PROBLEMS AND PERSPECTIVES OF ELECTRONIC COMMERCE

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Abstract— Conceptual approaches to e-commerce management in the context of digitalization of the economy have been developed and the problems of improving management efficiency have been studied. The directions of improving the regulatory framework for conducting and regulating e-commerce in the Republic of Uzbekistan have been identified.

Index Terms— business, information technology, system, e-commerce, trade.

1 INTRODUCTION

EXTENSIVE, research is being conducted on the effective organization of e-commerce in the world. In this regard, special attention is paid to further improving the quality of e-services and conducting research in such areas as systematic organization of business platforms such as B2B, B2C, B2G, C2C, effective marketing activities aimed at harmonizing customer and business relationships. In an environment of uncompromising competition in the international trade services market, the introduction of new market segments and the need to develop an effective management strategy to improve e-commerce management based on modern requirements to ensure operational efficiency.

2 LITERATURE REVIEW

Theoretical and practical aspects of the development of e-commerce have been studied by many foreign scholars, including P.F.Druker, B.Twiss [1], Y.Shumpeter [2], R.Fostr, Webster Frank, A.Dinis, Y Hsu, K.Oppenlender [3], Y.Hsu [4].

From the scientists of the Commonwealth of Independent States: P.N. Zavlin [5], L.P. Goncharenko [6], L.M. Goxberg, A.K. Kazantsev [7], B.Z. Milner, Yu.V. Yakovets, Yu.S. Kubkina, O. A.Kobelev [8;9], V.I.Shulepov studied in the scientific works of Kobelev.

Theoretical and practical problems of effective use of information and communication technologies by Uzbek scientists B.B.Abdullaev [10], I.Abduraimov, S.S.Gulamov researched in the scientific works of A.N.Aripov [11], T.Z.Teshabaev, Sh.A. Tursunov, R.I.Nurimbetov and others.

Despite the scientific research, the factors affecting the e-commerce system in the context of digitalization of the economy and issues related to improving the mechanism of effective management in this area have not been systematically studied.

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3 ANALYSIS AND RESULTS

The experience of the most developed countries in the field of e-commerce is reflected in the construction of Enterprise Resource Planning ERP, which is the basis of e-business infrastructure. The classic ERP system includes procurement, production, sales, inventory, and human resource management.

The most important part of e-commerce is e-commerce. According to the interpretation of this term by the Director General of the World Trade Organization (September 1998), e-commerce is a unique form of trade, a radically new way of buying, selling and distributing goods and services regulated by internationally recognized multilateral trade rules today, in particular Services is the General Agreement on Trade (GATS).

Businesses related to e-commerce are classified by the scope of business, geographical coverage, ownership and stage of the business life cycle, which covers all sectors of the global economy, as well as in specific forms. This situation raises the issue of e-commerce system management and legal regulation for all countries. In addition, the formation of a full-fledged e-commerce market in Uzbekistan, the existence of a number of problems and shortcomings that hinder domestic producers to foreign markets, in particular, the implementation of virtual market processes, is the establishment of the Association of Electronic Commerce. The implementation of this project is to develop social, cultural, scientific and other projects and programs aimed at improving the e-commerce environment, increase the legal and economic literacy of business representatives and the public, support ideas and initiatives. An E-commerce Uzbekistan group has been set up on Facebook to create an information platform to address tactical goals, exchange views, identify industry problems and develop measures to address them. The goal of the association is to create opportunities for everyone to buy and sell quality products and services online at any time and in any convenient place.

A new phase of the digital transformation is the development of digital data generation, coding and transmission technologies, including tools for automating socio-economic processes, data analysis, blockchain and artificial intelligence technologies. This means tracking, collecting and converting social and economic movements and business processes into

real-time quantitative data. The size, variability, and diversity of the data led to the emergence of the "big data" phenomenon. Datification has led to the transformation of data into an economically viable, selling and buying object, and has led to the emergence of a special concept - data trading, in which any manufacturing company can participate as a by-product of data production activities.

