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K. Oliinyk,

Postgraduate student, Mariupol State University

ORCID ID: <https://orcid.org/0009-0007-6413-7259>

V. Panchenko,

Doctor of Economic Sciences, Associate Professor, Professor of the Department of Economics and International Economic Relations, Mariupol State University

ORCID ID: <https://orcid.org/0000-0002-5578-6210>

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# DIGITAL INEQUALITY AS A SYSTEMIC PHENOMENON: MECHANISMS OF DIGITAL STRATIFICATION AND OPPORTUNITY TRAPS

К. Д. Олійник,

аспірант, Маріупольський державний університет

В. Г. Панченко,

д. е. н., доцент, професор кафедри економіки та міжнародних економічних відносин, Маріупольський державний університет

## ЦИФРОВА НЕРІВНІСТЬ ЯК СИСТЕМНИЙ ФЕНОМЕН: МЕХАНІЗМИ ЦИФРОВОЇ СТРАТИФІКАЦІЇ І ПАСТКИ МОЖЛИВОСТЕЙ

The article is devoted to the theoretical conceptualization of digital inequality as a derivative manifestation of digital stratification and to the identification of the mechanisms through which it is reproduced under conditions of global digital transformations. The purpose of the article is to reveal digital inequality as the result of a hierarchical distribution of control over digital resources, the rules governing their use, and the channels of appropriation of digital gains, as well as to systematize the mechanisms through which these hierarchies are transformed into stable and cumulative differences in access, practices of use, and outcomes of digital inclusion.

The methodological basis of the study combines the analytical toolkit of stratification economics with the Multidimensional Inequality Framework. It is shown that stratification economics provides a causal and structural logic of explanation, allowing digital inequality to be interpreted not as a set of isolated digital divides but as a consequence of the hierarchical organization of positions related to the control of digital assets and the capacity to define the rules of digital interaction. Within this perspective, digital stratification is understood as a structural order reproduced through institutional structuring of access, socially conditioned differentiation of skills and practices, concentration of digital assets and monetization channels, algorithmic management and segmentation of digitally mediated labour, as well as mechanisms of long-term consolidation of positional advantages.

The Multidimensional Inequality Framework complements this causal logic by demonstrating how the operation of digital stratification mechanisms is translated into cumulative trajectories of inequality through differentiated conversion of resources into capabilities and through cross-domain accumulation of advantages and disadvantages (educational; labour; economic; institutional; domains of social participation and influence; domains of everyday life and wellbeing). The article substantiates that the combined effect of digital stratification mechanisms generates opportunity traps, including corrosive disadvantages, fertile functionings or fertile capabilities, and spawning privileges, which reflect different configurations of the reproduction of inequality within the digital environment.

It is concluded that the mechanisms reproducing digital inequality operate simultaneously at multiple levels and cannot be reduced to a single dimension. Stratification economics explains why hierarchies of control and appropriation are formed and stabilized, while the multidimensional framework reveals how these hierarchies are transformed into durable inequality trajectories through the interaction of life domains. The results enable digital inequality to be understood as a systemic phenomenon of contemporary socio-economic development, providing a theoretical basis for policies that aim not only to expand access but also to transform the institutional conditions that perpetuate digital hierarchies.

Статтю присвячено теоретичному обґрунтуванню цифрової нерівності як похідного прояву цифрової стратифікації та виокремленню механізмів її відтворення в умовах глобальних цифрових трансформацій. Метою статті є розкриття цифрової нерівності як результату ієрархічного розподілу контролю над цифровими ресурсами, правилами їх використання та каналами привласнення вигод, а також систематизація механізмів, через які ці ієрархії перетворюються на стійкі й кумулятивні відмінності в доступі, практиках використання та результатах цифрової включеності.

Методологічну основу дослідження становить поєднання аналітичного інструментарію стратифікаційної економіки та багатовимірної рамки аналізу нерівності. Показано, що стратифікаційна економіка забезпечує причинно-структурну логіку пояснення, оскільки дозволяє трактувати цифрову нерівність не як сукупність розрізнених цифрових розривів, а як наслідок ієрархічної організації позицій щодо контролю над цифровими активами та визначення правил цифрової взаємодії. У межах цього підходу цифрова стратифікація описується як структурний порядок, який відтворюється через інституційне структурування доступу, соціально зумовлену диференціацію навичок і практик, концентрацію цифрових активів і каналів монетизації, алгоритмічне управління та сегментацію цифрово опосередкованої праці, а також механізми довготривалого закріплення переваг.

