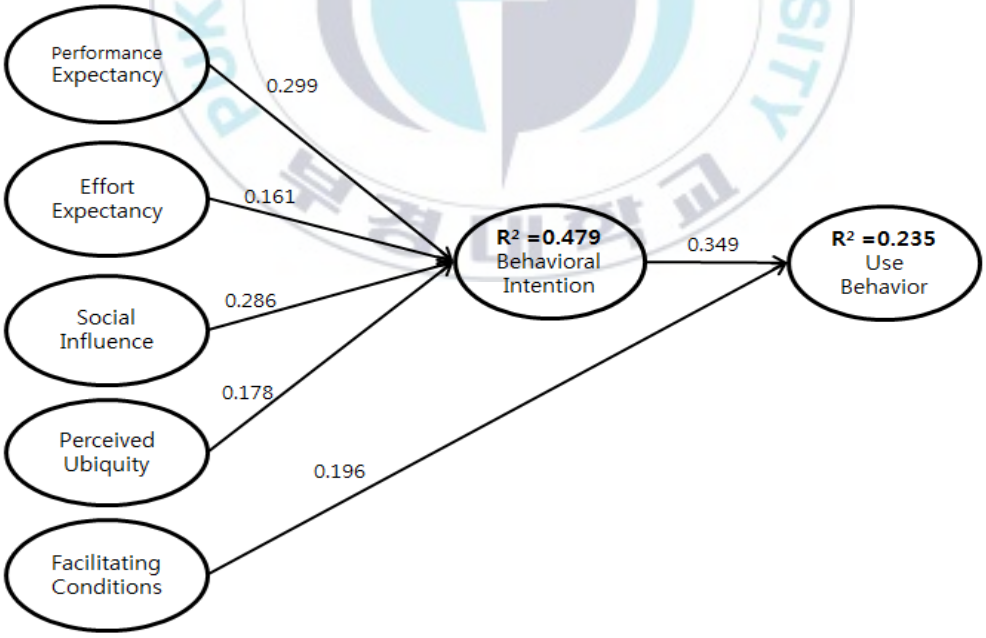
Convergent validity refers to the degree to which two different items' measurement scales are supposed to measure the same construct (Fornell and Larcker 1981). Hair et al (2006) in his study mentions that Convergent validity of the construct can be achieved if AVE exceeds the threshold. Table 4.2 indicates that AVE all factors are above the criterion of 0.5, which means that validity is converged. Discriminant validity refers to the extent to which measures of discrete constructs differ (Fornell and Larcker 1981). In other words, this validity is used to test whether the measurements or concepts that are supposed to be different are actually different. According to the study of Hair et al. (2006), the discriminant validity can be supported if the squared root of AVE of the factor is higher than the values of correlation between factors. Table 4.2 presents that squared roots of factors show greater value than that of correlation between those of constructs and hence, discriminant validity is also found to be adequate.

	AVE	PE	EE	SI	PU	FC	BI	UB
PE	0.648	0.805						
EE	0.683	0.427	0.826					
SI	0.553	0.461	0.288	0.744				
PU	0.709	0.473	0.277	0.375	0.842			
FC	0.580	0.513	0.557	0.448	0.473	0.761		
BI	1.000	0.583	0.420	0.536	0.471	0.545	1.000	
UB	1.000	0.380	0.373	0.371	0.250	0.386	0.456	1.000

[Table 4-2] Convergent and Discriminant Validity

3. Model verification

With sufficient confirmation from reliability and validity tests, in this part, hypotheses path is tested through evaluating the affect of each dependant variables of the model. The explanatory power is evaluated by examining the explained variance - R^2 values of each dependant variables. Total explained variance was used to examine the behavioral intention and use behavior, which indicated 47.9% and 23.5%, respectively. These results, which can be seen from Figure 4.1, show that structural model is satisfactory, as it confirms suggested level by Falk and Miller (1992) for explained variance (R^2>0.1), as well as the results of all factors indicate that all hypotheses were supported.



[Fig. 4-1]The Results of Research Model

Hypothesis 1-1. Hypothesis that performance expectancy of user positively will affect behavioral intention to use Telegram application is accepted, coinciding previous researches, with the results of path coefficient β=0.299, t=3.123 and p>0.05. Support of this hypothesis means that when users expect Telegram application to increase their performance in society, their intention to use this app increases. Thus, result of this hypothesis is consistent with the results of studies of Farooq and Basheer (2015); Alshare and Lane (2011); Gupta et al. (2008); Huang and Yoo (2010) and Alshehri et al. (2012).

