

# APPLICATION OF DIGITAL PLATFORMS IN THE STATISTICAL SYSTEM BASED ON INTERNATIONAL EXPERIENCE

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## Abstract

This article covers the international experimental application of digital platforms in the statistical system. Scientific-based proposals and recommendations have been developed on issues of development of the organization of digital platforms in the statistical system, problems in organizing statistical activities through digital platforms, ways of introducing modern technologies into it, further improvement of the activities of regional statistical departments on the basis of digital platforms. The article also covers the issues of developing the organization of work with data on the basis of digital technologies in the statistical system, analyzes the existing problems in this area, studies the factors that hinder the processes of digitization and describes the directions of digitization of production.

**Keywords:** Statistics, statistical system, digital platform, digitization of the economy, Digital Economy, Network, Technology, Information, Communication, Platform, analysis.

## Introduction

Today, the active development of digital platforms providing various services is an integral condition and one of the main elements of the country's digital economy. Among the measures of state support for such an urgent and important area of activity, it is possible to ensure the most favorable use of subsidies, loans, taxes and other financial benefits for private companies participating in the development of platforms<sup>1</sup>.

As one of the vivid examples of the development of digital platforms, one can cite the Chinese company Alibaba, which has an electronic trading system. The experience of using it shows that the process of data collection creates extremely competitive advantages for expansion into different sectors of the economy. Alibaba is not simply a digital platform, but a platform ecosystem. It is understandable that the power of such an ecosystem will be greater than the power of individual platforms. Hatto USA is also currently losing this race because it has to integrate different platforms there, while in China, Development in this area has gradually occurred at the expense of increasing efficiency – the transition from one platform to another<sup>2</sup>.

<sup>1</sup> Khodiev B., Shodmanov Sh. Theory of economics (textbook). - T., Publishing house harmonious Faiz media, 2017. – 785 b.

<sup>2</sup> Gulyamov S.S. etc. Blockchain technologies in the digital economy. T.: Publishing house "economists", 2019.



The digital economy platform is a digital environment with a set of services and functions that provide the needs of consumers and manufacturers, as well as realize the possibility of direct interaction between them (i.e., the software is a hardware complex). The task of such a platform is to ensure the process of interaction between participants and the possibility of direct communication .

Platformala reduces costs and provides additional functional opportunities for both suppliers and consumers. They also provide for the exchange of information between participants, which should significantly improve cooperation and contribute to the creation of innovative products and solutions. The platform has been around for a long time as a business model. A simple example of this is the classic market where sellers and buyers (manufacturers and consumers) find each other.

A digital platform is a set of web-based systematic software that speeds up and facilitates transactions between users. Digital platforms serve digital markets while offering physical products. They are common to businesses of all sizes, from startups to large enterprises, in performing various business functions, first of all, interaction with customers.

There are several types of digital platforms, but they all facilitate services, interactions and transactions between users. Interactions can occur between two or more individuals or between a user and a platform provider<sup>3</sup>.

## LITERATURE REVIEW

One of the areas that are developing rapidly and widely today is digital platforms, to which training of personnel is trained in certain types. The platforms bring together manufacturers and users who are able to interact without intermediaries. Today there are hundreds of digital platforms operating in the world. Companies working in digital format have now created their own digital ecosystems. We can cite Amazon, Google, Uber, Yandex, Airbnb and Alibaba, familiar to all of us, as examples of business models with a digital platform. Each of these platforms has its own specializations and features. What they have in common is that they perform functions individually<sup>4</sup>.

Digital platforms are seen as a model that provides a number of features that explain their attractiveness in organizations. Digital platforms help to significantly reduce transaction costs, such as data distribution, search, contracting, and monitoring costs (Eisenmann et al. 2006; Pagani 2013)<sup>5</sup>. For example, collection platforms such as TripAdvisor and Expedia collect and integrate travel-related information from multiple sources to a single platform, thus reducing search costs by establishing access to the services of information and intermediary agents. With the help of digital platforms, the organization and coordination of the technological development of additional products is formed modularity and related management structures

<sup>3</sup> Shodmonov Sh.Sh., Gafurov U.V. Theory of economics (textbook). - T., Publishing house "economics-finance", 2010. – 756 b.