Analysis of the dynamics of development of e-services in the Republic of Uzbekistan can be based on the analysis of statistical indicators and research results of the information society and the Internet economy. Statistics that allow us to assess the level of development of services based on digital transformation technologies can be divided into two main parts: production indicators of the volume of services provided by assessing the contribution to gross value added and consumption indicators of electronic services. It is difficult to imagine the economic development of Uzbekistan in the context of a globalized world economy and technological development without the rapid growth of the digital economy.

According to the ICT Development Index, Uzbekistan ranks 103rd out of more than 170 countries. The share of the digital economy in GDP in the country is 2.2%. At the same time, the average optimal rate is 7-8%, for example, in the UK - 12.4%, South Korea - 8%, China - 6.9%, India - 5.6%, Russia - 2.8%, and Kazakhstan. - 3.9%. According to the draft concept of e-government development of the Republic of Uzbekistan, it is planned to increase the share of ICT services in GDP by 5.0% by 2025 and by 10% by 2030.

Resolution of the President of the Republic of Uzbekistan dated October 5, 2020 PF-6079 "On approval of the Strategy" Digital Uzbekistan - 2030 "and measures for its effective implementation." The strategy defines the strategic goals, priorities and medium- and long-term prospects for the development of the digital economy and e-government of the Republic of Uzbekistan, the main directions and content of reforms in the development of e-government.

The development of e-commerce in the country is associated with its infrastructure, and the Republic of Uzbekistan ranks low in the world in terms of ICT development, Internet users and a number of other indicators. Lack of digital skills in Uzbekistan is a serious obstacle to digital transformation and a major factor negatively affecting the development of e-commerce. The average share of Internet use in the CIS countries is 69.7%, in Russia - 80.9%, in Azerbaijan - 79.8%, in Kazakhstan - 78.9%, in Moldova - 76%, in Uzbekistan - 55.2%. (Figure 1).

Despite the availability of existing payment systems (Click, Payme, M-bank, Upay, Humo, Easy, etc.) that allow you to make online payments for Internet, government services, taxes and fees, the share of electronic payments in total payments is 37% 12 percent lower than the world average and 14 percent lower than the CIS average.

According to the E-Government Development Index (EGDI) of Uzbekistan in 2019, it was 0.66 (0.62 in 2018), which is 0.60 higher than the world average, but the main indicator in this ranking is telecommunications. the infrastructure index (0.47) remained lower than the average of the CIS and Central Asian countries.

There are problems in the development of e-government, such as limited resources of countries, lack of digital infrastructure and insufficient opportunities, the dissertation requires identification of the industry and the factors influencing its development on the basis of econometric modeling.

As a result of the development of e-commerce, the assessment of the impact of the following factors on the volume of e-commerce services (Y) is the basis for the adoption of targeted strategies: number of Internet users (X1), tariffs for Internet services (X2), number of online stores (X3), e-commerce transactions (X4), total transactions made through POS terminals (X5), number of plastic cards (X6), number of ATMs and kiosks (X7).

In evaluating the impact of selected factors on the periodic development of the volume of e-commerce services, the Eviews 10 software package was used to obtain a multivariate regression equation applied to time series.

The results of descriptive statistics on the selected variables were checked on the basis of average values of the variable, mode and median, standard deviations, asymmetry coefficient, normal distribution coefficients. According to the results of classification statistics, all indicators of the selected time series are within the norm, and the specific correlation coefficients show that there is a strong correlation between the result factor (volume of e-commerce services, lnY) and influencing factors, ie the value of specific correlation coefficients accepted.

