Vol. 6 No. 1, 2025
DOI https://doi.org/10.30525/2661-5150/2025-1-7

ANALYSIS OF SPECIALISATION FACTORS AND MODELING OF SMART DEVELOPMENT PROSPECTS FOR REGIONS OF UKRAINE

Ruslan Kloba[1]

Abstract. The modern world is characterised by a multitude of trends that exert a significant influence on the necessity for the development of regions according to the principles of smart specialisation. This approach is predicated on the notion that it will engender cost reductions and concomitant benefits. The significance of this study lies in its identification of the most suitable tool for modelling the prospects for smart development of regions of Ukraine. The present study constitutes an analytical investigation into extant forms of smart specialisation. In addition, it identifies the factors that influence the formation of regional specialisation. These factors will serve as the basis for the selection of the optimal model of regional smart development for each individual region in the future. A study was conducted to identify the factors influencing the smart development of regions. In addition, the principles of smart specialisation of regions were studied, with consideration given to global experience. Following a thorough analysis of the available information sources, the following types of smart specialisation were determined: raw material, agricultural, industrial, infrastructure, financial, cultural and tourist, and universal. The primary factor influencing the specialisation of smart development of regions is the proximity to military threats (to regions where active hostilities are ongoing). In the context of examining the factors that contribute to the development of smart cities, a range of factors have been identified as being of significance. These include natural resources, agricultural potential, the presence of an industrial base, the quality of human capital, the presence of educational infrastructure, logistical accessibility, digital infrastructure, export orientation, innovation and investment climate, and cultural and tourism potential. Each of the factors is assessed in the context of the economic effect, which is defined as the costs and revenues. When modelling, it is imperative that these factors are given due consideration. Furthermore, when modelling smart specialisation of regions, it is necessary to take the following principles into account: focus on innovations, partnership between science and business, involvement of local governments, use of advanced technologies. The transition to smart development of regions is clearly indicated by world experience, and the feasibility of modelling the development prospects of regions of Ukraine is therefore justified. The author proposes a model for the smart development of regions of Ukraine, which is to be implemented using the following tools: economic and mathematical modelling, system-dynamic modelling, SWOT-TAI modelling and geoinformation modelling. For each of the proposed models, examples are given of the feasibility of application, indicating specific regions, methods and scenarios. It has been determined that the implementation of particular modelling tools should be informed by considerations of human potential, resource base and expertise of employees.

Keywords: smart specialisation, development of regions, smart development, SWOT-TAI.

JEL Classification: R23

1. Introduction

The approach of Smart Specialisation pursued by Ukraine necessitates a comprehensive evaluation of the capabilities and potential of regions, with the objective of averting both superfluous expenditures and the inefficient utilisation of investment funds. However, a paucity of literature from the modern scientific era fails to clearly identify the factors that influence smart specialisation of regions, which makes it extremely difficult to model regional development prospects.

Certain aspects of smart regional development, including that of Ukraine, using modern technologies

[1] Lesia Ukrainka Volyn National University, Ukraine
E-mail: vizoruta10@gmail.com
ORCID: https://orcid.org/0009-0008-2060-9055

are revealed in the works of Kosenkova T. (2017), Kroll H. (2015), Snihova O. (2018), Ishchuk S. and Sozansky L. (2020), Pavlikha N., Kornelyuk O. and Voychuk M. (2019) and others.

The absence of a definitive categorisation of factors contributing to smart specialisation at the regional level, coupled with the heterogeneity of these regions, and the dearth of coordination in approaches to modelling the prospects of smart specialisation in the developmental trajectories of Ukrainian regions, underscores the imperative for this study.

2. Theoretical Basis

The work is devoted to the analysis of types of specialisation and the factors that determine them. This analysis is facilitated by the analytical research method, which allows for the clear identification of factors of influence on regional development. Furthermore, the most common tools for modelling the prospects of smart specialisation of regions of Ukraine are identified using the modelling method.

3. Results

Formal Aspects of Regional Specialisation

The economic specialisation of regions, including Ukraine, is determined by its competitive advantage in the production of specific goods and the provision of services that ensure competitiveness at both the national and international levels. However, it is imperative to consider not only the advantages, but also to mitigate the disadvantages, thereby ensuring the maximisation of benefits and, consequently, the region's appeal to investors.

