

POLAND IN THE EUROPEAN UNION

Report 2026

**A Scholarly Tribute to Professor
Elżbieta Kawecka-Wyrzykowska**

EDITED BY ADAM A. AMBROZIAK

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First Edition

ISBN 978-83-8030-794-0

SGH Publishing House
162 Niepodległości Ave., 02-554 Warsaw, Poland
www.wydawnictwo.sgh.waw.pl
e-mail: wydawnictwo@sgh.waw.pl

Cover design and production

Magdalena Limbach

DTP

DM Quadro

Print and binding

QUICK-DRUK s.c.
e-mail: quick@druk.pdi.pl

Order 52/V/26

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Rector

28 May 2026

To Professor Elżbieta Kawecka-Wyrzykowska

Dear Professor

This year's report, *Poland in the European Union*, is a publication of exceptional importance for Poland, its citizens, its economy and public finances, as well as for the perception of the role that Poland plays within the family of European states and societies. Its publication comes at a time when, not only in Poland but throughout Europe and beyond, an extensive debate is taking place on issues such as the shape of the European community, its direct and indirect impact on economic and political processes, the common budget and its influence on the budgets of EU member states, the development of law and questions relating to the rule of law, migration challenges, sustainable development and defence policy. The report constitutes an important contribution to this debate and has the potential to become an impetus for even more intensive reflection, the initiation of further research projects, the shaping of specific governmental decisions, and the stimulation of activity within economic circles.

Without the slightest doubt, the SGH Warsaw School of Economics is a leading centre of serious reflection on these issues, and among those particularly active in this field, many mention you, Professor, first and foremost. Consequently, this year's report is not only another document serving the cause of Poland's close integration with the European Union but above all a tribute to you, Professor, to your multidimensional achievements, and to the encouragement you have given to a wide circle of collaborators to undertake European issues. Through your inspiration, entire teams have engaged with specific segments of this broad and multifaceted field of research.

Both the subject matter of the report – which is in fact a monograph dedicated to you – and the nationwide academic conference entitled Poland in the European Union. Report 2026, planned for the autumn as part of the celebrations marking the 120th anniversary of the SGH Warsaw School of Economics, will constitute an important contribution by the academic community to the debate currently taking place in Poland.

I should therefore like to take this opportunity to extend to you, Professor, my warmest congratulations. I would also like to acknowledge your outstanding contribution to the promotion and advancement of European integration, your scholarly, expert and advisory achievements, your devoted service in public life, as well as your dedication of nearly an entire lifetime to our home University. Please accept my warmest wishes for the well-deserved pride and satisfaction arising from your achievements in every sphere of your activity.

I wish you, Professor, happiness and every prosperity in your personal life.

With highest regards and appreciation



Piotr Wachowiak
Associate Professor
Rector of the SGH Warsaw School of Economics

FOREWORD

BY FORMER RECTOR OF SGH

ADAM BUDNIKOWSKI

It would be a challenge to identify a European economist whose academic career is more intimately linked to European economic integration than that of Professor Elżbieta Kawecka-Wyrzykowska. To me, she has been not only a fellow scholar but also a good friend. We even shared a doctoral supervisor.

Elżbieta has never ceased to be thoroughly Polish despite feeling thoroughly European. This naturally brought her European integration scholarship closer to economic and political transformation that has shaped our country within the European economic nexus. Also, Elżbieta's life overlapped with that of Europe's integration. She was born two years following the establishment of the Organisation for European Economic Co-operation (OEEC), which coordinated American aid to war-ravaged Europe. Her birth also came two years prior to the inception of the European Coal and Steel Community. By the time the Treaty of Rome was inked, Elżbieta was already in second grade. Even if she had lived within the then emerging EEC, at such a young age she would not have perceived the essence of strengthening economic ties all around her. If she were Dutch or Belgian, she might have heard her parents' stories about the overseas origin of milk powder or chocolate. A few years later, she would have learned at school about the benefits of trade stemming from budding integration. And coming of age, she would have appreciated the ease of crossing borders with just an ID card.

However, all these benefits were out of reach for a girl growing up in Poland. Her home country was not a party to those agreements. Despite enormous war losses, Poland ultimately refused American aid under the Marshall Plan. Neither did the country join the European Coal and Steel Community, notwithstanding its global heft in coal extraction. When the EEC came to life in 1958, Poland, Czechoslovakia and Hungary – all part of the European civilisation for centuries –

were absent at its creation. You could argue that, unlike France, Poland was not ready for a historical reconciliation with Germany just a few years after the war. Such a rapprochement formed the ideological bedrock of European integration at the time. As the nationwide debate following the Polish bishops' letter to their German counterparts in 1965 showed, the majority of Poles did not embrace the reconciliation idea even twenty years after the war. Perhaps the brutality of German occupation did play a role.

Ultimately, Poland's absence inside the fledgling EEC lay in post-war politics. The country inherited an externally imposed undemocratic political system alongside an inefficient centrally planned economy. In and of itself, Poland could not partake in western European integration. Equally importantly, Elżbieta's Poland could not pursue independent foreign policy. By way of example, comparing Poland and Japan at that time, you could say that it is better to lose a war in good company than to win one in lousy company.

The years that followed did not narrow the gap in living standards between Elżbieta's generations and those of Western Europe. If there was any consolation amidst the grey reality of everyday existence, it lay in Poland being 'the merriest barracks in the Soviet camp'. A number of mundane factors explained this fortuitous happenstance. They included easier access to foreign print and audiovisual media, relatively greater freedom of foreign travel, and milder censorship. In the context of this year's 57th anniversary of the first crewed landing on the moon, it is worth recalling that in this part of Europe only Poles could watch the live broadcast feed of this historic event. Elżbieta joined her western European peers in rejoicing at humankind's momentous achievement.

Another milestone brought Elżbieta's life closer to European integration in the mid-1960s. In 1967, she took up graduate education at the Faculty of Foreign Trade of the Main School of Planning and Statistics (SGPiS), a specialised business school based in Warsaw. I venture to claim hagiographically that she chose economics knowing full well that it would allow her to research European integration in the future. Based on my own and others' experience, I dare say that choosing this particular faculty owed to the presence of the adjective 'foreign' in its name. Those opting to major in international economics could master three foreign languages, which eased access to much-desired foreign travel.

Poland's economics canon stood somewhat apart in the 1960s and 1970s from the one taught in the rest of the communist bloc. Even though syllabuses did not quite follow the curricula developed in American or Western European colleges, Polish students could get a decent grasp of economic analysis. By comparison, textbooks

circulating at the time in the Soviet Union or East Germany could spark some amusement, such was the gap in serious scholarship. Significantly, some professors did not refrain from speaking up on controversial topics. For example, shortcomings of economic integration within Comecon were at times frankly articulated. In public, such discussion fell short of claiming explicitly that centrally planned economies could not really support economic integration.

Presumably, it was during her course of study and subsequent research work at the university that Elżbieta absorbed the foundations of integration theories. It may have happened during lectures on international economic relations. This catchphrase contained what is commonly understood as international economics.

During school and subsequent academic career, Elżbieta was undoubtedly aware of inefficiencies and, at times, criminal nature of the political system prevailing in Poland and our part of Europe. In 1956, aged six and living in a remote area of Mazovia far away from Hungary and Poznań, she could not have grasped yet the significance of bloody crackdowns taking place there amid anti-communist resistance. But she must have been an observant witness to momentous events that unfolded in Poland later, notably in 1968, 1970, 1976, 1978 (election of John Paul II), 1980 and 1981.

The imposition of martial law in the early 1980s ushered in a lost decade for the entire generation of Elżbieta's peers. The double whammy of economic deprivation on one hand, and a widening gap with the developed West on another, hurt badly. The pain became more apparent when economic integration within Western Europe proceeded apace. Poles looked on enviously as Greece, Spain and Portugal acceded to the EEC – all countries previously barred from the organisation for running undemocratic regimes. Then, in 1995, the European Council's Madrid summit took ancillary steps toward an economic and monetary union.

The 1980s also marked a decade of mass emigration of Poles. Elżbieta, however, stayed put and took up a full-time academic post at SGPiS. Nor did she choose to emigrate 'internally', opting instead to double down on research and teaching while picking up en route a few visiting appointments. Her research output at that time focused on foundational tenets of integration. Along the way she co-authored textbooks on international economics and trade policy. This achievement was so copious that it earned her the appointment to associate professorship (*habilitacja*) followed shortly thereafter by full university professorship, all within a bit over half a decade's time.

The real breakthrough for Elżbieta, as for most of her fellow countrymen, came in 1989 with the collapse of communism in Poland. The time marked the

transition to a market economy with its attendant reforms. The latter were spearheaded by Leszek Balcerowicz, her fellow scholar at the Institute and future deputy prime minister and central bank governor. Poland began catching up, not least in staffing international organisations from which it had been previously excluded. Rejoining the IMF had already happened earlier (1986), followed by formal accessions to GATT and NATO. Perhaps the most salient of them all was the 1991 association agreement with the European Communities (EC), barely two years into the transition period.

The last decade of the previous century and the first one of this century also marked Elżbieta's greatest scholarly output. First, negotiations with GATT in the 1990s greatly benefited from her advice. Then, she generously shared her knowledge in the run-up to the association agreement with the EC. On an even larger scale, Elżbieta became involved in an effort which ultimately resulted in Poland joining the EU in 2004. During the years leading up to accession, she served on important advisory bodies, both at the university and within the public sector. Her publications on the subject were often cited in economic literature and her voice carried widely in scholarly promotion procedures.

A book's foreword is not the appropriate place to document Elżbieta's scientific output. Nonetheless, two missing facts, one from a Wikipedia entry and the other from the Jubilarian's official CV, need to be mentioned.

First, Elżbieta supervised almost two dozen doctoral students, then guided them through their *habilitation* procedures. Along the way, she launched numerous postgraduate courses and managed research projects. All of this helped Elżbieta create her own school, probably one of the best such research centres on European integration in Poland. To this day, her research plays a vital role in generating public awareness of the EU's importance for the country. Elżbieta's success in this field earned her an EU-funded Jean Monet Chair, and then the *ad personam* Jean Monnet Chair.

Second, while Elżbieta has always been a leading Polish scholar of economic integration, she never aspired to nationwide stardom in the field. She did not seek the limelight, nor did she flood the media with repetitive interviews. Perhaps her modest upbringing away from metropolitan prep academies and storied grad schools, such as Oxford, HEC or MGIMO (Moscow State Institute of International Relations), fostered this humility. She accomplished as much as she did through hard work, not through back-door politicking.

