

Drivers of inclusive rural infrastructure development in Ukraine

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Abstract. The economic system of a society involves the constant movement of goods, services, money, securities, and labour. The coordinated interaction of market mechanism elements is achieved through their balanced development. It is impossible to increase the efficiency of the agricultural sector of the country's economy without improving rural infrastructure. The article is devoted to the study of theoretical and practical provisions for accelerating the development of rural infrastructure, ensuring access to it for all segments of the rural population and developing recommendations for improving the living standards of rural residents. The main research methods used were analysis of scientific literature, analysis of statistical data, comparative analysis, and expert assessments. The research paper examined the main indicators of improving the living standards of rural residents in terms of political, social and economic aspects. In order to adjust the goals of sustainable development, the article characterised the losses caused to infrastructure as a result of theft, destruction or damage to facilities. It is shown that the impact of economic growth on poverty alleviation increases with the growth of human capital, but weakens with significant income inequality. Particular attention was paid to indicators of improving the living standards of rural residents in terms of political, social and economic aspects. Conclusions were also drawn on the main tasks facing rural communities to ensure their sustainable development. The practical value of the study lies in the empirical results obtained, which can be used to develop and implement the state policy of rural development. The developed recommendations may be useful for local governments, public organisations and other entities involved in rural development. It is proposed to use the experience of Poland on the way to inclusive rural infrastructure development

Keywords: sustainable development; rural areas; rural communities; labour market; economic development; inclusive education

Article's History:

Received: 26.06.2024
Revised: 04.11.2024
Accepted: 10.12.2024

Suggested Citation:

Bilichenko, O., Bolshaya, O., & Kryzhova, V. (2024). Drivers of inclusive rural infrastructure development in Ukraine. *Ukrainian Black Sea Region Agrarian Science*, 28(4), 96-109. doi: 10.56407/bs.agrarian/2.2024.96.

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INTRODUCTION

The development of any country is impossible without improving the well-being of its citizens, especially in rural areas. This process is closely linked to the rapid growth of national income per capita and the improvement of overall living standards. A well-developed rural infrastructure plays an important role in this process, ensuring access to basic services for all segments of the population, stimulating economic activity in rural areas and making them more attractive for living. An inclusive approach to the development of rural infrastructure involves creating equal conditions for all rural residents, regardless of their social, age or gender characteristics. Such an approach is a prerequisite for social integration and the harmonious development of rural communities.

Infrastructure changes not only improve material living conditions, but also help create new jobs, attract investment and reduce social inequality between urban and rural areas. Infrastructure development has a multiplier effect, covering all sectors of the economy and territorial units of the country. This, in turn, stimulates the development of agricultural production and improves the quality of life in rural areas. Particularly important components of rural infrastructure are the transport network, water and wastewater systems, electricity supply, as well as educational, healthcare and cultural institutions. The development of these infrastructure elements not only improves the living standards of rural residents, but also creates the basis for economic growth and social development in the region. In addition, the development of digital infrastructure in rural areas is of particular importance in today's environment. Access to high-speed Internet and modern information and communication technologies opens up new opportunities for education, work and business in rural areas, facilitating their integration into the global economy and reducing the digital divide between urban and rural areas.

As noted by Yu. Kormyshkin & I. Moskal (2023), the insufficient level of development of social, communal, household, information and communication infrastructure leads to a low level of meeting modern human needs and the quality of life of rural residents, as evidenced by the scientific works and aspects revealed in the above study. In addition, there is a steady trend towards a significant deterioration in demographic indicators and the human development index in rural areas. There has been a significant decline in labour potential, rising unemployment and poverty among the population. The migration outflow of young people from rural areas to cities and abroad further exacerbates this negative phenomenon.

In their research, O. Dovgal *et al.* (2022) focused on increasing the competitiveness of staff, highlighting

such factors as motivation, management, and social aspects. The authors emphasised the importance of innovative development of Ukrainian enterprises through continuous professional development of employees and improvement of the education system. However, the issue of inclusive staff development, especially in rural communities, remained outside the scope of their study. A. Poltorak *et al.* (2021) demonstrated the effectiveness of modified approaches to managing the financial security of the state using a polynomial extrapolation algorithm. The correlation-regression model they developed allows considering such key indicators as the effectiveness of innovative development, the level of corruption, and debt dependence. However, the researchers did not assess the impact of rural infrastructure development on the financial security of the state.

O. Lazarieva (2019) considered the issue of rural infrastructure development in the context of ensuring sustainable development of the country. She emphasised the importance of not only economic factors, but also environmental and social aspects, in particular the development of infrastructure in the areas of water supply, sanitation and energy. O. Borodina & I. Prokopa (2019) studied the impact of information and communication technologies on rural development. The authors noted that access to modern technologies allows rural residents to be integrated into the national and global economy, creating new opportunities for development and improving the quality of life.

The purpose of the study was to develop both theoretical and practical provisions to accelerate the inclusive development of rural infrastructure and to develop recommendations for improving the living standards of the rural population.

MATERIALS AND METHODS

A wide range of theoretical and empirical methods were used to conduct a comprehensive study of inclusive rural infrastructure development. The choice of methods was driven by the need to ensure a comprehensive analysis of the problem, taking into account its multidimensional nature. A detailed analysis of scientific publications, reports of international organisations, and national strategic documents was conducted to identify current trends, theoretical approaches, and empirical evidence on inclusive rural development. Particular attention was paid to research on the drivers of rural infrastructure development, the role of institutional factors, and the experience of other countries. A systemic approach was used to identify the interrelationships between different components of the rural system (economy, social sphere, infrastructure, natural environment) and to identify key factors

that influence inclusive development. A comparative analysis of the experience of different countries (in particular, the European Union) in rural development was carried out to identify best practices and potential directions for Ukraine.

