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AUTONOMY (OR DEPENDENCE) OF THE EU ECONOMY ON CRITICAL SERVICES IN THE CONTEXT OF THE NEW EU INDUSTRIAL POLICY AND ECONOMIC SECURITY

Joanna Stefaniak

University of Gdańsk
Armii Krajowej 119/121, 81-824 Sopot, Poland

Rasa Daugėlienė

Kaunas University of Technology,
A. Mickevičiaus st. 37-1100, LT-44244 Kaunas, Lithuania

Adam A. Ambroziak

SGH Warsaw School of Economics
Niepodległości 162, 02-554 Warsaw, Poland

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Abstract. *The paper addresses the following scientific problem: the autonomy (or dependence) of the EU industry on critical services in the context of reindustrialisation and economic security. Thus, this paper aims to capture the competitive position of critical services from both EU and non-EU origins within the European Single Market, in light of the New EU Industrial Policy and economic security. To this end we analysed 1) changes in rate of provision of critical services in the EU broken down by origin of providers; 2) a share of these services in total international service provision in the EU broken down by origin of providers; 3) competitive position of critical services and its changes in the EU market regarding the origin of the services providers; and finally, 4) competitive and trade positions of EU and non-EU critical services providers. Data on trade in services were obtained from the Eurostat International Trade in Services Database and are presented according to the Eurostat Balance of Payments Services Classification (EBOPS 2010). In order to identify the position of the EU and non-EU critical service providers to the European Union's companies, we employ two specialisation measures commonly used in the trade literature - the Revealed Symmetric Comparative Advantage (RSCA) and the Trade Balance Index (TBI). The combination of the two indicators was visualised using the matrix proposed by Widodo adjusted to the aim of this research. In the first part of the paper, a literature review is presented, followed by a statistical analysis of trade and competitive positions of EU and non-EU critical services providers. The discussion, which is rather limited due to the small number of publications dealing with the problem raised, is presented. Finally, the paper ends with conclusions, policy recommendations and directions of further research. Our research allowed to state that the competitive position of critical services of EU providers is higher within the European Single Market in comparison to non-EU providers. This leads au to a conclusion that the EU maintains some level of autonomy in critical services and strengthened it over the last fifteen years (2010-2024).*

Keywords: *EU Industrial Policy; servitization; critical services; reindustrialisation; ICT, financial and transport services; economic security.*

Raktiniai žodžiai: *ES pramonės politika; servitizacija; kritinės paslaugos; reindustrializacija; IKT, finansinės ir transporto paslaugos; ekonominis saugumas.*

Introduction

In recent years, the world has witnessed significant changes in geopolitics, brought about by the COVID-19 pandemic, Brexit and the war in Ukraine. These, as becoming increasingly clear, are leading to a strengthening of the role of China and an attempt by the United States to maintain its position. The European Union is not indifferent to these developments, especially as they affect its economic, social and political position, as well as its internal economic transformation. In fact, it has become clear that the EU's open trade and investment policy, with its wide acceptance of outsourcing and offshoring, and the consequent dependence on subcontractors and manufacturers from around the world, has led to a shaky economic security for this economic entity.

The above factors have disrupted supply and production chains and indicated a strong need to pay more attention to economic security, including ensuring the resilience of member economies under threatening conditions, and ensuring so-called strategic autonomy. The discussion on it started more than a decade ago with defence issues (Ochman & Biziewski, 2020), but nowadays it is increasingly referred to as economic security in the broadest sense, including technological, digital or social dimensions (Darnis, 2021). In simple terms, this would boil down to ensuring the production of key products in the EU. In the face of growing geopolitical tensions, the possibility of disruptions in supply chains and increasing dependence on third countries (especially China), there is a need for some policies to ensure economic security. One policy that comprehensively affects the functioning of economies and can contribute to strengthening economic security is industrial policy concerning both manufacturing and provision of services

In June 2023, the European Commission (2023a) issued the "European Economic Security Strategy" (EESS), which presents industrial policy as a tool for ensuring economic security. A number of studies have already appeared on pointing to the need for sovereignty in the EU industrial policy (Crespi et al., 2021; Center for Geopolitics, 2024). As industrial policy concerns not only goods, it is worth noting that some services are essential for industry transformation, ensuring technological autonomy (understood as independence from external suppliers), and are also crucial for maintaining resilience to external and internal disruptions (Ambroziak, 2017). These services – critical services are named as ICT, financial and transport services. The services market has so far been subject to gradual, though not complete, liberalization within the European Single Market (Stefaniak & Ambroziak, 2017, Stefaniak 2024), which has continued to constrain their free trade within the EU, while strengthening the position of players in selected service categories (Stefaniak 2019, Stefaniak & Ambroziak, 2021; Stefaniak & Ambroziak, 2022).

In the aforementioned EESS, telecommunication and digital technology (ICT) systems, along with financial and transportation infrastructure, are listed as critical infrastructure1. So, services that relate to these systems (ICT, financial and transport services) are considered as critical as well. The ICT sector, as an element of economic security enforcement, includes, in addition to traditional IT services, services such as data and cloud computing, artificial intelligence (AI), and cybersecurity. Transportation services are crucial for the global supply chains, while financial infrastructure and services are crucial for the creation of a stable environment for business activities of all economic entities, as well as the whole state. All three types of services are also considered in the Industrial Strategy (2020) as key services for the competitiveness of the European industry. The EU, as a global player, should balance economic openness with the protection of strategic security, and avoid excessive dependence on technological solutions and services from outside the EU. It appears that there is currently a gap in research on the relationship between trade in critical services and the ongoing policy of reindustrialisation (within the New EU Industrial Policy) aimed at ensuring the EU's economic security.