Finally, paraphrasing the well-known adage of John F. Kennedy, we can say that for decades Elżbieta has done more for the EU than the latter has done for her.

Given the Jubilarian's modesty and her contagious uplifting spirit, it can be said, *toutes proportions gardées*, that she holds the same significant place in the world of ideas shaping European economic integration as Anna Walentynowicz did for the Solidarity movement.

Professor Adam Budnikowski
Former Rector of the SGH Warsaw School of Economics

FOREWORD BY DEAN MARIUSZ PRÓCHNIAK

The book *Poland in the European Union. Report 2026* constitutes a comprehensive contribution to the ongoing scholarly debate on the dynamics of European integration and Poland's role within the European Union. It is the sixth edition of the *Poland in the European Union. Report* series published by the Department of European Integration and Legal Studies, Collegium of World Economy, SGH Warsaw School of Economics since 2021.

I would like to express my gratitude and thanks to Professor Adam A. Ambroziak for the initiative he undertook almost six years ago when he took over as Head of the Department of European Integration and Legal Studies and decided to prepare the reports on Poland's role in the EU. Since then, the reports have been published systematically on an annual basis. They bring together a diverse set of perspectives addressing key economic, institutional, legal and social dimensions of Poland's EU membership, reflecting both the complexity and the evolving nature of integration processes. Each year, the reports *Poland in the European Union* highly contribute to our better knowledge and understanding of various aspects of Poland's membership in the EU.

There are two distinguishing features of this edition of the Report that I would like to highlight. On the one hand, the 2026 Report offers an in-depth examination of current challenges facing the European Union and Poland – from the future of the EU budget and industrial policy, through digital regulation and migration, to capital markets and global trade relations. On the other hand, the volume serves as a scholarly tribute to Professor Elżbieta Kawecka-Wyrzykowska, former head of the Department of European Integration and Legal Studies and the best Polish specialist in the issues of economic integration in Europe. Outstanding academic achievements of Professor Kawecka-Wyrzykowska have had a seminal impact on research into European integration in Poland and beyond. The contributions included in this book not only address contemporary issues but also draw inspiration from

her intellectual legacy, demonstrating the continued relevance of her analytical approaches and research agenda.

This book is intended for a wide readership, including academics, policymakers, students and all those interested in the economic and institutional development of the European Union. Not only does it provide a detailed account of current developments but also a foundation for further research and discussion on the future of Poland and the whole European Union.

I hope that this book will contribute to a better understanding of the opportunities and challenges associated with EU membership and will inspire continued reflection on the direction of European integration in the coming years.

*Professor Mariusz Próchniak
Dean of the Collegium of World Economy
SGH Warsaw School of Economics*

FOREWORD

BY HEAD OF DEPARTMENT

ADAM A. AMBROZIAK

Far from being a farewell, this text is a celebration of Professor Elżbieta Kawecka-Wyrzykowska's time with the Department of European Integration and Legal Studies at the SGH Warsaw School of Economics. I am delighted to showcase the remarkable dedication Professor Kawecka-Wyrzykowska has shown to her teaching, research and organisational efforts.

I had the honour of meeting Professor Kawecka-Wyrzykowska during my second year of study at the SGH Warsaw School of Economics in 1992–1993. At that time, she taught courses such as 'International Economics', 'European Political and Economic Integration', 'Poland's Association with the European Communities', and 'Poland's Relations with Selected Countries/Regions: Poland and the European Union'. I remember those days as a journey into what seemed to be an unknown and unattainable realm of European freedom, prosperity and economic cooperation. I never even dreamed Poland would one day become part of the European Union. However, the Professor's portrayal of the achievements of the European Communities and later the European Union, did not so much convince as inspire me to work towards Poland's EU membership.

Staying on the topic of teaching, over the years, Professor E. Kawecka-Wyrzykowska developed a wide range of courses on European economic integration at the SGH Warsaw School of Economics. These courses are still being developed and expanded by the Department of European Integration and Legal Studies by Professor Artur Nowak-Far, Professor Michał Schwabe, Doctor Marzenna Błaszczuk-Zawiła, Doctor Tomasz Grzybowski and Doctor Dariusz Mongiało and my humble person now serving as Head of the Department. One of Professor Kawecka-Wyrzykowska's major achievements was the incorporation of 'European Integration' as a compulsory module into the core subjects offered on the undergraduate

programme at the SGH Warsaw School of Economics. From today's perspective, it is clear just how wise and far-sighted this decision was. After more than 20 years of EU membership, awareness of the consequences of Poland's EU membership remains quite low among young Poles, while calls for 'Polexit' are becoming increasingly common in public debate. In this context, the courses on 'Financial Policy of the EU' and 'Economic Policies of the European Union', taught by the Professor in recent years, are worth highlighting, as they enable young people to understand the real effects of Poland's presence in the EU. It is also important to note that the Professor has invariably offered a nuanced perspective, addressing both the positive and negative consequences of European integration. The Professor deserves huge praise for this, as SGH alumni, now mature adults, highlight the clarity of her lectures, her thoroughness in preparing and conducting classes, her openness to discussion and her acceptance of other viewpoints, provided they are supported by sound reasoning.

I would like to emphasise that, in her teaching at the SGH Warsaw School of Economics, the Professor has always been guided by the fundamental values of a teacher: imparting knowledge truthfully and respecting her listeners, students and doctoral candidates. She has sought to instil these values in her students, among whom I count myself, who strive to live up to their mentor. This is a particularly significant achievement, given how difficult it is to persuade young people to seek the truth when half-truths are easier and more convenient. During her career at SGH, Professor Elżbieta Kawecka-Wyrzykowska has supervised numerous undergraduate and postgraduate theses and 19 doctoral dissertations. It is a great honour for me to be among those fortunate individuals.

In the early 1990s, everyone in Poland looking for information on the current state of affairs and broader knowledge on European Integration relied on Professor Kawecka-Wyrzykowska's well-researched studies on the European Communities and later the European Union. These included:

- Kawecka-Wyrzykowska, E., Synowiec, E. (1993). *Wspólnoty Europejskie. Stowarzyszenie Polski ze Wspólnotami Europejskimi*. Warsaw: Instytut Koniunktur i Cen Handlu Zagranicznego.
- Kawecka-Wyrzykowska, E., Synowiec, E. (1996). *Unia Europejska. Integracja Polski z Unią Europejską*. Warsaw: Instytut Koniunktur i Cen Handlu Zagranicznego.
- Kawecka-Wyrzykowska, E. (1999). *Polska w drodze do Unii Europejskiej*. Warsaw: PWE.
- Kawecka-Wyrzykowska, E., Synowiec, E. (Eds.) (2004). *Unia Europejska*. Warsaw: Instytut Koniunktur i Cen Handlu Zagranicznego.

- Kawecka-Wyrzykowska, E., Synowiec, E. (Eds.) (2004). *Polska w Unii Europejskiej*. Warsaw: Instytut Koniunktur i Cen Handlu Zagranicznego.

In the years that followed, we were able to learn from textbooks co-authored by the Professor:

- Barcz, J., Kawecka-Wyrzykowska, E., Michałowska-Gorywoda, K. (2007). *Integracja Europejska*. Warsaw: Wolters Kluwer.
- Barcz, J., Kawecka-Wyrzykowska, E., Michałowska-Gorywoda, K. (2012). *Integracja europejska w świetle Traktatu z Lizbony*. Warsaw: PWE.
- Barcz, J., Kawecka-Wyrzykowska, E., Michałowska-Gorywoda, K. (2016). *Integracja europejska w okresie przemian. Aspekty ekonomiczne*. Warsaw: PWE.
- Kawecka-Wyrzykowska, E., Mucha-Leszko, B. (2025). *Integracja europejska w teorii i w praktyce: korzyści i wyzwania członkostwa Polski w Unii Europejskiej*. Warsaw: PWE.

Amongst her other numerous academic commitments, in recent years, Professor Kawecka-Wyrzykowska has made a significant contribution to the annual development of the monograph *Poland in the European Union. Report*, prepared by the Department of Integration and Legal Studies at the SGH Warsaw School of Economics:

- Kawecka-Wyrzykowska, E. (2021). Changes in the System of Own Resources of the EU Budget After 2021: Implications for Poland. In: *Poland in the European Union. Report 2021* (pp. 73–95), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.
- Kawecka-Wyrzykowska, E. (2022). Proposal for the EU Carbon Border Adjustment Mechanism as an Instrument of the European Green Deal: Possible Implications for Poland. In: *Poland in the European Union: Report 2022* (pp. 11–38), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.
- Kawecka-Wyrzykowska, E. (2023). Poland's Settlements with the European Union Budget from May 2004 till the End of 2022, and Funds Available from 2021 to 2027. In: *Poland in the European Union: Report 2023* (pp. 123–41), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.
- Kawecka-Wyrzykowska, E. (2024). Changes in Poland's Foreign Trade after Accession to the European Union. In: *Poland in the European Union: 20 Years of Membership: Experiences and Foresights: Report 2024* (pp. 19–59), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.
- Kawecka-Wyrzykowska, E. (2025). Can Poland Afford the Energy Transition? In: *Poland in the European Union: Report 2025* (pp. 63–85), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.

- Kawecka-Wyrzykowska, E. (2026). EU Budget Financing for 2028–2034: Implications for Poland. In: *Poland in the European Union: Report 2026*, A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.

In addition to this, Professor Elżbieta Kawecka-Wyrzykowska has published nearly three hundred insightful articles, chapters in academic monographs, books, as well as dozens of expert reports for the Polish government and parliament. It is worth noting that all of the Professor's works are distinguished by their rigorous, reliable argumentation but above all by their innovative approach to the topics tackled. It is worth emphasising that she does not shy away from difficult areas of European integration, whether economic, social or political. At the same time, her published texts are characterised by clarity that allows every reader to familiarise themselves with the subject matter under consideration and the Professor's proposed opinion. They are also encouraged to form their own opinion based on the presented facts. Her skilfully rendered conclusions and recommendations enable readers to develop their own views. This has made the Professor a leading author of academic publications on European integration and Poland's membership of the European Union for the past thirty years.

In the context of my academic work, I would like to raise one more important point. Whenever I had doubts about my own research paper, I would politely ask Professor Kawecka-Wyrzykowska to read it and make her comments. This peer review within the department has always been, and I hope will continue to be, a vital part of the academic development and publication processes. The Professor's comments have always been relevant and to the point.

Moving on to organisational activities, what must be mentioned is the establishment of the first unit at the SGH Warsaw School of Economics dedicated to European integration in 1997. It was created by Professor Kawecka-Wyrzykowska, who headed the Jean Monnet Chair of European Integration within the Collegium of World Economy until January 2020, and later the Department of European Integration and Legal Studies at SGH.