Hypothesis 1-2. Effect of effort expectancy on behavioral intention to use Telegram app is positive. thus, likely in other most researches, this hypothesis is supported Effect of effort expectancy on behavioral intention to use Telegram app indicated that β=0.161, t=2.088 and p>0.05. the acceptance of this hypothesis indicates that the easier the Telegram app is to use, the more increase in user's behavioral intention to use the Telegram app. Result of this hypothesis supports the results of previous researches of scholars such as Mtebe and Raisamo (2014); Lin et al. (2004); P. Ifinedo (2012); El-Gayar and Moran (2006) and Sharma et al. (2012).

Hypothesis 1-3. Social influence also has a positive influence on behavioral intention to use Telegram app. Hence this hypothesis is supported as well, which means that when user's relatives, friends and important to them people suggest that he/she should use this application, user is more likely to use Telegram app. Results regarding this factor are that of β=0.286, t=2.799 ad p>0.05 values. this hypothesis had similar

result with the results of studies of Lee and lin (2008); Foon and Fah (2011); Wu et al. (2007) and K. Ghalandari (2012).

Hypothesis 1-4. Another hypothesis that perceived ubiquity will have positive effect on behavioral intention to use Telegram app is supported, with the results of that $p>0.05$ and $\beta=0.178$ as well as $t=2.001$. According to this criteria the user is supposed to increase intention to use Telegram app if the application is accessible anytime, anywhere. this hypothesis rehashed the results of researches of scholars such as Kim and Gary (2009); Yan and Yang (2015); Low and Pyun (2016).

Hypothesis 2. Results shown in Table 4.3 indicate that hypothesis about facilitating condition positively influences the behavioral intention to use Telegram app is accepted. Path coefficient of this hypothesis is $\beta=0.196$, along with $t=2.168$ and $p>0.05$. having a positive effect of facilitating conditions on a behavioral intention means that the user will increase his/her intention to us the app when they find more resources that supports Telegram app, e.g. technical infrastructure or organization. Similar results for this hypothesis were found by T. Zhou (2008); Al-Awadhi and Morris (2008); Al-Sobhi et al. (2011) and Gupta et al. (2008).

Hypothesis 3. The hypothesis that behavioral intention will affect the intention to use Telegram app positively is supported, that is to say that of user has a positive behavioral intention to use the app, then consequently, use behavior makes them use the Telegram application more frequently. This hypothesis was accepted with coefficient of $\beta=0.349$, $t=3.336$ and $p>0.05$. Hence, this hypothesis showed consonant

result with the results of researches of Farooq and Basheer (2015); Lin et al. (2004); P. Ifinedo (2012) and K. Ghalandari (2012). All results of hypotheses and model verification mentioned above are presented in Table 4.3 and Fig. 4.1

Hypotheses path	standard coefficient	t-value	Decision
H-1-1: Performance Expectancy => Behavioral Intention	0.299	3.123	accept
H-1-2: Effort Expectancy => Behavioral Intention	0..161	2.088	accept
H-1-3: Social Influence => Behavioral Intention	0.286	2.799	accept
H-1-4: Perceived Ubiquity => Behavioral Intention	0.178	2.001	accept
H-2: Facilitating Conditions => Use Behavior	0.196	2.168	accept
H-3: Behavioral Intention => Use Behavior	0.349	3.336	accept

[Table 4-3] Hypotheses Testing Results

V. Conclusion and implications

This study purposed to explain the factors which affect the user acceptance of Telegram application in Uzbekistan, through applying to the study the UTAUT model which was developed by Venkatesh et al. Also, UTAUT model was modified to adjust the model for the setting of the study. Modification included adding the perceived ubiquity as the independent variable which affects the behavioral intention to use the Telegram application, as well as eliminating moderating variables. From all conducted analyses by using SmartPLS, we can see that results indicate validity of all variables including performance expectancy, effort expectancy, social influence, perceived ubiquity, facilitating conditions and behavioral intention. All variables in the model (performance expectancy, effort expectancy, social influence and perceived ubiquity) that affect the behavioral intention, as well as the variables (facilitating condition and behavioral intention) that affect the use behavior of Telegram app were confirmed to have positive effect. Moreover, based on the reliability analysis and convergent validity analysis, the proposed model is reliable and all variables are correlated. Therefore, these results validated the applicability of the UTAUT model to assess the user acceptance of Telegram application. These statements indicate that this study supports previous studies which also confirmed the validity of the applicability of UTAUT model to assess the factors of acceptance and use of mobile application, the studies such as the acceptance and use of Wechat

application (Shuo Mei et al., 2013); user's acceptance behavior to E-books application (Ting Gao and Yanhong Deng, 2012); acceptance of library mobile applications (Chang Chiao-Chen, 2013) or the acceptance of mobile wallet applications (Dong-Hee Shin, 2009) etc.