<sup>4</sup> Immortal A., Vahobov A. Theory of economics: textbook. - T.: "Economics-Finance", 2014.

<sup>5</sup> Шодиев Т.Ш. Мультипликативный эффект цифровой экономики [Электрон. ресурс]. Режим доступа: <https://review.uz/ru/j2n>. (Дата обращения: 17.03.2020)



(Tiwana et al. 2010; Boudreau 2010)<sup>6</sup>. For example, Apple's iOS and Google's Android platforms form a regulatory structure that facilitates and encourages independent software developers to participate in technical and application development. In addition to these properties, it also has the property of generativity (Faraj et al. 2016; Yoo et al. 2012). Generativity is defined as the ability of technology to generate new results, driven by its users to large and diverse nations (Zittrain 2006). For example, generative crowdsourcing platforms allow you to produce new solutions to difficult problems.

Many scientific works of scientists from our country and abroad are devoted to the problems of the development of digital platforms and the effective use of digital platforms in the statistical system in various sectors and sectors of the national economy.

In the context of the formation of the digital economy, a set of scientific research of specialists of our country is devoted to solving the issues of effective use of ICT and digital platforms in the sectors and sectors of the national economy of the Republic of Uzbekistan. These include, in particular, a. Abdugafarov, R. X. Alimov, R. X. Ayupov, B. A. Begalov, T. F. Bekmuratov, A. B. Bobojonov, B. K. Gayibnazarov, S. S. Güломov, R. A. Dadabayeva, Sh. u. Janadilov, V. K. Kobulov, A. T. Kenjabayev, T. S. Kuchkarov, A. A. Musaliyev, Sh. G. Odilov, B. T. Salimov, B. Y. Khadiyev, T. Sh. Shadiyev, A. T. Shermuhamedov et al.

Plaxine S. M., Abdrakhmanova G. I., Kovaleva G. G. they move away from their traditional approaches to the development of digital platforms and consider the Internet economy as an object of statistical analysis. They describe the methodology for calculating Internet's contribution to the economy, the classification of the types of economic activities of the Internet economy, sources of information for collecting information, national accounting systems and methods for calculating gross domestic product.

At the same time, despite the wide scope of scientific research on the development processes of digital platforms, in the activities of various sectors and sectors of the economy, including the use of modern technological solutions in Uzbekistan, many issues are still outside the scope of study or have not been sufficiently developed. Thus, in the context of the formation of the digital economy, the issues of improving the methodology for using digital platforms in the statistical activities of the Republic of Uzbekistan remain controversial. The relevance and insufficient development of the problem made it possible to determine whether research will be carried out on this problem and the topic of this article.

## RESEARCH METHODOLOGY

Comparative, systematic, economic-statistical, SWOT-analysis, monographic research methods, questionnaire survey, statistical sampling, grouping, comparison, induction, deduction, optimization method, as well as methods for working with websites were used in statistical activities using foreign experience of the Republic of Uzbekistan. In addition, computer networks and specialized software products were used.

## ANALYSIS AND RESULTS

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<sup>6</sup> Бегалов Б.А. Сколько нас? Определит перепись [Электрон. ресурс] // Народное слово. 24 апреля 2020. Режим доступа: <http://xs.uz/ru/site/newspaper>.



Digital platforms are an important tool in the digital economy, integrating many new technologies and allowing users (both manufacturers and consumers and intermediaries) to take advantage of the best digital tools and the free competition market, leading to qualitative changes in the rules of the game in the respective segment.

Criteria for classifying an enterprise as a "digital platform" :

1. Algorithm for the interaction of platform participants: the interaction of participants is carried out within the framework of a clearly defined algorithm.
2. Mutually beneficial relations of platform participants.
3. The importance (scale) of the number of participants who use the platform for cooperation. It is important for all potential participants of the platform: society, economy, Country, World.
4. The presence of a single information environment and the corresponding information and technological infrastructure, in which the interaction of participants is carried out.
5. The presence of an effect in the form of reducing transactional costs under the interaction of different participants of the platform – in relation to the same interaction without platforms. At the same time, such an effect should be achieved by applying certain technologies for working with data and or reorganizing business processes <sup>7</sup>.