The Professor's numerous lectures and publications on European integration, combined with her active practical involvement in the integration processes at the level of Polish public administration and the Polish parliament, led to the European Commission awarding her the title of Jean Monnet Chairholder in 1997. Ten years later, she was awarded the Ad Personam Jean Monnet Chair. Between 1995 and 2014, the Professor organised 13 academic conferences, the last two of which were held in collaboration with other departments at the Collegium of World Economy, SGH Warsaw School of Economics. When I took over leadership of the department

in 2020, I decided to revive this fine tradition. For the past six years, the Department of European Integration and Legal Studies at the SGH Warsaw School of Economics has held nationwide academic conferences entitled ‘Poland in the European Union’, during which we have promoted our annual monograph report.

I sincerely hope that Professor Elżbieta Kawecka-Wyrzykowska will continue to support us within the Department of European Integration and Legal Studies at the SGH Warsaw School of Economics with her experience, knowledge and kind encouragement.

Adam A. Ambroziak
Associate Professor
Head of the Department of European Integration
and Legal Studies
SGH Warsaw School of Economics

INTRODUCTION

Poland in the European Union: Report 2026 is an annual academic publication prepared by the Department of European Integration and Legal Studies at the Collegium of World Economy, SGH Warsaw School of Economics. As in previous years, this volume examines issues that we consider most relevant to Poland's integration with the EU.

Chapter 1, '**EU Budget Financing in 2028–2034: Implications for Poland**', by Elżbieta Kawecka-Wyrzykowska, focuses on the draft Multiannual Financial Framework (MFF) for 2028, which the European Commission presented in July 2025. Compared with the current arrangements, the draft proposes significant broadening of the range of EU own resources. The chapter summarises the proposals, assesses their prospects of being adopted and explains what they would mean for the overall level of EU budget revenue. It also highlights the possible implications for Poland: estimates how Poland's contribution to the EU budget might change and looks at prospective knock-on effects for the national public finances. In essence, the Commission's package does not introduce genuine EU-level taxes, independent of national systems, that would move the Union away from the *juste retour* (fair return) mindset. Given the EU's very limited tax competences and the unanimity requirement for tax changes, member states are unlikely to agree to tax instruments to finance the EU budget. Any significant shift towards EU-level taxation would require Treaty change.

Chapter 2, '**Poland and the Sustainable Development Goals**', by Marzenna Błaszczuk-Zawiła, assesses Poland's performance on the SDGs, compares them with results of other EU member states, and presents prospects for their achievement. The analysis shows progress across the environmental, social and economic dimensions of sustainable development. It suggests that Poland performs relatively well in relation to other EU countries. Its score has improved over time and the gap with the frontrunner, Finland, has narrowed. That said, Poland still faces major

challenges on several goals. Overall, it is moving in the right direction, but current efforts remain insufficient.

In Chapter 3, **The New Approach to EU Industrial Policy. The Case of The Net-Zero Industry Act and Potential Consequences for Poland**, Adam A. Ambroziak delves into a new EU instrument intended to make the Union a more attractive destination for investment in clean technologies. The chapter identifies which elements of the new state aid framework are favourable to countries such as Poland and which may prove disadvantageous. It outlines the regulatory framework, with particular attention to the rules on permissible funding. To show how the approach to investment support has shifted, the new state aid rules are compared with existing regional aid schemes. These acts should be seen as another instrument of EU industrial policy, implemented by the European Commission with the support of the member states. Financing, however, is a separate matter: from Poland's perspective, it raises serious concerns about maintaining a level playing field in the single market. This applies not only to less-developed regions but also to individual member states, including Poland, especially where 'matching aid' allows approval of individual aid up to the level of a subsidy offered elsewhere in the world.

In Chapter 4, entitled **'NIS 2 Directive and its Implementation in European Union Member States'**, Artur Nowak-Far analyses the implementation of the NIS 2 Directive already completed in Croatia, Finland, Slovakia, Hungary and Italy, and the bills still in the legislative pipeline in Austria, Ireland and Germany. These legislative models show marked differences in how the Directive is transposed. One clear source of differences is the extent to which measures derived from the 5G Toolbox have been written into national law, and the extent to which lawmakers have chosen to go beyond the Directive's minimum standards. Across the countries examined, there is a cautious approach to additional national measures that would interfere with freedom to choose technologies and suppliers for digital services. The most common approach is to anchor restrictive measures in EU-level instruments (for example, decisions) and in decisions adopted through coordinated EU procedures. Accordingly, the national measures analysed reflect the principle of technological neutrality, including in relation to the 'essential' and 'important' entities defined by the Directive.

In Chapter 5, **'The EU Internal Market in the Case-Law of Polish Administrative Courts'**, Tomasz Grzybowski explores how the fundamental freedoms set out in EU primary law shape judicial practice in administrative cases. He shows how the national legal order is aligned with EU law at an operational level – in the day-to-day application of administrative law in matters relating to the EU Single Market.

The meaning and scope of these freedoms have been developed through judicial dialogue between national courts and the Court of Justice. A common thread in that dialogue, and a key tool for interpreting and giving practical effect to the Treaties' fundamental freedoms, is the principle of proportionality – a cornerstone of the European legal order and a hallmark of judicial decision-making. While being open-textured, proportionality has discernible theoretical contours that guide courts when balancing competing values and principles to advance the objectives of the single market. A review of administrative case-law suggests that Polish administrative courts treat the single market as a value in its own right, alongside the fundamental freedoms, with proportionality serving as the means of realising these values in public law and administrative decision-making.

In Chapter 6, **'Migration Dynamics in the New EU Member States Since 2004: Poland in Comparative Perspective'**, Michał Schwabe charts the evolution of migration patterns – from state-restricted emigration under socialism, through the large-scale labour outflows that followed the systemic transition and EU accession, to the rising immigration observed since 2010, a trend intensified by the war in Ukraine. The chapter also compares the countries that joined from 2004 onwards, with particular attention to Malta and Cyprus. It sets out the pre-accession background, the decade leading up to the pandemic, and the period since Russia's 2022 invasion of Ukraine. The findings indicate an increase in labour mobility after enlargement, with Poland and Romania being the main countries of origin in the immediate post-accession years. In the subsequent decade, as economic conditions improved, Central and Eastern European countries saw emigration decline and immigration rise. Russia's war against Ukraine has precipitated an unprecedented wave of forced migration. Overall, the analysis points to a fundamental shift across the region – from net emigration to net immigration – and underscores the need for effective integration policies that can turn migration pressures into a driver of development.

In Chapter 7, **'India as a Partner of the European Union in Trade in Services and Poland's Position'**, Dariusz Mongiało assesses India's significance as an EU partner in trade in services in 2020–2024, with particular reference to Poland. The chapter examines the EU's trade balance, India's share in the EU's services trade and the dynamics of bilateral flows. It overviews the sectoral structure of EU services exports to and imports from India and gauges the EU's and India's competitive positions in global services markets. A separate comparison is drawn between India and Poland. The analytical tools include year-on-year growth rates, the compound annual growth rate (CAGR) and a mapping technique based on the revealed symmetric

comparative advantage (RSCA) and net exports (NX) indices. The results indicate that India played only a limited role as the EU's services trading partner during 2020–2024. The EU and India occupied different competitive positions in global services markets in 2024, and the importance of access to the Indian market varied across member states. Poland was not among the leading EU exporters or importers of services to or from India. These findings are pertinent in the context of the ongoing EU–India free-trade agreement negotiations.

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To foster closer cooperation with other research centres, we invited four distinguished specialists from the Wrocław University of Economics and Business, the University of Gdańsk and the University of Łódź, as well as Adam A. Ambroziak's recently graduated doctoral student, to contribute to this report. This enabled us to expand the scope of the report on Poland in the European Union in the following chapters.

In Chapter 8, **'The significance of the European Union's Autonomy in Outer Space for Security and Defence: A Polish Perspective'**, Bogusława Drelich-Skulska and Julia Majewska seek to identify the significance of building and developing the European Union's space capabilities in the context of international security and defence, with particular emphasis on the Polish perspective. The authors argue that the possession of or access to space technologies currently constitutes one of the key determinants of the security of states and international organisations, as it enables the functioning of such areas as satellite navigation, Earth observation and early warning systems. The chapter demonstrates that the importance of possessing and developing space capabilities is increasingly recognised by the European Union, as reflected, inter alia, in the establishment of the EU Space Programme for the period 2021–2027 and the designation of outer space as a strategic domain in the Strategic Compass. An analysis of the objectives of these documents indicates that outer space plays a crucial role in ensuring the European Union's security and defence. Moreover, key EU programmes such as Galileo, Copernicus and EGNOS are discussed, alongside an examination of Poland's financial engagement through its contributions to the European Space Agency. It is noted that the pursuit of autonomy in outer space remains an area requiring further investment and development.

In Chapter 9, **'National Champions and SME Ecosystems In the European Union: Comparative Insights from France, Germany and Poland'**, Joanna Bednarz explores the role and characteristics of national champions across three countries: France, Germany and Poland. Comparing different institutional and political models

helps identify the main challenges and opportunities involved in creating ecosystems that foster cooperation between national champions and small and medium-sized enterprises (SMEs). This contributes to the ongoing discussion about the role of national champions in Poland. The study also offers policy-oriented recommendations relevant to Poland's future position within the EU. The challenge for Poland is to transform national champions into leaders in the economic ecosystem. Strengthening the links between large and smaller enterprises should be a goal of industrial and innovation policy. Incorporating criteria for SME participation in public procurement, innovation financing and strategic investment projects could help balance country competitiveness, cohesion and economic resilience.

In Chapter 10, **'The Warsaw Stock Exchange and the Process of Building an EU Capital Markets Union'**, Małgorzata Janicka examines the dynamic transformation of European capital markets, including stock exchanges, driven by financial globalisation and the development of stock exchanges in emerging countries. If European stock exchanges are to maintain their significant role in international investment flows, they must remain competitive, as they now compete for capital buyers and sellers not only against each other but also against global counterparts. In European Union countries, investment capital is primarily channelled through the banking sector, with the capital market playing a secondary role – a stark contrast with the United States, where the capital market dominates. For years, the EU has sought to reshape its financial system by strengthening the role of the capital market, including through the latest Capital Markets Union (CMU) initiatives. Assessing the initiative to build a CMU from a global perspective, it is clear that the only way to maintain the position of European stock exchanges is to build larger, integrated structures that attract both issuers and investors. The Warsaw Stock Exchange (WSE), although the largest in the region, currently holds little significance in the European market. Maintaining independence and refraining from joining alliances implies a risk of marginalisation in the long term, as large entities and investors seek markets with high capitalisation and high liquidity. The key threats to the WSE resulting from the changes in European capital markets include increasing marginalisation driven by the growing importance of key markets, such as Euronext, and the gradual concentration of capital on leading European exchanges.

