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INNOVATION FINANCING AND ITS IMPACT ON THE AGRICULTURAL SECTOR OF UKRAINE

ABSTRACT

The agriculture sector of Ukraine generated from 9,1% to 14,2% of Ukrainian GDP during 2012-2023 and is critical for ensuring the macroeconomic stability of the country, with a share in total export income between 27,8% and 57,2% during the same period. The financial performance and sustainable development of the Ukrainian agro-industrial sector have a major impact on the socioeconomic stability of society, especially at the current time, and also on the prospects of economic recovery and further growth. The market value of industry-forming agro-industrial enterprises reflects the efficiency of their economic activity and ability to generate added value. For the prospect of future economic recovery, it is important to investigate how innovations are associated with the economic development of countries in the world, and specifically, how government spending on research in the agriculture sphere is historically associated with the market value of Ukrainian agro-industrial companies. Consequently, the article aims to evaluate the association between innovation development and economic performance at the level of countries and the level of the Ukrainian agricultural sector. For the achievement of the research aims, comparative economic analysis and statistical methods were used, such as regression analysis.

Based on the study results, it is possible to conclude that innovation development is associated with economic development and is a slightly more important prerequisite for the economic prosperity of countries that have a share of oil exports of less than 10% of total exports. Also, it was found that during 2013-2023, the total market value of selected agro-industrial companies positively correlated with government spending on R&D in Ukraine. With the regression model, it is possible to explain around 68% of selected agro-industrial companies' market value variation and closely capture the general trend of 2013-2023 stock price movements. Study results can be used by policy-makers to make data-based strategic decisions.

Keywords: innovations, research and development, economic performance, GDP per capita, market value, financial resources

JEL Classification: G12, O13, O32, Q14

INTRODUCTION

Over the past 10-15 years, many industries worldwide have faced significant challenges in various aspects of their operations. Various factors, including the rapid development of information technologies, environmental and demographic challenges, and political and trade instability, have impacted economic efficiency, particularly in the agricultural sector.

In the face of escalating competition in the global economy, innovation may be one of the key driving mechanisms for stimulating economic efficiency, growth, and development, manifested in increased gross domestic product (GDP). The total allocation for research and development (R&D) in 2023 among EU countries amounted to USD 504 billion, with expenditures in the United States reaching USD 823 billion, China USD 780 billion, Japan and Germany USD 193 billion and USD 158 billion respectively. Overall, among the countries that are members of the Organization for Economic Co-operation and Development, expenditures on R&D in 2023 amounted to USD 1.9 trillion or 2.7% of GDP.

Investments in research and development support the development of high-tech sectors of the economy and provide competitive advantages for traditional sectors, including the crucial sector of agriculture (Davydenko, N., Pasichnyk Yu. (2017).

In Ukraine, the share of enterprises engaged in and implementing innovations decreased from 16.8% in 2013 to 14.7% of the total number in 2022. It is worth noting that in Germany, France, the United States, and Japan, the percentage of companies actively implementing innovations is 70-80%. This situation indicates that domestic enterprises do not pay enough attention to the introduction of innovative technologies and do not use their innovation potential effectively (Table 1).

One of the main drivers of changes in technological paradigms is research and development (R&D) activities. Research and development consist of creative and systematic work aimed at increasing the body of knowledge, including knowledge about humanity, culture, and society, as well as inventing new applications of existing knowledge. Such activity should be creative, uncertain in advance, systematic, reproducible, and new.

Table 1. Amount of innovative scientific and technical work performed, 2013-2022. (Source: compiled by the authors according to the State Statistics Service of Ukraine URL: <https://www.ukrstat.gov.ua/>)

The years	Total in actual prices, UAH million	including			Share of research work performed in GDP, %.
		fundamentals	applications	Scientific and technical developments	
2013	10248,5	2698,8	2061,3	5489,0	0,70
2014	9487,5	2452,0	1882,7	5152,8	0,60
2015	11003,6	2460,2	1960,6	6582,8	0,56
2016	11530,7	2225,7	2561,2	6743,8	0,48
2017	13379,3	2924,5	3163,2	7291,6	0,45
2018	16773,3	3756,5	3568,3	9448,9	0,47
2019	17254,6	3740,4	3635,7	9878,5	0,42
2020	17022,4	4259,0	3971,1	8792,1	0,41
2021	16072,9	4468,6	3615,8	7988,5	0,29
2022	16972,8	4585,3	3447,8	8939,7	0,33

The data in Table 1 demonstrate that they have grown significantly over the period under study, from UAH 10248.5 million in 2013 to UAH 16972.8 billion in 2022. As for their individual components, similar positive dynamics can be observed; in particular, basic and applied research are growing from year to year. The situation with R&D is somewhat different, with heterogeneous dynamics over the years, which is explained by the economic and political situation in the country. Despite the relatively positive dynamics, there are also negative characteristics. In particular, the share of scientific works in GDP is decreasing annually and in 2022 amounted to only 0.33%, which is a rather negative characteristic.

