



AGRICULTURAL PRODUCTION EFFICIENCY INDICATOR

Rahimov Odil Berdievich

Senior teacher of the Karshi branch of the Tashkent University of Information Technologies named after Muhammad al-Khorazmi
odilrahimov2374@gmail.com
<https://doi.org/10.5281/zenodo.7370452>

ARTICLE INFO

Received: 18th November 2022
Accepted: 25th November 2022
Online: 27th November 2022

KEY WORDS

Economic entities, interregional clustering, econometric modeling, digital technology, empirical model, econometric model, potential, relative model, forecast results, information system, endogenous variables, exogenous variables.

ABSTRACT

Kashkadarya region clustered the activities of economic entities interregionally econometric analysis and the theoretical foundations of econometric model construction and forecasting mechanisms have been improved using economic mathematical methods. Xefficient use of the main production resources in the clustering of business entities, or more generally, methods of forecasting production through econometric modeling are shown.

Relying on foreign experience is one of the main sources in the assessment of agricultural production parameters. When it comes to the use of digital technologies in the economic sectors of developed countries, its efficiency indicators can be taken as information, not only in agriculture, but also in various sectors of the economy. Because digital technologies simultaneously serve for the comprehensive development of all economic sectors and determine the state of general development.[1] In this sense, when connecting the level of economic growth with digital technologies, in the research work of many world leading scientific research centers, research institutes, a certain sector of the economy was not limited to the analysis of the results related to this sector [2].

Developed countries have passed the stage of land conservation in the sphere of problems in the production of agricultural products and have stepped into the next stages of development. One of the main criteria for their eligibility for this status is the value of the digital evolution index. According to the known character, digital evolution index is divided into 4 groups. Here, Group 1 is called Leaders, and the characteristic description of the group represents a high level of digital development and rapid growth. Singapore, Great Britain, New Zealand, Estonia, Hong Kong, Japan and Israel can be included in this group. Group 2 is called "slow growth" and is characterized by the fact that it has continued to grow dynamically for a long time, and now the rate of development has slowed down. They are expected to be



more likely to lag behind digitization leaders due to their lack of dynamic innovation. South Korea, Australia, as well as Western European and Scandinavian countries can also be included in this group. China, Kenya, Russia, India, Malaysia, Philippines, Indonesia, Brazil, Colombia, Chile, Mexico countries are included in the 3rd group of indexing, which is characterized by the general level of digitization compared to the first two groups, but at the same time has stable digital development dynamics. The status of these can attract investors and even give them access to the leadership team. The last group 4 is called "problematic" and the character of the group is slow growth under the influence of many obstacles related to internal factors, characterized by a low level of development. The Republic of South Africa, Peru, Egypt, Greece, and Pakistan can be included in this group[3].

Research methods. Relying on foreign experience is one of the main sources for evaluating modern production parameters. When it comes to the use of digital technologies in the economic sectors of developed countries, its efficiency indicators can be taken as information, not only in agriculture, but also in various sectors of the economy [4]. Because digital technologies simultaneously serve for the comprehensive development of all economic sectors and determine the state of general development. In this sense, when connecting the level of economic growth with digital technologies, in the research works of many leading scientific research centers and research institutes, a certain sector of the economy was not limited to the analysis of the results related to this sector [5].

Theoretical and practical issues of effective use of land and other resources of production in agriculture rely on several field knowledge. An agrarian approach alone does not offer any solution. According to Max Weber[6], a research scientist who conducted scientific research in the agricultural sector, in the future, the result cannot be achieved only by improving the quality of land resources and increasing the efficiency of labor resources, but it will be possible to achieve the increase of production volume only by using intellectual technologies. Dutch researcher Jaap Jan Schröder[7] emphasizes the increasing role of the chemical industry in agricultural production. Researcher Dunstan Gabriel Msuya [8] in his scientific research on the Canadian agricultural system, creating varieties resistant to the environmental environment, The development of genetic engineering will become one of the main factors determining the development of agriculture. Russian economist Yugai A.M.[9] In his studies, he emphasizes that repeated cropping and crop rotation in the Russian Federation had a great impact on the volume of production. Also, by the scientists of our country, the efficiency of land use[10] and the use of econometric modeling in assessing the value of land resources were considered.