In Chapter 11, **'The Role of EU Membership in Poland's Intra-Industry Trade in Services: A Gravity Model Approach'**, Barbara Majerczyk-Graczykowska assesses whether membership in the European Economic Area (EEA), a significant part of which is the European Union, determined changes in the intensity of Poland's intra-industry trade (IIT) in services and what was the direction of its impact. In order to

show changes in the structure of IIT in services and understand the extent of Poland's IIT in services, the Grubel and Lloyd (GL) index was applied. The chapter presents a general overview of Poland's international trade in services in the years 2004–2020 and the most important results of the analysis regarding changes of Poland's IIT in services from geographic and sectoral perspectives. It gives an estimation of the impact of Poland's membership in the EEA on the intensity of Poland's IIT in services, based on an extended gravity model. According to the results, the IIT index for Poland's total trade in services was lower in 2020 than in 2004; however, favourable changes were recorded in knowledge-intensive services, including creative services. Although overall IIT has declined, econometric analysis shows a positive impact of EEA membership on the overall IIT level. The study yields the following answer to the research question: EEA membership has contributed to the increase in the intensity of Poland's IIT in services.

* * *

The second section prepared for this volume is conceived as a scholarly tribute to Professor Elżbieta Kawecka-Wyrzykowska and as a reflection on the enduring influence of her research on contemporary studies of European integration. The sixteen contributions collected here, authored by academics currently affiliated with the Collegium of World Economy of the SGH Warsaw School of Economics, address a wide range of issues central to the functioning and evolution of the European Union. Although prepared independently and grounded in the authors' own ongoing research, these studies draw – explicitly or implicitly – on analytical perspectives, research questions and conceptual frameworks developed in Professor Kawecka-Wyrzykowska's extensive body of work. Taken together, they demonstrate how her scholarship continues to shape research on European economic integration, EU policies and institutional development, and Poland's position within the European Union:

- Chapter 12. **EU Energy Policy at the Start of the Third Decade of the 21st Century – Change or Continuity?** by Grażyna Wojtkowska-Łodej,
- Chapter 13: **Rethinking Innovation Disparities in the European Union: Policy Implications for Enhancing Sustainable Competitiveness** by Marzenna Anna Weresa,
- Chapter 14. **Regulatory and Institutional Barriers to the Development of the Equity Crowdfunding Market in Poland** by Aneta Waszkiewicz,
- Chapter 15. **From Sustainable Development to Resilience: New Mechanisms of European Integration** by Ewelina Szczech-Pietkiewicz,

- Chapter 16. **Ukrainian Refugees in the Polish Labour Market: A Socio-Economic Perspective** by Michał Schwabe,
- Chapter 17. **When European Integration Stops Uniting: Why More Can Mean Less** by Mariusz-Jan Radło,
- Chapter 18. **Real Convergence in Income Levels Between Central and Eastern Europe and Western Europe** by Mariusz Próchniak,
- Chapter 19. **The EU's Multiannual Financial Framework for 2028–2034** by Leokadia Oreziak,
- Chapter 20. **The Principle of Conditionality of Payments from the General Budget of the European Union: An Assessment in the Context of the Proposal for the 2028–2034 Multiannual Financial Framework** by Artur Nowak-Far,
- Chapter 21. **Cultural Diversity in the European Union: A Competitive Advantage or a Barrier to International Business?** by Dariusz Mongiało,
- Chapter 22. **Selected Economic Effects of Brexit on the United Kingdom** by Andżelika Kuźnar,
- Chapter 23. **VAT Fraud and the Protection of the EU's Financial Interests** by Tomasz Grzybowski,
- Chapter 24. **The Role of European Integration in EU Sustainable Competitiveness** by Krzysztof Falkowski,
- Chapter 25. **Reasons for the EU FTAs: The EU–Mercosur Agreement in the Spotlight** by Marzenna Błaszczuk-Zawiła,
- Chapter 26. **Strategic Agility of Polish SMEs in the EU's Turbulent Market Conditions** by Ewa Baranowska-Prokop,
- Chapter 27. **New EU Industrial Policy in Times of Change: Recommendations for Poland** by Adam A. Ambroziak.

Given Professor Elżbieta Kawecka-Wyrzykowska's extensive and outstanding scientific achievements, which are internationally recognised, the editor has not attempted to review them. In the digital world in which we currently live, we enlisted the assistance of artificial intelligence. As a result, you will find the last Chapter 28 '**Between Numbers and Institutions: Professor Elżbieta Kawecka-Wyrzykowska and the Economics of European Responsibility**', drawn up by ChatGPT based on Professor Kawecka-Wyrzykowska's latest publications.

The Editor
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EU BUDGET FINANCING FOR 2028–2034: IMPLICATIONS FOR POLAND

Introduction

On 16 July 2025, the European Commission unveiled a draft Multiannual Financial Framework (MFF) for 2028–2034. The proposal would bring radical changes to the budget's architecture. This chapter focuses solely on the revenue side of the MFF, examining proposed new own resources (i.e. EU budget revenue) and changes to selected existing sources.

The objective of this paper is to provide a concise overview of the Commission's financing proposal for 2028–2034 and to set out its implications for Poland, estimating the extent to which Poland's contributions to the EU budget might rise over the period examined and what the consequences would be for the national budget.

The analysis begins with the draft package of new own resources for 2028–2034. Against that backdrop, the Commission's proposal is assessed with regard to the overall budget envelope and the prospects for its adoption. Contingency options are also identified should the member states fail to reach agreement on new own resources. The subsequent section gauges the potential cost to Poland of a higher contribution arising from the adoption of the new resources.

1. Proposed budgetary resources for 2028–2034¹

The Commission proposes an EU budget for the next MFF of just under EUR 1.98 trillion (current prices), equivalent to 1.26% of the Union's gross national income (GNI). Of this, EUR 168 billion (0.11% of GNI) would be allocated to servicing and repaying the debt issued for the EU's post-COVID-19 recovery instrument, Next Generation EU (NGEU), leaving EUR 1.82 trillion (1.15% of GNI) to finance all other expenditure. The 2028–2034 envelope is larger than the current 2021–2027 MFF, which totals EUR 1.2 trillion (current prices). Even so, with GNI and prices rising in parallel, the budget's share of EU GNI would only increase slightly from 1.13% in the current period to 1.26% in the next [European Commission, 2025a, p. 61; European Commission, 2025b, p. 2].

Despite this modest relative increase, the Commission considers it necessary to broaden the revenue base. A small percentage rise in spending translates into large sums in cash terms, and existing own resources will not grow enough to cover it. In particular, the case for new resources is reinforced by plans to step up funding for ambitious economic and political priorities: improving competitiveness (in light of the Draghi report), bolstering the Union's internal and external security, and continued support for Ukraine. Meanwhile, from 2028, an important new line on the expenditure side will be the aforementioned NGEU repayments – interest and principal on the common debt issued after the COVID-19 pandemic to help member states rebuild and strengthen their resilience to future crises.

Proposals for new resources and modifications to existing ones²

a) Resource based on revenue from the sale of ETS 1 allowances (ETS-based own resource)

At present, most revenue from auctioning greenhouse-gas emission allowances under the EU Emissions Trading System (ETS 1), in place since 2005, accrues to national budgets. Under the Commission's proposal, member states would transfer a share of this revenue – at a collection rate of 30% – to the EU budget. The measure dovetails with the Union's climate policy for 2030 and the new 2040 target the

¹ Unless stated otherwise, statistical data cited for these proposals are drawn from European Commission [2025a, pp. 61–67], in 2025 prices.

² Table 1 at the end of this subsection summarises the proposals and provides an estimate of their financial implications for Poland.

Commission proposed in 2025, namely a 90% net reduction in emissions relative to 1990.³ Meanwhile, the proposal here concerns receipts from the existing ETS 1 only. The Commission had earlier envisaged adding part of the revenue from the new ETS 2 programme, due to start in 2027, to ETS 1, but ultimately withdrew from this plan. On the assumption of a carbon price of EUR 88.33 per tonne in 2025 prices, this source is expected to yield average EU budget revenue of about EUR 9.6 billion a year over 2028–2034 (see Table 1).

b) Carbon Border Adjustment Mechanism (CBAM)

The Carbon Border Adjustment Mechanism (CBAM), established by Regulation (EU) 2023/956 of 10 May 2023, is intended to level the playing field for EU producers who face the cost of purchasing ETS 1 allowances [Kawecka-Wyrzykowska, 2021, pp. 73–95]. Under ETS 1, firms incur significant costs to acquire greenhouse gas emission allowances. In particular, CBAM imposes a levy on imports of selected carbon-intensive goods from jurisdictions with less stringent CO₂ rules. The charge is designed to mirror the cost of EU CO₂ allowances, thereby limiting carbon leakage – i.e. the relocation of production to places with weaker decarbonisation requirements – and encouraging third-country producers to cut emissions (in which case their goods sold in the EU would attract a lower or no CBAM charge). Meanwhile, the price of CBAM certificates will track the price of ETS 1 allowances.⁴ At present, CBAM applies to cement, iron and steel, aluminium, fertilisers, hydrogen and electricity, with the product scope to be widened over time to better reflect the sectors covered by ETS 1. The Commission proposes to keep the call rate at 75%. On that basis, it estimates average annual revenue of about EUR 1.2 billion over 2028–2034, with an extension of scope potentially adding a further EUR 0.2 billion.

c) Own resource based on e-waste

Rising volumes of waste electrical and electronic equipment (e-waste) are problematic, not least because they contain hazardous substances, including heavy metals, which, if not properly collected and treated, pose serious risks to

³ This target is an intermediate step between the current target of a 55% reduction by 2030 and the ultimate goal of climate neutrality by 2050.