Our goal is to explore the relationship between the innovative development of countries and their economic development, as well as between government investments in research and development in the agricultural sector and the market value of the top 5 agro-industrial companies in Ukraine.

LITERATURE REVIEW

Existing studies by researchers include investigations into the relationship between innovation development and economic efficiency at the level of individual sectors and firms. However, only a small number of studies are dedicated to examining the association between investments in research and development (R&D) in the agricultural sector and the value of companies operating in countries where such investments are made.

Italian researcher Bigliardi (2013) examined the innovation effect on the financial performance of small and medium-sized enterprises. The empirical study used data collected through surveys from a sample of 98 small and medium-sized enterprises, followed by the formation of a regression model. The modelling results demonstrate that increased innovation levels lead to improved financial indicators.

A group of scholars, Pece, Simona, and Salisteanu (2015), conducted an empirical analysis of innovation and economic growth among Central and Eastern European countries. Their study aimed to assess the relationship between economic growth and innovation in the economies of Poland, the Czech Republic, and Hungary. Factors determining innovation included the volume of investments in research and development, human capital quality, and foreign direct investments. The scholars established a positive link between innovation, particularly foreign direct investments, and economic growth.

Kung and Schmid (2015) conducted research on innovation, growth, and asset prices. Their developed model predicts a small but constant endogenous component in productivity growth determined by innovation, leading to sustained and persistent fluctuations in macroeconomic variables.

Turkish scholar Karabulut (2015) evaluated the effect of different types of innovations on the economic performance of manufacturing firms in Turkey. According to the scholar, product innovations, process innovations, and organizational innovations have a positive impact on financial results, customer experience, productivity of internal business processes, and others.

Gök and Peker (2017) investigated how innovations affect business outcomes. According to the Turkish scientists, there is a negative relationship between innovation expenditures and firm financial indicators. However, a compensatory effect from market indicators was also detected, resulting in an overall positive impact on business outcomes.

Kogan et al. (2017) studied the relationship between technological innovations, resource allocation, and economic growth. They used patent data from private US firms from 1926 to 2010. They proposed a new measure of the economic importance of each innovation using information on the stock market reaction to patent news. The value for economic growth is largely associated with the scientific value of such patents, which is measured by the number of citations.

Rajapathirana (2018) examined the relationship between innovation capability, innovation type, and firm productivity in Sri Lanka's insurance industry. The researcher found that higher innovation capability, defined as the ability to understand and identify future customer needs, their expectations, and the timely response to new customer needs by developing and implementing an innovative culture, internal and external knowledge, positively affects the productivity of insurance firms in Sri Lanka.

Indian researcher Nandy (2020) analyzed the impact of research and development activity on the financial indicators of pharmaceutical companies listed on the Indian stock exchange. The scholar found a significant positive impact of research and development activity on financial indicators, particularly on return on assets (ROA), return on equity (ROE), and market capitalization.

Ergün (2022) examined the impact of research and development expenditures on the financial performance of aviation companies in Turkey from 2008 to 2021. The study found that the financial efficiency of Turkey's aviation sector largely depends on investments in research and development in this industry.

Özkan (2022) investigated the relationship between research and development investments of the 500 largest industrial enterprises operating in 25 different sectors of Turkey's economy and their financial indicators from 2013 to 2019. The research results demonstrate that research and development expenditures accounted for only 0.6% of the sales volume of the surveyed firms. As a result, insufficient investment levels according to the constructed model led to a situation where research and development investment volume negatively correlates with financial indicators.

The presented studies contain conclusions about the influence of innovative activities on business outcomes at the level of certain industries and firms. However, there are certain results that did not identify such a relationship. In our research, we decided to analyze the impact of the overall level of innovation in the economy on the welfare level of the population of the world's countries, as well as the influence of government investments in research and development on the capitalization level of large agro-industrial companies in Ukraine.