Багатовимірна рамка аналізу нерівності доповнює причинно-структурне пояснення, дозволяючи аналітично показати, як дія механізмів цифрової стратифікації переходить у кумулятивні траєкторії нерівності через диференційовану конвертацію ресурсів у можливості та міжсферну кумуляцію переваг і обмежень (освітній; трудовий; економічний; інституційний; сфері соціальної участі та впливу; сфері повсякденної життєдіяльності і добробуту). У статті обґрунтовано, що сукупна дія механізмів цифрової стратифікації формує пастки можливостей, зокрема пастку кумулятивних обмежень, зони кумулятивних досягнень та пастку породження привілеїв, які відображають різні конфігурації відтворення нерівності у цифровому середовищі.

Зроблено висновок, що механізми відтворення цифрової нерівності діють одночасно на різних рівнях і не зводяться до одного виміру: стратифікаційна економіка пояснює формування і закріплення ієрархій контролю та привласнення вигод, тоді як багатовимірна рамка аналізу нерівності показує їх трансформацію у стійкі траєкторії нерівності через взаємодію сфер життєдіяльності. Отримані результати дозволяють трактувати цифрову нерівність як системний феномен сучасного соціально-економічного розвитку та створюють підстави для обґрунтування політик, спрямованих не лише на розширення доступу, а на зміну інституційних умов відтворення цифрових ієрархій.

*Key words: transformation, digitalization, stratification, digital economy, digital inclusion, socio-economic inequality, digital inequality, digital market, digital platform, digital competencies, digital resources, digital assets, socio-economic development, mechanism, stratification economy, interdisciplinarity human capital, employment.*

*Ключові слова: міждисциплінарність, трансформація, диджиталізація, стратифікація, цифрова економіка, цифрова нерівність, цифровий ринок, цифрова платформа, цифрові компетенції, цифрові ресурси, цифрові активи, цифрова інклюзія, соціально-економічна нерівність, соціально-економічний розвиток, механізм, стратифікаційна економіка, людський капітал, зайнятість.*

## INTRODUCTION

Methodologically, it is advisable to adopt a multidimensional framework for analysing inequality, which offers a systemic approach to understanding complex forms of socio-economic inequality [1–11]. The basis of this framework is the assumption that inequality cannot be adequately understood through the isolated analysis of individual indicators, as its manifestations arise simultaneously across several interconnected dimensions that mutually reinforce one another.

The fundamental feature of the multidimensional framework for analysing inequality is that it allows for examining inequality not only as a difference in achievements, but also as a difference in the ability to convert resources into real opportunities and outcomes. Formal access to resources does not guarantee equal opportunities, since the consequences depend on the specific social and institutional conditions that determine how different groups convert available resources into life chances. This is why this framework is

productive for analysing digital inequality in the context of global transformations, where the expansion of digital access may not be accompanied by an equivalent expansion of real opportunities and may shift inequality to more indirect dimensions. At the same time, the analytical toolkit of stratification economics establishes an explanatory logic that enables us to move from addressing these multidimensional manifestations to identifying the mechanisms of their formation and reproduction. This allows us to isolate the mechanisms of digital stratification as a set of institutional, social, economic, labor, spatial, and intergenerational processes through which the hierarchical distribution of positions in the digital environment is formed, consolidated, and reproduced over time. It is these mechanisms, the institutional structuring of access, the socially conditioned differentiation of skills and practices, the concentration of control over digital assets and channels of appropriation of benefits, the algorithmic management and segmentation of digitally mediated labor, the spatial entrenchment of unequal trajectories of inclusion, and the intergenerational reproduction of digital advantages, that explain why digital inequality is not automatically leveled with the growth of digital inclusion, but changes dominant forms and is reproduced in new configurations.

#### THE REVIEW OF THE LITERATURE

The literature on digital inequality has developed at the intersection of studies on digitalization, social inequality, and structural transformations of the global economy. Early contributions by Ukrainian scholars examined the distinction between the digital divide and digital inequality, showing that new asymmetries under technoglobalism are shaped not only by access to technologies but also by unequal opportunities to use and benefit from them [1]. This perspective was expanded through studies on the gig economy, digital labour markets, strategic alliances, platformization, innovation, and digital ecosystems in international business and trade [2–8]. A key conceptual contribution was made by S. Brennen and D. Kreiss [9], who distinguished digitization from digitalization and emphasized that digital transformation should be understood as a restructuring of socio-economic relations rather than a purely technical process.

Subsequent research increasingly focused on the mechanisms through which digitalization reproduces inequality. T. Burchardt and R. Hick [10] interpreted inequality as unequal capacity to convert resources into opportunities, while studies

by the World Bank and affiliated scholars [11; 21] showed that technological progress may coexist with persistent disparities. W. Darity [12] conceptualized inequality as a structurally reproduced intergroup phenomenon rooted in unequal access to assets, institutional power, and accumulation channels. This structural perspective is reinforced by studies on financial inclusion and digital transformation [13–16], as well as by the influential works of P. DiMaggio, E. Hargittai and co-authors [17–20], who demonstrated that inequality increasingly shifts from access gaps toward differentiated patterns of use, returns, and cumulative advantages. More recent studies also highlight the concentration of control over digital assets, infrastructures, and platforms within a limited number of actors and institutional settings [22–26]. Despite the breadth of existing research, the literature remains fragmented, underscoring the need for an integrated interpretation of digital inequality as a cumulative, structurally reproduced form of socio-economic stratification.