⁴ The Commission is to assess whether to extend the mechanism to additional ETS 1 sectors and to table an initial legislative proposal to include certain downstream products, starting with steel and products with a high aluminium content, as announced in the European Steel and Metals Action Plan [European Commission, 2025c].

the environment and public health. Concurrently, e-waste is rich in critical raw materials – such as copper, platinum and rare-earth elements – making it strategically important for the Union’s autonomy. Considering how scarce these materials are within the Union, products containing them should be recycled on a far larger scale. This is already envisaged under Directive 2012/19/EU (the WEEE Directive), yet in practice, recycling rates remain unsatisfactory. In 2022, the EU’s overall e-waste collection rate stood at 40%; the Commission aims to lift it to over 60% in the near term. As with the plastic-based own resource on non-recycled packaging waste, an e-waste-based resource would incentivise member states to step up collection. Meanwhile, it would also support the Union’s competitiveness and strategic autonomy. The contribution would be calculated by applying a uniform call rate to the weight of WEEE not collected.⁵ The proposed call rate is EUR 2 per kilogram. On this basis, annual revenue for the EU budget is put at around EUR 15.0 billion.

d) Tobacco Excise Duty Own Resource (TEDOR)

According to the Commission, the case for this resource is not merely fiscal; in particular, it is grounded in public health concerns given high smoking rates in some member states. A further argument is that the current excise regime distorts competition and impairs the functioning of the single market. Wide disparities in excise levels – and therefore in retail prices – across member states fuel large-scale cross-border purchases and smuggling, leading to an unwarranted redistribution of tax revenues between EU countries. Each member state’s contribution would be determined by applying the minimum excise rate applicable in that member state to the quantity released for consumption across all categories of manufactured tobacco and tobacco-related products in a given year, followed by charging a uniform call rate. With a call rate of 15%, the Commission estimates average annual revenue of EUR 11.2 billion over 2028–2034. The proposal also envisages raising the existing minimum excise duty rates and extending the directive’s scope to new products and to raw tobacco [Council Directive 2011/64/EU].

⁵ Data for calculating member states’ e-waste contributions are collected using a standardised methodology, as required by the WEEE Directive.

e) Corporate Resource for Europe (CORE)

This resource would take the form of a lump-sum payment by companies operating and selling in the Union, with the amount varying by firm size as measured by net turnover. Entities with annual net turnover of EUR 100 million or less – broadly, small and medium-sized enterprises – would be out of scope. Public bodies, international organisations and non-profit organisations would likewise be exempt. For other companies, the payment would increase with net turnover. The Commission stresses that the charge would represent only a small fraction of net turnover. It estimates that CORE would yield an average of EUR 6.8 billion a year for the EU budget over 2028–2034.

In particular, the Commission’s rationale is that firms derive substantial benefits from the single market: predictability, stability and long-term prospects that underpin investment, innovation and economic growth. Common rules on competition, intellectual property and environmental standards also help ensure fair practices and lower compliance costs. Meanwhile, companies benefit directly and indirectly from EU spending – through grants co-financing their investments and through support for modernisation, innovation and competitiveness. Flagship programmes such as Horizon Europe, Erasmus Plus and the Single Market Programme have strengthened industrial competitiveness and accelerated growth. Overall, the EU budget plays a pivotal role in sustaining a strong internal market; those who benefit from a large single market should therefore contribute to its financing.

Adjustments to existing EU own resources

a) Levy on non-recycled plastic packaging waste (the plastic levy)

The Commission proposes increasing the plastic levy, in place since 2021, from EUR 0.80 to EUR 1.00 per kilogram from 2028. The case for a higher rate rests on the recent bout of inflation, which has eroded the levy’s real value and weakened incentives for member states to step up plastic waste recycling. This change would raise average receipts by about EUR 2.2 billion a year over 2028–2034.

b) Customs duties

The Commission proposes several adjustments to existing customs-related resources to lift revenue. In particular, it would cut the proportion retained by member

states as collection costs from 25% to 10%, thereby increasing the EU share of customs receipts. The rationale includes efficiency gains from the digitalisation of customs processes and the abolition of the EUR 150 de minimis threshold, below which customs duties are not levied, as set out in the proposal to reform the Union Customs Code (UCC) [European Commission, 2023]. On the Commission’s estimates, lowering the retention rate would generate roughly EUR 4.5 billion a year, while abolishing the de minimis threshold would yield a further EUR 2.3 billion annually. Moreover, in line with the UCC reform proposal, a handling fee for distance sales (e-commerce) would be introduced, which could bring in an additional EUR 4.6 billion a year.

Elimination of correction mechanisms

The package includes the removal of the current correction mechanisms, with the stated aim of making the own resources system more transparent. In particular, the Commission proposes to abolish the rule capping the VAT base at 50% of a member state’s GNI. It would also scrap the flat-rate reductions applied to the own resource based on non-recycled plastic packaging waste⁶ and to the GNI-based resource. The Commission argues that these changes are needed to ensure transparent burden-sharing across the EU budget. Meanwhile, the call rates for the plastic-packaging and e-waste resources would be annually index-linked to inflation.

Table 1. Proposals to introduce new own resources for the EU budget and modify the existing ones⁷

Type of own resource (source of EU budget revenue)	Expected annual revenue from a given source (EUR billions)	Proposal details	Poland’s actual contribution to EU budget in 2025 (EUR billions)	Estimation of Poland’s contribution in 2025 (EUR billions)
1	2	3	4	5
Proposals for new sources of revenue				
Emissions Trading System 1 (ETS 1)	9.6 ^a	30% of revenue from the sale of CO ₂ certificates		0.960 (2024 data) ^b

⁶ These lump-sum reductions were introduced when the plastic levy was adopted to offset the relatively greater burden on countries with lower plastic-waste recycling rates (see below).
⁷ Unless stated otherwise, EU budget revenue figures are given in 2025 prices.

Type of own resource (source of EU budget revenue)	Expected annual revenue from a given source (EUR billions)	Proposal details	Poland's actual contribution to EU budget in 2025 (EUR billions)	Estimation of Poland's contribution in 2025 (EUR billions)
1	2	3	4	5
Carbon Border Adjustment Mechanism, CBAM ^c	1.4 ^d	Uniform call rate of 75% of revenues from the sale of CO ₂ emission allowances on imports of selected goods with a high carbon footprint		0.115 ^e
Own resource based on e-waste (non-collected electrical and electronic equipment)	15.0	Proposal details: call rate of EUR 2/kg applied to non-collected e-waste		1.1 ^f
Tobacco Excise Duty Own Resource (TEDOR)	11.2	15% of revenue calculated using each member state's specific minimum rate for manufactured tobacco and tobacco- related products		–
CORE (Corporate Resource for Europe)	6.8	Lump-sum contribution by companies operating and selling in the EU with net turnover above EUR 100 million ^g		–
Modifications to existing own resources				
Own resource based on non-recycled plastic packaging waste	2.2	Increasing the call rate from 0.80 to 1 euro/kg for the relevant packaging to align the charge with inflation	0.483	Increase by 0.097 ^h
Modification of customs revenue	4.5	Reduction of the collection costs of customs duties retained by member states from the current 25% of customs revenue to 10%	1.0	Increase by 0.21
The abolition of the minimum customs value of EUR 150 up to which no customs duties are levied	2.3	This will increase the value of imports subject to customs duties		–
Introduction of handling fee for distance sales (e-commerce)	4.6	This proposal is provided for in the reform of the EU Customs Code		–

cont. Table 1

Type of own resource (source of EU budget revenue)	Expected annual revenue from a given source (EUR billions)	Proposal details	Poland's actual contribution to EU budget in 2025 (EUR billions)	Estimation of Poland's contribution in 2025 (EUR billions)
1	2	3	4	5
Elimination of correction mechanisms				
Elimination of own resource-specific adjustments (correction mechanisms)		Elimination of the VAT-base cap at 50% of member states' GNI, and of the GNI own resource ¹	Poland's contribution to financing rebates for other countries = 0.438	Elimination of this contribution: –0.438
		Elimination of the lump- sum reductions applied to the non-recycled plastic packaging waste own resource	Poland's rebate on account of plastic levy = 0.117	+0.117
Other (e.g. contributions from third parties participating in certain EU programmes)	0.9			–
	The above in total 58.5 [European Commission, 2025d]		1.804	2.161

Notes:

^a Revenue estimates are based on an assumed carbon price of EUR 88.33 (2025 prices) [European Commission, 2025a, p. 63].

^b In 2024, Poland's revenue from auctioning the relevant ETS 1 allowances was EUR 3.84 billion [KOBIZE, 2024], nearly 10% of the EU total (EUR 39 billion). We therefore proxy Poland's ETS-based contribution at 10% of the Commission's EU-wide estimate (EUR 9.6 billion), i.e. EUR 0.960 billion.

^c Regulation (EU) 2023/956.

^d Assuming the mechanism's scope is extended to additional goods.

^e Estimate by the Sejm Analysis Office [2023], updated to 2024 prices [see Kawecka-Wyrzykowska, 2025, pp. 348–352, 358].

^f This amount is estimated as follows: Poland's share of non-collected WEEE in 2022 (latest available data) was 7.5%. Applying the same share to the estimated EU revenue (EUR 15 billion) gives EUR 1.1 billion [author's own calculation based on Eurostat, 2025].

^g The absolute amount of the CORE contribution would be tiered by net turnover. The lowest annual payment, EUR 100,000, would apply to companies with net turnover between EUR 100 million and EUR 250 million; the highest, EUR 750,000, would apply to companies with turnover of EUR 750 million or more.

^h This amount is calculated on the assumption that the volume of relevant packaging in Poland is unchanged and the charge rises by 20%: EUR 0.483 billion x 20% = EUR 0.580 billion [EU, Euratom, 2025, p. 52].

ⁱ Lump-sum reductions in GNI-based contributions were granted many years ago to five countries – Germany, the Netherlands, Denmark, Austria and Sweden. These reductions are financed by all other member states, thereby diluting the benefits for recipients. For example, Germany's gross reduction in 2025 was EUR 4.4 billion; at the same time, Germany financed EUR 2.3 billion of the reductions granted to others, leaving a net benefit of EUR 2.2 billion. Net reductions for the other beneficiaries were (EUR billion): Netherlands – 1.8; Denmark – 0.3; Austria – 0.4; Sweden – 1.0 [EU, Euratom, 2025, p. 50]. Abolishing these rebates would not raise total budget revenue, as the rebates are financed by all countries. This does not apply to the VAT-based cap (50% of GNI), which does lower revenue, albeit only marginally. In 2025 the cap applied to Estonia, Croatia, Cyprus, Luxembourg, Malta, Poland and Portugal. The total amount was small (EUR 474 million – 0.48% of GNI-based contributions and 0.32% of total EU budget revenue in 2025) and is ignored here [author's own calculations based on EU, Euratom, 2025, p. 46].

Source: Author's own compilation based on European Commission [2025a, pp. 63–67], European Commission [2025b, pp. 1–14], EU, Euratom [2025].

