Research Article

The Influence of the Institutional Environment on Telecommunication Company Development: Case Study of Telegram

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Abstract: Recent business models are based on the latest information and telecommunication technologies cross over the world. Such approach allows global and local companies to become more competitive. Highlighted innovative trends successfully combine mobile messaging services - messengers, which become the main driver of the digital economy growth due to simplicity, convenience, safety and security, as well as a large number of users. Recent studies show the influence of some factors from the institutional environment of the business on the commercial success, especially in the period of COVID19. But to conduct a full assessment of the impact of the institutional environment on mobile messengers, the study of the influence of this factor alone is not enough.

The research paper conducts a study of the influence of the institutional environment on the Telegram messenger, identifies the influence of the level of freedom on the messenger audience, analyze the relationship between the volume of the e-commerce market and the number of messenger users. Using correlation analysis, comparative study and statistical data authors investigate recent trends in messenger's development; define the role of online messengers in internet marketing, including e-commerce; present case study of Telegram messenger in Russian market, and provide recommendations for messenger future development.

Keywords: institutional environment, e-commerce, telecommunication company, Telegram, Messenger, COVID19

1. INTRODUCTION

Digitalization is a source of growth in the global economy, increasing the efficiency of the education system, healthcare, social sphere and public administration. The introduction of business models based on the latest information and telecommunication technologies allows global and local companies to become more competitive [1]. In recent years, blockchain technology has been gaining more and more popularity, which is widely used in various countries, including in the public services sector, when organizing document flow, and processing transactions.

Highlighted innovative trends successfully combine mobile messaging services - messengers, which become the main driver of the digital economy growth due to simplicity, convenience, safety and security, as well as a large number of users. In addition to the originally provided text messaging function, developed as a replacement for traditional SMS messages, these services are constantly being improved and currently have the ability to make audio and video calls, exchange their location data and documents, follow the news and consult a wide range of issues with bots -consultants. In addition, the process of introducing electronic payments and money transfer services is underway.

The increase in the range of services provided has led to a rapid growth in the popularity of mobile messaging services [2], turning them into a significant factor in economic and socio-political life, creating a new market based on the Internet. This market has certain specific features that have not yet been sufficiently studied by the scientific community. The aim of this work is to study the impact of changes in the institutional environment of the mobile messenger market as a segment of the digital economy on the activities of its participants using the example of the Telegram messenger.

Nowadays, there are studies that show the influence of some factors of the institutional environment, such as the influence of the level of corruption on the popularity of Telegram [3]. To conduct a full assessment of the impact of the institutional environment on mobile messengers, the study of the influence of this factor alone is not enough. For the most complete analysis of the influence of the institutional environment, we are considering the high-tech component of the IT company; also, it is necessary to consider a wider range of factors.

The main objectives of this study are: development of tools for identifying the influence of institutional factors on the activities of companies - developers of mobile messengers, identifying factors of the institutional environment that have a significant impact on the development of the market and forecasting its changes, identifying the market position of Telegram and its main competitors, analyzing the development plans of Telegram.

Therefore, this paper includes the main contributions as follows:

- analysis of the recent trends in messenger's development,
- investigation of the role of online messengers in internet marketing, including e-commerce,

- market research and comparative study of messengers,
- case study of Telegram messenger in Russian market,
- analysis of the environmental factors and its influence on messengers' development,
- recommendations for messenger future development.

The content of this research is organized as follows. Some literatures about role of the messengers in internet marketing will be arranged and discussed in chapter 2. After that, methodology content and the main research goal will be explained in chapter 3. The survey, data analysis and influence of institutional factors on messenger's development will be analyzed and evaluated based on proposed method and correlation analysis will be executed in chapter 4. Some recommendations will be token over in chapter 5. Finally, main results and conclusion will be discussed as ending.

2. LITERATURE REVIEW

A. Trends of E-commerce in the Era of COVID19

The introduction of the social distance rule to avoid contamination and a number of other restrictive measures have effectively suspended the conduct of traditional retailing. In the U.S., retail and foodservice sales were down 7.7% between February and April 2020 compared to the same period in 2019. At the same time, there was an increase in sales, especially from grocery stores and online retailers, by 16% and 14.8%, respectively [4].