AIMS AND OBJECTIVES

This research aims to analyze the relationship between the level of innovative development in countries and their economic performance, with a particular emphasis on the agricultural sector. Specifically, the study seeks to explore how public investment in research and development (R&D) influences both the overall economic well-being of nations and the market value of leading agro-industrial companies in Ukraine.

Research objectives:

1. To investigate the correlation between the Global Innovation Index and GDP per capita across countries, considering the influence of natural resource revenues.
2. To evaluate the contribution of cumulative R&D expenditures to GDP growth in major global economies over the period 2000–2023.
3. To assess the dynamics of Ukraine’s Global Innovation Index in comparison with leading innovation-driven economies.
4. To examine the relationship between government funding for agricultural R&D and the market capitalization of selected Ukrainian agro-industrial enterprises.
5. To analyse the structure of sources of financing of innovation activities in Ukraine and to identify the main problems and advantages of using own funds and loans.
6. To develop recommendations for the effective financing of innovations in the agricultural sector of Ukraine.

METHODS

In our research, we utilized descriptive statistical methods to investigate the dynamics of changes in the global innovation development index of Ukraine and 10 countries with the highest average index for the years 2014–2024.

We applied a linear regression model to assess the degree of association between the indicators of the global innovation development index and the GDP per capita across countries worldwide in 2022.

Additionally, a linear regression model was employed to evaluate the association between expenditures on research and development in the agricultural sector, as specified in the state budget and the market capitalization of the selected large agro-industrial companies in Ukraine for the period 2013–2021.

Data sources for the research were obtained from reports of the World Intellectual Property Organization (WIPO), databases of the World Bank and the Organization for Economic Co-operation and Development (OECD), information on the state budget of Ukraine, and official websites of exchanges where the stocks of selected agro-industrial companies are listed.

RESULTS

The Global Innovation Index is a multidimensional assessment of a country's innovation landscape, tasked with determining its position based on the level of innovation development in a global context (Özkan, N. (2022)).

We examined the dynamics of the Global Innovation Index indicators for the years 2014–2024 in Table 2.

Table 2. The dynamics of the Global Innovation Index indicators for Ukraine and the top 10 countries with the highest average indicators from 2014 to 2024. (Source: compiled by the authors according to WIPO)

State	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Avg.
Switzerland	64.8	68.3	66.3	67.7	68.4	67.2	66.1	65.5	64.6	67.6	67.5	66.7
Sweden	62.3	62.4	63.6	63.8	63.1	63.7	62.5	63.1	61.6	64.2	64.5	63.2
USA	60.1	60.1	61.4	61.4	59.8	61.7	60.6	61.3	61.8	63.5	62.4	61.3
United Kingdom	62.4	62.4	61.9	60.9	60.1	61.3	59.8	59.8	59.7	62.4	61.0	61.1
Netherlands	60.6	61.6	58.3	63.4	63.3	61.4	58.8	58.6	58.0	60.4	58.8	60.3
Finland	60.7	60.0	59.9	58.5	59.6	59.8	57.0	58.4	56.9	61.2	59.4	59.2
Singapore	59.2	59.4	59.2	58.7	59.8	58.4	56.6	57.8	57.3	61.5	61.2	59.0
Denmark	57.5	57.7	58.5	58.7	58.4	58.4	57.5	57.3	55.9	58.7	57.1	57.8
Germany	56.0	57.1	57.9	58.4	58.0	58.2	56.6	57.3	57.2	58.8	58.1	57.6
Rep. of Korea	55.3	56.3	57.2	57.7	56.6	56.6	56.1	59.3	57.8	58.6	60.9	57.5
Ukraine	36.3	36.5	35.7	37.6	38.5	37.4	36.3	35.6	31.0	32.8	29.5	35.2

As we can see, according to the Global Innovation Index data, Switzerland is the most developed country in terms of innovation, with an index score ranging from 64.6 to 68.4. In the report for 2024, Ukraine's Global Innovation Index stood at 29.5, placing it at the 60th position out of 133 countries in the overall ranking.

Overall, the top 10 countries with the highest Global Innovation Index scores in the 2024 report are classified as high-income countries. Ukraine, in the same report, ranks 4th among countries with lower-middle income levels.

Let's conduct an analysis of the association between the Global Innovation Index and the GDP per capita indicator for 2023 in Figure 1.