A salient feature of the contemporary regional development of Ukraine is its proximity to the theatre of military operations, which introduces an additional risk of damage to the property and interests of legal entities and individuals, military infrastructure, and critical infrastructure facilities.

Consequently, the primary factor contributing to the specialisation of regions within the Ukrainian context is determined to be proximity to military threats. The following factors can be identified as typical and generally accepted: natural resources, demographics, the economy, infrastructure, the institutional environment, and scientific and technical potential.

In order to achieve specialisation, it is necessary to consider the following factors: the enhancement of the strengths and the weakening of the weaknesses of regional development. It is important to note that this approach can be applied to both regions at the oblast level and to territorial communities, which in general should be considered as small regions.

Thus, regions can have different types of specialisation depending on the dominant economic sectors, the level of development of society, the capacity of infrastructure, etc. The competitive advantages provided by regional specialisation for investors are important, and it is on this basis that the author distinguishes the following types of specialisation:

– Raw material specialisation. Developing processing and increasing the benefits per unit of output, especially as part of a consortium of companies, also reduces dependence on raw material exports and may therefore be the subject of additional investment by the state. It should be noted that the use of environmental technologies reduces costs (in strategic planning) and is in line with global trends, and thus will be in demand in foreign markets.

– Agricultural specialisation implies the availability of sufficiently fertile soils, which means that additional costs for chemical fertilisers can be reduced. In general, this specialisation of the region allows for stable and sustainable incomes regardless of minor weather fluctuations, and thus high productivity of agricultural enterprises.

– Industrial specialisation aimed at active use of automation, digital technologies, diversification of production, focus on exporting goods with lower unit costs, and thus creating competitive products and focusing on maximum economic efficiency of production.

– Infrastructure specialisation involves the creation of transport hubs, the development of logistics and, as a result, the activation of related economic facilities. This specialisation will help to maximise the effect of initial investments at minimal maintenance costs. It will also significantly increase the attractiveness of the surrounding regions for investors who have their own infrastructure.

– Financial specialisation is not widely used in Ukraine, as the domestic economy is concentrated in the real sector. However, such specialisation (in financial technologies, digital banks in the context of regional development) will allow for the immediate redistribution of financial resources in the interests of the region, Ukraine and international co-operation.

– Cultural and tourist specialisation: specialisation of regions in social projects, tourism, etc. This specialisation is typical for regions that are tourist centres and allows for investments with a significant level of profit, but the profit is seasonal.

– Universal specialisation (without a focus on specific areas) is the most common in Ukraine. After the decentralisation reform of the late 2020s, regions are forced to develop all areas with a small focus, for example, on tourism and the extractive industry, but without significant specialisation.

Following the identification of the primary forms of specialisation, it is evident that this process is

directed towards the advancement of regional interests. This enables regions to garner heightened interest from investors. Concurrently, it is imperative that the specialisation of regions is aligned with national development priorities, thereby ensuring their integration into global markets and contributing to the enhancement of the country's economic stability. In such instances, potential conflicts may emerge between the interests of the region and those of the state. In order to achieve the maximum possible effect from the specialisation of regions, it is essential that the state takes into account both possible areas of specialisation and the actual resource base of the regions in its own projects.

Consequently, strategic planning for regional development entails the identification of regional strengths, the promotion of cluster initiatives, and the attraction of international investment. The harmonisation of regional specialisation with state programmes has been demonstrated to facilitate the efficient use of financial resources and to enhance the general well-being of the population. The state implements numerous strategies (for example, the State Strategy for Regional Development for 2021-2027 (The Resolution of the Cabinet of Ministers of Ukraine "On Approval of the State Strategy for Regional Development for 2021-2027", 2020), development programs (for example, at least 4.5 billion UAH has been allocated to the Regional Development Fund of Ukraine for investment programs (About Investment Programs and Regional Development Projects …, 2021), etc.). Funding amounts are distributed among all regions of Ukraine, an average of 50 programs per region are active at the time of writing this work (List of regional target programs in effect in 2025, 2025). Furthermore, it is evident that the development of these programmes has been undertaken with only a limited consideration of the resource potential of the respective regions.