The share of e-commerce in the United States in the first and second quarters of 2020 rose to 16.1%. In the UK, these figures increased from 17.3% to 20.3% between the first quarter of 2018 and the first quarter of 2020, and later to 31.3%. Similar changes can be seen in other regions, including China, where the share of online shopping reached 24.6% from January to August 2020, up from 19.4% in August 2019 and 17.3% in August 2018 [5].

Only retail sales can be considered e-commerce in which the customer selects from the catalogues presented on the website and orders over the Internet rather than by telephone or mail.

In the Asia-Pacific region, an increase in e-commerce was detected earlier than in Europe and the United States, already in early 2020, due to the fact that this region faced the challenges of the pandemic before others.

The crisis has affected the categories of demand for goods and services. Increased demand was observed for personal protective equipment, household goods, food, while goods for travel, sports, business style clothing did not enjoy interest. Growing demand for food has led many farms to switch to e-commerce to ensure that food is delivered directly to the consumer. Online sales of medicines and food products have grown significantly in Germany. In Korea, significant growth was seen in catering (66.3%), household goods (48%), food and beverage (46.7%), while the provision of cultural and entertainment services or travel and transportation declined significantly. In China, food has become the single largest leader in e-commerce [6].

Online retailers have faced the same challenges as traditional mainstream retailers in reducing consumer spending on non-essentials. The COVID-19 crisis has led to a redirection of demand from small and specialty stores to larger and more diversified ones. The complementarity of online and offline sales channels became apparent.

B. Messenger Role in Internet Marketing

Modern Internet marketing declares the importance of high response speed and omnichannel increasing, and therefore the use of messengers in working with clients and partners becomes more important.

Considering the essence of instant messengers, let us pay attention to the fact that this is a new generation of instant messaging services focused on mobile devices. With the help of the messenger, the company can create conversations and groups, detect activity and develop relationships. Optimizing communications, accelerating processes, the company relieves the client from communicating with by the company on the phone during working hours, from the need to visit their resources. Information provision is formed in the form of short and capacious messages on a smartphone or tablet. Concerning it should be emphasized that the messenger is a personal tool, it is not social networks or advertising on other sites, therefore the brand's marketing policy on such a platform requires maximum clarity, correctness and brevity. Messages should be unobtrusive, ethical lined up, competent and neat so that inform the client rather than annoy and distract.

Consider the current state of activity Russian internet (Runet) users in messengers. According to Deloitte survey, the most popular in 2018 WhatsApp was the messenger in Russia: 69% of smartphone users installed it (in 2017, there was 65%). At the same time, it was actually used by 58% of respondents, which is 11% more than a year earlier. Viber is in 2nd place with 57% and 38%, respectively [7].

Over the year, the share of those who installed this messenger grew by 1%, and those who actually use it – by five%. 3rd place for Skype: 45% and 11%. Telegram's popularity is also growing: it is installed on 25% of smartphones (+ 8%), and 10% use it (+ 3%) owners of these devices. Overall 49% survey participants said they began to use them more often than a year earlier [8].

3. METHODOLOGY

To conduct a study of the influence of the institutional environment on the Telegram messenger, we need to identify the influence of the level of freedom on the messenger audience, the relationship between the volume of the e-commerce market and the number of messenger users.

To compare the level of freedom and the number of Telegram users in the country, we need to perform an analysis, the main stages of which are shown in Figure 1.

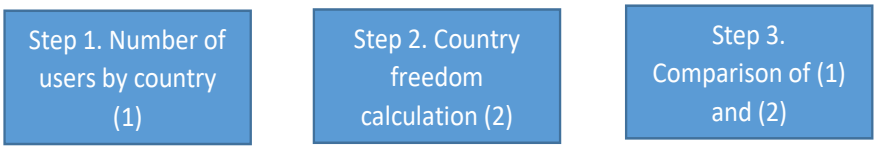

Figure 1 - Stages of survey

Telegram does not publish detailed statistics related to the operation of its mobile messenger. To conduct a study, we need to obtain data on the number of messenger users per month across the country. For this, after calculating the total number of visits to telegram.org and telegram.me sites, we calculate the total share of visits to these sites for each country. Since, through these websites, users get access to information about the messenger, as well as to its web version, we can understand the growing interest of users in the messenger, as well as in its web version. Further, adjusting this data for the number of active users per month, the value of which is periodically published by the developer, we will find out the number of users by country.