To quantify the state of rural infrastructure and the dynamics of its development, statistical data from Minfin (n.d.), State Statistics Service of Ukraine (2023), National Institute for Strategic Studies (2024) and other official sources were analysed. The indicators studied include employment rates, incomes, investments in agriculture, and infrastructure development. Based on the empirical material, a list of tasks faced by communities is outlined, taking into account the programmes of inclusive sustainable development of rural infrastructure. The main indicators of rural development for the period from 2005-2022 are assessed. The introduction of martial law in Ukraine in February 2022 made it difficult to obtain complete operational statistical information, and additional uncertainty factors made it impossible to analyse some indicators for 2023-2024. With this in mind, the main challenges facing the socio-economic development of rural areas and the infrastructure sector were identified.

The choice of research methods was driven by the need to provide a comprehensive and in-depth analysis of the problem. Theoretical methods helped to form the theoretical basis of the study and define key concepts. Empirical methods provided quantitative and qualitative data on the state of rural infrastructure and the factors influencing its development.

RESULTS AND DISCUSSION

A high level of economic development in countries does not always guarantee a corresponding standard of living in rural areas. Economic growth does not automatically lead to an improvement in the living standards of poor and low-income families. Research by M. Tymoshenko (2014) has shown that the impact of economic growth on poverty reduction increases with the growth of human capital, but weakens with significant income inequality. In Ukrainian practice, the focus has been on the growth of the agricultural sector and its export potential. As a result, the majority of vulnerable groups in rural areas are left out of the programmes developed by the government. Improving living standards is one of the conditions for sustainable rural development, based on the aspects shown in Figure 1.



Figure 1. Indicators of improving the living standards of rural residents

Source: compiled by the authors

These living standards indicators are the main criteria that determine the degree of development of rural areas. Inclusive development helps to create better living conditions in Ukraine, ensure equal opportunities, and build a fair and prosperous society. Ukraine is implementing a number of programmes to ensure inclusive development of rural infrastructure:

1) reconstruction and construction of social infrastructure facilities is carried out in accordance with the requirements of barrier-free access. For example, as part of the implementation of Decree of the President of Ukraine No. 533/2020 (2020), equal opportunities are created for all groups of the population in

education, medical care, self-realisation, employment and other areas of life;

2) adapted services for people with disabilities are being introduced. For example, according to the UN Convention on the Rights of Persons with Disabilities, access to all spheres of life, including the physical environment, transport, information, communication, education, employment, healthcare, and participation in political and public life, is ensured for people with disabilities (United Nations Convention, 2006);

3) information materials on rural development are being developed in various forms. For example, pursuant to a decision of the Government of Ukraine,

special sections for people with disabilities are being created on the websites of local governments and other institutions providing services in rural areas, where information can be presented in Braille, audio or video, etc. (Ministry of Education and Science of Ukraine, 2021).

The implementation of these programmes should contribute to the achievement of sustainable rural development and improvement of living standards. The

constant empowerment of local communities poses new challenges for them in terms of harmonisation and further development of territorial communities, as O. Pavlov (2009) wrote. This requires taking into account the interests and initiatives of every resident of rural areas, since only joint efforts can achieve high production efficiency, preserve the environment and improve the quality of life. Rural communities face a number of tactical challenges (Table 1).

Table 1. List of tasks for communities in terms of their sustainable development

Tactical tasks of territorial communities	Expected results from the implementation of tactical tasks
Development of agricultural production	Through decentralisation and the involvement of local communities in decision-making, rational use of resources will be achieved, innovations will be introduced, labour productivity will be increased, and new jobs will be created, making life in rural areas more comfortable and attractive.
Improving the quality of life	The development of infrastructure will improve the quality of housing, educational, medical, transport, information and communication services, as well as participation in political and social activities.
Environmental protection	Conscious attitude to nature and rational use of resources are the key to preserving the environment for future generations.

Source: compiled by the authors

A key element in the development of the country's agricultural sector is the comprehensive development of rural areas aimed at ensuring appropriate progress in agriculture, improving working conditions, living conditions and the environment. In the current economic, financial and social environment, the creation of a self-sufficient and self-regulating system of socio-economic development of rural areas remains problematic. Achieving the intermediate and ultimate goals of sus-

tainable rural development is complicated by many factors. This is especially true for the so-called frontline and adjacent areas. The impact of rural areas on socio-economic development requires the attention of state and local authorities. To achieve this goal, effective management technologies and tools are needed to preserve and expand the potential of rural areas. This will help to increase the competitiveness of the national economy and improve the welfare of rural residents (Table 2).

Table 2. Dynamics of indicators of agricultural sector development in Ukraine by components

Indicators	Average during		
	2005-2010	2010-2015	2015-2020
Economic component			
Share of the industry in GDP, %	11.9	9.3	6.7
Gross value added of the industry, USD billion	10.9	14.4	11.9
Share of the industry in value added, %	14.2	10.8	11.1
Public expenditures on the industry, UAH million	1,636.3	4,665.0	7,693.7
Trade openness (share of exports), %	31.8	38.3	44.8
Annual capital investments, million USD	1,380.7	1,879.8	2,378.9
including for the 1 st enterprise, thousand USD	30.4	39.5	48.6
Social component			
Salaries of employees in the industry per month, UAH	3,309	9,734	16,159
including in % to the average in the economy	74.8	84.0	93.2
Share of people employed in agricultural production, %	17.5	17.1	16.7
Relative level of rural poverty (by expenditures), %	27.9	43.8	59.7
Environmental component			
Ploughed agricultural land, %	78.4	79.5	80.6
Amount of mineral fertilisers applied per 1 ha, kg	98	152	206
Area treated with pesticides, %	42.6	91.4	95.4
Area under organic production, %	19.0	7.0	3.0
Carbon dioxide emissions, million tonnes	161.1	150.5	139.9
Share of water used for production needs in agricultural production, %	20.3	21.8	23.3

Source: compiled by the authors on the basis of data from I. Kryukova & S. Stepanenko (2022)

Not only are there no financial opportunities to restore infrastructure in the war-affected settlements, but existing infrastructure facilities are being further destroyed, leading to an increase in the problems of technogenic and environmental safety (contamination of territories with explosive devices, destroyed buildings). In Ukraine's agriculture, the war caused the greatest losses to agricultural machinery, warehouses and stocks of produce (Table 3).