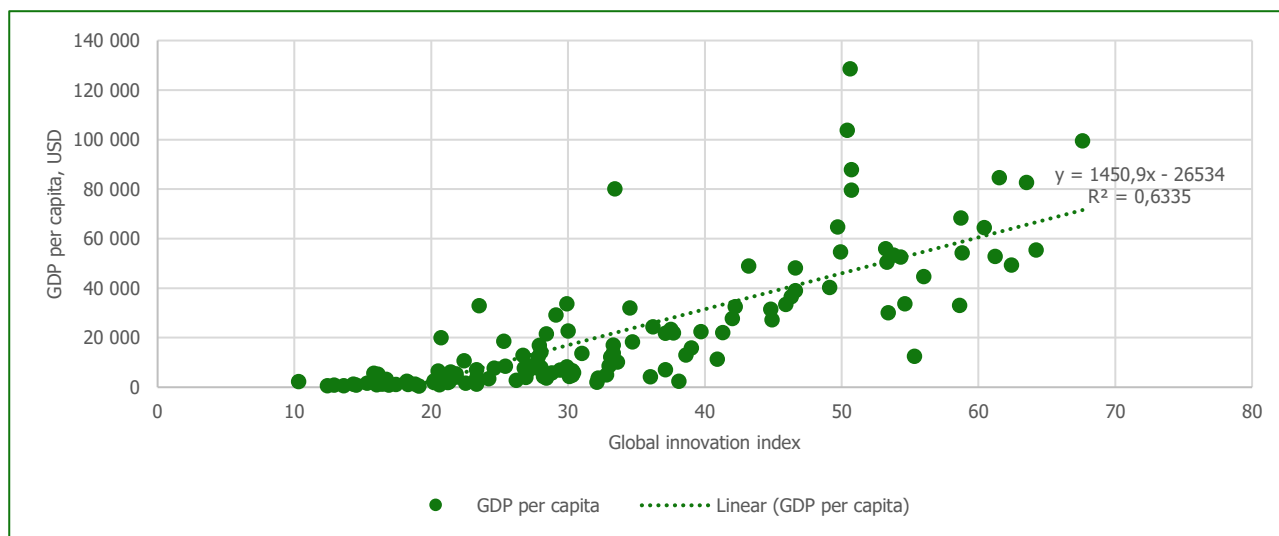


Figure 1. The relationship between the Global Innovation Index and GDP per capita for countries worldwide in 2023.

As seen in Figure 1, there is a certain linear relationship between the innovation development of countries' economies and the welfare of their populations, as expressed by GDP per capita.

During the era of using oil as one of the main energy sources, a situation arose where countries with relatively low Global Innovation Indexes had quite high GDP per capita figures. To further avoid the factor of oil rent as the main driver of GDP per capita, let's examine the relationship between the Global Innovation Index and GDP per capita for countries where the share of oil rent in GDP structure does not exceed 10%.