Through carrying out the survey from 130 respondents of different age and gender, this study tried to explain the factors which affect the behavioral intention to use Telegram application, which is the most preferred messaging application among the messengers that are used in Uzbekistan. study was conducted by applying UTAUT model to the study and by using SmartPLS - statistical software for structural equation modeling. We can see from findings that all variables had showed positive affect towards the intention to use this application, which explains why users in Uzbekistan mostly prefer to use this instant messenger. And here below we will discuss these factors that influence users' intention to use this application.

In this study, performance expectancy can be defined as the degree to which users believe that they are more likely to believe that they increase performance when they use Telegram application. As we already stated above, performance expectancy affects the behavioral intention to use Telegram app positively and showed the most significant effect among other variables. This result supported the results of the previous studies of Kamal Ghalandari who studied the acceptance of e-banking in Iran; or Paul Juinn Bing Tan who carried out a study on the factors affecting the English e-learning websites in Taiwan; as well as Hee Seo Lee who conducted a research on the factors affecting smartphone applications.

Thus, since user of the app in Uzbekistan believe that by using this app they will increase their performance at work or study or in the environment where they expect it should be increased, Telegram app should focus on developing those and other more functions which users expect to impact their performance.

Effort expectancy also was mentioned in findings that showed a positive effect towards the behavioral intention to use the app with the least significant contribution. This factor for the acceptance of Telegram application can be defined as the degree of ease associated with the use of app. Therefore, users expect the application to be easy to use and their intention to use will increase if they find it easy to use. This result is consistent with those studies of Shuo Mei et al. (2013) who carried out a study on the factors affecting the acceptence of Wechat app; and Farooq Alam Khan and Ahmad Basheer (2015) who studied mobile web applications' adoption in Pakistan; or Yeoh Sok Foon and Benjamin Chan Yin-Fah whose research was about the internet banking adoption in Kuala Lumpur. So the conclusion for this factor is that the developers of Telegram app. should focus on improvements of applications functions so that the application could be adopted more effortlessly by users.

According to the findings, another factor that positively affected the behavioral intention is social influence. In terms of the acceptance of Telegram app, social influence can be explained as the degree to which users believe that important persons to them think that they should use Telegram app. And results of our research regarding to this factor supported the statements of other previous studies, such as the study on

the explanation of mobile banking user adoption, which is conducted by Tao Zhou et al. (2010); or Ting Gao and Yanhong Deng's (2012) study on users' acceptance behavior to mobile e-books applications; and the study on the acceptance of mobile payment in China, conducted by Peng Hongxia. Therefore, it can be noted as the conclusion that more activities of marketing and advertising the app is expected to get more different and wider range of users in Uzbekistan, since the users get more motivated to use this app, when important people around think and give some directions that they should use this app.

The next antecedent among the variables of UTAUT model, which showed the positive influence on behavioral intention to use Telegram app as well, is perceived ubiquity. In this study perceived ubiquity can be interpreted as the degree to which users believe that they are able to get an access to Telegram app from anywhere, anytime and through several device at the same time. Results of this factor is associated with the results of studies such as Kim and Garrison's research on mobile wireless technology adoption; or the study conducted by Hong Yan and Zonghua Yang on the examination of mobile user adoption from the perspective of trust. Thus, based on these results of perceived ubiquity, it can be concluded, that people in Uzbekistan are more likely to spend more time on using this app, when they believe that they can get an access to Telegram anytime and anywhere, as well as through two or more devices at the same time.

Definition for facilitating conditions regarding the user acceptance of Telegram application is referred to an extension to which user perceives

that there are organizational or technical supports to make the use of Telegram enable and easier. Facilitating conditions contributes with a positive effect to use behavior of Telegram application, which replicates the results of previous researches conducted by Rania Shibl et al. (2013) on factors influencing decision support system acceptance; or the study of Je Ho Cheong on the mobile payment adoption in Korea. Thus, if users get better facilitating condition such as the technical or organized support, their intention to use the app will increase.

Behavioral intention, the dimension that affects use behavior, is defined as the degree to which users' willingness to use Telegram application is perceived. Proceeding the result that behavioral intention has positive effect on use behavior, it can be concluded that people in Uzbekistan tend to use Telegram application.