#### THE PURPOSE OF THE ARTICLE

The aim of the article is to reveal digital inequality as a derivative manifestation of digital stratification by identifying and systematizing the mechanisms through which the hierarchical distribution of control over digital resources, the rules of their use, and the channels of appropriation of benefits is transformed into persistent and cumulative differences in access, usage practices, and outcomes of digital inclusion.

The main material of the article. The use of stratification economics as a theoretical basis allows a rethinking of socio-economic and digital inequality as a structurally ordered and reproducible system rather than a set of random differences or a temporary consequence of unequal access. Inequality is manifested as a hierarchy of entrenched positions in which social groups have unequal opportunities to access resources, influence distribution rules, and benefit from economic activity. It is embedded in the organization of economic and social relations, where institutional rules, property regimes, employment conditions, and risk distribution mechanisms systematically reproduce advantages for some groups and constraints for others. Thus, inequality functions as an intrinsic characteristic of economic development that determines the distribution of gains from transformation. Its persistence is ensured by the transmission of hierarchical positions over time, as technological change, digitalization, and expanded access do not eliminate inequality due to unequal starting

conditions. Previously accumulated advantages are transformed into new forms of control and access in digital environments, while existing constraints are reproduced as new barriers.

Within this framework, opportunity traps serve as an analytical tool for explaining how digital stratification mechanisms generate устойчиві trajectories of inequality. The corrosive disadvantages trap reflects a configuration in which unequal access and socially selective formation of digital skills restrict participation in digitally mediated labour markets, education, and services, reinforcing vulnerabilities. Fertile functionings zones describe conditions where guaranteed access, effective usage, and favourable employment environments enable the multiplication of opportunities and the conversion of digital inclusion into broader outcomes. The spawning privileges trap captures the concentration of control over data, platforms, and algorithms, which enables the setting of access rules, market structuring, and influence over development trajectories, thereby reinforcing digital inequality as a self-reproducing order.

In order to analytically specify how the mechanisms of digital stratification are related to forms of digital inequality, it is advisable to correlate these mechanisms by levels of manifestation and dominant types of digital gaps, which allows us to systematically present the relationship between the hierarchical organization of the digital space and the empirical manifestations of digital inequality (see Table 1).

The above demonstrates that digital inequality is not an independent or isolated phenomenon, but rather a dynamic manifestation of the hierarchical organization of the socio-economic space in the context of digital transformations. The presented correlation of levels of analysis, mechanisms of digital stratification, and forms of digital inequality demonstrates that digital gaps do not exist autonomously but are interconnected and change dominant forms in the process of digital transformations. The analytical tools of stratification economics allow us to trace a natural transition from inequality of access to inequality of skills and use, and subsequently to inequality of results and positions in the digital economy, considering this

**Table 1. The relationship between digital stratification, digital inequality, and reproduction mechanisms**

| Level of analysis           | Digital stratification as a structural order                                               | Mechanism of digital stratification                          | Form of digital inequality     | Meaningful content of digital inequality                                                                                                      |
|-----------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Infrastructural</i>      | Hierarchical distribution of positions regarding full inclusion in the digital environment | Institutional differentiation of access                      | Inequality of access           | Differences in the availability and quality of connectivity, territorial and economic accessibility, and security of the digital environment  |
| <i>Functional practices</i> | Unequal positions in the use of digital resources                                          | Socially conditioned differentiation of skills and practices | Inequality of skills and use   | Differences in digital competencies, types, and productivity of technology use                                                                |
| <i>Effective</i>            | The hierarchy of appropriation of the benefits of digital development                      | Concentration of digital assets and monetization channels    | Inequality of outcomes         | Various economic, social, and professional benefits of digital inclusion                                                                      |
| <i>Labor</i>                | Unequal positions in digitally transformed work                                            | Algorithmic management and employment segmentation           | Inequality of labour positions | Different distribution of labour risks, levels of protection, and opportunities for income reproduction in digitally mediated forms of labour |
| <i>Spatial</i>              | The global hierarchy of the digital economy                                                | Unequal inclusion of regions and countries                   | Spatial digital inequality     | Asymmetries in the concentration of digital capital and access to centres of control                                                          |
| <i>Intergenerational</i>    | Reproducing digital hierarchies over time                                                  | Intergenerational consolidation of digital advantages        | Long-term digital inequality   | Transmission of unequal starting opportunities between generations                                                                            |

Source: compiled by the authors.

dynamic not as a sequence of isolated stages, but as a manifestation of a single mechanism of hierarchical distribution of opportunities and benefits. From this perspective, digital inequality does not disappear with the growth of digital inclusion, but rather transforms, acquiring more indirect and yet more stable forms.