2. Assessment of the Commission's package: overall volume and prospects for adoption

In its proposal, the Commission assumes that the MFF will stabilise national contributions at their 2027 level in constant prices [European Commission, 2025a, p. 61]. This implies that the planned budget expansion should be financed by new own resources.⁸ Over 2028–2034, these new resources are projected to account for about 20.6% of the annual EU budget and around 0.26% of the Union's GNI on average.⁹ This is substantial, given that over 2021–2027 existing own resources averaged 1.13% of the EU GNI [European Commission, 2025a, p. 61]. Put differently, the new revenue would fund a little over one-fifth of the future budget, thereby avoiding a further rise in GNI-based contributions. In particular, this matters because GNI-based contributions reinforce the so-called net-balances (or fair-return) mindset, which tallies how much each member state pays in and how much it receives back in direct cash flows, while disregarding the wider benefits of membership. That perspective encourages net contributors to resist budget increases. New resources could temper this tendency, though they will not eliminate it altogether. Meanwhile, almost all the proposed new resources would be what Steinbach dubs 'unreal' or 'virtual' taxes – revenues calculated using statistical methods to determine what member states must pay into the EU budget, without the Union actually levying a new tax across the board [Steinbach, 2023, p. 311]. That is already the case with the plastic levy introduced in 2021: the amount is computed hypothetically and paid from national budgets. As a result, most of the proposals would not increase EU-level tax receipts in the strict sense; they would shift funds from national budgets to the EU. Member states will therefore scrutinise each measure primarily through the lens of its national budgetary cost. This will hardly ease the negotiations on the next MFF.

Under the Treaties, the EU budget should be financed wholly from own resources ('Without prejudice to other revenue, the budget shall be financed wholly from own resources', Article 113 TFEU), rather than from 'other revenue' (including so-called 'unreal' taxes).¹⁰ However, a key obstacle to a fully

⁸ The Commission has also envisaged some reductions in traditional headings, including cohesion and agricultural policy, to free up room for new spending.

⁹ The calculations use the following data: the MFF totals EUR 1,984.9 billion over seven years, i.e. an average of EUR 283.6 billion per year, equivalent to 1.26% of EU GNI. New resources (EUR 58.5 billion) represent 20.6% of the annual budget and 0.26% of EU GNI on average in 2028–2034 [European Commission, 2025a, p. 61].

¹⁰ Questions around recourse to EU borrowing to finance the budget – in a similar way to the NGEU financing – are not discussed here.

Treaty-compliant solution is the Union's limited competence to create and collect EU-level taxes.¹¹

Meanwhile, it is worth recalling that planned expenditure for 2028–2034, expressed as a share of GNI, is only slightly higher than at present (1.26% versus 1.13%). If one strips out the 'fixed' item – the NGEU debt service and repayment, which the Commission puts at EUR 24 billion a year, or 0.11% of EU GNI – the gap between the two MFFs is slimmer still: roughly 1.15% versus 1.13% of EU GNI [European Commission, 2025a, p. 61]. In truth, then, the proposed budget is modest. In this context, any reduction in revenue – even a small one, should member states reject part of the package – would constrain the funds available for spending, as the EU budget must be balanced.¹² That would risk missing integration objectives, diminishing the benefits of the single market and weakening the Union's position in the world.

The Commission's package markedly broadens the list of potential revenue sources compared with the 2023 proposal¹³ even though some would yield only modest sums. This likely reflects both an effort to exhaust every available avenue to bolster revenue and a desire to ease compromise between member states by widening the scope for partial concessions and trade-offs.

In particular, many of the proposed new resources would reinforce common EU policies – climate and environmental measures (ETS 1, CBAM, e-waste, the plastic levy) and protection of the single market from unfair domestic and foreign competition (CBAM, TEDOR). A 'double dividend' is often cited in this context: the measures would not only bring additional revenue but also advance other key objectives, notably the climate agenda. Meanwhile, CORE would amount to a contribution by companies for the privilege of operating in the European single market. The double-dividend argument ought, objectively, to encourage policymakers to coalesce around common solutions; without EU-level coordination, national actions are likely to be less effective.

As to feasibility, CORE has drawn the most criticism so far. Member states argue it would further undermine the competitiveness of EU firms, already weak relative to major global rivals even without such a levy. There are also concerns – albeit rarely voiced openly – that it would encroach on fiscal sovereignty and, over time,

¹¹ The EU may legislate on certain environmental and energy-related taxes (Articles 192(2) and 194(3) TFEU) and approximate laws (including taxes) necessary for the functioning of the internal market (Article 114 TFEU). It has no general taxation competence for public-finance purposes.

¹² Article 310(1) TFEU stipulates that 'revenue and expenditure shown in the budget shall be in balance'.

¹³ That proposal envisaged adding CBAM receipts, a temporary statistical own resource based on corporate profits and ETS 1 auction revenues to own resources [see Kawecka-Wyrzykowska, 2025].

expand the Union's tax powers. By contrast, payments linked to CBAM and ETS 1, which have been discussed for years as potential own resources, may be easier to accept. The e-waste proposal likewise looks relatively uncontroversial, backed by the precedent of the plastic levy and the clear need to manage e-waste that can harm the environment.

For several countries, higher contributions would arise not only from the measures above but also from scrapping existing rebates and correction mechanisms. It is worth noting that those rebates chiefly benefit wealthier member states, which would therefore bear the cost of their removal.¹⁴ Given their scale and the fact that they accrue to the largest net contributors, resistance from these countries is likely. At the same time, the burden of the abolition would fall on countries more closely in line with their relative prosperity, thereby promoting equal treatment.

In terms of revenue quality, the package's main weakness is that most of the proposed new resources reallocate existing or prospective national revenues to the EU budget rather than create genuinely new ('real') EU-level receipts (see above). In particular, this redistribution would cover part of ETS 1 auction proceeds and tobacco excise receipts – both currently accruing fully to national budgets – as well as the plastic and e-waste levies. A package dominated by such 'unreal taxes' risks dampening member states' willingness to agree, since it would increase the burden on national budgets.

3. Possible solutions should EU member states fail to agree on new own resources

The package to raise the budget and broaden its financing base is ambitious. It is likely that some elements will be dropped, with others watered down. As the EU budget must be balanced, any shortfall in revenue will necessarily translate into lower expenditure. In principle, the gap could be filled by higher GNI-based contributions;¹⁵ in practice, that looks unrealistic given the opposition already voiced to such an approach.

Another avenue frequently mooted in the literature is greater recourse to borrowing, with Next Generation EU (NGEU) cited as the precedent [Kowald,

¹⁴ Cf. Table 1, note i.

¹⁵ The advantage of the GNI-based resource is that it can be raised almost automatically, on a Commission proposal, to close any funding gap. Its use is, however, constrained by the own-resources ceiling.

Pari, 2025].¹⁶ Proposals range from issuing fresh common debt along NGEU lines to deferring NGEU amortisation beyond 2058 by rolling over maturing debt [Steinbach, 2023, p. 312]. This would create headroom in the EU budget over the coming years that could temporarily finance other spending [Kowald, Pari, 2025, p. 10]. The snag is that such steps would require unanimity among member states, which would be hard to secure [Darvas, McCaffrey, p. 3]. For the record, under the original decisions, NGEU repayments are due to begin in 2038.

4. Possible implications for Poland resulting from changes in the financing of the EU budget

On a very preliminary and partial estimate of the impact on Poland – excluding TEDOR and CORE – Poland's contribution to the EU budget from ETS 1, CBAM, the plastic levy, the e-waste charge and customs duties could rise by an average of EUR 2.161 billion a year over 2028–2034 (Table 1, column 5; 2025 prices). This figure nets off EUR 0.438 billion that Poland currently pays towards financing other member states' rebates, and which would cease if those mechanisms are abolished. It also includes a EUR 117 million annual increase reflecting the expiry of the lump-sum reduction on Poland's plastic-levy contribution, which applies in 2021–2028¹⁷ and will not be prolonged. An annual uplift of EUR 2.161 billion would amount to roughly a quarter of Poland's 2025 contribution (planned at EUR 7.95 billion) – a very sizeable increase. Even so, it would remain well below the average rise in own resources for the EU as a whole on the 2025 baseline (around 37%).¹⁸ That said, Poland's figure is understated: it excludes some of the proposed new revenue sources. Moreover, both Poland's and the EU-wide comparisons are

¹⁶ The NGEU borrowing was an exceptional measure in a system where the budget must be balanced (Article 310(1) TFEU). The balanced budget rule has generally been read as a prohibition on EU-level debt. The Commission argued that Article 122 TFEU – allowing derogations from standard Treaty rules – applied in light of the exceptional circumstances of the COVID-19 pandemic. The German Federal Constitutional Court accepted this reasoning and dismissed the complaint against NGEU in December 2022 [Kowald, Pari, 2025, p. 10]. Not all economists agree that NGEU was Treaty-compatible or that it could be repeated.

¹⁷ In addition to Poland, lump-sum reductions in the plastic levy were granted (EUR millions in brackets) to Bulgaria (22), Czech Republic (23.2), Estonia (4), Greece (33), Spain (142), Croatia (13), Italy (184), Cyprus (3), Latvia (6), Lithuania (9), Hungary (30), Malta (1.4), Portugal (31.3), Romania (60), Slovenia (6.3), Slovakia (17). These were offered to 'Member States with a GNI per capita in 2017 below the EU average. The reduction should correspond to 3.8 kilograms multiplied by the population in 2017 of the Member States concerned' [Council Decision (EU, Euratom) 2020/2053, preamble, point 7].

¹⁸ The EU budget for 2025 amounts to EUR 151 billion [EU, Euratom, 2025, p. 52].

benchmarked to 2025. By 2027 – the final year under the current rules – the budget will be larger, so the base for measuring growth from 2028 will be higher and the implied growth rate lower.

Most of the new or amended contributions would be a direct charge on the state budget in Poland (as in other member states), since the relevant revenue streams currently accrue nationally – ETS 1 auction receipts, tobacco excise and customs duties. Additional budgetary costs would also stem from the higher plastic levy already payable to the EU and from the proposed e-waste levy.

A welcome feature for Poland is the proposed exclusion, from the ETS-based own resource, of the allowances whose auction proceeds finance the Modernisation Fund and the Innovation Fund [European Commission, 2025b, recital 14]. Poland is the largest beneficiary of the Modernisation Fund.¹⁹

Table 2. Poland's share in the growth of EU budget revenue by type of own resource

Type of resource	Expected increase in EU budget revenue (EUR billions)	Expected increase in Poland's contribution (EUR billions)	Poland's share of EU contributions from a given source (%)	Regressivity index of contributions for Poland (p.p.) ^a
1	2	3	4	5
ETS 1	9.6	0.960	10	10% – 4.77% = 5.23 p.p.
CBAM	1.4	0.11	8.2	8.2% – 4.77% = 3.43 p.p.
e-waste	15.0	1.1 ²⁰	7.3	7.3% – 4.77% = 2.53 p.p.
plastic levy	2.2	0.097	4.4	4.4% – 4.77% = –0.37 p.p.
modification of customs revenue	4.5	0.21	4.7	4.7% – 4.77% = –0.07 p.p.
total	32.7	2.482	7.6	7.6% – 4.77% = 2.83 p.p.

