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ВІД ТЕОРІЇ ДО ПРАКТИКИ

# ТЕЗИ ДОПОВІДЕЙ

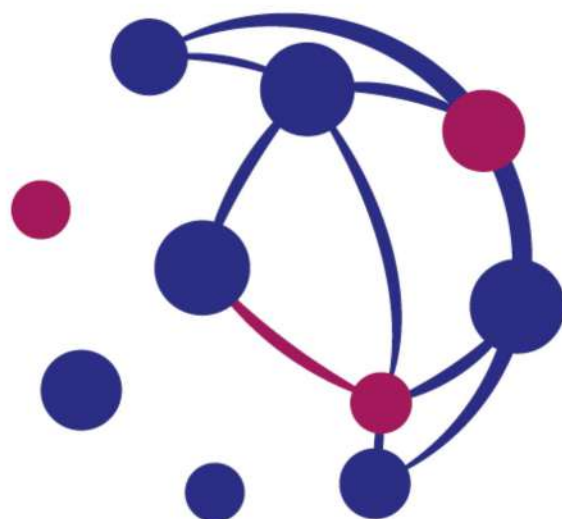


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FROM THEORY TO PRACTICE**

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Матеріали I Міжнародної науково-практичної конференції «Сучасні інформаційні технології: від теорії до практики». Видання містить аналіз та результати досліджень, що стосуються актуальних питань інформаційних технологій в галузях освіти, науки та промисловості. Тези доповідей надано в авторській редакції. За фактичний матеріал і його інтерпретацію відповідають автори.

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# **COMPARATIVE ANALYSIS OF TELECOMMUNICATIONS AND INFORMATION SERVICES EXPORTS AS A FACTOR OF SUSTAINABLE INDUSTRIAL DEVELOPMENT IN UKRAINE AND THE EU**

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*The dynamics and structural features of telecommunications, computer, and information services exports in Ukraine and the EU over the period 2010–2024 are analyzed in the context of the digital economy. The level of integration is assessed using the share of exports in GDP, and the statistical significance of differences is tested using the Student's *t*-test. The results indicate comparable levels of development; however, differences in export structure are evident: the EU shows a more diversified structure, while Ukraine shows a concentration in computer services.*

*Keywords: computer services, digital economy, service exports, telecommunications services.*

Digitalization of the economy in the modern world is a key driver of international trade transformation and an important prerequisite for sustainable industrial development. It creates opportunities for the provision of services on a global scale without the need for the provider's physical presence, facilitates the emergence of new sources of income, and enhances the competitiveness of national economies.

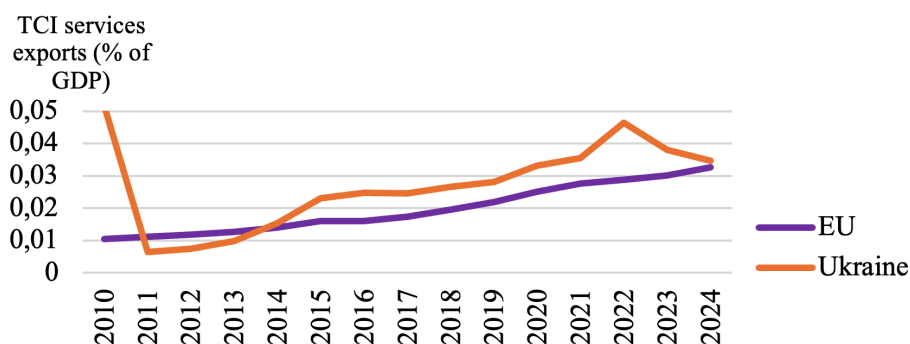
In this context, the export of telecommunications, computer, and information services becomes particularly significant as one of the most dynamic segments of the digital economy. Its development reflects a country's level of integration into global digital markets and its ability to effectively utilize digital technologies to drive economic growth and structural modernization of industry.

At the same time, analyzing the absolute volumes of such service

exports does not always allow for an objective assessment of their role in a national economy, as high values may be обусловед by the overall scale of the economy. Therefore, it is more appropriate to use a relative indicator—namely, the share of telecommunications, computer, and information services exports in gross domestic product (GDP). This indicator ensures a more accurate comparison between countries of different economic sizes. It enables the assessment of the effectiveness of integrating these services into the economic system in the context of sustainable development.