The paper addresses the following scientific problem: the autonomy (or dependence) of the EU industry on critical services in the context of reindustrialisation and economic security. Thus, this paper

[1] Other critical infrastructure includes: pipelines, undersea cables, power generation, electronic communication networks, health infrastructure. European Commission (2023)

aims to capture the competitive position of critical services from both EU and non-EU origins within the European Single Market, in light of the New EU Industrial Policy and economic security.

To this end we analysed 1) changes in rate of provision of critical services in the EU broken down by origin of providers; 2) a share of these services in total international service provision in the EU broken down by origin of providers; 3) competitive position of critical services and its changes in the EU market regarding the origin of the services providers; and finally, 4) competitive and trade positions of EU and non-EU critical services providers.

In the first part of the paper, a literature review is presented, followed by a statistical analysis of trade and competitive positions of EU and non-EU critical services providers. The discussion, which is rather limited due to the small number of publications dealing with the problem raised, is presented. Finally, the paper ends with conclusions, policy recommendations and directions of further research.

Literature review

Industrial policy can be defined very differently, taking into account many aspects, both in terms of its objectives, the instruments used and its addressees. From the point of view of objectives, it has traditionally been used to promote industrial growth (OECD, 1975), to improve growth and competitiveness (Krugman & Obstfeld, 1991), and to increase productivity (Beath, 2002). Today, researchers focus on much broader objectives to influence a country's performance towards a desired goal (Pitelis, 2006), and to improve the business environment or change the structure of economic activities, towards sectors, technologies or tasks that offer better prospects for economic growth or social welfare (Saggi & Pack, 2006; Ambroziak, 2017; Aiginger & Rodrik, 2020). Originally, the target of any intervention in the market was supposed to be industrial firms, which were basically manufacturing industries. However, as early as the 1980s, the role of services began to be emphasised, although not always so explicitly, suggesting that industrial policy refers to those policies that are intended to affect manufacturing or service industries in some way (Graham, 1986). It is now accepted that a more modern version of industrial policy emphasises productive services in addition to manufacturing (Aiginger & Rodrik, 2020). There is no doubts that the global economy is generally moving toward a greater consideration of services in the economy, which leads to so-called servitization.

Servitization can be understood as the offering of a more complete customer-oriented market package of a combination of goods, services, support, self-service, and knowledge. It is worth noting that as early as 1988, it was predicted that this movement would further blur the line between traditional manufacturers and service providers and change some of the relationships and competitive dynamics in which businesses operate (Vandermerwe and Rada, 1988). In the ensuing 2000s and 2010s, people began to point to a shift away from the economics of ownership provided by the surplus production of products to the economics of access to services, which provide the same benefits without the need to purchase products. Thus, the idea was to integrate products and services that provide utility value to the customer (Baines et. al. 2007). More recently, servitization can also be seen as a process of creating value by adding services to products (Baines et. al. 2009). In this way, servitization extends a manufacturer's reach ever closer to the customer and his basic needs (Schmenner 2008). As a result, manufacturers tend to deliver integrated products and services using customer-centric strategies to provide customers with "desired outcomes" (Lightfoot et. al. 2013). As a result, it is now difficult not to consider the service sector alongside manufacturing when defining industrial policy (Ambroziak, 2020; Rodrik, 2022; Juhász et. al., 2024).

The current approach to industrial policy, including within the EU, focuses not only on improving the competitiveness of the economy and the companies operating in it, but also on ensuring economic security (Guerrieri & Padoan, 2024). Economic security is most often analysed concerning national security, and society's resilience to crises is highlighted through capabilities such as the ability to overcome provocation, manage threats, and respond quickly to consequences. The focus in the economic security definition is

on trades and economic factors which are related to i.a. trade (Sotskova & Kalashnikova, 2021). International trade as a way for development of economies, but in some cases, as a threat as some economies are becoming more dependent on foreign suppliers and are loosing their own autonomy (independence) and weakening their economic security. According to Bown (2024), it involves a country getting the goods and services it needs when it needs them, at a reasonable price, with an acknowledgement that its economy is open and has some interdependence with the outside world. Murphy and Topel (2013) define economic security as the set of public policies that protect the safety or welfare of a nation's citizens from substantial threats. Modern concerns over economic security, however, involve recognition that others, typically policymakers abroad, may be working against a country's effort to achieve its objectives.

Data and methods

The services under consideration are telecommunications, computer and information services, transportation services and financial services. Data on trade in services were obtained from the Eurostat *International Trade in Services Database* and are presented according to the Eurostat Balance of Payments Services Classification (EBOPS 2010). The period for analysis covers the years 2010 to 2024 (up to the latest available data). The EU is defined as its current composition of 27 member states and hence excludes the UK, as our intention is to draw conclusions relevant to the EU as it currently stands.

In order to identify the position of the EU and non-EU critical service providers to the European Union's companies we employ two specialization measures commonly used in the trade literature - the Revealed Symmetric Comparative Advantage (RSCA) and the Trade Balance Index (TBI).