Next, we need to find out the level of freedom in the country. The mobile messenger is strongly influenced by factors such as freedom of the Internet, the press and the rule of law. These indicators are reflected in such rankings as Reporters Without Borders' World Press Freedom Index, Freedom House's Worldwide Internet Freedom Index, The World Justice Project's Rule of Law Index. The values of these ratings for each country are reduced to a single scale from 0 to 100, where 0 is the best value, 100 is the worst. After that, a single coefficient is calculated by finding the arithmetic mean of three values, since the indicators of these values are equally significant for us. A single coefficient of the level of freedom is needed in order to more accurately reflect the state of the environment in the country and to consider the main factors that affect the activities of a mobile messenger.

After calculating the number of Telegram users in the country and the coefficient of the level of freedom, we carry out a correlation and regression analysis using Excel tools, calculating the correlation coefficient, the coefficient of determination, the weight of the number of users and the level of freedom.

To analyse the markets of countries with high user interest in functions related to electronic money transfers, an analysis is performed, the stages of which are shown in Figure 2.

Figure 2 - Stages of market analysis in countries with high user interest in functions related to electronic money transfers

To identify the presence of interest from users in online money transfer through mobile messengers, it is necessary to analyse the popularity of mobile devices, the popularity of instant messengers, how many users are registered online banking.

At the next stage, we need to calculate the total number of messenger users in the country. To do this, we multiply the data on the number of smartphone users by the percentage of mobile messenger users from the number of smartphone users. You can also compare the number of Telegram users and its main competitor by obtaining data on the main competitor by multiplying the total number of mobile messenger users in the country by the percentage of users of the most popular competitor.

Comparison of the number of messenger users and the volume of the e-commerce market is carried out using correlation and regression analysis using Excel. At the same time, such coefficients are calculated as: the correlation coefficient, the determination coefficient and the weight of the number of users and the level of freedom.

4. SURVEY

A. Analysis of the Degree of Freedom Dependence in the Country and the Number of Users of the Telegram Messenger

The Telegram mobile messenger is known for the security of its communication channels and a high degree of innovation. In some countries, it has a high level of popularity, in other countries it has yet to push its competitors out.

Since the Telegram developers position it as a messenger with a high level of security, you need to find out if this is really so. This is essential for the correct positioning of the product. In this regard, it is advisable to test the hypothesis that the lower the level of freedom in the country, the higher the popularity of Telegram.

First, we will find out the number of messenger users in each of the countries we are considering, then we will find out the level of freedom in each of them, after that we will carry out a correlation-regression analysis and draw conclusions for each of the countries.

Telegram does not publish accurate data on the users of the service, their total number, as well as statistics for individual countries and regions. In addition, there are no third party studies with the required data. In order to find out the number of users, we need to sum up the visits to the telegram.org and telegram.me web sites. We take the data of visits to these particular websites, and not statistics on the use of mobile applications, although usually correspondence between users is carried out with their use, since by visits to the site it is possible to identify and assess the interest of users, because before installing the application on his device, the user examines information about him, the official website of the product. On the Telegram website, you can not only get information about the service, but also go to download the application and use the web version. The more users visit the site, the more of them will download the application, or use the web version of the service, which some part of the audience uses on an ongoing basis.

For the study, it is advisable to take the following countries: Russia, Iran, USA, UK, Germany, China, France, which, in our opinion, can demonstrate possible trends in the global development of Telegram.

To determine the proportion of users who visited the sites of interest to us for each country for November 2019 [9]. To calculate the total share of users from a certain country for two sites, we need to know the total number of visits to this site for November 2019 for each site. Such data is provided by the service similarweb.com [10],[11].

Let's determine the total share of visits of users from a certain country for two sites using the formula (1):

$$E\% = \frac{(A*A1+B*B1)}{(A1+B1)} \quad (1)$$

where, E% - the total share of user visits from a certain country on two sites;

A - the percentage of users on the telegram.me website from the country per month;

A1 - the total number of visits to the telegram.me website from all countries per month;

B - the percentage of users on the telegram.org website from the country per month;

B1 - the total number of visits to the telegram.org website from all countries per month.

Let's calculate the number of users in the country per month using the formula (2):

$$Et = E\% * (A1 + B1) \quad (2)$$

where, Et is the total number of users in the country per month;

A1 - the total number of visits to the telegram.me website from all countries per month;

B1 - the total number of visits to the telegram.org website from all countries per month.