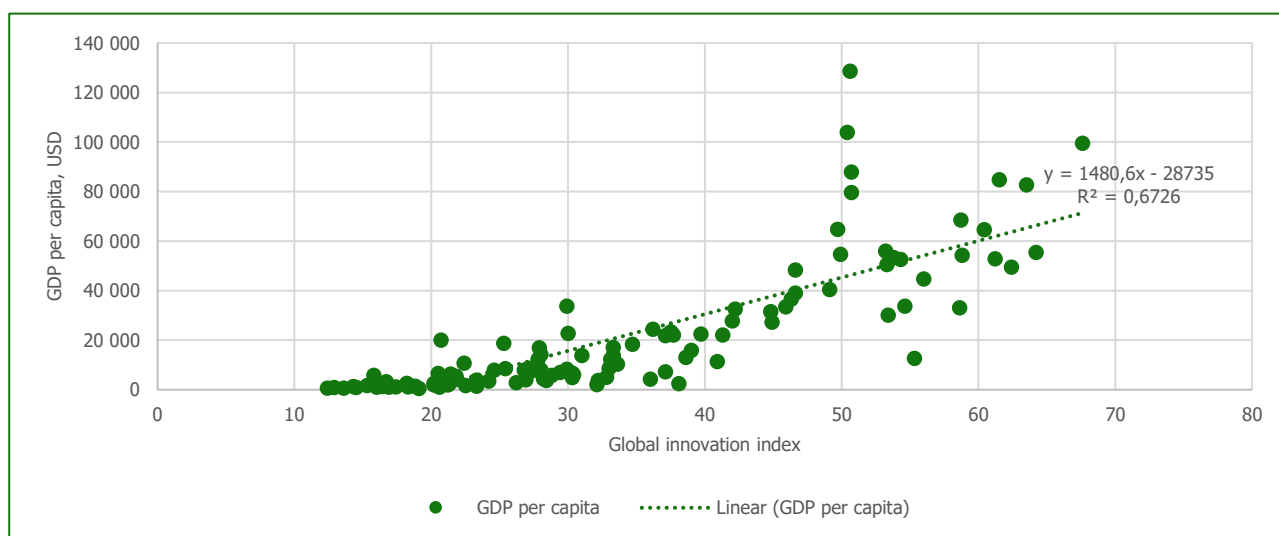


Figure 2. The relationship between the Global Innovation Index and GDP per capita for countries where the share of oil rent in GDP structure does not exceed 10% in 2023.

It is noticeable that, excluding the factor of oil rent, which exceeds 10% of the total GDP structure of a country, the innovation index of the economy plays a somewhat greater role in shaping the GDP per capita indicator. Both including all

countries and excluding those where the share of oil rent exceeds 10% of GDP, the Global Innovation Index is statistically significant in explaining GDP per capita, with R-squared values of 0.63 and 0.67, respectively. Therefore, it can be concluded that in the absence of resource revenues from oil sales, significant attention should be paid to research and development to ensure economic development.

The highest expenditures on research and development in the period from 2000 to 2023 were made by the following five countries:

- USA: USD 12.1 trillion.
- China: USD 7.2 trillion.
- Japan: USD 3.9 trillion.
- Germany: USD 2.6 trillion.
- South Korea: USD 1.6 trillion.

For a comprehensive understanding of the cumulative GDP growth in the aforementioned countries during the period from 2000 to 2023, a comparison with the cumulative growth of their R&D expenditures is provided in Table 3.

Table 3. Cumulative GDP growth and research and development (R&D) expenditures in 2023 compared to 2000. (Source: calculated by the authors based on data from World Bank Open Data, OECD)

State	Cumulative GDP growth	Cumulative R&D spend growth
USA	2.69	2.29
China	14.69	19.61
Japan	1.78	1.45
Germany	2.55	2.01
Republic of Korea	3.26	5.99

Based on the data presented in Table 3, it can be concluded that there is a significant dependence of nominal GDP growth on research and development (R&D) expenditures in the analyzed countries.

We conducted a regression analysis of the relationship between cumulative GDP growth and cumulative R&D expenditure using aggregated data for the aforementioned countries for the period 2000-2023.

The modelling results using the MS Excel Analysis Toolpak are as follows: $R^2 = 0,96$, P-Value for the intercept and independent variable = 0,00, indicating a statistically significant dependence. The general linear regression equation is as follows:

$$GDPCM\% = 0,28 + 0,83 * RDCM\% + u_i$$

where, *GDPCM* – cumulative growth of nominal GDP; *RDCM* – cumulative growth of R&D spends; *u_i* – residual.

The regression equation indicates that without research and development (R&D), the cumulative GDP growth rate would have been 0,28 for the period from 2000 to 2023. This observation underscores the importance of research and development for economic development and growth.

In the context of generating economic value added in individual enterprises, we assume that investments in innovation in the agricultural sector contribute to the adoption of new technologies, which, in turn, increase labour productivity, reduce energy costs, thereby reducing the cost of production, ensuring its competitiveness, and increasing profitability.

We examined the impact of budget allocations for research and development in the agricultural sector in Ukraine (functional budget classification code - 0482) and the economic value added of the studied agricultural companies on their market value.

The volume of budget allocations for research and development in the agricultural sector in Ukraine from 2013 to 2021 is presented in Table 4.

Table 4. The budget expenditures from the general fund for research and development in the agricultural sector in Ukraine. (Source: Official web portal of the Parliament of Ukraine)

Year	Budget allocation, k USD
2013	68 779
2014	41 165
2015	18 899
2016	13 135
2017	16 901
2018	18 404
2019	12 236
2020	21 040
2021	25 867

To investigate the impact of budget allocations on scientific research in the agricultural sector on the overall market value of the surveyed agribusiness companies, we will conduct a regression analysis and present its results in Table 5.