In the first stage, we used the RSCA index to identify export specialization by indicating a competitive position, and its changes, in the export of services to the Internal Market whether by EU or non-EU suppliers. In this study, a version of the RSCA index is used, as proposed by Laursen (2015), although with some changes regarding the specific interpretation of export flows:

$$RSCA_j^i = \frac{\left(RCA_j^i - 1\right)}{\left(RCA_j^i + 1\right)} \tag{1}$$

where:

$$RCA_j^i = \frac{\left(x_j^i / \Sigma x_j^i\right)}{\left(x_j^{EU} / \Sigma x_j^{EU}\right)} \tag{2}$$

x_j^i – value of service *j* offered to the EU entities provided by supplier *i* (from the EU or non-EU),
x_j^{EU} – value of service *j* offered to the EU entities provided by suppliers from the EU and non-EU.

In the case of this study, service suppliers are divided into EU and non-EU (extra-EU) suppliers. The reference group refers to services provided to the EU entities by both the EU and non-EU suppliers.

The RSCA indicator takes values in the range (-1; 1). Positive values indicate the existence of a comparative advantage as a given type of service provided to EU entities has a higher share in the total services offered by specific group of suppliers (EU or non-EU) than it is in the case of all services provided to EU entities by all suppliers regardless their original location (EU and non-EU). Negative values, in contrast, reflect a lower importance of a particular type of service provided to the EU entities by the EU or non-EU suppliers than it is in the reference group. That indicates the absence of the comparative advantage in this particular sector. To identify tendencies in RSCA indices for chosen services, the change in RSCA indices were calculated separately for the EU and non-EU service provided to the EU entities. We used the formula:

$$\Delta RSCA = RSCA_{2024} - RSCA_{2010} \tag{3}$$

In the second stage of the analysis, the TBI index (3) has been proposed as a tool for determining a trade position in a given sector for both of the groups EU and non-EU providers. For this indicator we have used the following formula:

$$TBI_j = \left(x_j - m_j\right) \Big/ \left(x_j + m_j\right) \quad (4)$$

where:

for EU service providers:
x_j – value of intra-EU exports of service j
m_j – value of extra-EU import of service j

and for non-EU service providers:
x_j – value of extra-EU import of service j
m_j – value of extra-EU export of service j

The value of this indicator ranges from -1 to +1, with positive values indicating a preference for exports over imports (net exporter) and negative values indicating a preference for imports (net importer). Thus, this indicator reflects the importance of export and import flows in a given category of goods or services in a country's international trade (or in this case – in reference to the EU or non-EU markets). The TBI is widely used in the study of the trade position and competitiveness of individual countries, as it allows such an analysis not only in static but also in dynamic terms (Hinloopen, Marrewijk, 2001, Mikic, Gilbert, 2007, Laursen, 2015), taking into account the processes of structural transformation and/or narrowing of cooperation as a result of integration processes (Ferto, Hubbard 2003).

In order to comprehensively assess the competitive position of countries in trade in services in the Internal Market, we took advantage of the possibility to simultaneously measure both the trade position and the comparative advantage individually for EU and non-EU providers of these services. By combining the TBI and RSCA indicators, it is possible not only to determine whether a country is specialized in the export of certain goods and services, but also to assess the degree of comparative advantage relative to competitors (Volrath 1991). The combination of the two indicators can be visualised using the matrix proposed by Widodo (2009) (see Diagram 1) adjusted to the aim of this particular research:

Diagram 1. *Widodo Matrix*

TBI > 0 RSCA < 0	TBI > 0 RSCA > 0
TBI < 0 RSCA < 0	TBI < 0 RSCA > 0

Source: Adapted from Widodo (2009).

Empirical evidence suggests that consistently high RSCA associated with a positive trade balance (TBI > 0) is indicating durable export specialization. In contrast, low RSCA values and trade deficits typically signal weak competitiveness and reliance on foreign supply.

Statistical analysis and results

Global trade in services has grown steadily over the past few decades. In the case of the EU, the value of services offered by both EU and non-EU providers has increased significantly (by approximately 2.8 times), respectively from EUR 535.5 billion in 2010 to EUR 1,503.3 billion in 2024 for EU providers, and from EUR 487.1 billion to EUR 1,362 billion in 2023 for non-EU providers. However, the rate of increase in the value varied between categories of services, with the highest growth for intra-EU trade in ICT (287%) and financial services (216%), followed by extra-EU import of financial (177%) and ICT services (166%) (Figure 1).

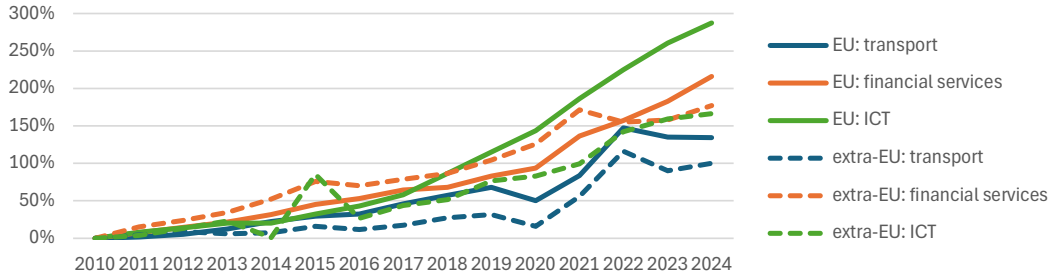

Figure 1. *Growth rate of provision of critical (ICT, financial and transport) services in the EU broken down by origin of providers (2010-2024).*

Source: Own elaboration

The share of the selected service categories in the total value of services offered in the single European market has varied over time. Notably, the highest shares, especially regarding the intra-EU trade, were observed in 2021 and 2022, most likely due to the impact of COVID-19 lockdowns, which disproportionately reduced the volume of other service categories. Finally, in 2024, transport services provided by EU companies accounted for the largest share of the value of services offered for sale in the EU: 9.1% (compared to 10.9% in 2010), followed by ICT services at 8% (up from 5.8% in 2010) and financial services at 4.6% (up from 4.1% in 2010). In contrast, non-EU service providers had significantly smaller shares of the single European market: 7.8% for transport services (down from 10.9% in 2010), 4.2% for ICT services (down from 4,4%), and 3.1% for financial services (3,1% in 2010, while 4,3% in 2021) (see Figure 2).