The concept of digital transformation is seen as one of the main processes in ensuring general socio-economic development, not only in agriculture or land use issues. In our country, comprehensive measures are being implemented for the active development of the digital economy, the widespread introduction of modern information and communication technologies in all sectors



and areas, first of all, in public administration, education, health care and agriculture[10].

Digital transformation is taking place on a global scale, both in the economy and at the level of individual sectors. Because it can be seen that international corporations are introducing new technologies and their business models, digital transformation to maintain their leading position in their fields by creating technological barriers that their competitors cannot overcome[11].

In the context of the digital economy, a new approach to saving in agriculture, linking production costs with product quality and production efficiency is required. And it can be achieved in many ways by using new forms and methods of econometric and statistical accounting, new methodologies of digital technology[12].

Result and discussion.In our opinion, the formation of agriculture based on digital technologies provides a solution to the problems. In addition, it is desirable to create legal conditions that ensure the full economic and financial independence of farms and encourage the purposeful, rational and effective use of agricultural land resources that have been leased for a long time.

The use of digital technologies in production and management in agriculture, the creation of material and equipment supplies at the level of demand, arming them with modern digital technology, and deepening economic reforms in the agricultural sector, further increasing the sense of ownership of land and property, entrepreneurship, [13] business, new ownership and digital organization of economy-based production and

development of optimal regulation mechanisms are of great importance.

The "Digital Uzbekistan-2030" strategy aims to create a digitized, modern complex system based on the requirements that must be fulfilled, taking into account the current global development mechanisms. What the minimum level of development for the production process of agricultural products could look like in the event that the actions listed on the priority directions of digital infrastructure development are implemented. The minimum state can be understood as general, that is, public use of the created opportunities. In this case, it is necessary to pay attention to the following aspect, that is, the availability of a space for rapid information acquisition and exchange. It naturally strengthens the advertising market in this area, the emergence of qualitative and quantitative improvement due to the acquisition and exchange of experience, increased competition,

Increasing the productivity of land use in agriculture through the introduction of modern information and communication technologies, reducing the cost of products and establishing a system for increasing the export potential remains one of the priorities directly related to the development of agricultural production [14].

Management and organization of production based on digital technologies were studied by foreign scientists, and the results showed that the lack of use of digital technologies in both cases caused a decrease in the level of economic growth by 24 percent compared to competitors (Table 1).



Table 1.

Efficiency indicator of the manufacturer on the use of digital technologies (%)

Variant	Technology	A new management method	Benefit
1	-	-	-24%
2	-	+	+9%
3	+	-	+11%
4	+	+	+26%

Digitalization is 2 percent more effective than using a new management method, and in both cases, the application of one or another factor is proven to be effective. The greatest effect in this process is their joint application, which provides the manufacturer with an economic increase of 26 percent.

Special attention is being paid to efficient use of land in the cultivation of agricultural products in our country. If we look at the example of Kashkadarya region, according to the technical and economic stages of agricultural development, the problems of saving labor and land are not the greatest, but it can be observed that more attention is being paid to other factors of effective use of available land resources[10]. For example, an intensive production process. A number of foreign scientists have emphasized that it is effective to organize

the intensive production process using digital technologies. Therefore, a solution can be found by introducing the "Smart" agriculture project in the region.

Conclusion. Increasing the productivity of land use in agriculture, reducing the cost of products and increasing the export potential through the introduction of digital technologies is one of the priorities directly related to the development of agricultural production. To create a favorable environment for the national market of digital technologies and to develop promising "digital" start-ups, to develop local technological and software digital tools used in the production of agricultural products, taking into account local capabilities, geographic, ecological, geological, biological characteristics of the region. it is necessary to develop the output.