This allows us to conceptualize digital inequality as a derivative of the empirical manifestation of digital stratification, which is formed and reproduced through the institutional structuring of access to digital resources, the socially conditioned differentiation of practices of their use, the concentration of control over digital assets and channels of appropriation of benefits, as well as spatial and intergenerational mechanisms of consolidating positional advantages. It is the combined action of these mechanisms that determines which types of digital divides are amplified, which change shape, and which are reproduced in new configurations during digital transformations.

Within the framework of the stratification economy approach, digital inequality ceases to be considered a set of separate technological or educational disparities and becomes a structurally determined result of the hierarchical distribution of access, opportunities for use, and the outcomes of digital inclusion. This enables us to transition from describing multiple digital divides to explaining the mechanisms of their sustainability and reproducibility, as well as to substantiate digital inequality as a systemic phenomenon of socio-economic development within the context of digital transformations. Within the proposed combination of stratification economics and the multidimensional framework of inequality analysis, the key analytical task is to identify the mechanisms that reproduce digital inequality, allowing us to move from describing empirical gaps to explaining the persistence and transformation of hierarchies in the socio-economic space of digital transformations.

We are not discussing individual factors or isolated causes, but rather systemically related processes through which digital inequality is formed, entrenched, and perpetuated over time. Stratification economics establishes a causal-structural logic of analysis within which inequality arises from the hierarchical distribution of control over resources, institutional rules, and channels of benefit appropriation. In the digital context, this means that inequality is not reduced to differences in access to technologies or levels of digital skills but is determined by which groups occupy privileged

positions in the ownership, management, and regulation of digital resources.

The first fundamental mechanism in the stratification economy is hierarchical control over digital resources. Digital infrastructures, platforms, data, and algorithmic systems are not simply technical means, but strategic assets, control over which determines the distribution of opportunities and benefits. Unequal access to control over these resources means that some groups can shape the rules of the game, while others are constrained to operate within predetermined boundaries. It is this control that allows for the concentration of economic benefits, determines the conditions of participation in digitally mediated markets, and influences the development trajectories of other groups and territories.

The second key mechanism is the institutional structuring of access to and use of digital resources. Access to digital technologies, data, and platforms is not universal or automatic; it is mediated by institutional rules, legal regimes, property models, and contractual forms. Through these institutional configurations, digital inequality acquires a structural character, as differences in access and opportunities are enshrined in formalized rules and procedures. As a result, even with the formal expansion of digital infrastructure, hierarchies of access that are socially and spatially differentiated are preserved and reproduced.

The third mechanism is the positional placement of groups in the digital economy. Stratification economics emphasizes that inequality is shaped not only by the amount of resources, but also by the positions groups occupy in the decision-making system, their influence over rules, and their ability to protect their interests. In a digitally transformed socio-economic landscape, these positions are determined by access to capital, education, social networks, political influence, and participation in global value chains. Digital technologies do not eliminate these differences, but often reinforce them, providing additional tools for consolidating positional advantages.

The fourth mechanism within the stratification economy is the asymmetric distribution of benefits and risks of digital transformations. The digital economy is characterized by a high level of concentration of benefits in the upper segments of the hierarchy and the transfer of risks related to instability, algorithmic control, and income loss to lower groups. Such asymmetry means that even as overall digital inclusion grows, inequality does not decrease; instead, it changes form, becoming

more indirect and, at the same time, more stable. The multidimensional framework for analysing inequality complements this causal-structural logic, allowing us to demonstrate how the actions of these mechanisms translate into cumulative trajectories of inequality through the interaction among different spheres of life. It focuses not only on the distribution of resources but also on the ability of different groups to convert them into tangible opportunities and achievements. The central mechanism within the multidimensional framework is the differentiated conversion of resources into opportunities. Formally, the same access to digital resources can lead to fundamentally different outcomes depending on individual, social, and institutional conditions. It is this inequality of conversion that explains why policies aimed exclusively at expanding access do not eliminate digital inequality but only shift it to other dimensions.

The next mechanism is the cross-sectoral cumulation of advantages and limitations. The cross-sectoral cumulation of advantages and limitations refers to the process within which inequalities formed in one sphere of life are consistently transferred and reinforced in other interconnected spheres (educational, labour, economic, institutional, sphere of social participation and influence; sphere of everyday life and well-being), forming stable trajectories of reproduction of digital inequality. Achievements or limitations in the digital sphere extend to education, employment, income, participation in public life, and the formation of social capital. Because of this, inequality takes on the character of mutually reinforcing processes, within which limitations in one area increase vulnerability in others, and achievements are transformed into sustainable trajectories of advantages.