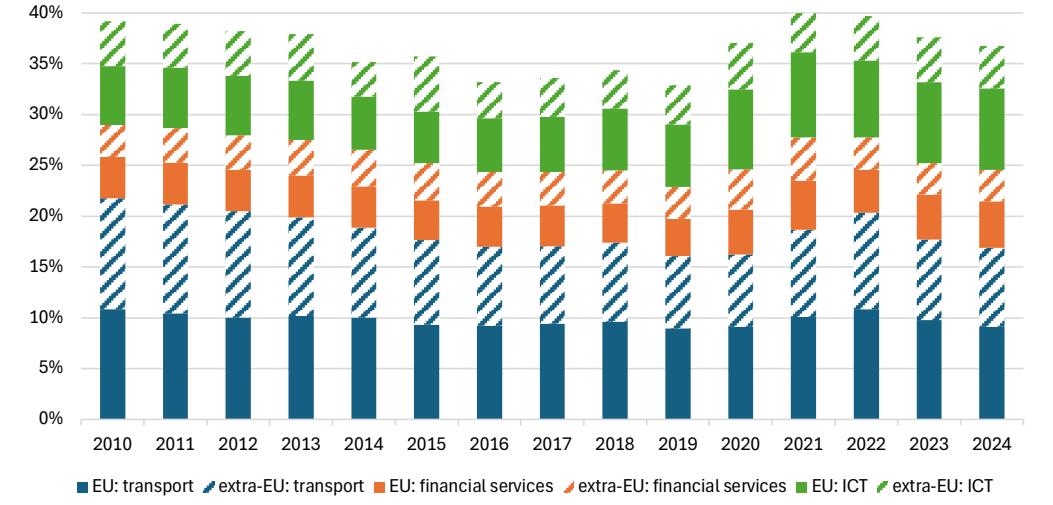

Figure 2. *Share of critical (ICT, financial and transport) services in the total international service provision in the EU broken down by origin of providers in 2010-2014*

Source: Own elaboration

As for transport services, the RSCA of 0.01 in 2024 indicates that EU transport service providers (intra-EU) do not exhibit a strong comparative advantage (Figure 3). However, the increase of RSCA from approximately -0.03 in 2010 to +0.01 in 2024 indicates that EU service providers have managed to slightly improve their competitive positions in the internal market. At the same time, the competitive position of non-EU providers worsened (ΔRSCA = -0.04), what resulted in a negative RSCA (competitive disadvantage). As for financial services, we observed a wider gap between the RSCA indexes for intra-EU trade over the non-EU import by EU entities. This reflects a certain comparative advantage of EU-based financial service providers, as their share in intra-EU trade in services is higher than what would be expected based on their overall share in total service trade. During the period of analysis, the EU providers further strengthened their comparative advantage (ΔRSCA = 0.03) at the cost of non-EU suppliers of financial services to the EU (ΔRSCA = -0.04) Finally, the intra-EU trade in ICT services in 2024 noted the highest RSCA value among the analyzed sectors. This indicates a relatively strong comparative advantage of EU-based providers of ICT services meaning that the EU entities rely more on ICT services provided by EU suppliers than would be expected based on the sector's average share in the overall services trade (EU and non-EU). Furthermore, the increase of RSCA compared to 2010 (+0.07) confirms that the EU has strengthened its internal ICT capabilities. At the same time, the comparative advantage of non-EU suppliers of ICT services to the EU entities dropped by -0.11, worsening their competitive position within the EU market.