A digital platform is a set of web-based systematic software that speeds up and facilitates transactions between users. Digital platforms serve digital markets while offering physical products. They are common to businesses of all sizes, from startups to large enterprises, in performing various business functions, first of all, interaction with customers<sup>8</sup>.

There are several types of digital platforms, but they all facilitate services, interactions and transactions between users. Interactions can occur between two or more individuals or between a user and a platform provider. In Table 1 below, we will consider the advantages of the digital platform (Table 1)<sup>9</sup>.

**Table 1. Advantages and features of the digital platform**

Advantages	Features
Improved customer experience	Digital platforms related to customer service can improve the relationship between buyer and seller in several ways during the process, including freely offering relevant information before sale, simplifying the procurement process, and providing assistance after transaction.
Extended customer range	Its online presence provides a wider range of potential customers than the store. Digital platforms are the best way for businesses to connect with a wider audience and create new opportunities for innovation and development.
Improved data concept	Digital platforms often include business analytics and data collection, which helps businesses learn about customer behavior and trends. This information, collected by ingenious specialists, will strengthen decision-making and stimulate growth.

<sup>7</sup> Savina T.N. Digital economy as a new development paradigm: challenges, opportunities and prospects // Finance and Credit. 2018. № 3(771).

<sup>8</sup> Porsaev G'.M., Safarov B.Sh., Usmanova D.Q.. Fundamentals of digital economics. (Textbook) - T.: "Publishing house of Science and technology", 2020. 372 b.

<sup>9</sup> Porsaev G'.M., Safarov B.Sh., Usmanova D.Q.. Fundamentals of digital economics. (Textbook) - T.: "Publishing house of Science and technology", 2020. 372 b.



The use of digital platforms in a statistical system is ideal for organizations that collect a lot of quantitative data in the form of numbers, multiple choices, dates and images, and many industry employees, from utilities to oil refineries, are now using phones or tablets instead of paper.

Distinctive features of digital platforms include:

1. The purpose of the platform is the main activity carried out using a digital platform.
2. Groups of participants or parties that use the digital platform, as well as the main beneficiary (the person who has given his property or finances to the trust to generate income) the presence and use of a platform that contributes to the digital economy with the results of the activities through the use of the platform. Its purpose and the platform requirements of such a beneficiary.
3. The level of data processing on the platform. To what extent the processing of the data entered by the participants on the platform will achieve the effect :
  - to carry out a certain technological process of information processing (combining a number of Technical Operations Inherent in a particular information processing technology);
  - obtaining information for decision-making (collecting the use of a number of technologies within the framework of automation of the business process of a particular economic entity );
  - obtaining the effect of business from the provision of products, services to the consumer (combining the use of a number of separate automated business processes within the framework of an economic transaction between the subjects of the economy).
4. Digital platform infrastructure. What the "unified information environment" in which the activities of the subjects of the digital economy are carried out means and what it consists of<sup>10</sup>.

Statistics we can see the following main advantages of using digital platforms in the system:

1. In relation to the price. There are many aspects to the "price"of something - it's not just hardware. Electronic devices will certainly cost more than a few papers, even if you buy them in bulk with large discounts. That is, in addition to buying and configuring data entry machines, it will be more expensive if you take into account the requirement to hire, train and hire data entry personnel for paper processes.
2. Speed and efficiency. This can be the most obvious advantage of data collection in the digital space compared to paper. Digital data collection reduces both the time it takes to collect data and the time it takes to analyze and disseminate data collection results. One of the main problems with paper is its administrative burden. Paper can be uncomfortable not only for field workers, but also for employees who need to manage paper blanks. And if changes occur, updating and distributing them can be a nightmare, while digital forms can be updated quickly and automatically by pressing a button and sent to all field workers.
3. The quality of the data is affected. Digital data collection using digital platforms not only reduces the likelihood of error at the data collection point within the field, but can also automate data auditing. By processing and checking data faster, errors are corrected and corrected faster. In addition, paper may be lost, destroyed, or mishandled in various ways, which can cause problems later if information needs re-access. Digital data on digital platforms, on the other hand, can be easily and cheaply stored, copied, backed up, and encrypted for future secure