Within the multidimensional framework, these processes are conceptualized through the mechanism of opportunity traps, which serve as an analytical generalization of the cumulative action of digital stratification mechanisms. The trap of cumulative disadvantages reflects a configuration in which the inequality of access and the socially selective formation of digital skills result in systemic restrictions on participation in digitally mediated labor markets, education, and services, thereby forming persistent trajectories of socioeconomic vulnerability.

Zones of cumulative achievements (fertile functionings, fertile capabilities) capture the opposite logic, in which the cumulative action of mechanisms of quality access, productive practices

of use, and favourable conditions of digital employment produces a multiplicative effect, expanding opportunities. It is fundamentally important that access to such configurations is socially and spatially differentiated, and therefore, the mechanism of their formation itself reproduces a hierarchical order.

The spawning privilege trap is particularly relevant to the analysis of global digital transformations. It is associated with the concentration of control over digital assets, platforms, data, and algorithmic systems, as well as the spatial consolidation of control centres in the global digital economy. The excessive concentration of power at the top of the hierarchy enables shaping access rules, structuring markets, and determining the development trajectories of others, thereby entrenching digital inequality as a self-perpetuating structural order.

## **CONCLUSIONS**

In combination, stratification economics and a multidimensional framework for analysing inequality make it possible to show that the mechanisms reproducing digital inequality operate simultaneously at different levels and cannot be reduced to a single dimension. Stratification economics explains why hierarchies emerge and become entrenched, while the multidimensional framework reveals how these hierarchies are translated into stable trajectories of inequality through interactions among different spheres of life. This integrated perspective allows digital inequality to be understood not as a temporary disparity or a technical problem of access, but as a systemic phenomenon rooted in the distribution of control, opportunities, and benefits within the socio-economic space of digital transformations. In this context, the digital economy does not eliminate stratification but modifies its forms of manifestation. Digital inequality appears as an empirical expression of digital stratification, that is, as observed differences in access, usage practices, and outcomes of digital inclusion determined by the unequal placement of groups within structures of control, regulation, and appropriation of benefits. Digital divides, therefore, reflect deeper structural hierarchies rather than self-sufficient phenomena.

The combined analytical framework of stratification economics and a multidimensional approach to inequality demonstrates that the reproduction of digital inequality is ensured by a set of interrelated mechanisms, including the institutional structuring of access to digital resources, the socially determined differentiation of digital skills and usage practices, the con-

centration of control over digital assets and channels of benefit appropriation, the algorithmic management and segmentation of digitally mediated labour, the cross-sectoral accumulation of advantages and limitations, and the inter-generational consolidation of digital advantages.