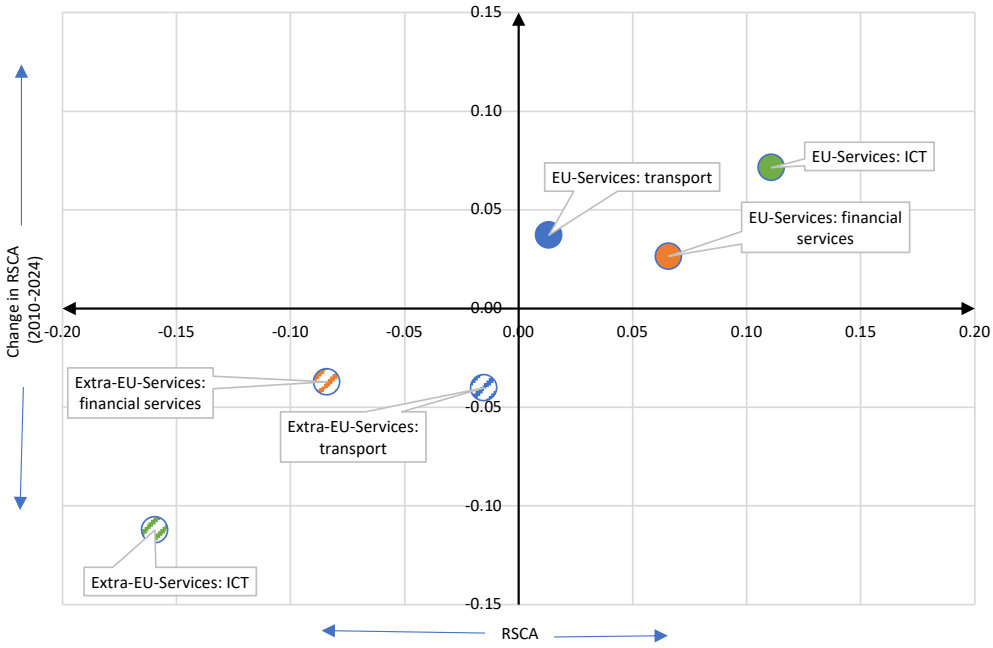

Figure. 3. *Comparative advantage (RSCA) in critical services in 2024 and changes of RSCA between 2010 and 2024.*

Source: Own elaboration.

The position and importance of a given sector in trade is determined not only by its comparative advantage, but also by its trade position, understood as the net trade balance of specific services (Figure 4).

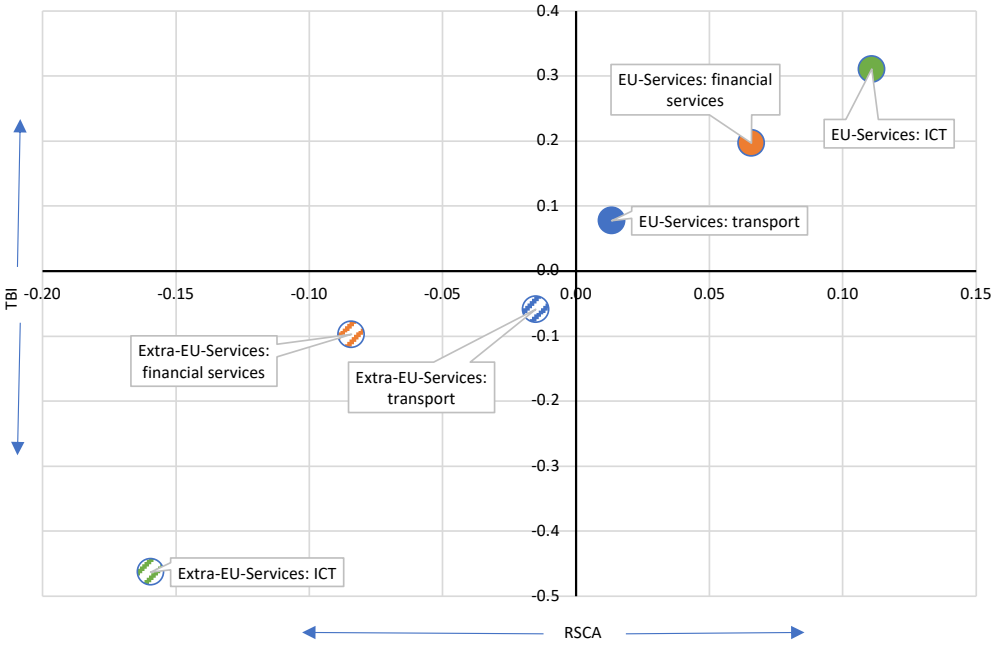

Figure 4. *Comparative advantage (RSCA) and trade position (TBI) in critical services in 2024.*

Source: Own elaboration.

In 2024, in the case of transport services, in addition to the modest comparative advantage observed in intra-EU trade over extra-EU import, we also recorded a positive TBI for intra-EU trade and a negative one for non-EU providers. These results indicate better trade position of EU transport services suppliers in the internal market as that EU entities purchase more transport services from EU-based suppliers than they import from non-EU providers. A similar pattern was observed in financial services trade. In 2024, the RSCA and TBI indices for intra-EU trade recorded positive values, while trade in these services provided by non-EU suppliers showed negative values for both indicators. These results suggest a moderate comparative advantage and a positive trade balance for intra-EU exports, and a lack of comparative advantage and a trade deficit as they import more financial services from the EU than they supply to EU clients. Finally, in the case of ICT services, the same pattern as in transport and financial services was observed, although with the largest differences between the indices. In 2024, a comparative advantage and a positive TBI indicated that EU-based suppliers provided a greater share of ICT services to the EU clients than was imported from outside the EU. In contrast, non-EU providers were less competitive in delivering ICT services to EU clients and their export of ICT services was lower than the value of these services bought from EU suppliers.

Discussion

During the time of analysis (2010-2024), trade/export of critical (ICT, financial, and transport) services to the EU increased significantly. This is linked to the growing industrial base within the EU's reindustrialisation of industrial policy efforts. These services are of the utmost importance to Europe-

an manufacturers who are competing with companies from outside the EU (European Commission, 2023b). However, the rate of growth varied between these categories. Given their importance to the EU industry competitiveness and its economic security, the stronger increase in intra-EU trade (in both value and growth rate) compared to extra-EU import of these services should be considered as a highly positive development. This trend suggests a strengthening of the EU's service providers' positions and a reduced dependency on external providers. We also observed a similar pattern: in each category, the intra-EU share of services trade exceeded that of services provided by non-EU suppliers. This ensures the safety of both the services offered and their users, particularly in industrial sectors (European Commission, 2022).