Factors of Ukrainian Regions' Specialisation

As previously indicated, the primary factor contributing to Ukraine's specialisation in the contemporary context is its geographical proximity to regions experiencing armed conflict and the potential for military invasion. The potential of regions is generally determined by the presence of development factors (including resources, infrastructure, and organisational capacity), which in turn give rise to specialisation. There are a significant number of approaches to specialisation (by economic component, by impact on the state economy, by level of costs, etc.). In consideration of the aforementioned categories of specialisation, the following factors are proposed for the highlighting of regional specialisation:

1. Natural resources. The presence of minerals, water resources or forests can form a raw material specialisation, but not invariably. For instance, the eastern territories of Ukraine are abundant in deposits of coal, gas, and various ores. However, not all territorial communities (hromadas) are engaged in the extraction or processing of natural resources. It is evident that certain regions are oriented towards the production of agricultural products or light industry, with a view to safeguarding the interests of the residents of neighbouring communities (hromadas).

Polissya is renowned for its forestry resources; however, logging activities are predominantly concentrated around a select number of complexes (Mazepa and Novak, 2023). The development of agriculture in the southern and central regions is influenced by climatic conditions. Concurrently, the port capacities of Odesa and Mykolaiv can delineate these oblasts as a transport nexus (infrastructural specialisation). It is evident that these are not isolated examples. It can be posited that, in a number of regions, the factor of resource potential can be pivotal, albeit solely in a limited number of instances where it is conducive to the formation of cities. This factor can be assessed as one that brings stable income and requires high capital investments.

2. Agrarian potential. The development of agriculture is contingent on the presence of fertile lands and a favourable climate. The majority of Ukraine's territory is characterised by a significant agrarian potential. This factor has the potential to broaden the export prospects of regions within Ukraine. Furthermore, agro-processing has been demonstrated to enhance the economic value of both semi-finished and finished products. The corporatisation of the agribusiness sector has been a key factor in the distribution of financial benefits, with large agricultural enterprises such as Kernel, MHP, UkrLandFarming, "ADM Ukraine", Nibulon, and others being the primary beneficiaries (Top 20 largest Agro-Industrial Companies of Ukraine, 2023). It is noteworthy that the proportion of land purchased by agricultural holdings constitutes approximately 38% of Ukraine's total land stock (Ukraine's Largest Agricultural Holdings …, 2024), which is a substantial figure. Furthermore, a considerable proportion of agricultural land is subject to long-term lease agreements. This factor can be assessed as requiring moderate investment and having high profitability when exporting.

3. The industrial base is one of the most important factors determining the production specialisation of regions, especially in the presence of large enterprises. In addition, existing factories, industrial enterprises and technology parks can form an industrial cluster – agglomeration. The industrial factor provokes the development of related economic objects: food, light industry, trade. These objects create new jobs and taxes go to local budgets. However, this factor creates a high dependency on a stable energy supply.

This factor can be assessed as requiring large investments, but having a high return on investment.

4. In the context of regional development, it is essential that various professional workers represent human capital. An educated and qualified population is known to stimulate the development of IT, science and education, both in the region and in Ukraine as a whole. The financial burden of personnel training can be allocated among various stakeholders, including local governments, state bodies, and representatives of business structures. The enhancement of labour productivity is poised to yield two key outcomes: the generation of innovative products and the safeguarding of cultural heritage for posterity, in addition to providing a foundation for nurturing young talents. From an economic perspective, it is this author's opinion that this factor, when evaluated, will ensure strategic profit in long-term planning, with relatively minor costs.

5. The educational infrastructure, spanning from kindergarten to university, facilitates the formation of the entire range of personnel required at the regional level. Notably, it ensures the acquisition of practical skills, a consequence of the close proximity to employer enterprises. This approach ensures the continuity of training and contributes to the enhancement of the region's overall intellectual capacity. Furthermore, this factor will have a synergistic effect with those factors that require highly qualified workers. However, to ensure the full implementation of this factor of regional specialisation, significant investments in education in the long term are necessary.

6. Logistic accessibility (infrastructure): the presence of railways, highways, ports and/or airports makes the region attractive for trade, immigration, investment, development of science and transit. That is why logistical accessibility is considered as one of the factors of specialisation of regions. The infrastructural factor of regional development is the basis for all regional specialisations. The availability of specified transport capabilities in sufficient quantity and quality is imperative for the efficient export of products, the delivery of raw materials, and the import of tourists, workers, and so forth. From an economic perspective, this factor can be assessed as having a direct linear correlation between capital investments and payback due to the growth of financial flows in the short term.