References:

1. "Рақамли Ўзбекистон – 2030" стратегияси доирасида 2020–2022 йиллар Қашқадарё вилоятини рақамли трансформация қилиш ДАСТУРИ. Ўзбекистон Республикаси Президентининг 2020 йил 5 октябрдаги ПФ–6079-сон Фармонида 13-илова. <https://lex.uz/ru/docs/5030957>
2. Гарифуллин Б.М., Зябриков В.В. Цифровая трансформация бизнеса: модели и алгоритмы. Журнал креативная экономика. Том-12, №9,09.2018, 1345-1358
3. Санникова Т. Д. и друг. Зарубежные модели цифровой трансформации и перспективы их использования в российской практике. Журнал Экономические отношения. Том 9, № 2, Апрель–июнь 2019. Стр-481-494



4. Mukhitdinov Khudoyar Suyunovich, Normahmatov Khayriddin Mingliyevich providing health care services to the population of the region. Accepted in the journal The American Journal of Management and Economics Innovations (ISSN-2693-0811) for Volume 03 Issue 02 February 2021.
5. Mukhitdinov K. S., Juraev F. D. Methods of Macroeconomic Modeling //International Journal of Trend in Scientific Research and Development (IJTSRD), e-ISSN. – C. 2456-6470
6. Muxitdinov, X. S. va L. N. Xudoyorov. "KICHIK BIZNESLARNI PROGNOZ BERISH AXBOROT-TAHLILLIK QO'LLAB-QUVVAT TIZIMLARI". Web of Scholar 5 (2016): 12-14.
7. Qodirov, Farrux, and Xudayar Muhitdinov. "Features that increase efficiency in the provision of medical services and factors affecting them." Ta'lim va rivojlanish tahlili onlayn ilmiy jurnali 2.7 (2022): 192-199.
8. Qodirov Farrux Ergash o'g'li. Bir jinsli va bir jinsliga olib kelinadigan differensial tenglamalar. amaliy masalalarga tadbiqu (ko'zgu masalasi)/ Barqarorlik va yetakchi tadqiqotlar onlayn ilmiy jurnali. 2022/1/23
9. Qodirov Farrux Ergash o'g'li. O'zgaruvchilari ajralgan va ajraladigan differensial tenglamalar/ barqarorlik va yetakchi tadqiqotlar onlayn ilmiy jurnali. 2022/1/23
10. Vazirbek Nasriddinovich Qodirov Farrux Ergash o'g'li, Qalandarov, Saera Jetkerbaevna Barlikbaeva. Current role and disadvantages of qr-code technology. 2020 Материалы конференции Научные труды молодых учёных. Страницы 25-27
11. Abdirasulov Javohir, Qodirov Farrux / Yoshlar ma'naviyatini yuksaltirishda milliy onlayn yotov do'konini tshlab chiqish va tadbiqu etish. Мухаммад ал-Хоразмий номидаги Тошкент ахборот технологиялари университети Карши филиали. Республика илмий-амалий анжуман / 2019/4/15 [с. 275-277].
12. Qodirov Farrux Ergash o'g'li Jurayev Suhrobjon Salohiddin o'g'li, Sharipov Daler Ko'chkarovich. Types of video formats and their differences and quality/ XIV Международная научная конференция Инновации в технологиях и образовании. 2022/3/25
13. Кодиров.Ф.Э and О.Д.Дониёров. "Эффективные модели развития медицинского обслуживания населения кашакадарьинской области." Символ науки 7-2 (2022): 15-17.
14. Qodirov Farrux Ergash o'g'li. Econometric modeling of the development of medical services to the population of the region / Berlin Studies Transnational Journal of Science and Humanities. 2022/5/9. 1.1 Economical sciences.