Since we take into account data on two sites, we need to enter a correction factor that will take into account the fact that the audience of these two sites overlaps. As of early December 2019, the number of active users was 100 million users per month [12]. Let's calculate the correction factor according to the formula3:

$$Kcor = \frac{number\ of\ active\ users\ per\ month}{total\ visiters\ to\ telegram.me\ and\ telegram.org\ per\ month} \quad (3)$$

Where, K*cor* is a correction factor.

Substituting the data from [10], [11] and [12] into formula (3), we get a correction factor of 0.71, which will help to show the real number of users, excluding repetitions due to the intersection of the audience of the sites we are interested in.

Considering the above calculation methods, we will compile table 1, where we will calculate the number of users in the countries of interest to us.

Table 1. Number of Telegram users by country, 2019

Country	% of visits per country (telegram.me)	% of visits per country (telegram.org)	Total visits per month, %	Number of visitors, ml.	Number of visitors, ml. (corrected)	Share of users % (corrected)

Russia	5,10%	9,50%	8,20%	11,62	8,20	8,20%
Iran	66,80%	29,30%	40,37%	57,18	40,37	40,37%
USA	3,60%	4,70%	4,38%	6,20	4,38	4,38%
UK	1,40%	1,60%	1,54%	2,18	1,54	1,54%
Germany	1,80%	4,50%	3,70%	5,25	3,70	3,70%
China	1,50%	1,70%	1,64%	2,32	1,64	1,64%
France	0,50%	1%	0,85%	1,21	0,85	0,85%
Total number of visits (ml. per month)	41,8	99,86	-	-	-	-

Source: [10], [11].

According to data provided by the Combot service, as of September 2019, the number of active Telegram users in Russia was about 8 million people, while in Iran the number of active users per month was about 35-40 million as of February 2019 [12].

The data obtained as a result of our research is similar to the data provided by the Combot service, which indicates the sufficient reliability and relevance of the above calculations.

Having adjusted data on the number of active users by country, we can compare the level of freedom in the country with the number of users.

In order to determine the level of freedom in the countries of interest to us, consider such rankings as the "World Press Freedom Index" for 2019, compiled by the organization Reporters Without Borders [14]. The index allows to assess the situation in countries regarding freedom of opinion, safety of journalists and independence of the media, which includes Telegram. This ranking is based on a survey of experts. Points are assigned from 0 to 100, the lower the value, the better the situation with the level of freedom. The following rating, which shows the level of Internet freedom in the world for 2019, was compiled by the Freedom House organization [14]. Points are assigned in the range from 0 to 100, the fewer points a country gains, the higher its level of Internet freedom. This study is also based on a peer-reviewed methodology. And another rating that got into our study, the Rule of Law Index for 2019, prepared by The World Justice Project. The index assigns values from 0 to 1, where 1 indicates the strongest compliance with the law, 0 indicates the lowest level of rule of law. The rating is also based on a survey of experts [15].

Let's get a single coefficient of the level of freedom from these three ratings by calculating the arithmetic mean of their values. This coefficient will make it possible to more accurately determine the level of freedom in the country, since it takes into account various factors reflected in the ratings. These factors are equally important for assessing the performance of a mobile messenger. To calculate, you need to bring the ratings to a single measurement scale, namely from 0 to 100, where the lower the number of points, the greater the level of freedom in the country. Two ratings out of three correspond to this methodology, in order to bring the Rule of Law Index rating, we will recalculate it using the formula (4):

$$LIcor = (1 - \mathrm{T}) * 100, \qquad (4)$$

where, $LIcor$ - the value of the rule of law index for the country, recalculated;

T - the initial value of the country's rating.

Calculations of the coefficient of the level of freedom for the country, as well as bringing the rule of law index to a single scale are shown in Table 2.

Table 2 - Level of freedom by country, 2019

Country	World Press Freedom Index	Global Internet freedom	Law Index rating	Law Index rating (corrected)	Common coefficient of freedom
Russia	49,45	66	0,47	53	56,15
Iran	65,12	85	0,48	52	67,37
USA	23,88	21	0,73	27	23,96

UK	22,26	24	0,81	19	21,75
Germany	14,97	20	0,83	17	17,32
China	77,66	87	0,5	50	71,55
France	22,24	26	0,74	26	24,75

Source: [15]

Using a single coefficient of the level of freedom, we will compare the level of freedom in the country and the number of users of the Telegram messenger in Table 3. In addition, for clarity, we will include in the comparison the most popular messenger in this country [16].