The problem of socio-economic recovery of the territories affected by the war is gaining national proportions, which requires the implementation of a comprehensive social policy at the state level to effectively address it. As a result, the key element is the creation and practical implementation of strategic planning aimed at the socio-economic development of each specific rural settlement. Such strategic planning should meet the interests of every resident of rural areas (Dunayev *et al.*, 2024).

Table 3. Structure of losses caused to Ukrainian agriculture by the war

Category	Total cost, million USD
Agricultural machinery	2,885.4
Storage facilities	1,062.5
Animal husbandry	362.5
Perennial crops	348.7
Production factors (fuel, fertilisers, plant protection products)	95.4
Manufactured products	872.0
Total	6,626.8

Notes: data as of 15.09.2022

Source: compiled by the authors based on data from R. Neiter *et al.* (2022)

Rural areas continue to lose their attractiveness not only because of the low level of housing with basic amenities, but also because of the absence or inaccessibility of such services as social, medical, educational, information and communication services. A significant number of residents of rural areas are also deprived of access to such services due to the dilapidated state of the road transport infrastructure. This negatively affects the ability to provide timely services (Belei, 2021). Further development of rural areas in Ukraine is complicated by a number of negative factors. These include: lack of coordination and control over the implementation of rural development measures, low financial capacity of territorial communities, insufficient financial and credit services, formal attitude to the development of development strategies and programmes, low investment attractiveness and weak branding of rural areas, underdeveloped social infrastructure, unsatisfactory wages, high unemployment and lack of qualified specialists (Dovgal *et al.*, 2022). Eliminating these problems requires joint efforts of the government and society to implement development strategies and programmes, attract investment, improve social infrastructure and ensure the development of non-agricultural activities. It is also necessary to attract and provide adequate training for qualified professionals who can use the latest technologies and make effective management decisions to solve problems at the local level.

Rural areas are heavily dependent on transport services for the supply of inputs and logistics in the process of selling products or providing services, which is

essential for ensuring the proper efficiency of agricultural production and the quality of life in rural communities (Borko *et al.*, 2022). The low level of development of transport networks serving rural areas reduces their investment attractiveness and limits the possibility of introducing innovative development of promising activities, such as tourism, recreation, and others. Insufficient development of social, communal, household, information and communication infrastructure lead to a low level of meeting the modern needs and quality of life of rural residents.

Economic relations are the basis on which the development of all spheres of life – social, cultural, political and others – rests. This is especially evident in rural areas. The decline of the rural economy leads to the destruction of other important areas of life. There is a steady trend towards a significant deterioration in demographic indicators and living standards in rural areas. They are experiencing a significant decline in labour potential, rising unemployment and poverty among the population. The migration outflow of young people from rural areas to cities and abroad further exacerbates this negative phenomenon. Another problem for rural development is the low level of wages. The level of wages in agriculture is determined by national standards (minimum wage, taxation) and cannot be lower than the level established by law for a fully worked day. However, in order to minimise labour costs, employers use the practice of part-time employment and dismissal after the end of the employment contract, which makes full-time employment impossible (Yekimov *et al.*, 2024).

One of the factors affecting wages is the qualifications of employees. About 60% of people working in the agricultural sector perform the simplest jobs, so their wages are determined by the lowest tariff category. In 2021-2023, the cost of labour and social measures in the structure of agricultural production costs averaged 6.1%. In 2019-2024, this figure decreased by almost 40% (National Institute for Strategic Studies, 2024). Employers explain low wages in agriculture by insufficient labour productivity. However, labour productivity depends to a greater extent on the employer itself: its ability to organise production, introduce modern technologies, and provide advanced training for employees. By saving on modernisation, investment, and innovation, employers reduce profitability and, as a result, eliminate the possibility of raising wages for employees.

Research by S. Yekimov *et al.* (2023) shows that the low share of wages in production costs is associated with the raw material nature of agricultural production, low levels of added value, and the rise in the cost of logistics services. Farmers are business owners but formally belong to the corporate sector. However, due to the small share of production (8.7%) and additional goals (meeting the needs of their families and rural communities), their profitability is much lower than that

of owners of large agricultural enterprises. Farming can be seen as the most optimal model of management in the agricultural sector in terms of inclusiveness, as farmers independently determine the forms and methods of management, as well as the use of the results of their production activities. Hired workers are not involved in production management, profit distribution, and are not liable for losses. Their inclusion is limited. On the one hand, they are included in the production process, enjoy socio-economic protection and other legal guarantees of formal employment, but on the other hand, receiving a fixed salary, they are not entitled to share in the results of economic activity.

The war is having a severe impact on the country's economy and employment. Part of the rural population is forced to leave their homes and go abroad, and those who remain join the ranks of the unemployed. The current demographic situation in rural areas is characterised by depopulation of the rural population, decreased life expectancy and birth rates, increased mortality, and an increase in the migration outflow of rural residents, resulting in a shrinking settlement network. There are more than 200 million unemployed people in the world. Due to the full-scale war, Ukraine is among the countries with the highest unemployment rates (Table 4).

Table 4. Number of registered unemployed in Ukraine, 2010-2022

Years	Total population, thousand people	Number of registered unemployed, thousand people
2010	45,795.9	452.1
2015	42,774.6	461.1
2020	41,629.9	459.2
2021	41,208.1	295
2022	41,167.3	186.5

Source: compiled by the authors based on data from Minfin (n.d.)

It should be noted that in 2010-2022, Ukraine has been experiencing a steady downward trend in the country's population. The main reasons for this are, first and foremost, the negative impact of military aggression by the Russian Federation and, as a result, the

out-migration of citizens. Since the beginning of the full-scale invasion, as of September 2022, 6.98 million people have become internally displaced in Ukraine. The negative population growth rate also has a negative impact on the country's population (Table 5).