7. The present study highlights digital infrastructure as a discrete factor in the specialisation of regions. Consequently, the advent of high-speed Internet, data centres and digital services has catalysed the evolution of information technology, fintech, remote work and outsourcing, among other phenomena. The digital transformation of business is implemented not only as a modern direction of development, but also as an achievement of the need to increase productivity and reduce costs. From an economic perspective, the augmentation of costs associated with the expansion of digital infrastructure to other regions (i.e., scaling) is anticipated to engender a substantial escalation in profitability, whilst concurrently ensuring the stability of the energy supply.

8. Export orientation. In light of the ongoing military conflict in Ukraine, the possession of substantial resource and production capabilities, as well as the presence of highly qualified employees within Ukrainian enterprises, renders the capacity to produce goods in demand in foreign markets and to export them an imperative factor in the promotion of regional development and the strategic specialisation of regions. Export orientation facilitates the establishment of external economic ties, as well as political, social, investment and scientific ties. Moreover, the state will receive foreign exchange earnings, which will stimulate the economy as a whole and encourage exports (grants, programmes, subsidies, joint financing, etc.). The transition to unified quality standards in individual sectors of the economy will be enabled by export orientation. From an economic perspective, this factor can be evaluated as one that, at moderate costs, can yield very high incomes with effective promotion in foreign markets.

9. Climate for innovation and investment. Transparency of the "rules of the game", stability of socio-economic relations and access to credit attract business. Attracting business stimulates the domestic market of the regions and Ukraine as a whole, which is confirmed by the existence of a number of tax incentives to stimulate the market. This enables the optimisation and strengthening of the region's innovation profile (through the implementation of the latest technologies, transport, etc.), including through foreign and national grants, venture and credit investments. This factor of smart specialisation of the region is directly correlated with state support: the more favourable the investment conditions and state support, the higher the profit.

10. Cultural and tourist potential. This enables the optimisation and strengthening of the region's innovation profile (through the implementation of the latest technologies, transport, etc.), including through foreign and national grants, venture and credit investments. This factor of smart specialisation of the region is directly correlated with state support: the more favourable the investment conditions and state support, the higher the profit.

The aforementioned factors of regional specialisation form the basis of strategic regional development: the greater the unique competitive advantages, the greater the region's focus on this direction of smart specialisation.

4. Modeling the Prospects for Smart Development of Ukrainian Regions

The focal point of this research endeavours is the conceptualisation of prospects for intelligent development. In this context, the importance of selecting appropriate tools for modelling regional development, determining the principles of this modelling, and acknowledging global experience is emphasised. Furthermore, emphasis is placed on the role of the state in shaping the smart specialisation of regions. The aforementioned factors of regional specialisation form the basis of strategic regional development. It is evident that the greater the region's unique competitive advantages, the more pronounced its focus on this direction of smart specialisation.

When examining the principles of modelling smart regional development, it is important to note that when modelling is carried out by business entities, investors or other interested parties, it is necessary to adhere primarily to the principles defined in the legislation. The main principles of smart specialisation are as follows:

– Focus on innovation;
– partnership between science and business;
– involvement of local government bodies;
– use of advanced technologies.

Such principles will ensure a long-term impact of the implementation of smart specialisation of regions, effective allocation of resources and stimulation of entrepreneurship.

The employment of smart specialisation approaches by regions has facilitated the initiation and execution of numerous efficacious smart specialisation projects within European Union countries. It is evident that a number of regions within Finland are undergoing a transformation in which they are developing high-tech industries based on their own scientific achievements. In addition, Germany is implementing the Industry 4.0 model, the purpose of which is to stimulate the digital transformation of production (Industrie 4.0, 2025). For Ukraine, it is important to borrow European experience and adapt best practices to local conditions.

The present study will consider approaches to modelling the prospects for smart development of regions of Ukraine, working on the following research principles, factors and potential types of smart specialisation of regions.

1. The field of economic and mathematical modelling is predicated on the utilisation of formalised models to predict the impact of smart specialisation on economic processes in regions. The following tools can be used for modelling:

– Regression analysis.
– Analysis of inter-industry balances.
– Economic equilibrium models, etc.

The primary objective is to quantify the outcomes of potential transformation, including, but not limited to, growth in gross regional product, employment dynamics, and investment attractiveness. Such models facilitate the comparison of alternative development scenarios and the identification of the most effective option from a financial perspective. The primary advantage of regional development policy is the possibility of informed planning.