Note: Definition of the regressivity indicator for Poland: the difference, in percentage points, between Poland's share of EU revenue from a given resource and Poland's share of EU GNI (4.77% in 2025) [EU, Euratom, 2025, p. 50].

Source: Author's calculations based on the data in Table 1.

It is to Poland's disadvantage, however, that most of the proposed new contributions would be, to varying degrees, regressive. In this context, regressivity means that Poland's relative burden would be greater than its share of EU GNI would imply. It is measured here as the difference (in percentage points) between Poland's

¹⁹ The Modernisation Fund supports the energy transition in countries that joined the EU in 2004 or later. The largest allocation goes to Poland, given its heavy reliance on fossil fuels and the associated transition costs [see Kawecka-Wyrzykowska, 2020, p. 200].

²⁰ This amount is estimated as follows: Poland's share of non-collected WEEE in 2022 (latest available data) was 7.5%. Applying the same share to the estimated EU revenue (EUR 15 billion) gives EUR 1.1 billion [author's own calculation based on Eurostat, 2025].

share of contributions from a given resource and its share of the Union's GNI. According to Table 2, the highest regressivity index for Poland would arise under two new revenue sources: ETS 1 (5.23 p.p.) and CBAM (3.43 p.p.). By contrast, the lightest relative burden would be associated with the higher take from customs duties and with the plastic levy, where Poland's shares (4.7% and 4.4%, respectively) are broadly in line with, or slightly below, its GNI share.

If one looks instead at absolute amounts, the largest burdens for Poland would stem from the e-waste resource and ETS 1, at roughly EUR 1.1 billion and just under EUR 1.0 billion per year, respectively.

Poland's total share of contributions from the new sources listed above would come to 7.6%, well above its 2025 share of EU GNI (4.77%). Hence, the overall regressivity index would be 2.83 percentage points. The scope to reduce this regressivity lies chiefly in cutting the economy's carbon intensity (thereby lowering ETS 1 receipts) and in reducing unprocessed plastic waste and e-waste. That would require national policy instruments that prompt users to sort electronic equipment and plastic packaging more effectively than at present. Tellingly, Poland has been paying into the EU budget for non-recycled plastic packaging since the start of the current MFF (2021), yet the measure that should encourage recycling – a deposit-return scheme – took effect only on 1 October 2025. Meanwhile, payments linked to ETS 1 would fall with a more consistent shift away from high-emission energy sources, especially coal, which currently entails high spending on greenhouse gas emission allowances.

Conclusions

An increase in revenue under the new Multiannual Financial Framework from 2028 is necessary. The Union has already undertaken commitments that extend beyond 2021–2027 – above all, servicing and repaying NGEU debt and continuing support for Ukraine²¹ – while new needs are emerging (further assistance to Ukraine, the energy transition, protection of the external borders, improving the EU's competitiveness, and so on). Without additional funds, NGEU repayments and support for Ukraine would either require cuts to the largest spending headings (cohesion and agricultural policy) or higher GNI-based contributions. Neither option appears acceptable to a significant number of member states.

²¹ The cost of repaying loans taken out by the EU to support Ukraine in 2021–2027 is relatively modest, as principal repayment is largely deferred until after 2034.

Most of the proposed contributions would fall directly on national budgets, as they are not genuine EU-level taxes but national transfers calculated on statistical bases [Verfassungsblog, 2025]. A statistics-based own resource implies higher national payments to the EU budget that each member state would have to finance by raising domestic taxes, reducing expenditure or borrowing more.

Taken as a whole, the Commission's proposal does not amount to the introduction of real, Union-wide taxes implemented independently of national policies and capable of curbing – let alone eliminating – the 'fair return' mindset. Member states have not been able to agree taxes dedicated to financing the EU budget: the Union's tax competences are limited, and any tax change requires unanimity. In practice, any significant expansion of true EU taxation would call for Treaty change.

The calculations of Poland's prospective contributions set out above are approximate. They rest on estimates of individual items at a time when the precise evolution of the various resources after 2028 is unknown, and they do not cover every type of contribution. Even so, they indicate the relative weight of the different headings and, when viewed alongside regressivity, show which would be largest in absolute terms and which would place the heaviest relative burden on the national budget. On this reading, both ETS 1 and the e-waste resource meet those two tests. Poland should therefore seek to mitigate their impact on the national budget.

Member states face a long and difficult phase of coalition-building, preceded by the preparation of national positions that reflect each country's particular interests and circumstances. There is broad recognition of the need to identify new sources of EU revenue, which creates scope for compromise. That compromise will most likely entail modifications to much of the Commission's package, allowing each country to claim a negotiating success. Based on previous MFF negotiations, it is also reasonable to expect the Commission's overall envelope to be trimmed.

Even if the Council and the European Parliament reach an agreement on new own resources, that would only be the first step. Under the Treaties, the own resources decision must then be ratified by every member state – an outcome that is by no means guaranteed.

REFERENCES

Council Decision (EU, Euratom) 2020/2053 of 14 December 2020 on the system of own resources of the European Union and repealing Decision 2014/335/EU, Euratom, OJ L 424, 15.12.2020.

- Council Directive 2011/64/EU of 21 June 2011 on the structure and rates of excise duty applied to manufactured tobacco (codification), OJ L 176, 5.7.2011.
- Darvas, Z., McCaffrey, C. (2024). *Management of Debt Liabilities in the EU Budget Under the Post-2027 MFF*, <https://www.europarl.europa.eu/cmsdata/290726/5.%20Darvas%20-%20final.pdf> (accessed: 16.07.2025).
- Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE) (recast), OJ L 197, 24.7.2012.
- EU, Euratom (2025). Definitive adoption (EU, Euratom) 2025/31 of the European Union's annual budget for the financial year 2025, OJ L 2025/31, 27.2.2025.
- European Commission (2023). Proposal for a Council Regulation amending Regulation (EEC) No 2658/87 as regards the introduction of a simplified tariff treatment for the distance sales of goods and Regulation (EC) No 1186/2009 as regards the elimination of the customs duty relief threshold, COM(2023) 259 final, 17.5.2023.
- European Commission (2025a). Commission Staff Working Document accompanying the Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions – *A dynamic EU budget for the priorities of the future – the Multiannual Financial Framework 2028–2034*, SWD(2025) 570 final/2, 16.7.2025.
- European Commission (2025b). Proposal for a Council Decision on the system of own resources of the European Union and repealing Decision (EU, Euratom) 2020/2053, COM(2025) 574 final, 16.7.2025.
- European Commission (2025c). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – *A European Steel and Metals Action Plan*, COM (2025) 125 final, 19.3.2025.
- European Commission (2025d). *An Ambitious Budget for a Stronger Europe: 2028–2034*, https://ec.europa.eu/commission/presscorner/detail/en/ip_25_1847 (accessed: 16.07.2025).
- Eurostat (2025). *Waste Electrical and Electronic Equipment (WEEE) by Waste Management Operations – Open Scope, Six Product Categories (From 2018 Onwards)*, https://ec.europa.eu/eurostat/databrowser/view/env_waseleeos/default/table?lang=en (accessed: 16.07.2025).
- Kawecka-Wyrzykowska, E. (2020). Assessment of the European Commission's Proposals for Financing the EU Budget in 2021–2027, *International Journal of Management and Economics*, 56(3). DOI: 10.2478/ijme-2020-0018.
- Kawecka-Wyrzykowska, E. (2021). Changes in the Ways of Financing the EU Budget After 2021: Implications for Poland. In: *Poland in the European Union. Report 2021* (pp. 73–95), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.
- Kawecka-Wyrzykowska, E. (2025). Ocena propozycji nowych zasobów budżetu Unii Europejskiej z perspektywy celów polskiego budżetu In: *Integracja europejska w teorii i praktyce. Korzyści i wyzwania członkostwa Polski w Unii Europejskiej* (pp. 332–371), B. Mucha-Leszko, E. Kawecka-Wyrzykowska (Eds). Warsaw: PWE.

- KOBiZE (2024). *Raport z rynku CO₂*, https://www.kobize.pl/uploads/materialy/materialy_do_pobrania/raport_co2/2024/KOBiZE_Analiza_rynku_CO2_sierpie%C5%84_2024.pdf (accessed: 16.07.2025).
- Kowald, K., Pari, M. (2025). *Future of EU Long-Term Financing: Post-2027 Needs and How to Finance Them*, [https://www.europarl.europa.eu/RegData/etudes/BRIE/2025/767242/EPRS_BRI\(2025\)767242_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2025/767242/EPRS_BRI(2025)767242_EN.pdf) (accessed: 18.07.2025).
- Regulation (EU) 2023/956 of the European Parliament and of the Council of 10 May 2023 establishing a carbon border adjustment mechanism, OJ L 130, 16.5.2023.
- Sejm Analysis Office (2023). *Opinia w sprawie zmienionego wniosku dotyczącego decyzji Rady zmieniającej decyzję (UE, Euratom) 2020/2053 w sprawie systemu zasobów własnych Unii Europejskiej (COM (2023) 331 final)*, BAS-WASiE/WAPEiM-1772/23.
- Steinbach, A. (2023). Tax and Debt Financing the EU, *Intereconomics*, 58(6). DOI: 10.2478/ie-2023-0064.
- Verfassungsblog (2025). *Can the EU Levy Its Own Taxes?* <https://verfassungsblog.de/can-the-eu-levy-its-own-taxes/> (accessed: 18.07.2025).

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POLAND AND THE SUSTAINABLE DEVELOPMENT GOALS

Introduction

Unfavourable changes in the natural environment (such as climate change, pollution and environmental degradation), huge disparities in people's living standards, accompanied by a rise in poverty and inequality, as well as by growing threats to peace and justice, have prompted worldwide action to address these global challenges. In 2015, the United Nations (UN) adopted the Sustainable Development Goals (SDGs) as a universal call to end poverty, protect the planet and ensure that, by 2030, all people can enjoy peace and prosperity [UNDP, 2022a]. This means they have now been in place for a decade, with fewer than five years left to achieve them.