Table 5. The results of the regression model illustrating the relationship between the market value of the researched agro-industrial companies and the budget allocations. (Source: calculated by the author using the MS Excel Analysis Toolpak)

Summary output					
Regression Statistics					
Multiple R	0.64				
R Square	0.41				
Adjusted R Square	0.32				
Standard Error	464 735.72				
Observations	9.00				
ANOVA					
	df	SS	MS	F	Significance F
Regression	1.00	1 038 531 637 071.66	1 038 531 637 071.66	4.81	0.06
Residual	7.00	1 511 855 001 064.08	215 979 285 866.30		

As we can observe, budget allocations for research in the agricultural sector are statistically significant, although the level of association expressed in R^2 is only 0,41. Taking this into account, it can be argued that state investments in research and development in the agricultural sector have a moderate impact on increasing the market value of agricultural companies and ensuring competitiveness. Most importantly, in the case of innovative development, they contribute to increased labour productivity and reduced production costs.

Developed countries draw financial resources for innovation activities from both public and private sources. In particular, a significant number of Western European countries and the United States have an almost equal distribution of financial resources between public and private capital.

Having analysed the structure of sources of financing innovation activities in Ukraine (Table 6) in 2014-2022, it was found that the main sources are the company's own funds, i.e., the company's net profit. It is worth noting that the share of own funds in the structure fluctuates somewhat. In 2015, they had the highest share of 97.2%. Since 2016, there has been a decrease in the share of own funds; in 2020, it was 85.4%, and in 2021, this figure increased slightly.

Table 6. The structure of sources of financing for innovation in Ukraine, 2014-2022 (at the beginning of the year). (Source: compiled by the authors according to the State Statistics Service of Ukraine URL: <https://www.ukrstat.gov.ua/>)

Sources of financing		The years				
		2014	2016	2018	2020	2022
Total, UAH million		7696	23229	12180	14407	12171
Of the total (as a % of total financing)	Own	85	94,9	88,2	85,4	87,3
	Involved	15	5,1	11,8	14,6	12,7
	The state budget	4,5	0,8	5,2	1,9	1,2
	Local budgets	0,1	0,4	0,1	0,4	0,2
	Domestic investors	0,1	0,6	0,9	0,3	0,3
	Foreign investors	1,8	0,1	0,9	0,9	0,6
	Loans	7,3	2,7	3,9	9,6	9,1
	Others	0,8	0,6	0,8	1,6	1,3

On the one part, the use of own funds to finance innovations is characterised by stability, simplicity and speed of their attraction, the possibility of flexible and prompt investment decision-making, minimisation of the project cost by the amount of interest on loans, which ensures high mobility of cash flow and prevention of the risk of insolvency and bankruptcy during their use. However, the constant insufficiency of own funds and the high level of risk inherent in innovation activities do not always guarantee domestic enterprises high rates of development through self-financing of innovation activities.

Lending is one of the main methods of financing the innovation activities of enterprises. However, the share of credit resources in the structure of financing sources is insignificant, especially compared to the enterprises' own funds, but it is the largest in the structure of attracted resources. In the context of the financial crisis, such a rapid decline is associated with economic instability, lack of confidence in the banking system of Ukraine, which is associated with the outflow of deposits from the banking sector, short-term nature of lending that has no innovative orientation, high uncertainty of the results of innovative activities that do not provide for clear guarantees of reimbursement of borrowed funds and, accordingly, their high cost, underdevelopment of the stock market, as well as a small amount of liquid assets that could be used to finance innovation.

In our opinion, financial support for the development of innovation should be a priority task of the innovation strategy for the development of the agricultural sector, which should be based on a system of priorities for innovation development with a reduction in their number and preservation of those in which Ukraine has significant scientific achievements and prospects. An effective system of financial support for agricultural enterprises engaged in innovative activities should be developed and implemented, including the development of mechanisms to reduce the cost of loans and stimulate the activities of banks that lend to innovative projects. Such measures will help to stimulate increased investment in research institutes, technology parks, and other science-based industries from other non-state sources.

CONCLUSIONS AND DISCUSSION

Our study has a twofold focus. First, we analyse the impact of the level of innovation development on population welfare in a macroeconomic context, using data from over 100 countries. Second, we study the associations between public spending on agricultural research in Ukraine and the market capitalisation of leading agricultural companies between 2013 and 2023.