Regarding trade positions, across all three service categories under consideration, EU-based providers consistently strengthened their competitive advantage within the EU internal market, accompanied by positive net trade (RSCA > 0; TBI > 0). In contrast, non-EU providers experienced a decline in competitiveness and recorded trade deficits within the internal market (RSCA < 0; TBI < 0). In the trade of transport services, the gradually improving position of EU-based providers over non-EU suppliers may indicate increasing resilience of the EU's internal market to external competition in the transport sector. This is in line with the expectation of establishing economic security and a robust industrial foundation within the EU, based on its indigenous resources. The transport sector ensures the implementation of the fundamental freedoms of the Single European Market and, when used in trade with third countries, allows for the preservation of independence and security of supply (European Parliament, 2020). This strengthens the competitive position of EU production. A similar pattern was noted for financial services trade, which suggests an increase of financial sovereignty as well as continued relevance and resilience of the EU financial services sector, despite growing global competition and evolving regulatory frameworks. This will clearly strengthen the industrial sector and secure the financial resources needed to implement a new industrial policy based on new financial mechanisms. Finally, the most significant improvement in trade positions was observed in the ICT services sector, which suggests increasing independence of EU economies from acquiring these services from outside the EU. This shift may result from the growing importance of digital transformation in many manufacturing companies, as well as from improvements in ICT services provided within the EU, particularly catalyzed in the pandemic Covid-19 time. The services offered by these European entities significantly improve the EU's industry's competitive position on global markets, as well as its independence, economic security and digital security (Erixon, F., Guinea, O., & Pandya, D. (2024). However, it should be noted that in this case, cybersecurity must be ensured, as well.

These changes may partly result from deliberate EU economic policies aimed at deepening the single market for services, as well as reindustrialisation of European economy (Ambroziak, 2017). Also initiatives such as the Digital Single Market strategy, the Capital Markets Union, and increased investment in trans-European transport infrastructure have likely facilitated cross-border service provision within the EU what resulted in strengthening the position of EU-based service suppliers in the internal market. Additionally, regulatory harmonisation and support for digital transformation (especially data sovereignty, cybersecurity, or digital autonomy) among member states (ex. Ireland) may have further strengthened intra-EU service trade. From the EU industrial policy perspective, it is important that these services are present in new cooperation and financing mechanisms within the framework of Important Projects of Common European Interest. They enable European industry to improve its competitiveness on global markets by ensuring the highest quality, constant availability and limited dependence on third-country partners (Schmitz et al., 2025).

In terms of economic security, the competitive advantage of the EU countries in the provision of critical services shows that the EU becomes more autonomous in extra trade policy. EU countries rely more on the EU internal market, what undoubtedly ensures the its economic security. By following common trade rules, EU Member States can regulate trade flows with third countries more consistently. This makes EU countries not only more competitive but also resistant to various economic dependencies.

Conclusions

Our research allowed to state that the competitive position of critical services of EU providers is higher within the European Single Market in comparison to non-EU providers. This leads au to a conclusion that the EU maintains some level of autonomy in critical services and strengthened it over the last fifteen years (2010-2024).

Concerning transport services, the RSCA for 2024 showed that EU transport service providers (within the EU) do not have a significant comparative advantage. However, the increase in the RSCA indicates that EU service providers have managed to slightly improve their competitive position in the internal market. With regard to financial services, the analysis showed a certain competitive advantage for EU financial service providers, as their share in intra-EU trade in services is higher than would be expected based on their overall share in total trade in services. EU providers have strengthened their competitive advantage at the expense of non-EU financial service providers. The relatively strong comparative advantage of EU-based ICT service providers means that EU entities are more dependent on ICT services provided by EU suppliers than would be expected based on the average share of this sector in total trade in services (EU and non-EU). It is essential to note that the ICT market revolution also has a significant impact on economic security.

The changing new industrial policy of the European Union, driven by a growing focus on economic security, has highlighted the role of critical service providers, both EU and non-EU critical service providers. Economic security refers to a collection of public policies designed to safeguard the safety and well-being of a nation's citizens against significant threats. In contemporary times, economic security also encompasses the understanding that foreign policymakers may actively work to hinder a country's ability to achieve its goals. In order to strengthen its resilience to external vulnerabilities and enhance its internal economic sovereignty, the EU seeks to align its industrial policy with its strategic objectives. EU critical service providers are seen as key drivers of economic stability and innovation, reindustrialisation within the EU, benefiting from regulatory harmonisation and regional integration. However, non-EU providers face a double challenge: adapting to stricter compliance measures while operating in a competitive environment that priorities EU strategic autonomy. The interplay between cooperation and competition is likely to determine the future direction of cross-border relations in critical sectors. Moreover, appropriate political decisions to improve industrial policy, including service sector, unequivocally ensure economic security.

To identify the potential dependencies of EU industry on service providers from EU and non-EU countries even more precisely, it would be useful to break them down by sector. Depending on the availability of data, this study would make it possible to identify the endogenous factors determining these dependencies in EU Member States.