The study uses statistical data from UNCTADstat for the period 2010–2024 (the latest available reporting period), including indicators of exports of telecommunications, computer, and information services, and gross domestic product for Ukraine and European Union countries [1–2], as well as WTO data on digital services exports [3].

The analysis of the dynamics of the relative export of telecommunications, computer, and information services over the period 2010–2024 indicates a gradual increase in this indicator in both EU countries and Ukraine (fig. 1).



*Figure 1. Comparative dynamics of telecommunications, computer, and information services exports as a percentage of GDP in Ukraine and the EU (2010–2024), based on [1–2]*

For the EU, a relatively stable trajectory is observed, with moderate but steady growth throughout the period, reflecting the gradual strengthening of digital services within the economic structure. In Ukraine, the dynamics are more volatile: after a sharp initial decline, a rapid recovery is followed by sustained growth, particularly in 2015–2022. In 2022, the maximum value is reached, followed by a slight decline in 2023–2024; however, the overall level

remains above the initial values. Overall, Ukraine's average level of relative exports is somewhat higher than that of EU countries. Still, visual analysis does not allow a definitive assessment of the statistical significance of this difference. Therefore, a Student's t-test is applied to test the hypothesis of differences in the means between the two samples.

The calculations show that the average relative export value of telecommunications, computer, and information services in EU countries over the period 2010–2024 is approximately 1.97 % of GDP, whereas the corresponding average for Ukraine is 2.7 %; the standard deviations are 0.007 % and 0.013 %, respectively. The application of Student's t-test for independent samples yields a t-value of approximately 1.92 ( $df \approx 28$ ), which does not exceed the critical value at the 0.05 significance level. Accordingly,  $p\text{-value} > 0.05$ , indicating that the difference between Ukraine and the EU is not statistically significant. These results confirm that the average levels of relative exports of telecommunications, computer, and information services in Ukraine and EU countries are comparable, with no statistically significant differences. To further interpret the findings, it is appropriate to examine the structural characteristics of telecommunications and information services within total digital services exports. According to WTO data on digital services exports [3], in EU countries, this segment accounts for a relatively small share, with telecommunications services representing about 1.8% and information services about 2.0 % in the structure of the respective services, which is significantly lower than other components of digital exports, such as computer and business services. In Ukraine, the share of telecommunications and information services is even lower: telecommunications services account for approximately 1.0 %, while information services represent about 0.7 %. This indicates a limited role of these segments in the structure of digital exports and a relatively low level of their development compared to other components. Thus, despite the overall comparability of the relative export of telecommunications, computer, and information services in GDP, the structural analysis reveals differences in the internal composition of this sector between Ukraine and the EU. This points to different

models of digital economy development: a more diversified model in the EU and a more concentrated one in Ukraine, focused on computer services.

The results indicate that the development of telecommunications and information services in Ukraine is broadly comparable to that of EU countries in terms of relative export indicators; however, it differs significantly in terms of structural balance. The concentration of exports in specific digital service segments, combined with a relatively low share of telecommunications and information services, suggests an incomplete structural transformation of the digital economy.

Accordingly, Ukraine's digital sector policy should focus not only on supporting IT service exports but also on diversifying the digital economy by developing telecommunications and information infrastructure, improving investment attractiveness, and expanding its role in value creation. It is also important to strengthen integration into European digital markets through regulatory harmonization, infrastructure development, and support for innovation in digital communications. These measures could contribute to a more balanced digital economy and enhance long-term economic resilience and industrial competitiveness.

### References

1. United Nations Conference on Trade and Development. (n.d.). *Telecommunications, computer and information services (current US\$)*. UNCTADstat. Retrieved from <https://unctadstat.unctad.org/datacentre/dataviewer/US.TradeServCatQuarterlyAnnualized>
2. United Nations Conference on Trade and Development. (n.d.). *GDP by expenditure and economic activity (current and constant prices)*. UNCTADstat. Retrieved from <https://unctadstat.unctad.org/datacentre/dataviewer/US.GDPComponent>
- World Trade Organization. (n.d.). *Digitally delivered services trade dataset*. Retrieved from [https://www.wto.org/english/res\\_e/statis\\_e/gstdh\\_digital\\_services\\_e.htm](https://www.wto.org/english/res_e/statis_e/gstdh_digital_services_e.htm)