#### Література:

1. Булатова О.В., Резнікова Н.В., Іващенко О.А. Цифровий розрив чи цифрова нерівність? Нові виміри глобальних асиметрій соціально-економічного розвитку в умовах техноглобалізму. Вісник Маріупольського державного університету. Серія: Економіка. 2023. № 13 (25). С. 45—57. <https://doi.org/10.34079/2226-2822-2023-13-25-45-57>
2. Панченко В., Резнікова Н., Іващенко О., Русак Д. Гіг-економіка як середовище трансформації міжнародного ринку праці. Інвестиції: практика та досвід. 2024. № 4. С. 12—18. <https://doi.org/10.32702/2306-6814.2024.4.12>
3. Птащенко О., Резнікова Н., Іващенко О. Міжнародні стратегічні альянси в умовах цифрових трансформацій і розвитку ринку даних. Європейський науковий журнал економічних та фінансових інновацій. 2023. Т. 2, № 12. С. 214—227. <https://doi.org/10.32750/2023-0218>
4. Резнікова Н., Булатова О., Панченко В., Іващенко О. Цифрова трансформація ринку праці: платформна економіка і нові загрози нерівності в умовах техноглобалізму. Агросвіт. 2023. № 18. С. 33—42. <https://doi.org/10.32702/2306-6792.2023.18.33>
5. Резнікова Н.В., Булатова О.В., Шлапак А.В., Іващенко О.А. Інновації як драйвер цифрової трансформації світової економіки в умовах техноглобалізму. Інвестиції: практика та досвід. 2023. № 12. С. 5—12. <https://doi.org/10.32702/2306-6814.2023.12.5>
6. Резнікова Н.В., Булатова О.В., Шлапак А.В., Іващенко О.А. Платформізація цифрової економіки чи техноглобалізм цифрових платформ? Трансформаційний потенціал діджиталізованих екосистем для міжнародного бізнесу і торгівлі. Ефективна економіка. 2023. № 6. <https://doi.org/10.32702/2307-2105.2023.6.1>
7. Резнікова Н.В., Чугаєв О.А., Птащенко О.В., Іващенко О.А. Вплив особливостей розвитку покоління Y на становлення сучасного міжнародного ринку праці. БІЗНЕС-ІНФОРМ. 2023. № 1. С. 89—94. <https://doi.org/10.32983/2222-4459-2023-1-86-94>
8. Резнікова Н.В., Шлапак А.В., Іващенко О.А. Від промислових екосистем до екосистем цифрової економіки: нові бізнес-моделі і моделі конкуренції в умовах діджиталізації міжнародної торгівлі товарами і послугами. Вісник Хмельницького національного університету. Серія: економічні науки. 2023. № 2 (316). С. 332—340. <https://doi.org/10.31891/2307-5740-2023-316-2-52>
9. Brennen S., Kreiss D. Digitalization and digitization. 2014. Available at: <http://culturereadigitally.org/2014/09/digitalization-and-digitization/>
10. Burchardt T., Hick R. Inequality, Advantage and the Capability Approach. Journal of Human Development and Capabilities. 2018. Vol. 19, no. 1. P. 38—52.
11. Clarke G., Xu L.C., Zou H. Finance and Income Inequality. Test of Alternative Theories. The World Bank. 2003. Available at: <https://documents1.worldbank.org/curated/en/892521468762914086/pdf/multi0page.pdf>
12. Darity W. Stratification economics: The role of intergroup inequality. Journal of Economics and Finance. 2005. Vol. 29. P. 144—153.
13. Desyatnyuk O., Krysovatty A., Ptashchenko O., Kyrylenko O. Enhancing financial inclusivity and accessibility of financial services through digital technologies. AD ALTA: Journal of Interdisciplinary Research. 2024. P. 65—69. Available at: [https://www.magnanimitas.cz/ADALTA/140142/papers/A\\_13.pdf](https://www.magnanimitas.cz/ADALTA/140142/papers/A_13.pdf)
14. Desyatnyuk O., Krysovatty A., Ptashchenko O., Kyrylenko O. Financial Security in the Conditions of Globalization: Strategies and Mechanisms for the Protection of National Interests. Economics Affairs. 2024. Vol. 69, Special Issue. P. 261—268. Available at: <https://ndpublisher.in/admin/issues/EAv69n1z1.pdf>
15. Desyatnyuk O., Krysovatty A., Ptashchenko O., Kyrylenko O. Innovative Approaches to Transformation of Business Processes in Digital Economy: Ensuring Financial Security and Inclusion. Salud, Ciencia Y Tecnologia — Serie De Conferencias. 2025. Vol. 4. Article ID 1498. Available at: <https://conferencias.ageditor.ar/index.php/sctconf/article/view/1498>
16. Desyatnyuk O., Krysovatty A., Ptashchenko O., Kyrylenko O., Kurtsev O. Innovative Digital Economy Strategies for Enhancing Financial Security in Logistics Optimisation. Journal of Information Systems Engineering and Management. 2025. Vol. 10 (2s). P. 397—407. DOI: <https://doi.org/10.52783/jisem.v10i2s.-328.11>
17. DiMaggio P., Garip F. Network effects and social inequality. Annual Review of Sociology. 2012. Vol. 38 (1). P. 93—118. DOI: 10.1146/annurev.soc.012809.102545

18. DiMaggio P., Hargittai E. From the 'digital divide' to 'digital inequality': Studying Internet use as penetration increases. Working paper, Princeton University, Princeton, NJ. 2001. Available at: <https://www.princeton.edu/~artspol/workpap15.html>

19. DiMaggio P., Hargittai E., Celeste C., Shafer S. From unequal access to differentiated use: A literature review and agenda for research on digital inequality. In: Neckerman K. M. (Ed.) *Social Inequality*. New York, NY: Russell Sage Foundation, 2004. P. 355—400.

20. DiMaggio P., Hargittai E., Neuman W. R., Robinson J. P. Social implications of the Internet. *Annual Review of Sociology*. 2001. Vol. 27. P. 307—336. DOI: 10.1146/annurev.soc.27.1.307

21. Narayan A., Saavedra-Chanduvi J., Tiwari S. *Shared Prosperity: Links to Growth, Inequality and Inequality of Opportunity*. World Bank Policy Research Working Paper 6649. 2013. World Bank: Washington D.C.

22. Obeng-Odoom F. *The commons in an age of uncertainty: Decolonizing nature, economy, and society*. Toronto: University of Toronto Press, 2020.