References

1. Aiginger, K. & Rodrik, D. (2020). The Rebirth of Industrial Policy: Reasons and Open Questions. Journal of Industry, Competition and Trade, vol. 20, pp. 189-207. *https://doi.org/10.1007/s10842-019-00322-3*
2. Ambroziak, A.A. & Stefaniak, J. (2022). The Position of China in Trade in Services within the European Union. Oeconomia Copernicana, vol. 13(2), pp. 335-343. *https://doi.org/10.24136/oc.2022.010*
3. Ambroziak, A.A. (Ed.) (2017). New Industrial Policy of the European Union. Switzerland: Springer. *https://doi.org/10.1007/978-3-319-39070-3*
4. Ambroziak, A.A. (Ed.) (2020). New Challenges for the European Union's Industrial Policy: climate change, servitisation, digitalisation. Warsaw: SGH Publishing House.
5. Baines, T.S., Lightfoot, H.W., Benedettini, O. & Kay, J.M. (2009). The Servitization of Manufacturing. Journal of Manufacturing Technology Management, vol. 20(5), pp. 547-567. *https://doi.org/10.1108/17410380910960984*
6. Baines, T.S., Lightfoot, H.W., Evans, S., Neely, A., Greenough, R., Peppard, J., Roy, R., Shehab, E., Braganza, A.,

Tiwari, A., Alcock, J.R., Angus, J.P., Bastl, M., Cousens, A., Irving, P., Johnson, M., Kingston, J., Lockett, H., Martinez, V., Michele, P., Tranfield, D., Walton, I.M. & Wilson, H. (2007). State-of-the-Art in Product-Service Systems. Journal of Engineering Manufacture, vol. 221(10), pp. 1543-1552. *https://doi.org/10.1243/09544054JEM858*

7. Beath, J. (2002). UK Industrial Policy: Old Tunes on New Instruments? Oxford Review of Economic Policy, vol. 18, no. 2. *https://doi.org/10.1093/oxrep/18.2.221*
8. Darnis, J.P. (2021). The European Union between Strategic Autonomy and Technological Sovereignty: Impasses and Opportunities. Recherches & Documents, no. 10.
9. Erixon, F., Guinea, O., & Pandya, D. (2024, December). Securing Europe's Future: Strengthening ICT Competitiveness for Economic and National Security (ECIPE Policy Brief No. 22/2024). European Centre for International Political Economy.
10. European Commission (2022) EU Industrial Strategy: Building a stronger Single Market for Europe's recovery. Publications Office of the European Union. https://data.europa.eu/doi/10.2779/951377
11. European Commission (2023a). Joint Communication to the European Parliament, the European Council and the Council on "European Economic Security Strategy".
12. European Commission. (2023b). Single Market and reindustrialisation: Annual Single Market and Competitiveness Report 2023. Publications Office of the European Union. https://data.europa.eu/doi/10.2873/858009
13. European Parliament. (2020). Transport and the Single Market. Briefing by the Directorate-General for Internal Policies https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/652040/IPOL_BRI(2020)652040_EN.pdf
14. Graham, H. (1986). European Industrial Policy. London: Croom Helm.
15. Juhász, R., Lane, N. & Rodrik, D. (2024). The New Economics of Industrial Policy. Annual Review of Economics, vol. 16, pp. 213-242. *https://doi.org/10.1146/annurev-economics-081023-024638*
16. Krugman, P. & Obstfeld, M. (2009). International Economics: Theory and Policy, 7th ed. New York: Pearson-Addison Wesley.
17. Lightfoot, H., Baines, T. & Smart, P. (2013). The Servitization of Manufacturing: A Systematic Literature Review of Interdependent Trends. International Journal of Operations & Production Management, vol. 33(11/12), pp. 1408-1434. *https://doi.org/10.1108/IJOPM-07-2010-0196*
18. Ochman, J. & Biziewski, J. (2020). European Union's Strategic Autonomy, in Ramírez, J.M. & Biziewski, J. (Eds.), A Shift in the Security Paradigm. Advanced Sciences and Technologies for Security Applications, pp. 245-258. Springer. *https://doi.org/10.1007/978-3-030-43253-9_12*
19. OECD (1975). Objectives and Instruments of Industrial Policy: A Comparative Study. Paris: OECD.
20. Pitelis, C.N. (2006). Industrial Policy: Perspectives, Experience, Issues, in Bianchi, P. & Labory, S. (Eds.), International Handbook on Industrial Policy. Cheltenham: Edward Elgar. *https://doi.org/10.4337/9781847201546.00034*
21. Rodrik, D. (2022). An Industrial Policy for Good Jobs. Policy Proposal. The Hamilton Project, Brookings.
22. Saggi, K. & Pack, H. (2006). Is There a Case for Industrial Policy? A Critical Survey. The World Bank Research Observer, vol. 21(2). *https://doi.org/10.1093/wbro/lkl001*
23. Schmenner, R.W. (2009). Manufacturing, Service, and Their Integration: Some History and Theory. International Journal of Operations & Production Management, vol. 29(5), pp. 431-443. *https://doi.org/10.1108/01443570910953577*
24. Stefaniak, J. & Ambroziak, A.A. (2017). "Pakiet usługowy" Komisji Europejskiej - remedium na bariery na unijnym rynku usług? Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu, vol. 487, pp. 306-317. ISSN: 1899-3192. *https://doi.org/10.15611/pn.2017.487.27*
25. Stefaniak, J. & Ambroziak, A.A. (2021). Intra-EU vs. Extra-EU Trade in ICT Services. International Journal of Management and Economics, vol. 57(1), pp. 34-43. *https://doi.org/10.2478/ijme-2021-0001*
26. Stefaniak J. (2019). Liberalizacja swobody przepływu usług a międzynarodowy handel usługami w Unii Europejskiej: wymiana wewnątrzunijna a handel zewnętrzny (Liberalisation of the freedom to provide services and international trade in services in the European Union: intra-EU exchange versus external trade). Studia Europejskie. Vol. 23, pp. 91-107. *https://doi.org/10.33067/SE.2.2019.5*
27. Stefaniak J. (2024). Uwarunkowania przepływów usług biznesowych na rynku wewnętrznym Unii Europejskiej. (Determinants of business services flows in the Internal Market of the European Union). Gdańsk: Wydawnictwo Uniwersytetu Gdańskiego