The determination coefficient is used to determine the percentage (y) in the multivariate econometric model of the factors included in the model, and it is calculated as follows:

$$R^2 = 1 - \frac{\hat{\sigma}^2}{\hat{\sigma}_y^2} = 1 - \frac{RSS/n}{TSS/n} = 1 - \frac{RSS}{TSS}$$

here,

$RSS = \sum_{i=1}^{n} \varepsilon_i^2 = \sum_{i=1}^{n} (y_i - \hat{y}_i)^2$ - the sum of the squares of the regression residues;

$TSS = \sum_{i=1}^{n} (y_i - \bar{y}_i)^2 = n \cdot \hat{\sigma}_y^2$ - total variance;

y_i, $\hat{y}_i$, $i=\overline{y}_i$ - the actual, calculated, and average values of the resulting factor, respectively.

The results of the unknown parameters of the multifactor econometric model based on the Eviews program are presented in Table 1.

Table – 1 Calculated parameters of a multifactor econometric model

Variable	Coeff.	Stnd.error	t-stat.	Probability (p)
LNX1	0,297774	0,109909	2,709281	0.0274
LNX2	-0,052961	0,008134	-6,511063	0.0422
LNX3	0.172653	0,061710	2,797812	0.0462
LNX4	0.479430	0,146369	3,275489	0.0385
LNX5	0.109259	0,026379	4,141893	0.0299
LNX6	0.485094	0,177597	1,731431	0.0949
LNX7	0.199961	0,131784	2,517339	0.0501
C	6.876430	1,135413	6,056325	0.0001
R-square	0.984427	The average of the dependent variables		11.11578
R^2	0.975343	standard deviation		0.703711
Stnd.error	0.110500	Akayke information criteria		-1.278437
F-stat.	108.3694	Darbin-Watson statistics		1.983517
Probability (F- stat.)	0.000000			

Using the data in Table 1, we present a mathematical view of a multifactor econometric model:

$$\ln y = 6{,}8764 + 0{,}2978 \ln x_1 - 0{,}0529 \ln x_2 + 0{,}1726 \ln x_3 + 0{,}4794 \ln x_4 + 0{,}1092 \ln x_5 + 0{,}4851 \ln x_6 + 0{,}1999 \ln x7 \quad (1.2)$$

According to the results of the regression analysis, the number of Internet users in Uzbekistan (lnx1) will increase by an average of 1.0%, while the volume of e-commerce services (lny) will increase by an average of 0.2978%. The increase in the share of Internet users should be considered as a factor that has a high impact on the growth of sales in online stores, the result of which is the development of e-commerce. In Uzbekistan, the increase in the cost of tariffs for Internet services (lnx2) will lead to an average increase of 1.0%, the volume of e-commerce services (lny) will decrease by an average of 0.0529%. This feedback is due to the reduction in the cost of Internet service tariffs, the creation of opportunities for providers to provide more types of services to both e-commerce and Internet users, and the formation of a competitive environment. The increase in the number of online stores in the country (lnx3) by an average of 1.0% should be considered as a factor influencing the growth of e-commerce services (lny). In particular, an increase in the number of e-shops per unit will lead to an increase in e-commerce by 0.1726%. The increase in online stores will increase competition in the market for these services, expand the range of goods in online stores and, as a result, increase consumer usage.

An increase of e-commerce transactions (lnx4) by an average of 1.0% leads to an increase in the volume of e-commerce services (lny) by an average of 0.4794%. In addition, the total transaction through POS terminals (lnx5) will increase by an average of 1.0%, the volume of e-commerce services (lny) will increase by an average of 0.1092%. Among the population, plastic cards lead to an average increase of 1.0% in the number of corporate plastic cards in enterprises (lnx6), an increase in the volume of e-commerce services (lny) by an average of 0.4851%. At the same time, the opportunities for citizens or businesses to make electronic purchases through plastic cards through electronic payment systems Click, Payme, Unipay and other systems will be expanded. Based on the results of econometric modeling, it was determined that the increase in the number of ATMs and kiosks (lnx7) in Uzbekistan by an average of 1.0%, the volume of e-commerce services (lny) by an average of 0.1999%.