23. Reznikova N., Ptashchenko O., Chugayev O., Ivashchenko O. Y-Reality as a shift from "Great Moderation" to "Global Chaos": Assessment of global macroeconomic and crisis processes through the prism of generational dialogue and development issues. *Журнал стратегічних економічних досліджень*. 2022. № 6 (11). P. 9—20. DOI: <https://doi.org/10.30857/2786-5398.2022.6.6.14>

24. Rip A. Introduction of New Technology: Making Use of Recent Insights from Sociology and Economics of Technology. *Technology Analysis & Strategic Management*. 1995. Vol. 7 (4). P. 417—431.

25. Shlapak A., Yatsenko O., Ivashchenko O., Zarytska N., Osadchuk V. Digital transformation of international trade in the context of global competition: technological innovations and investment priorities. *Financial and Credit Activity: Problems of Theory and Practice*. 2023. Vol. 6 (53). P. 334—347.

26. Wan H., Chen J. Theoretical Connotation and Quantitative Measurement of Common Prosperity. *China Finance and Economic Review*. 2022. Vol. 11, no. 2. P. 23—45. <https://doi.org/10.1515/cfer-2022-0008>

#### References:

1. Bulatova, O. V., Reznikova, N. V. and Ivashchenko, O. A. (2023), "Digital divide or digital inequality? New dimensions of global asymmetries of socio-economic development in the conditions

of technoglobalism", *Visnyk Mariupolskoho derzhavnoho universytetu. Seriya: Ekonomika*, vol. 13, no. 25, pp. 45—57. <https://doi.org/10.34079/2226-2822-2023-13-25-45-57>.

2. Panchenko, V., Reznikova, N., Ivashchenko, O. and Rusak, D. (2024), "Gig economy as an environment for transformation of the international labor market", *Investytsii: praktyka ta dosvid*, vol. 4, pp. 12—18. <https://doi.org/10.32702/2306-6814.2024.4.12>.

3. Ptashchenko, O., Reznikova, N. and Ivashchenko, O. (2023), "International strategic alliances in the context of digital transformation and data market development", *Yevropeyskyi naukovyi zhurnal ekonomichnykh ta finansovykh innovatsii*, vol. 2, no. 12, pp. 214—227. <https://doi.org/10.32750/2023-0218>.

4. Reznikova, N., Bulatova, O., Panchenko, V. and Ivashchenko, O. (2023), "Digital transformation of the labor market: the platform economy and new threats of inequality in the conditions of technoglobalism", *Ahrosvit*, vol. 18, pp. 33—42. <https://doi.org/10.32702/2306-6792.2023.18.33>.

5. Reznikova, N. V., Bulatova, O. V., Shlapak, A. V. and Ivashchenko, O. A. (2023), "Innovation as a driver of digital transformation of the global economy in the conditions of technoglobalism: the influence of new business models on the development of international trade in goods and services", *Investytsii: praktyka ta dosvid*, vol. 12, pp. 5—12. <https://doi.org/10.32702/2306-6814.2023.12.5>.

6. Reznikova, N. V., Bulatova, O. V., Shlapak, A. V. and Ivashchenko, O. A. (2023), "Platformization of the digital economy or technoglobalism of digital platforms? Transformation potential of digitalized markets for international business and trade", *Efektivna ekonomika*, vol. 6. <https://doi.org/10.32702/2307-2105.2023.6.1>.

7. Reznikova, N. V., Chuhaiev, O. A., Ptashchenko, O. V., Ivashchenko, O. A. (2023), "Vplyv osoblyvosti rozvytku pokolinnia Y na stanovlennia suchasnoho mizhnarodnoho rynku pratsi", *Biznes-Inform*, vol. 1, pp. 89—94. <https://doi.org/10.32983/2222-4459-2023-1-86-94> (Accessed 5 January 2026).

8. Reznikova, N. V., Shlapak, A. V. and Ivashchenko, O. A. (2023), "From industrial ecosystems to digital economy ecosystems: new business models and models of competition in the conditions of digitalization of international trade in goods and services", *Visnyk Khmelnytskoho natsionalnoho universytetu. Seriya: ekonomichni nauky*, vol. 2 (316), pp. 332—340. <https://doi.org/10.31891/2307-5740-2023-316-2-52>.

9. Brennen, S. and Kreiss, D. (2014), "Digitalization and digitization", available at: <http://culturedigitally.org/2014/09/digitalization-and-digitization/> (Accessed 5 March 2026).

10. Burchardt, T. and Hick, R. (2018), "Inequality, Advantage and the Capability Approach", *Journal of Human Development and Capabilities*. <https://doi.org/10.1080/19452829.2017.1395396>.

11. Clarke, G., Xu, L. C. and Zou, H. (2003), "Finance and Income Inequality. Test of Alternative Theories", The World Bank, available at: <https://documents1.worldbank.org/curated/en/892521468762914086/pdf/multi0page.pdf> (Accessed 4 April 2025).