Table 5. Dynamics of natural population change in Ukraine, thousand people

Years	Number of births	Number of deaths	Natural increase, population decline
2010	497.7	698.2	-200.5
2015	411.8	594.8	-182.6
2020	293.5	616.8	-323.3
2021	273.8	714.3	-440.5
2022	207.0	541.7	-334.7

Source: compiled by the authors based on *How Ukraine's population...* (2024)

Employment rates in urban and rural areas differ significantly. According to the data for 2021-2024, the employment rate in cities is significantly higher and shows positive growth dynamics. In contrast, the opposite trend is observed in rural areas: the employment rate is lower and tends to decline. Employment and unemployment rates are important indicators of the country's socioeconomic development and the state of the labour market. Unemployment causes not only the economic decline of rural areas, but also the moral impoverishment of people, which ultimately suppresses the economic activity of the rural population (Minfin, n.d.).

The economically active population of rural areas is the part of the working-age population that offers its labour for production or service provision. The degree of participation in labour activity and employment opportunities reflects the level of economic activity of the rural population. The most active in registering as unemployed, as well as in looking for work, are people aged 35 to 40. Young people in Ukraine are more flexible and ready for social change. They also have greater potential for career growth and are willing to work longer hours. Therefore, it is important to have an active employment policy aimed at stimulating youth employment, especially during and after the military conflict. A significant proportion of rural residents are forced to engage in private farming in the face of a declining supply of paid work. Most of them are aged between 50 and 60 years (State Statistics Service of Ukraine, 2023).

Given the significant shrinkage of the production sector in rural areas, agriculture remains the main source of employment. Deeper specialisation of production, concentration of land use, and growth in the size of business entities in the corporate sector have not been accompanied by an increase in employment due to economies of scale. This is due to the focus on monoculture production and the decline of labour-intensive industries. The best employment option depends on the needs and circumstances of each individual. If flexible working hours are required, part-time employment is the most appropriate choice. If it is a stable job with a high salary and social guarantees, employment under an employment contract is the most suitable. Seasonal work is a viable option when employment is effectively secured for a short period.

Diversification of the rural economy is the way to its socio-economic sustainability, development, and overcoming depression and territorial disproportions. It involves the use of all available resources in rural areas to create jobs, enter new markets, support regional specialisation and realise local competitive advantages. Diversification includes sustainable and inclusive development of rural areas, implementation of effective

development tools, such as building infrastructure and ensuring access to relevant services; a new vision of the use of natural and climatic resources, and intensification of the development of the service sector. This will improve the living standards of rural residents, reduce their dependence on agriculture, create new jobs, stimulate the development of small and medium-sized businesses, and make villages more attractive places to live and work.

The issues of stimulating the diversification of the rural economy, creating a favourable investment climate, and developing public-private partnerships require appropriate regulatory changes and additions in terms of defining preferential conditions and modes of operation for business, especially in the context of the construction and operation of facilities related to the provision of social services to rural areas. Strategic and current planning is a powerful tool that can help accelerate the process of rural development, taking into account the principles of inclusiveness and content. However, it should be noted that not all communities have developed and approved development strategies, even after amalgamation. In addition, existing strategies are based on different methodological approaches and differ in structural changes and content. Therefore, it is necessary to develop unified methodological guidelines for professionals to use when determining priorities and current tasks for the development of territories. It is also necessary to establish a mechanism for analysing the effectiveness of the implementation of local development strategies and current plans, as well as a procedure for approving amendments to these documents.

Despite the fact that local authorities have their own powers and responsibilities for the socio-economic development of their territories, there may be problems with uneven distribution of resources and different levels of economic development of individual territories. Therefore, it is necessary to monitor the development of rural areas and make appropriate management decisions to reduce inequalities, which is discussed in detail in O. Dovgal *et al.* (2024). The effectiveness of planning as an important tool for managing inclusive rural development depends on financial resources and the willingness and ability of managers to attract additional resources. Financial decentralisation has provided local governments with opportunities to increase local budget revenues by boosting economic activity and increasing tax revenues. Local governments also have the opportunity to develop inter-municipal cooperation and receive additional funding through the State Fund for Regional Development. However, the main problem is the lack of strategic vision and the unpreparedness

of managers to work in the new business environment, as well as the lack of qualified professionals who can justify management decisions and prepare project documents. Therefore, the issue of encouraging highly qualified specialists to work in rural areas is relevant.

The socio-economic changes that took place in Ukraine between 1991 and 2024 could not have spared rural areas. As a result of the reforms, rural residents became hostages not only to the modernisation of society and the bankruptcy of agricultural enterprises, but also to a sharp decline in income and reform of rural social infrastructure. The transformation processes place greater demands on the financing and organisation of rural infrastructure. Improving employment and reducing unemployment in rural areas depends on the quality of education and increasing its funding. The organisation of education in rural areas has its own specifics compared to urban areas. Due to the lack of students willing to study in grades 10-11, the period of study in schools is shortened as much as possible. This leads to the fact that young people do not acquire the necessary knowledge and skills for successful employment (Figs. 2, 3).

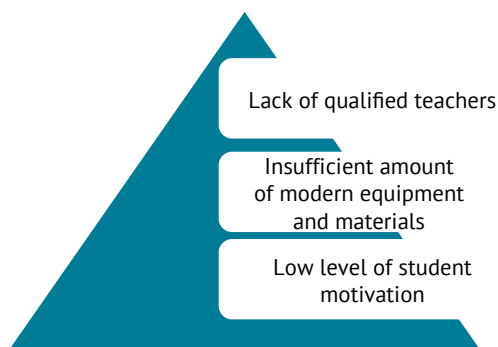


Figure 2. Reasons for the low quality of education in rural areas

Source: compiled by the authors

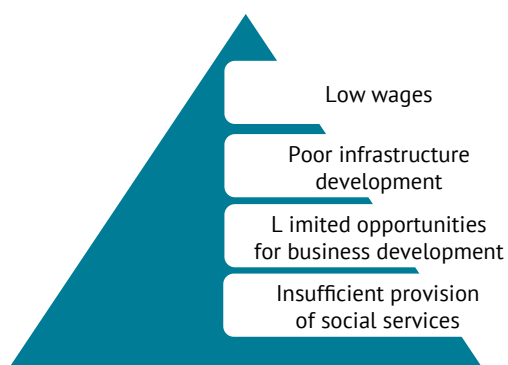


Figure 3. Impact of limited funding for rural areas

Source: compiled by the authors

Pre-school education in Ukraine is the first element in the structure of continuing education, forming the continuity of upbringing and education of a child in the kindergarten, family and school. This level requires physical and moral education, skills, training, care and health of a preschool child based on supporting his or her individuality, respecting his or her interests and needs, and developing his or her creative abilities. As of 2024, rural schools are part of the national education system. Its main goals, functional tasks and key indicators are not determined by the village. For schools in rural areas, there are no exclusively "rural" curricula, training programmes, textbooks and teaching methods. Social requirements for the professional and pedagogical activities of teachers in rural and urban schools are generally the same. At the same time, rural schools function under the influence of demographic, psychological, socio-cultural, environmental and legal factors.