An important factor in the organization of any economic activity, in particular e-commerce, is to evaluate the effectiveness of the decisions made and the whole process in general. All electronic transactions take the form of certain economic activities, such as sales, insurance and leasing. Accordingly, the methods of their evaluation are studied in detail, and the improvement of methods of their application in practice is one of the main problems for enterprises operating in the field of e-commerce. It is possible to use the same system of analysis of economic activity with e-commerce, that is, to collect and organize data and calculate efficiency indicators based on them.

A generalized division of the effects of the introduction of e-commerce into the economic, organizational and marketing in the economic literature; impact hierarchy for buyers and sellers; there are a number of indicators of e-commerce and, in particular, e-commerce efficiency. However, there is no consistent system of indicators to assess the effectiveness of e-commerce as a specific type of economic activity at the level of an economic entity, country or group of countries. There are also cases when the calculation of e-commerce efficiency does not take into account its risks and communication risks.

According to the author, it is expedient to develop methods for evaluating the effectiveness of e-commerce based on micro, meso and macro impact mechanisms, taking into account the positions of consumers, sellers and the state. According to this evaluation method, a matrix for determining the economic impact of e-commerce is recommended according to Table 2.

While the practice of using generalized methods of evaluating the effectiveness of e-commerce at the micro, benchmark and macro levels allows to set strategic goals at the national level, it does not allow enterprises to develop effective marketing strategies at the level.

Table-2 Economic effects of e-commerce

Degree	Economic impact	The number of factors by position		
		From a consumer standpoint	From the seller's position	From a state position
Micro-level (business entity - consumer)	Finance	2	2	0
	Trade	2	4	0
	Risk	6	4	0
Meso-level (nationwide)	Increase in tax revenues to the budget; GDP growth per capita; Increased labor productivity in trade; Increased purchasing power due to reduced costs of purchasing goods			
	Risk	0	0	4
Macro-level (at the level of international relations)	Finance	0	0	1
	Trade	0	0	7

Given this situation, the dissertation proposes a method of assessing the effectiveness of e-commerce at the micro level (from the point of view of the seller).The results of the study show that e-commerce is a form of business that brings high economic efficiency for all enterprises. However, the development of mechanisms to regulate these processes is one of the most pressing issues not only in Uzbekistan but also in the world. Also, there is no officially recognized practice of regulating and taxing e-commerce in the practice of international economic relations. The movement of information on the Internet with the same network characteristics is often not regulated by the legislation of any one country, which necessitates the creation of international legal instruments.

The results of the practice of the world's leading countries (USA, Japan, Canada, South Korea, Australia, etc.) in the regulation of e-commerce systems, including "bit tax" (Belgium), a special "identification mark" for Internet trading companies (France), " Tax for Internet Use for Business Purposes "(Germany), e-banking services and the Internet-banking national taxation system (Switzerland) have not been effective. Analyzing the current organizational structure of the State Tax Committee of the Republic of Uzbekistan, there is no department for controlling Internet sales through social networks (telegram, facebook, Instagram, etc.).

Taking into account the above, the dissertation proposes a mechanism of state regulation of e-commerce based on the introduction of licensing of the most informal and widespread

social networks in Uzbekistan, including "telegram" groups. A new section on the current organizational structure of the State Tax Committee: Trade Control Department "was considered expedient.

The new department, which is included in the current organizational structure of the State Tax Committee of the Republic of Uzbekistan, will allow expanding, regulating and controlling the tax base on the basis of control over e-commerce relations between the population.

The main obstacles to the development of e-commerce in Uzbekistan at the initial stage are:

internet users are in a very narrow circle and most of them are not inclined to shop online;

the average resident of internet users looks primarily in terms of financial well-being, technical training and level of education. These situations have not made the use of e-commerce an ideal tool for consumers to promote computer hardware, software, and sophisticated electronics.

the chaos and information load on most sites makes it difficult for potential consumers, i.e., the issue of creating a professional site and the ability to evaluate its performance;

the security of confidential information in financial transactions and transmitted is not adequately protected

the lack of professionals in the field of Internet marketing and advertising leads to a decline in the quality of their services.