12. Darity, W. (2005), "Stratification economics: The role of intergroup inequality", *Journal of Economics and Finance*, vol. 29, pp. 144—153. <https://doi.org/10.1007/BF02761550> (Accessed 4 March 2025).

13. Desyatnyuk, O., Krysovaty, A., Pta-shchenko, O. and Kyrylenko, O. (2024), "Enhancing financial inclusivity and accessibility of financial services through digital technologies", *AD ALTA: Journal of Interdisciplinary Research*, pp. 65—69, available at: [https://www.magnanimitas.cz/ADALTA/140142/papers/A\\_13.pdf](https://www.magnanimitas.cz/ADALTA/140142/papers/A_13.pdf) (Accessed 5 January 2026).

14. Desyatnyuk, O., Krysovaty, A., Pta-shchenko, O. and Kyrylenko, O. (2024), "Financial Security in the Conditions of Globalization: Strategies and Mechanisms for the Protection of National Interests", *Economics Affairs*, vol. 69, Special Issue, pp. 261—268, available at: <https://ndpublisher.in/admin/issues/EAv69n1z1.pdf> (Accessed 4 March 2026).

15. Desyatnyuk, O., Krysovaty, A., Pta-shchenko, O. and Kyrylenko, O. (2025), "Innovative Approaches to Transformation of Business Processes in Digital Economy: Ensuring Financial Security and Inclusion", *Salud, Ciencia Y Tecnologia — Serie De Conferencias*, vol. 4, Article ID 1498, available at: <https://conferencias.ageditor.ar/index.php/sctconf/article/view/1498> (Accessed 4 January 2026).

16. Desyatnyuk, O., Krysovaty, A., Pta-shchenko, O., Kyrylenko, O. and Kurtsev, O. (2025), "Innovative Digital Economy Strategies for Enhancing Financial Security in Logistics Optimisation", *Journal of Information Systems Engineering and Management*, vol. 10 (2s), pp. 397—407. <https://doi.org/10.52783/jisem.v10i2s.328.11>.

17. DiMaggio, P. and Garip, F. (2012), "Network effects and social inequality", *Annual Review of Sociology*, vol. 38 (1), pp. 93—118. <https://doi.org/10.1146/annurev.soc.012809.102545>.

18. DiMaggio, P. and Hargittai, E. (2001), "From the 'digital divide' to 'digital inequality': Studying Internet use as penetration increases", Working paper, Princeton University, Princeton, NJ, available at: <https://www.princeton.edu/~artspol/workpap15.html> (Accessed 5 March 2026).

19. DiMaggio, P., Hargittai, E., Celeste, C. and Shafer, S. (2004), "From unequal access to differentiated use: A literature review and agenda for research on digital inequality", *Social Inequality*, Russell Sage Foundation, New York, USA, pp. 355—400.

20. DiMaggio, P., Hargittai, E., Neuman, W. R. and Robinson, J. P. (2001), "Social implications of the Internet", *Annual Review of Sociology*, vol. 27, pp. 307—336. <https://doi.org/10.1146/annurev.-soc.27.1.307>.

21. Narayan, A., Saavedra-Chanduvi, J. and Tiwari, S. (2013), "Shared Prosperity: Links to Growth, Inequality and Inequality of Opportunity", World Bank Policy Research Working Paper 6649, Washington D.C, USA.

22. Obeng-Odoom, F. (2020), "The commons in an age of uncertainty: Decolonizing nature, economy, and society", University of Toronto Press, Toronto, Canada.

23. Reznikova, N., Pta-shchenko, O., Chugayev, O. and Ivashchenko, O. (2022), "Y-Reality as a shift from 'Great Moderation' to 'Global Chaos': Assessment of global macroeconomic and crisis processes through the prism of generational dialogue and development issues", *Journal of Strategic Economic Studies*, vol. 6 (11), pp. 9—20. <https://doi.org/10.30857/2786-5398.2022.6.6.14>.

24. Rip, A. (1995), "Introduction of New Technology: Making Use of Recent Insights from Sociology and Economics of Technology", *Technology Analysis & Strategic Management*, vol. 7 (4), pp. 417—431. <https://doi.org/10.1080/09537329508524223>.

25. Shlapak, A., Yatsenko, O., Ivashchenko, O., Zarytska, N. and Osadchuk, V. (2023), "Digital transformation of international trade in the context of global competition: technological innovations and investment priorities", *Financial and Credit Activity: Problems of Theory and Practice*, vol. 6, no. 53, pp. 334—347. <https://doi.org/10.055643/fcaptp.6.53.2023.4241>.

26. Wan, H. and Chen, J. (2022), "Theoretical Connotation and Quantitative Measurement of Common Prosperity", *China Finance and Economic Review*, vol. 11, no. 2, pp. 23—45. <https://doi.org/10.1515/cfer-2022-0008>.

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