28. Schmitz, L., Seidl, T., & Wuttke, T. (2025). The costs of conditionality. IPCEIs and the constrained politics of EU industrial policy. Competition & Change, 0(0). *https://doi.org/10.1177/10245294251320675*

29. Vandermerwe, S. & Rada, J. (1988). Servitization of Business: Adding Value by Adding Services. European Management Journal, vol. 6(4), pp. 314-324. *https://doi.org/10.1016/0263-2373(88)90033-3*

Joanna Stefaniak, Rasa Daugėlienė, Adam A. Ambroziak

ES EKONOMIKOS AUTONOMIJA (ARBA PRIKLAUSOMYBĖ) NUO KRITINIŲ PASLAUGŲ NAUJOSIOS ES PRAMONĖS POLITIKOS IR EKONOMINIO SAUGUMO KONTEKSTE

Anotacija. *Šiame straipsnyje nagrinėjama tokia mokslinė problema: ES pramonės autonomija (arba priklausomybė) kritinių paslaugų reindustrializacijos ir ekonominio saugumo kontekste. Todėl, šio straipsnio tikslas – įvertinti ES ir ne ES kilmės kritinių paslaugų konkurencinę padėtį Europos bendrojoje rinkoje, atsižvelgiant į naująją ES pramonės politiką ir ekonominį saugumą. Šiuo tikslu buvo analizuojama: 1) kritinių paslaugų teikimo ES pokyčiai, suskirstyti pagal paslaugų teikėjų kilmę; 2) šių paslaugų dalis bendrame tarptautinių paslaugų teikime ES, suskirstyta pagal paslaugų teikėjų kilmę; 3) kritinių paslaugų konkurencinę padėtį ir jos pokyčius ES rinkoje, suskirstytus pagal paslaugų teikėjų kilmę; ir galiausiai 4) ES ir ne ES kritinių paslaugų teikėjų konkurencinę ir prekybos padėtį. Duomenys apie prekybą paslaugomis buvo gauti iš Eurostato tarptautinės prekybos paslaugomis duomenų bazės ir pateikiami pagal Eurostato mokėjimų balanso paslaugų klasifikaciją (EBOPS 2010). Siekiant nustatyti ES ir ne ES kritinių paslaugų teikėjų padėtį Europos Sąjungos įmonių atžvilgiu, naudojami du specializacijos rodikliai, dažnai naudojami prekybos literatūroje: atskleistas simetrinių palyginamųjų pranašumų rodiklis (RSCA) ir prekybos balanso indeksas (TBI). Šių dviejų rodiklių derinys buvo vizualizuotas naudojant Widodo pasiūlytą matricą, pritaikytą šio tyrimo tikslams. Pirmoje straipsnio dalyje pateikiama literatūros apžvalga, po kurios seka ES ir ne ES kritinių paslaugų teikėjų prekybos ir konkurencinės padėties statistinė analizė. Pateikiama diskusija, kuri yra gana ribota dėl mažo skaičiaus šią temą nagrinėjančių publikacijų. Atitinkamai straipsnyje pateikiamos išvados, politikos rekomendacijos ir tolesnių tyrimų kryptys. Mūsų tyrimas leido padaryti išvadą, kad ES kritinių paslaugų teikėjų konkurencinė padėtis Europos bendrojoje rinkoje yra geresnė nei ne ES teikėjų. Tai leidžia daryti išvadą, kad ES išlaiko tam tikrą autonomiją kritinių paslaugų srityje ir per pastaruosius penkiolika metų (2010–2024 m.) ją sustiprino.*

Joanna Stefaniak, Associate Professor, PhD in Economics, University of Gdańsk, Faculty of Economics, Department of Transportation Policy and Economic Integration, Poland.
E-mail: *joanna.stefaniak@ug.edu.pl*

Rasa Daugėlienė, Associate Professor, PhD in Social Sciences, Kaunas University of Technology, Faculty of Social Science, Arts and Humanities, Member of research group „Public Governance“, Lithuania.
E-mail: *rasa.daugeliene@ktu.lt*

Adam A. Ambroziak, Associate Professor, PhD in Economics, SGH Warsaw School of Economics, Faculty of World Economy, Head of the Department of European Integration and Legal Studies, Poland.
E-mail: *Adam.A.Ambroziak@sgh.waw.pl*

Joanna Stefaniak, docentė, ekonomikos mokslų daktarė, Gdansko universitetas, Ekonomikos fakultetas, Transporto politikos ir Ekonominės integracijos katedra, Lenkija
El. paštas: *joanna.stefaniak@ug.edu.pl*

Rasa Daugėlienė, docentė, socialinių mokslų daktarė, Kauno technologijos universitetas, Socialinių, humanitarinių mokslų ir menų fakultetas, „Viešojo valdymo“ mokslo grupės narė.
El. paštas: *rasa.daugeliene@ktu.lt*

Adam A. Ambroziak, docentas, ekonomikos mokslų daktaras, SGH Varšuvos ekonomikos mokykla, Pasaulio ekonomikos fakultetas, Europos integracijos ir teisės studijų fakulteto dekanas, Lenkija.
El. paštas: *Adam.A.Ambroziak@sgh.waw.pl*