Nowadays, developers of Telegram application enabled users to create not only groups, but also the "channels" and "bots" within the app. These tools, through which users can broadcast public messages to wider range of audience and can have unlimited number of group members, made users to be able to use telegram app in purpose of study, shopping, entertainment or getting latest world news. Since these functions became available, numbers of teaching channels and bots were created to teach languages, school or university subjects or other social interests to users in regardless of their profession, gender, age, abilities or experiences as well as numerous shopping and advertising channels also were created to promote all kinds of products to customer-users, as well as purchasing those advertised products from vendors. And there are a lot of news

channels or entertainment channels and other types of channels became available for users. These functions can be stated as one of the main reasons that can explain why number of Telegram users in Uzbekistan is increasing.

This study was headed to study the acceptance of Telegram application only as the tool of communicating of people. However, T. E. Rodriguez (2014) studied the adoption of Facebook as learning tool in Spain, employing UTAUT model, which showed positive results, and A. Bere (2014) also conducted a research on adoption of WhatsApp application as learning tool in South Africa, which also revealed positive results. Thus, based on these and other studies, and conclusions of this research, this study suggests that there is a need to develop and study the adoption of Telegram application as the tool which can be used in context of study in Uzbekistan, since users are able to use and already using this app in many social purposes.

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Questionnaire

Ushbu so′rovnoma O′zbekistondagi Telegram dasturi foydalanuvchilari shu dasturni qanday qabul qilayotganliklari va nima sabablar tufayli ushbu dasturdan foydalanayotganliklarini aniqlashga qaratilgan magistratura bitiruv malakaviy ishi uchun tayyorlandi. Ushbu so′rovnomada siz beradigan javoblar bizning bitiruv malakaviy ishimizda katta ahamiyatga ega. Biroz vaqtingizni ayamasdan savollarga javob bersangiz minnatdor bo′lar edik.

Umumiy savollar.

1. Yoshingiz

○ 20 yoshdan kichik

○ 20 yoshdan 40 yoshgacha

○ 40 yoshdan katta

2. Jinsingiz

○ Ayol

○ Erkak

Asosiy savollar

	Mutlaqo unday emas	Unday emas	Neytral	Ha shunday	Mutlaqo to'g'ri
Telegram menga oila /qarindosh/do'stlarim bilan aloqada bo'lishimda foydali vosita	○	○	○	○	○
Telegramdan foydalanish menga ishlarimni tezroq bitirishda yodam beradi	○	○	○	○	○
Telegramdan foydalanish mening unumdorligimni oshiradi	○	○	○	○	○
Mening ish/o'qishimda Telegram foydali deb bilaman	○	○	○	○	○
Men uchun Telegramni ishlata olishni o'rganish boshqa mobil dasturlardan ko'ra osonroq	○	○	○	○	○
Men Telegramni ishlatish oson deb bilaman	○	○	○	○	○
Telegram dasturining tizimini tushunish men uchun oson	○	○	○	○	○
Mening hatti -xarakatlarimga ta'siri bor insonlar Telegramdan foydalanishim kerak deb o'ylashadi	○	○	○	○	○
Menga muhim bo'lgan insonlar Telegramdan foydalinishim kerak deb hisoblashadi	○	○	○	○	○
Menda Telegramdan foydalanish uchun kerakli manbalar bor	○	○	○	○	○

Telegramdan foydalana olish uchun menda ma'lumot (bilim /tushuncha) yetarli	○	○	○	○	○
Telegram men foydalanyotgan mobil OT ga mos keladi (Mobil operatsion tizim – Android OS, iOS, Windows OS va h.k.)	○	○	○	○	○
Men telegramda duch kelishim mumkin bo'lgan muammolarni hal qilishda yordam bera oladigan inson(lar) bor	○	○	○	○	○
Telegramdan istalgan vaqt foydalana olish imkoniyati mavjud	○	○	○	○	○
Telegramdan istalgan joyda foydalana olish imkoniyati mavjud	○	○	○	○	○
Telegramdan istalgan qurilma (telefon, planshet, kompyuter) orqali foydalana olish imkoniyati mavjud	○	○	○	○	○
Men Telegramdan foydalanish niyatim bor	○	○	○	○	○
Men Telegramdan kelgusi 12 oy davomida davomiy foydalanaman deb o'ylayman	○	○	○	○	○

Ishtirokingiz uchun tashakkur!