Table 3 - Dependence of the number of Telegram users and the level of freedom

Country	**Common coefficient of freedom**	**Number of Telegram users (corrected), ml.**	**Users, % Telegram (corrected)**	**The most popular messenger**
Russia	56,15	8,2	8,20%	WhatsApp
Iran	67,37	40,37	40,37%	Telegram
USA	23,96	4,38	4,38%	Facebook Messenger
UK	21,75	1,54	1,54%	WhatsApp
Germany	17,32	3,7	3,70%	WhatsApp
China	71,55	1,64	1,64%	WeChat
France	24,75	0,85	0,85%	Facebook Messenger

Source: [16]

Based on the data in Table 3, using Excel data analysis tools, we carry out a correlation-regression analysis. To obtain more reliable results, we exclude China from the comparison, since at the time of the study, access to the messenger in this country was limited.

In our case, it turns out that the R-square - the coefficient of determination is 0.689 or 68.9%. This means that the calculated parameters of our model explain the relationship between the studied parameters by 68.9%. Since our coefficient is greater than 0.5, our model can be considered quite reliable.

The coefficient 0.5993 shows the weight of the variable X on Y. That is, the level of freedom within this model affects the number of Telegram users with a weight of 0.5993.

The correlation coefficient is 0.830, which means a high degree of correlation, when evaluated on the Chaddock scale. The higher the single coefficient of the level of freedom, the greater the number of Telegram users in the country. Since a high level of a single coefficient means a low degree of freedom, it can be concluded that the lower the level of freedom in any country, the more users Telegram has.

The high degree of popularity of the Telegram messenger in Iran is explained by the ban on the functioning of its main competitors, a large degree of control and regulation of communications and data exchange by the state. High importance is attached to the reliability of encryption and resistance of the messenger to blocking. Since Telegram uses separate servers for each of the regions and has them considering regionality, this is a significant advantage for Iran, given the difficult foreign policy situation around this country. An indicator of the success of Telegram in this market is the fact that it is used by about 40 million people, which is about half of the country's population.

In Russia, the growth of the Telegram user base is due to the introduction of new technologies by the company, a high level of implementation of services, the popularity of the figure of the founder of the messenger and also against the background of a not so high level of freedom.

The percentage of mobile messenger users in countries with an English-speaking population is quite low. The popularity of Telegram in West EU and USA is currently not high enough, the messenger cannot demonstrate a sufficiently large percentage of users in countries such as the USA, Great Britain, Germany and France.

Since 2015 Telegram is blocked on the territory of China, even the number of users it has is a high indicator, since these people have to look for ways to bypass blocking, which also negatively affects the speed and stability of the messenger.

B. Market Analysis of Countries with High User's Interest in Functions Related to Online Transfers

Earlier, we identified the relationship between the level of freedom in the country and the number of Telegram users. The countries considered in the previous section, which according to the ratings are fairly free, do not have a sufficiently large number of Telegram users.

Consider the research of data on mobile devices, as well as their use for making online payments, compare the size of the e-commerce market and the number of users of mobile messengers in the country and draw conclusions.

For Western countries, the developers of the messenger are introducing functions related to mobile payments, because according to the study, the results of which are shown in Figure 3, users from these countries are interested in functions that allow money transfers.

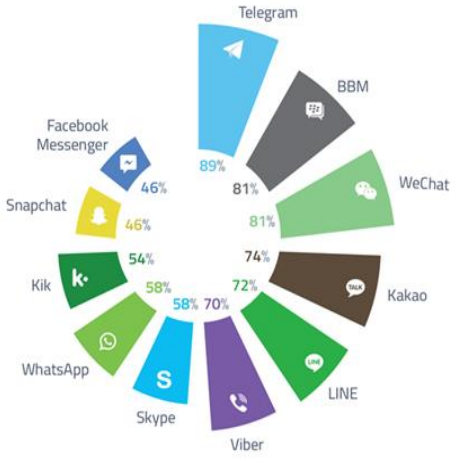

Figure 3 - Percentage of mobile messenger users interested in functions related to money transfer [17].

This study, conducted by Global Web Index [17], is based on a survey of US and UK users.