Taking into account the above problems, pessimistic, inertial and optimistic scenarios in 3 directions have been developed based on the results of forecast calculations of the volume of e-commerce services in Uzbekistan for the coming periods (Figure 1).

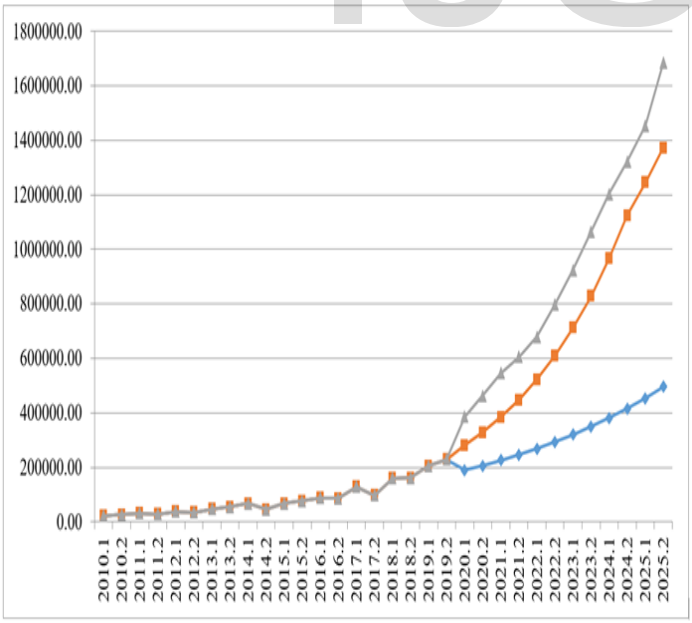

Fig.1. Dynamics of the volume of e-commerce services in Uzbekistan in 2010-2019 and forecast values for 2020-2025

The analysis of the 3 different forecasting scenarios shown in Figure 3 shows that in the pessimistic scenario, i.e. in the field of e-commerce, there is a tendency to grow even when the situation is "worst". In the pessimistic scenario, the volume of e-commerce services will increase by an average of 320.5 billion soums in the forecast period, and in 2025 will be 474.8 billion soums in the pessimistic scenario. In the pessimistic scenario, the number of Internet users did not increase, the cost of Internet services increased, the number of online stores did not change, e-commerce transactions decreased, and overall transactions through POS terminals remained unchanged. This situation leads to a certain low level of e-commerce services in the country.

The inertial scenario takes into account the current real situation, from which the above-mentioned influencing factors change in real time. According to the inertial scenario, the volume of e-commerce services in the country every 6 months averages 735.3 billion. soums. According to this scenario, the volume of e-commerce in 2025 will amount to 1308.9 billion soums, which is 2.75 times more than in the pessimistic scenario.

4 Conclusions

An optimistic scenario is a development of the "best" option in e-commerce, which reflects the positive impact of all selected factors. Increase in the number of Internet users in Uzbekistan, decrease in tariffs for Internet services, increase in the number of online stores, increase in the volume of e-commerce transactions, increase in total transactions through POS terminals, more purchases by bank cards, ATMs and is done on the basis of a scenario such as an increase in the number of kiosks.

According to the optimistic scenario, the volume of e-commerce services will increase by an average of 927509367 soums in the forecast period, and in 2025 it is projected to reach 1568.8 billion soums. In this scenario, the volume of e-commerce services will increase by 2.01 times compared to the pessimistic scenario and by 70% compared to the inertial scenario.

Research has shown that a prerequisite for the development of e-services in the Republic of Uzbekistan is to improve their quality and accessibility, which is consistent with the objectives of intensive and broad economic growth.

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