The deterioration of the situation in rural education is evidenced by the fact that 153 schools were closed in rural areas between 2021 and 2023, half of which were primary schools (State Statistics Service of Ukraine, 2023). Schools with a small number of students are transformed into branches of a hub educational institution (usually primary or secondary schools). In this case, high school students are transported to neighbouring settlements by school bus, but it should be noted that not every school is provided with the necessary transport, which creates additional problems and is one of the reasons that prompts families to change their place of residence.

To improve the situation with employment and unemployment in rural areas, it is necessary to improve the quality of education, i.e. to provide educational institutions with qualified personnel, to update the material and technical base of schools, to motivate students to study, to increase the level of wages in rural areas and to develop infrastructure (Honcharenko & Honcharenko, 2023). The situation is similar in the healthcare sector. Rural areas employ 5.3% of doctors and 11.5% of junior and middle-level medical staff. However, more than 55% of the equipment in healthcare facilities is recognised as outdated. The healthcare sector in Ukraine is constantly undergoing ongoing reforms, closely linked to political and socio-economic transformations in the country. At the same time, the rural healthcare system is a relatively autonomous social entity that has the property of inertia in relation to the ongoing reforms. The inertia is determined by both resource factors (low living standards in rural areas, lack of education, insufficient funding, shortage of personnel, territorial remoteness, sparse information flows,

etc.) and traditions of the rural population's way of life, a certain conservatism of life attitudes.

The rural healthcare system has a number of peculiarities in contrast to urban healthcare. Medical support for rural residents is provided in various types of institutions. Hospital care is provided in inpatient facilities of central district hospitals, district hospitals and district hospitals. The outpatient stage includes polyclinics, rural medical outpatient clinics, general medical practices, and paramedic and obstetric stations. Small medical institutions that are significantly distant from each other prevail. The majority of rural residents served by such healthcare facilities are unemployed pensioners. The population of rural areas has virtually no choice of healthcare facilities, as in small settlements medical care is usually provided by a single doctor or paramedic. Specialised medical care, which is less accessible to the rural population, is provided mainly in district and regional hospitals.

Further reforms of the healthcare system should not lead to the destruction of the historically estab-

lished practices of providing medical care to the rural population. It is necessary to improve medical care in rural areas by expanding its infrastructure and changing the content of the work of a particular type of institution. Therefore, one of the most important tasks of healthcare in rural areas in the current development environment is to use the available financial resources of communities to achieve the best possible result. The modern Ukrainian village requires not only the expansion and strengthening of social infrastructure facilities, but also fundamentally new approaches to the problem of engineering arrangement, primarily from the standpoint of their comprehensive solution and urgency. A comprehensive approach is needed to address the issues of gasification, heating and water supply in rural areas. Providing rural residents with housing and relevant communal services is a priority task of the state policy on the revival of rural areas. The military aggression of the Russian Federation has caused the greatest direct losses and destruction to residential buildings and infrastructure (Fig. 4).

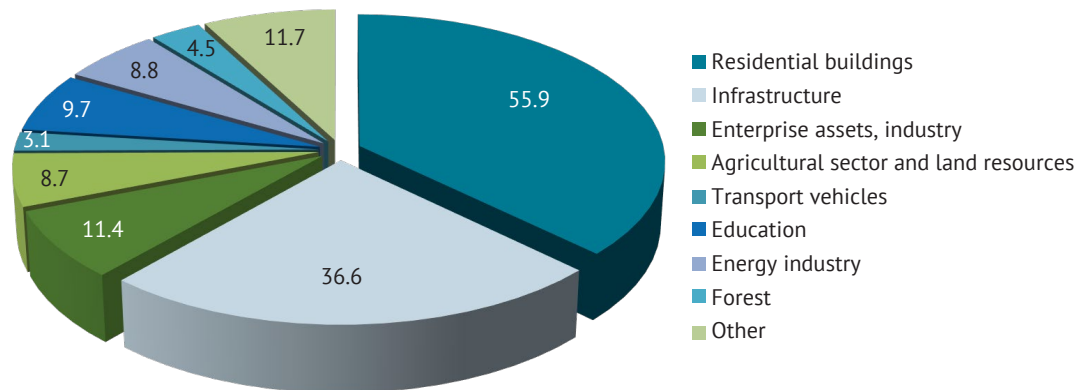


Figure 4. Direct losses from destruction and damage by sector, USD billion

Source: compiled by the authors based on USAID (2023)

The main problems of housing construction in rural areas as of 2024 include: lack of budget funds for the construction of social housing; rising prices for construction materials; and low incomes of rural citizens. The poor development of rural infrastructure leads to the following negative consequences:

- ➔ vulnerability of rural areas and reduced efficiency of the existing resource potential;
- ➔ limited employment opportunities and dependence on the degree of infrastructure development in the settlement;
- ➔ increased risks of job losses for rural residents;
- ➔ pronounced seasonality in income generation and its low level;
- ➔ dependence of household income on weather conditions.

It is worth highlighting the drivers that contribute to the development of rural infrastructure (Fig. 5).