We can say that in general, users of messengers in the West are interested in these functions. According to a study by Global Web Index, 63% of mobile messenger users use services related to mobile banking on their mobile phones or smartphones, as shown in Figure 4.

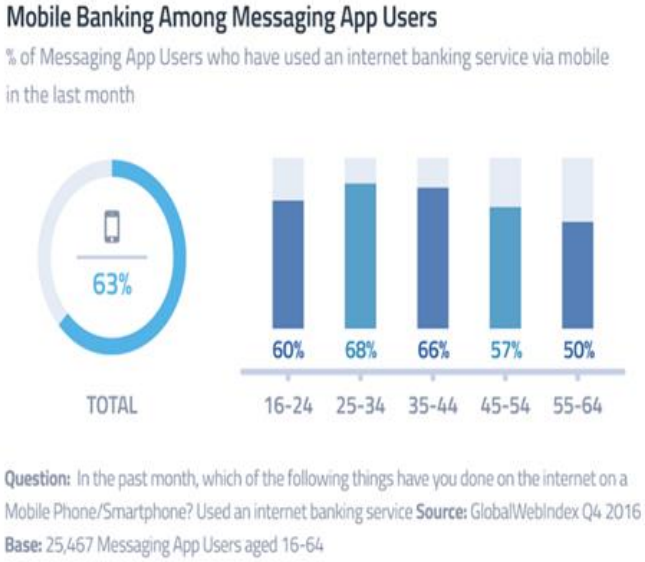

Figure 4 - Percentage of mobile messenger users using online banking services on their smartphones [17].

Let us analyse the countries in the top 10 in terms of the volume of the e-commerce market [17], selecting the ones we analysed in subsection 2.1 and reveal the total number of mobile messenger users, as well as the number of users who use other messengers, not Telegram.

When calculating, we will need the adjusted data on the number of Telegram users from the previous section. Also, the calculation will use data on the number of smartphone users by country for 2019, given by the portal statista.com [18]. In addition, for the calculation, we will take the percentage of mobile messenger users from the number of smartphone users, given in a study by the emarketer.com portal [19].

The total number of mobile messenger users can be calculated by multiplying the number of smartphone users in the country by the percentage of mobile messenger users from the number of smartphone users. The number of users using mobile messengers other than Telegram will be obtained by subtracting the recalculated number of Telegram users from section 2.1 from the total number of users. These calculations are shown in Table 4.

Table 4 - Number of messenger users not yet using Telegram.

Country	Number of Telegram users, ml.	Number of smartphone users, ml	Percentage of mobile messenger users from the number of smartphone users, %	Number of messengers' users, ml	Number of messengers' users (excluding Telegram), ml
USA	4,38	226,29	55,1%	124,68	120,3
UK	1,54	44,95	41,2%	18,52	16,98
Germany	3,7	55,49	41,2%	22,86	19,16
France	0,85	42,4	41,2%	17,47	16,62

Source: [19]

As you can see from this comparison, users of competitors in total make up an impressive number, against the background of which Telegram's indicators do not look so confident. That is why the developers of the messenger are striving to introduce services related to money transfers, since users from these countries are interested in them and this should help to take a significant share and squeeze out competitors.

Let's compare the size of the e-commerce market in the country and the number of users of mobile messengers. The data are shown in Table 5.

Table 5 - The size of the e-commerce market and the number of users of mobile messengers.

Country	E-commerce market size, USD billion	The number of mobile messengers' users, ml.
USA	431,84	124,68
UK	121,36	18,52
Germany	76,47	22,86
France	49,68	17,47

Source: [20]

Based on the data in Table 5, using Excel data analysis tools, we carry out a correlation-regression analysis.

R-squared - the coefficient of determination is 0.97 or 97%. This means that the calculated parameters of our model explain the relationship between the studied parameters by 97%. Since our coefficient is much larger than 0.5 and is approaching 1, our model can be considered quite good.

The coefficient 0.2924 shows the weight of the volume of the e-commerce market on the number of users of mobile messengers. That is, the size of the e-commerce market within this model affects the number of users of mobile messengers with a weight of 0.2924.

The correlation coefficient is 0.985, which tells us about a very high correlation strength, according to the Chaddock scale. Since the coefficient is positive, we can argue that the higher the size of the e-commerce market, the more people will use mobile messengers.