<sup>10</sup> Andy Patrizio (2023). What is digital transformation? Everything you need to know // TechTarget Editorial. URL: <https://www.techtarget.com/searchcio/definition/digital-platform>



access when needed. This also improves the transparency and visibility of the data, allowing for things like Control and access. Increase Risk Reduction and reduce the risk of data leakage. 4. Its appearance and observability become easier. The fourth important advantage of digital data on digital platforms over paper is observation. Paper processes will not tell you anything about what is happening in real time, but with a digital platform, as soon as the database technician or operator fills out a questionnaire in the database, the data will be open to all interested parties. The view tells you "have all security requirements been met?" questions immediately. or "have all equipment and maintenance records been tracked?" or "is the overall productivity of any team improving or deteriorating?" You can't control what you haven't observed. Provides an organization engaged in statistics with the ability to effectively manage both assets and people<sup>11</sup>.

The use of digital platforms in the study and analysis of Statistics increases the possibilities of data reproduction and analysis. In addition, the study of their data increases the level of systematic and accuracy. The most popular digital platforms for statistics are:

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1. With Microsoft Excel: Excel, it is possible to analyze its data in the form of tables and graphs. This application was chosen by many users for its study and convenience.
2. SPSS (Statistical Package for the Social Sciences): SPSS is a program designed for statistical analysis and data learning. This program has a wide range of opportunities for the implementation of statistical analysis methods and the study of their data.
3. The R Programming Language: R program is one of the first internationally accepted programs for data analysis and statistical analysis. It is a free and open source application.
4. Python: Python is also used for statistical analysis. Data is analyzed and visualized using libraries such as Pandas, NumPy, Matplotlib, and Seaborn.
5. Tableau: Tableau is a visualization program that allows you to analyze your data in the form of graphs and coordinated tables. This program is very popular for creating graphics and interactive Uzbeks.
6. Google Sheets: it is an online service that provides functions such as Microsoft Excel and allows you to easily integrate, analyze and view your data.

While each of these platforms has its own advantages and products, what data support to work with, Choose the one you are comfortable with here. It is also important that there are ways to learn new programs and how to learn them.

## **CONCLUSION**

Let's summarize, the effectiveness of the use of digital technologies in the digital economy and statistical system shows that at the same time it is developing in a wide range of industries and is usually not built by a limited number of companies, even if they are given special powers and resources. Therefore, the main role in the use of digital technologies in the digital economy

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<sup>11</sup> Лапидус Л.В. Цифровая экономика: управление электронным бизнесом и электронной коммерцией. Монография. М.: ИНФРА-М, 2018. 381 с





and in the statistical system should be played by the acquisition of experience with strong skills and an innovative approach, while the state creates infrastructure and conditions for a private initiative.

Statistics have the following advantages of using digital platforms in the system:

1. Ease and speed: digital platforms facilitate the processes of data jamming, storage, analysis and visualization. These platforms generally have consumer-friendly interfaces, as well as providing opportunities to automate data learning and analysis processes.
2. Multiple analysis methods: digital platforms provide opportunities to study and implement many analysis methods. This allows the use of various methods of analysis, such as data analysis, visualization, regression, classification, clustering, etc.
3. Integration with many data sources: digital platforms usually provide integration capabilities with many data sources. This makes it easier to integrate, analyze, and use data by gathering data in a single location.
4. Data visualization: facilitates the analysis of digital platforms, data through graphs, diagrams, coordinated tables and other visualization tools. This provides easy and effective ways to read statistics and analyze data.
5. Data analysis automation: digital platforms provide automated data analysis. This provides opportunities for Automatic Data analysis, as well as convenient ways to create statistical models and implement them on data.
6. Algorithmic support: digital platforms provide various algorithmic methods for statistical analysis. This provides algorithmic support for building statistical models, training on data, and performing other actions on data.

These advantages provide easy and effective ways to analyze and identify data in statistics. The use of digital platforms makes the processes of data analysis and detection easy and efficient, as well as the possibility of automating the processes of data acceptance and data analysis.

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