Market transformations have shown that the rural economy is inert to new challenges and opportunities. However, having become part of an open global economic space, rural areas cannot remain aloof from global processes, such as a reduction in the number of people employed in agricultural production, an increase in international trade, digitalisation of all spheres of human life, increased migration, and the spread of remote and other forms of employment. When looking for ways to solve the problem of inclusive rural infrastructure development, it is worth looking at the European experience. Rural development benchmarks that meet the principles of sustainable and inclusive development can be successfully applied in Ukraine.

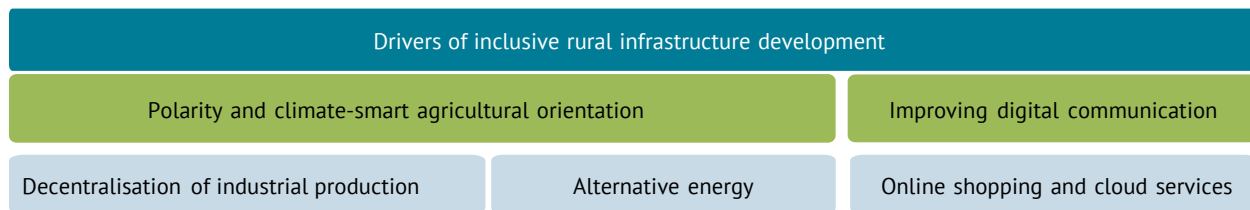


Figure 5. Drivers of inclusive rural infrastructure development

Source: compiled by the authors

It seems unlikely that the indicators of countries with developed rural infrastructure (France and Germany) will be achieved in the near future. Therefore, the indicators of countries with similar development conditions, such as Poland, can serve as target benchmarks. Poland has succeeded due to several factors that should be taken into account: high labour productivity, an effective system of support for national agricultural producers, developed infrastructure, stimulation of research and development, active integration into European and global markets, and development of rural tourism. The challenges faced by Poland on the way to inclusive rural infrastructure development should also be taken into account. It is about the loss of labour force, which migrates to countries such as Germany and France in search of higher wages. However, through effective public policy, widespread implementation of scientific and technological progress, integration into the global market, and preservation of traditions, rural development can be achieved. As of 2024, Poland has become an active importer of labour from Ukraine. A large number of Ukrainians are employed in rural areas for seasonal work. This is due to limited employment opportunities in Ukraine (especially in rural areas) and higher wages in Poland.

It is important for Ukraine to study and adapt the experience of European countries to achieve inclusive development of rural infrastructure, promote farming, increase wages and improve working conditions in agriculture, and reduce dependence on raw material exports and increase exports of processed products. Improving the efficiency of agricultural production will be a source of increasing its competitiveness. The Global Donor Platform for Rural Development considers inclusive agribusiness as a key perspective for understanding and stimulating transformations in the agricultural and agro-industrial sectors. The source of finance plays an important role in the development of the private sector, from small local enterprises to large international corporations. Drawing on the experience of developed countries, it should be noted that an integral part of the modern infrastructure support of the rural market sector is agricultural logistics.

The study has shown that the current conditions of rural infrastructure development require its inclusive orientation, as well as the transformation of approaches to wartime conditions and possible post-war recovery. Given the needs of society in the current situation, the authors of this study support the opinion of A. Kliuchnyk & N. Halunets (2021) about the importance of using internal and additionally attracted external sources of development of territorial communities. The issues of stimulating the diversification of the rural economy, creating a favourable investment climate, and developing public-private partnerships require appropriate regulatory changes and additions in terms of defining preferential conditions and modes of operation for business, especially in the context of the construction and operation of facilities related to the provision of services to rural areas and social services to the population.

The importance of maintaining the gradual implementation of the European experience of higher education institutions is described in V. Shebanin *et al.* (2024). In this paper, the authors' conclusions were supplemented by the problems of preserving school education at the level of territorial communities. The situation in the field of medical care in rural areas was analysed. It is determined that the healthcare system has similar problems, which are manifested in the quantitative reduction of institutions, deterioration of their logistical support, optimisation of the system of institutions, and in the case of further reforms – to the destruction of the historically established practice of providing medical care to residents of rural areas.

The source of further economic development of rural areas is the overcoming of depressive disproportions by diversifying production based on sustainable development. The development of infrastructure support industries should take place in the context of the rational use of available budget funds of rural communities and additional attraction of investment resources. The development of strategic and current plans is an effective tool for accelerating the process of rural development based on inclusiveness. The directions of socio-economic development of rural areas are

described in S. Oneshko *et al.* (2022). Based on this source, this scientific study has supplemented the analysis of losses caused by the military aggression of the Russian Federation and pointed out the main aspects of further diversification of the agro-industrial complex to ensure food security. Thus, attention was paid to fundamentally new approaches to the engineering arrangement of villages, the introduction of integrated solutions to energy efficiency in gasification, heating and water supply, which should become the priority tasks of state policy. Attention is focused on the need to restore logistics links and high-quality transport links, develop economic activity of rural residents and provide jobs. The author analyses the dynamics of infrastructure indicators for the period from 2005-2020 by grouping them into five-year periods. In addition to the general information, an analysis of changes in the number of registered unemployed in the country is carried out. The dynamics of natural population movement under the influence of changes in the number of births and deaths on the total population of Ukraine is characterised. In turn, the study by M. Kovalenko & N. Onikiyenko (2018) focused on the issues of infrastructure provision of the social sphere of rural areas. The author emphasised that the availability of high-quality educational and medical institutions, cultural and sports facilities in rural areas stimulates population retention and growth, which, in turn, contributes to maintaining social stability and strengthening communities.

The peculiarity of the approach to any implementation of scientific work lies in the conceptual subdivision of drivers of inclusive directness according to the following criteria: political, social, economic. This made it possible to look at the current processes of development of territorial communities; The situation is that the rural territories are facing a position of infrastructural security, as well as the influx of destructive factors resulting from military aggression on the further economic development of the agro-industrial complex.

CONCLUSIONS

Acceleration of the inclusive orientation of the development of rural infrastructure is not particularly relevant at the current stage. To achieve the specified goal, it is necessary to take comprehensive measures, such as diversification of the economy, modernisation of infrastructure and investment in research and development. It is also important to ensure the participation of local residents in decision-making and to study the experience of European countries. An inclusive agribusiness sector involves using resources from donors and development agencies as a catalyst for market-based solutions aimed at poverty alleviation. Government

investment and incentive policies play an important role in this, as the private sector cannot succeed on its own.