Examples of the application of such modeling could be the following scenarios:

– Modelling the dynamics of gross regional product growth and human resource requirements in the transition of Poltava Oblast from exporting raw materials and semi-finished products to deep processing of agricultural products with further export of finished products;
– Modeling the dynamics of unemployment, migration and average wages during the transition of enterprises of territorial communities of the Dnipropetrovsk Oblast to deep digitalisation.

2. System dynamics modelling allows to simulate the complex interrelationships between social, economic, infrastructure and environmental factors of regional development. System dynamics is based on the concepts of feedback and delays in systems, and is therefore well suited for analysing long-term scenarios. This methodological approach facilitates the identification of the impact of investments in specific sectors, such as education or science, on parameters including employment, migration flows, and environmental status. It is a valuable tool for managing complex transformations, particularly in the context of analysing the strategic development of regions in Ukraine. Its ability to consider a wide range of factors at the strategic planning level makes it a highly effective instrument.

Examples of the application of such modeling could be the following scenarios:

– A model of the impact of opening an innovation hub on the retention of youth in the region and migration dynamics has been created in the Kharkiv Oblast;
– A model of maritime logistics development and its impact on the load on the ecosystem and the level of employment has been built in the Odesa Oblast.

3. SWOT-TAI modeling (combination of strategic analysis and technological index) (Swot Analysis, its Role and Importance in Business, 2025).

This approach integrates a qualitative assessment of the region's internal strengths/weaknesses and opportunities/threats (SWOT analysis) with a quantitative Technological Capability Index (TAI). This approach enables the formulation of a realistic and targeted smart development strategy. SWOT analysis is a tool that is used to identify key local resources, while TAI is a method of determining the

technological level of a region in comparison with others. This approach ensures a well-founded choice of areas of specialisation and allows for the concentration of resources on the most promising areas.

Examples of the application of such modeling could be the following scenarios:
– Lviv Oblast demonstrates a high level of technological potential in the IT sector and creative industries, which defines them as the main areas of specialisation;
– In Cherkasy Oblast, SWOT-TAI can identify the need for modernisation of production, while having strong positions in agro-industry and logistics.

4. Spatial (geoinformation) modeling facilitates the visualisation of the spatial characteristics of regions, as well as the analysis of the location of resources, infrastructure, demographic flows and economic activity. The utilisation of geoinformation modelling facilitates the construction of maps delineating potential developmental areas, the identification of clusters of innovative activity, and the calculation of optimal logistics routes. Spatial modelling has been demonstrated to be a particularly useful tool in the context of strategic planning. For instance, it can be employed to determine the optimal location for transport hubs, to address logistical challenges, and to identify bottlenecks in the construction of logistics systems. The approach under discussion combines economic analysis with visual planning.

Examples of the application of such modeling could be the following scenarios:
– Development of a map of optimal location of logistics centers in the border areas of Western Ukraine to improve access to EU markets;
– A geoinformation model in the Kherson and Zaporizhzhia oblasts, which shows the potential for placing solar power plants taking into account climatic conditions, power lines and demand, taking into account the consequences of military operations.

The role of the state as a discrete entity capable of exerting influence should not be dismissed, given its capacity to exert both deleterious (e.g., a complete prohibition on a specific activity) and advantageous (e.g., the dedication of state authorities to the development of lucrative facilities) impacts.

The state must create a favorable regulatory environment and support innovation clusters.

It is imperative that the subject of analysis possesses a comprehensive understanding of their own capabilities, given that modelling based on the utilisation of economic and mathematical models or a rudimentary SWOT analysis does not necessitate a substantial investment of resources or human capital. Concurrently, system-dynamic or geoinformation modelling necessitates the processing of substantial information volumes, thus underscoring the requirement for specialists in data analysis and the utilisation of specialised software packages, among other competencies.

5. Discussion

The objective of this study is to ascertain the factors that will form the basis of the smart specialisation model of Ukrainian regions, and to identify promising modelling options. In the course of the analysis of factors, the problem of mutual influence and synergy of individual factors was identified.

Prospects for future research include in-depth study of the factors of smart specialisation of regions, with maximum clarification of the essence of each of them. It is imperative to possess a comprehensive understanding of the impact of each factor on the result when constructing a regional development model, which will facilitate the identification of problems and interests for investors.