Based on the data presented in this section, smartphones are the most used devices, and users of instant messengers are interested in operations related to money transfers. In the markets of the countries discussed

above, the overwhelming majority use instant messengers from developers competing with Telegram, and the share of competitors often exceeds 50%. Based on this, it can be argued that if Telegram implements the functionality associated with money transfers at a sufficiently high level, then it will be able to get some of its competitors' users. In addition, since, according to forecasts [21], the volume of the e-commerce market will increase and there is a direct relationship between the volume of the e-commerce market and the number of messenger users, it is possible to attract new users who previously did not use messengers at all.

5. DISCUSSION

As we found out earlier, the popularity of the Telegram mobile messenger is influenced by such factors as the cost and speed of the Internet, the cost of owning a mobile phone, as well as the general standard of living in the country. Such a factor as the level of freedom in the country has a fairly strong influence on popularity. There is a high level of user interest in money transfer related functions. Let us consider how these factors of the company's development plans set out in the white paper [22], and give our recommendations and calculate their effectiveness.

This document describes TON (Telegram Open Network) - a fast, secure and scalable blockchain platform capable of handling millions of requests in just a second. This platform will be a set of the following services:

- TON Blockchain is a flexible platform that has the ability to process millions of transactions per second, as well as supporting the ability to implement micropayments and other functions;
- TON P2P Network - peer-to-peer network protocol for accessing the TON blockchain platform;
- TON Storage - distributed data storage for files and data using a torrent-like technology;
- TON Proxy - a proxy server created to increase anonymity and hide the IP addresses of network participants, which will additionally encrypt the data sent through it;
- TON Services - a platform that will help third-party services exchange data via TON Network, and organize logical management in TON smart contracts, which is essentially the new Internet;
- TON DNS - a service for converting URLs into 256-bit addresses for various types of accounts, nodes, services;
- TON Payments - a payment system for making payments. Branded cryptocurrency Gram will be installed by default, it is also possible to use other cryptocurrencies;
- TON DHT is a distributed hash table built on top of TON Network for storing arbitrary values. It helps TON Storage find the distributing nodes, and TON Proxy finds intermediate relays.

The TON blockchain platform will have the ability to easily integrate with various applications and social networks, which will make this platform easily accessible to ordinary users.

Based on the forecasts, Telegram's audience will grow significantly in the coming years. This will be due to the gradual introduction of TON services, which will not only strengthen Telegram's strengths and strengthen its position in markets where it already has a strong position, but will also help to gain popularity where its position is not so strong at the moment.

6. CONCLUSIONS

The mobile messenger market is a rapidly growing segment of the digital economy. To assess its dynamics and form a strategy for IT companies, it is necessary to use an institutional approach.

The research carried out to date on the influence of the institutional environment on the messenger market is fragmentary. In this regard, the work assesses the impact on the market and the formation of companies' strategies of a number of important factors reflecting the situation in different countries.

The most important factors of the institutional environment that affect the Telegram messenger are the dependence of the audience on the level of freedom, the interest of users in functions related to remittances and the dependence of the number of messenger users on the volume of the e-commerce market in the country.

The author proposed a scheme for analyzing the dependence of the number of messenger users on the selected institutional factors, which made it possible to conduct a study based on open source data.

As a result of the study, it was revealed that the lower the level of freedom in the country, the more users Telegram has.

In countries with a high level of freedom, there is a high interest of users in those functions associated with electronic money transfers.

Based on the analysis, we established the relationship between the size of the e-commerce market and the number of users of mobile messengers: the larger the volume of the e-commerce market, the larger the audience for mobile messengers in a given country.

Analysis of trends in the level of freedom in different countries of the world made it possible to predict a general decrease in the index of the level of freedom. In those countries where its growth is expected, there are high risks of a change in the situation.

Telegram's audience is expected to increase due to a decrease in the overall level of freedom while continuing the company's current course towards a high level of security and protection of user data.

An increase in the audience of Telegram and other messengers is predicted due to the growth in the volume of the e-commerce market.

The Telegram audience will receive an additional impetus for growth thanks to the introduction of new functions by the company.

The study of the influence of the institutional environment on mobile messengers is extremely important, since significant changes are taking place in the messenger market, there is a permanent introduction of new technologies, there is a high level of competition for users, and the legal regulation of this industry is strengthening.

It is advisable to use the proposed research scheme and its results when forming a competitive strategy by participants in the mobile messenger market.

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