In rural areas, there is a certain variety of organisational forms of management, but there is a lack of labor force. Unemployment is an extremely negative social phenomenon. The highest level of unemployment is observed among persons aged 35 to 40 years. Young people are more flexible and ready for changes in social terms. They also have better potential for career growth and are ready to handle a greater workload. Therefore, it is important to implement an active employment policy aimed at stimulating the employment of young people, especially during and after a military conflict.

Increasing the efficiency of agricultural production is key to ensuring competitiveness. Creating a self-sufficient system of socio-economic progress and achieving the goals of sustainable development of rural areas are important tasks for improving living conditions and ensuring the prosperity of communities. To improve the situation with employment and unemployment in rural areas, it is necessary to increase the quality of education, providing educational institutions with qualified teaching staff, updating the material and technical base of schools, motivating students to study, increasing the level of wages in rural areas, and developing infrastructure.

It is necessary to improve medical care in rural areas by expanding its infrastructural support. One of the most important tasks of health care is the use of available financial resources of communities. The modern Ukrainian village needs not only the expansion and strengthening of infrastructure facilities of the social sphere, but also fundamentally new approaches to the problem of engineering arrangement, first of all, from the standpoint of their comprehensive solution and urgency. An optimal approach is needed in solving issues related to gasification, heating and water supply of rural areas.

It is important for Ukraine to study and adapt the experience of European countries to achieve inclusive development of rural infrastructure. Indicators of Poland's sustainable development can serve as target benchmarks. Inclusive agribusiness creates new jobs, increases incomes and improves access to food for the poor. In addition, it promotes economic growth, infrastructure development and social services in rural areas. The inclusive orientation of rural areas also contributes to the improvement of the quality of manufactured products. All this makes inclusion an indispensable tool for the sustainable development of rural areas and improving the quality of life of the population.

In the future, it is necessary to focus attention on several factors: the economic efficiency of inclusive models, social impact, environmental aspects, the role of institutional factors, innovations in agriculture.

Further research in the field of inclusive development of rural areas will allow to develop more effective strategies and policies aimed at ensuring the sustainable development of rural areas of Ukraine and improving the quality of life of the rural population.

None.

None.

ACKNOWLEDGEMENTS

CONFLICT OF INTEREST

REFERENCES

- [1] Belei, S. (2021). Development of rural areas in conditions of decentralization. *Efektivna Ekonomika*, 1. doi: [10.32702/2307-2105-2021.1.78](https://doi.org/10.32702/2307-2105-2021.1.78).
- [2] Borko, T., Fradynskiy, O., Oneshko, S., Zalievska-Shyshak, A., & Krasota, O. (2022). Prospects for restoring the economic potential of Ukraine in the post-war period. *Economic Affairs*, 67(4s), 815-823. doi: [10.46852/0424-2513.4s.2022.15](https://doi.org/10.46852/0424-2513.4s.2022.15).
- [3] Borodina, O., & Prokopa, I. (2019). *Inclusive rural development: A scientific discourse*. *Economics and Forecasting*, 1, 70-85.
- [4] Decree of the President of Ukraine No. 533/2020 "On Ensuring the Creation of Barrier-Free Space in Ukraine". (2020, January). Retrieved from <https://zakon.rada.gov.ua/laws/show/533/2020#Text>.
- [5] Dovgal, O., Novikov, O., Bilichenko, O., Kozachenko, L., & Stamat, V. (2022). *Implementation of the concept of circular economy as an integral component of sustainable development of the region: Problems and prospects*. *Review of Economics and Finance*, 20, 1051-1059.
- [6] Dovgal, O., Potryvaieva, N., Bilichenko, O., & Kuzoma, V. (2024). Circular economy development in the context of war: Global challenges. *Interdisciplinary Journal of Applied Science*, 8(13). doi: [10.18226/25253824.v8.n13.04](https://doi.org/10.18226/25253824.v8.n13.04).
- [7] Dunayev, I., Kuchma, M., Byelova, L., Jatkiewicz, P., Bilichenko, O., & Poberezhets, H. (2024). Wartime destruction: Regional assessment of damage to Ukraine's infrastructure. *International Journal of Environmental Studies*, 81(1), 8-17. doi: [10.1080/00207233.2024.2314862](https://doi.org/10.1080/00207233.2024.2314862).
- [8] Honcharenko, I., & Honcharenko, O. (2023). Features of the processes of mergers and acquisitions in the agro-industrial sector of Ukraine's economy. *Modern Economics*, 38(1), 34-40. doi: [10.31521/modecon.v38\(2023\)-05](https://doi.org/10.31521/modecon.v38(2023)-05).
- [9] How Ukraine's population will decline: Experts' predictions. (2024). Retrieved from <https://www.slovoidilo.ua/2024/07/17/infografika/suspilstvo/yak-skorochuvatymetsya-chyselnist-naselennya-ukrayiny-prohnozy-ekspertiv>.
- [10] Kliuchnyk, A., & Halunets, N. (2021). *Methodological aspects of developing a strategy for the development of territorial communities*. Mykolaiv: Mykolaiv National Agrarian University.
- [11] Kormyshkin, Yu., & Moskal, I. (2023). Regulatory and legal aspects of system management provision of medical services in territorial communities. In *Development of territorial communities: Legal, economic and social aspects* (pp. 190-191). Mykolaiv: Mykolaiv National Agrarian University.
- [12] Kovalenko, M., & Onikiyenko, N. (2018). *International financial support for agribusiness enterprises*. *Foreign Trade: Economy, Finance, Law*, 1, 61-71.
- [13] Kryukova, I., & Stepanenko, S. (2022). Efficiency of domestic agrobusiness in prisms of priorities of sustainable development. *Agrosvit*, 9-10, 3-12. doi: [10.32702/2306-6792.2022.9-10.3](https://doi.org/10.32702/2306-6792.2022.9-10.3).
- [14] Lazarijeva, O. (2019). Features of socio-economic development of rural areas. *Problems of a Systematic Approach in the Economy*, 1(69), 68-72. doi: [10.32782/2520-2200/2019-1-33](https://doi.org/10.32782/2520-2200/2019-1-33).
- [15] Minfin. (n.d.). *Number of registered unemployed*. Retrieved from <https://index.minfin.com.ua/ua/labour/unemploy/register>.
- [16] Ministry of Education and Science of Ukraine (2021). *Inclusive resource centers in Ukraine implement European standards of barrier-free conditions – a solution to the order*. Retrieved from <https://mon.gov.ua/news/inklyuzivno-resursni-tsentri-v-ukraini-vprovadzhuvatimut-evropeyski-standarti-bezbarernosti-rishennya-uryadu>.
- [17] National Institute for Strategic Studies. (2024). *Ukraine's agricultural sector in 2023: Components of sustainability, challenges, and prospective tasks*. Retrieved from <https://niss.gov.ua/doslidzhennya/ekonomika/ahraryny-sektor-ukrayiny-u-2023-rotsi-skladovi-stiykosti-problemy-ta>.
- [18] Neiter, R., Bohonos, M., Nivievsky, O., Makarenko, O., & Lytvynov, V. (2022). *A look at the riots during the war in the rural dominion of Ukraine* (Vol. 2). Kyiv: Center for Food and Land Studies of the Kiev School of Economics.
- [19] Oneshko, S., Bashlai, S., & Korolenko, O. (2022). Features of preserving and maintaining the economic potential of Ukraine in the conditions of war. *Economy and Society*, 40. doi: [10.32782/2524-0072/2022-40-4](https://doi.org/10.32782/2524-0072/2022-40-4).
- [20] Pavlov, O. (2009). *Rural territories of Ukraine: Functional-managerial model*. Odesa: Astroprint.