6. Conclusions

The scientific research is devoted to the study of the specialisation of the regions of Ukraine, the factors influencing the formation of this specialisation, and the search for optimal models for determining the prospects for smart development of the regions of Ukraine. The following factors were identified as being of particular importance in influencing the specialisation of regions: natural resources, agricultural potential, the presence of an industrial base, the quality of human capital, the presence of educational infrastructure, logistical accessibility, digital infrastructure, export orientation, innovation and investment climate, and cultural and tourism potential.

However, when studying a specific region, it is necessary to take into account the maximum number of factors when formulating the most accurate model of smart specialisation. In the opinion of the author, it is advisable to utilise a number of models for the purpose of determining the prospects for intelligent development in the regions of Ukraine. These include economic and mathematical modelling, system-dynamic modelling, SWOT-TAI modelling and geoinformation modelling. The selection of one or more modelling types is to be made with consideration for the characteristics of a specific region and the factors that influence the formation of its smart specialisation.

References:

Agroportal (2023). Top 20 largest Agro-Industrial Companies of Ukraine. Available at: https://agroportal.ua/ru/news/novosti-kompanii/top-20-naybilshih-kompaniy-apk-ukrajini

Brander (2025). Swot Analysis, its Role and Importance in Business. Available at: https://brander.ua/blog/swot-analiz-yoho-rol-i-vazhlyvist-u-biznesi

The Resolution of the Cabinet of Ministers of Ukraine "On Approval of the State Strategy for Regional Development for 2021-2027" (2020). Available at: https://zakon.rada.gov.ua/laws/show/695-2020-п#Text

The Resolution of the Cabinet of Ministers of Ukraine "On Investment Programmes and Regional Development Projects that Can Be Implemented in 2021 at the Expense of the State Regional Development Fund" (2021). Available at: https://zakon.rada.gov.ua/laws/show/297-2021-p#Text

Dnipropetrovsk Regional Military Administration (2025). "List of regional target programs in effect in 2025". Available at: https://adm.dp.gov.ua/storage/app/media/Pro%20oblast/Regionalni%20programi/region-program-20250101.pdf

Horizon Europe (2025). Available at: https://horizon-europe.org.ua/uk/home

Industrie 4.0 (2025). Available at: https://www.plattform-i40.de/IP/Navigation/DE/Home/home.html

Ishchuk, S., & Sozansky, L. (2020). Methodological Principles for Choosing Potential Areas of Smart Specialization of Regions of Ukraine. *Economics and Law*, Vol. 2(57), p. 32–44.

Kosenkova T. (2017). Prospects for the Development of Smart Specialization in the Kharkiv Region. *Sotsial'na ekonomika,* Vol. 53, p. 76–80.

Kroll, H. (2015). Efforts to Implement Smart Specialization in Practice – Leading Unlike Horses to the Water. *European Planning Studies*, Vol. 23(10), p. 2079–2098.

Latifundist (2024). Ukraine's Largest Agricultural Holdings have Purchased Only About 18 Hectares of Land Since the Beginning of the Year. Available at: https://latifundist.com/novosti/65237-najbilshi-agroholdingi-ukrayini-pridbali-lishe-blizko-18-ga-zemli-z-pochatku-roku

Mazepa, V. G., & Novak, A. A. (2023). Regional forestry, Spolom, Lviv, Ukraine.

Pavlikha, N. V., & Voychuk, M. V. (2019). *Organizational and economic principles of managing the sustainable development of the city*, Vezha-Druk, Lutsk, Ukraine.

Snihova, O. (2018). Unlocking the Potential of Smart Specialization to Overcome Regional Structural Inertia in Ukraine. *Economy of Ukraine*, Vol. 8(681), p. 75–87. Available at: http://nbuv.gov.ua/UJRN/EkUk_2018_8_7

State Fund for Regional Development (2025). Available at: https://center.diia.gov.ua/support/support-2

Tsymbaliuk, I., Pavlikha, N., & Korneliuk, O. (2023). Local budgets as the basis for financial autonomy and territorial competitiveness. *Economy and Society*, Vol. 55. https://doi.org/10.32782/2524-0072/2023-55-107

Received on: 08th of February, 2025
Accepted on: 12th of March, 2025
Published on: 31th of March, 2025