Unlike previous studies, which focused only on internal enterprise indicators or linear relationships, the authors combine macro- and microeconomic levels of analysis. They also include external factors, particularly the share of oil rent in the GDP structure, and use a limited agricultural sector sample in the context of Ukraine's ongoing economic turbulence. This enabled us to identify deeper patterns, in particular:

- increased dependence of welfare on innovation in countries with low commodity exports;
- the existence of a positive correlation between public funding of R&D in the agricultural sector and the market value of agricultural companies, even during the crisis.

In our opinion, the article provides a new empirical basis for reconsidering economic growth strategies based on an innovative approach, particularly given limited access to capital, military risks, and the need for the economy to undergo

structural transformation. Therefore, the analysis conducted examines the impact of innovation on the overall economic well-being of countries as well as on the market value of agricultural companies in Ukraine.

Using graphical and regression analysis methods, we investigated the degree of influence of innovation on population welfare. For this purpose, we examined the impact of the Global Innovation Index on GDP per capita across all countries and excluding those with a share of oil rent in GDP exceeding 10% as of 2023. It was found that the coefficient of determination is 0.63 and 0.67, respectively. This means that countries with a low share of oil revenues depend more on their level of innovation to ensure a high standard of living for their population.

In the context of Ukrainian agricultural companies, we studied the impact of expenditures on research in the agricultural sector from the general state budget on changes in their overall average market value. It was established that state expenditures on research in the agricultural sector are a statistically significant factor in explaining changes in the market value of the researched agricultural companies. The coefficient of determination in this case is 0.41.

Understanding the impact of investments in research and development on the economic well-being of a country and individual sectors, including agriculture, can serve as the basis for forming appropriate state policies and strategies for economic development, implementing innovative approaches to managing overall economic development, and specific industries.

The proposed methodology can be used to formulate an innovation-oriented state policy, particularly with regard to developing programmes to support R&D and provide investment incentives for the technological renewal of Ukraine's agricultural sector.

Further research should aim to clarify the intersectoral differences in the impact of innovations on market capitalisation, taking into account the specifics of agriculture as a low-margin yet strategic sector.

ADDITIONAL INFORMATION

AUTHOR CONTRIBUTIONS

All authors have contributed equally.

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CONFLICT OF INTEREST

The Authors declare that there is no conflict of interest.

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ПЕРСПЕКТИВИ ІННОВАЦІЙНОГО РОЗВИТКУ ЕКОНОМІКИ ТА АГРАРНОГО СЕКТОРА УКРАЇНИ

Сільськогосподарський сектор України генерує від 9,1% до 14,2% українського ВВП протягом 2012-2023 років і є критично важливим для забезпечення макроекономічної стабільності країни з часткою в загальному обсязі експортних надходжень від 27,8% до 57,2% за той самий період. Фінансові результати й сталий розвиток агропромислового сектора України мають значний вплив на соціально-економічну стабільність суспільства, особливо в поточний час, а також на перспективи відновлення та подальшого зростання економіки. Ринкова вартість галузеутворюючих агропромислових підприємств відображає ефективність їхньої господарської діяльності й здатність генерувати додану вартість. Для перспективи майбутнього економічного відновлення важливо дослідити, як інновації пов'язані з економічним розвитком країн світу й зокрема, як державні витрати на дослідження в аграрній галузі історично пов'язані з ринковою вартістю українських агропромислових компаній. Отже, метою дослідження є оцінка зв'язку між інноваційним розвитком та економічними показниками на рівні країн і на рівні аграрного сектора України. Для досягнення мети було використано порівняльний економічний аналіз і статистичні методи, такі як регресійний аналіз.

За результатами дослідження можна зробити висновок, що інноваційний розвиток пов'язаний з економічним розвитком і є дещо важливішою передумовою економічного процвітання країн, які мають частку експорту нафти, меншу за 10% від загального експорту. Також було виявлено, що протягом 2013-2023 років загальна ринкова вартість окремих агропромислових компаній позитивно корелювала з державними витратами на НДДКР в Україні. За допомогою регресійної моделі можна пояснити близько 68% варіацій ринкової вартості обраних агропромислових компаній і точно вловити загальну тенденцію руху цін на акції у 2013-2023 роках. Результати дослідження можуть бути використані політиками для ухвалення стратегічних рішень на основі даних.

Ключові слова: інновації, дослідження та розробки, економічні показники, ВВП на душу населення, ринкова вартість, фінансові ресурси

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