- [21] Poltorak, A., Potryvaieva, N., Kuzoma, V., Volosyuk, Yu., & Bobrovska, N. (2021). Development of doctrinal model for state financial security management and forecasting its level. *Eastern-European Journal of Enterprise Technologies*, 5(13), 26-33. doi: [10.15587/1729-4061.2021.243056](https://doi.org/10.15587/1729-4061.2021.243056).
- [22] Shebanin, V., Shebanina, O., & Kormyshkin, Yu. (2024). Implementation of circular economy principles to promote the development of rural areas. *Ekonomika APK*, 31(2), 51-59. doi: [10.32317/2221-1055.202402051](https://doi.org/10.32317/2221-1055.202402051).
- [23] State Statistics Service of Ukraine. (2023). *Population and migration*. Retrieved from https://www.ukrstat.gov.ua/druk/publicat/kat_u/publnasel_u.htm.
- [24] Tymoshenko, M. (2014). [Theoretical ambushes for the development of social infrastructure in rural areas](#). *Efektivna Ekonomika*, 11.
- [25] United Nations Convention "On the Rights of Persons with Disabilities". (2006, December). Retrieved from https://zakon.rada.gov.ua/laws/show/995_g71#Text.
- [26] USAID. (2023). [Report on direct damage to infrastructure and indirect losses to the economy from destruction as a result of Russia's military aggression against Ukraine as of June 2023](#). Kyiv: Kyiv School of Economics.
- [27] Yekimov, S., Kontsevaya, S., Poltorak, A., Sharin, O., Verkhovod, I., & Kuris, Y. (2024). The importance of agricultural clusters for the development of rural regions. *E3S Web of Conferences*, 538, article number 03004. doi: [10.1051/e3sconf/202453803004](https://doi.org/10.1051/e3sconf/202453803004).
- [28] Yekimov, S., Oleksenko, R., Vokhidova, M., Aytimbetov, M., Kolokolchikova, I., Poltorak, A., & Volosyuk, Y. (2023). Investments in human capital in agriculture. *E3S Web of Conferences*, 452, article number 01005. doi: [10.1051/e3sconf/202345201005](https://doi.org/10.1051/e3sconf/202345201005).

Драйвери інклюзивної спрямованості розвитку сільської інфраструктури України

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Анотація. Економічна система суспільства передбачає постійний рух товарів, послуг, грошей, цінних паперів, робочої сили. Злагоджена взаємодія елементів ринкового механізму досягається їх збалансованим розвитком. Неможливо підвищити ефективність функціонування аграрного сектора економіки країни без вдосконалення сільської інфраструктури. Стаття присвячена вивченню теоретичних і практичних положень щодо прискорення розвитку інфраструктури сільських територій, забезпеченню доступу до неї усіх верств сільського населення та розробленню рекомендацій щодо підвищення рівня життя селян. Основними методами дослідження були аналіз наукової літератури, аналіз статистичних даних, порівняльний аналіз, експертні оцінки. У науковій роботі досліджено основні індикатори покращення рівня життя мешканців сільських територій у розрізі політичного, соціального та економічного аспектів. Для корегування цілей сталого розвитку було охарактеризовано втрати завдані інфраструктурному забезпеченню через викрадення, знищення або пошкодження об'єктів. Показано, що вплив економічного зростання на подолання бідності посилюється з ростом людського капіталу, але слабшає при значній нерівності доходів. Особливу увагу було приділено індикаторам покращення рівня життя мешканців сільських територій у розрізі політичного, соціального та економічного аспектів. Також було зроблено висновки щодо основних завдань, що стоять перед сільськими громадами для забезпечення їхнього сталого розвитку. Практична цінність дослідження полягає в одержаних емпіричних результатах, що можуть бути використані для розробки та реалізації державної політики розвитку сільських територій. Розроблені рекомендації можуть бути корисними для органів місцевого самоврядування, громадських організацій та інших суб'єктів, які займаються питаннями розвитку сільської місцевості. Запропоновано використання досвіду Польщі на шляху до інклюзивного розвитку сільської інфраструктури

Ключові слова: сталий розвиток; сільські території; сільські громади; ринок праці; економічний розвиток; інклюзивна освіта