This paper aims to assess Poland's current performance and prospects in achieving the SDGs, and to compare them with other EU member states. It begins with a brief overview of the SDGs and the shift in the way they were perceived from treating them as peers to recognising a hierarchy among them, particularly in recent years. The second part presents EU-wide results across the environmental, social and economic dimensions of the SDGs, and the third describes a more detailed assessment of Poland's progress. The analysis draws on the 2025 SDG Index and Dashboards, published in the Sustainable Development Report 2025 [Sachs, Lafortune, Fuller, Jablonovski, 2025], which is widely regarded as the most comprehensive global review of SDG indicators.¹ The paper concludes with final observations.

¹ The global indicator framework for the SDGs was developed by the Inter-Agency and Expert Group on SDG Indicators (IAEG-SDGs) and adopted in 2017 [UN DESA, 2022]. The SDGs are accompanied by 169 targets and 231 indicators, which are used to measure progress towards their achievement.

1. What are the Sustainable Development Goals and how are they perceived?

The Sustainable Development Goals, also known as the Global Goals, comprise 17 goals (see Table 1) providing an overarching policy framework to make the world better and more sustainable. They were drafted at the United Nations Conference on Sustainable Development in Rio de Janeiro in 2012 and adopted in September 2015 by the United Nations General Assembly – that is, by all 193 UN member states. The SDGs succeeded the Millennium Development Goals, which aimed to combat the indignity of poverty [UNDP, 2022b]. They comprise universal goals that meet the urgent environmental, political and economic challenges facing the world. Their implementation officially began on 1 January 2016, with a target date of 2030 [UN General Assembly, 2015, p. 6].

The SDGs are to balance the three dimensions of sustainable development: economic, social and environmental, which are integrated and indivisible [UN General Assembly, 2015, p. 2]. To illustrate this, Table 1 brings together five different approaches from the literature to classifying the goals by dimension. Generally, some goals were clearly allocated to a single dimension (SDGs 4–6, 8–9, 13–15), while others were assigned to at least two of them (SDGs 1–2, 7, 10–12, 16–17). SDG 7 (Affordable and Clean Energy) was variously placed in all three categories, and SDGs 16 (Peace, Justice and Strong Institutions) and 17 (Partnerships for the Goals) were left outside the basic classification by some authors. This lack of a clear division makes it harder to assess progress within each dimension.

Achieving balance between the three dimensions is not straightforward also because understandings of sustainable development vary, not least because countries are at different levels of economic development (Table 2). Broadly speaking, developed, industrialised countries tend to prioritise environmental protection and restoration. By contrast, in many developing countries, the social dimension – ensuring equitable access to resources and technology, as well as fair opportunities for economic development – takes precedence [Sociology.Institute, 2025].

Table 1. The Sustainable Development Goals and their classification into social, economic and environmental dimensions

	Goal	Short name	Dimension				
			Rockström and Sukhdev, 2016	de León et al., 2021	D'Adamo et al., 2021	Palomares et al., 2021	Pal, Sarker, Odhikari, 2022
SDG 1	End poverty in all its forms everywhere	No poverty	Social	Social	Social	Economic	Economic
SDG 2	End hunger, achieve food security and improved nutrition and promote sustainable agriculture	Zero hunger	Social	Social	Social	Economic	Social
SDG 3	Ensure healthy lives and promote well-being for all at all ages	Good health and well-being	Social	Social	Social	Economic	Social
SDG 4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	Quality education	Social	Social	Social	Social	Social
SDG 5	Achieve gender equality and empower all women and girls	Gender equality	Social	Social	Social	Social	Social
SDG 6	Ensure availability and sustainable management of water and sanitation for all	Clean water and sanitation	Environmental	Environmental	Environmental	Environmental	Environmental
SDG 7	Ensure access to affordable, reliable, sustainable and modern energy for all	Affordable and clean energy	Social	Economic	Economic	Environmental	Environmental
SDG 8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Decent work and economic growth	Economic	Economic	Economic	Economic	Economic
SDG 9	Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation	Industry, innovation and infrastructure	Economic	Economic	Economic	Economic	Economic
SDG 10	Reduce inequality within and among countries	Reduced inequality	Economic	Economic	Social	Social	Economic

cont. Table 1

	Goal	Short name	Dimension				
			Rockström and Sukhdev, 2016	de León et al., 2021	D'Adamo et al., 2021	Palomares et al., 2021	Pal, Sarker, Odhikari, 2022
SDG 11	Make cities and human settlements inclusive, safe, resilient and sustainable	Sustainable cities and communities	Social	Economic	Economic	Social	Social
SDG 12	Ensure sustainable consumption and production patterns	Responsible consumption and production	Economic	Economic	Economic	Environmental	Economic
SDG 13	Take urgent action to combat climate change and its impacts	Climate action	Environmental	Environmental	Environmental	Environmental	Environmental
SDG 14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	Life below water	Environmental	Environmental	Environmental	Environmental	Environmental
SDG 15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation; and halt biodiversity loss	Life on land	Environmental	Environmental	Environmental	Environmental	Environmental
SDG 16	Promote peaceful and inclusive societies for sustainable development; provide access to justice for all and build effective, accountable and inclusive institutions at all levels	Peace, justice, and strong institutions	Social	Institutions and partnerships	Social	Social	Social
SDG 17	Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development	Partnerships for the goals	–	Institutions and partnerships	Social	Social	Social

Source: Author's own compilation based on UN General Assembly [2015, p. 14]; United Nations [2022]; Rockström and Sukhdev [2016]; de León et al. [2021]; D'Adamo, Gastaldi, Imbriani, Morone [2021]; Palomares et al. [2021]; Pal et al. [2022].

Table 2. Perception of sustainable development in developed and developing countries

Group of countries	Priorities
Developed countries (mainly Europe, North America, parts of Asia)	- Environmental restoration and technological innovation (shifts towards renewable energy, green technologies and circular economies); efforts to mitigate past environmental damage - Environmental conservation (protecting forests, oceans and wildlife); reducing CO₂ emissions
Developing countries (Africa, Asia, Latin America)	- Equitable access to resources and technology, fair economic opportunities and lifting people out of poverty - Environmental issues are important, but typically not the immediate priority

Source: Author's own compilation based on Sociology.Institute [2025].

The goals were originally presented using 17 icons, evoking associations with an advent calendar or a coloured wheel (a 'doughnut' chart) [United Nations, 2022]. This single-level presentation has been criticised for failing to show how the goals are interconnected. It can imply that the goals are detached from each other, while in reality many of them interact; progress on one may either undermine or amplify progress on others [Holmström, 2020]. It can also suggest that the goals can be tackled sequentially and separately. Similar criticisms apply to the familiar 'three pillars' depiction of the SDGs' dimensions (see Figure 1).

To convey how the three dimensions intersect, a Venn diagram is often used, with each circle representing one of the pillars (see Figure 1). This model implies the three domains are of similar and equal importance to sustainable development, and has been also criticised [de León et al., 2021]. Alternative representations include:

- The 'wedding cake' model, which treats the biosphere as the most important element of the whole system and a precondition for social sustainability, with the economy only as a means to deliver social sustainability [Holmström, 2020; Rockström, Sukhdev, 2016].
- The nested sustainability model, which places the economic domain of sustainable development within the social domain, and both within the environmental domain – highlighting that economic development is not an end in itself but a means to improve people's health and well-being [de León et al., 2021] (a set of nested circles, with the environment as the outermost layer; see Figure 1).

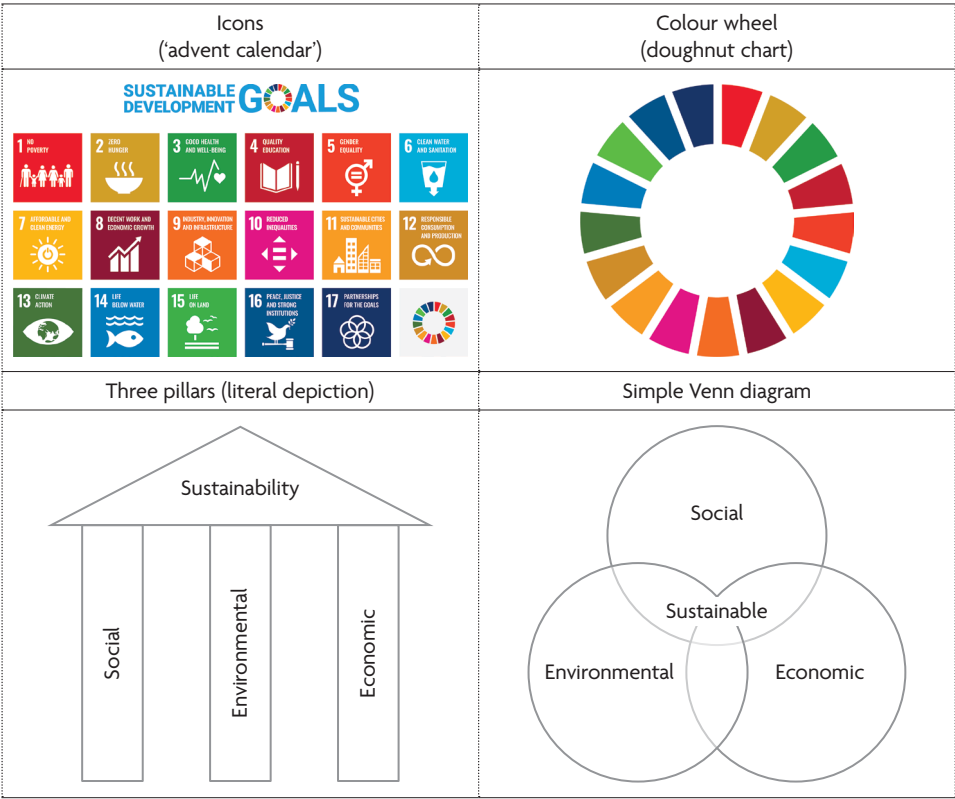
The COVID-19 pandemic strengthened the need to rethink the relationships between the three dimensions of sustainable development. While it catalysed some short-term positive changes and opened up opportunities to reconfigure those relationships, overall, it was detrimental to SDG progress, especially on the

socio-economic goals. It reversed earlier gains, exacerbated pre-existing inequalities and slowed progress on the 2030 Agenda, its goals and targets [UN General Assembly, 2020; de León et al., 2021]. Naidoo and Fisher [2020] estimate that:

- Eight SDGs were under threat (SDGs 2, 4, 6, 7, 8, 10, 11, 13).
- Five were partially under threat (SDGs 5², 12, 14, 16, 17).
- Three experienced mixed effects – both adverse impacts and mitigating influences (SDGs 1³, 3, 15).
- One saw its challenges exacerbated (SDG 9⁴).

As for the targets, two-thirds were judged either to be under threat or not well-placed to mitigate the pandemic’s impacts [Naidoo, Fisher, 2020].

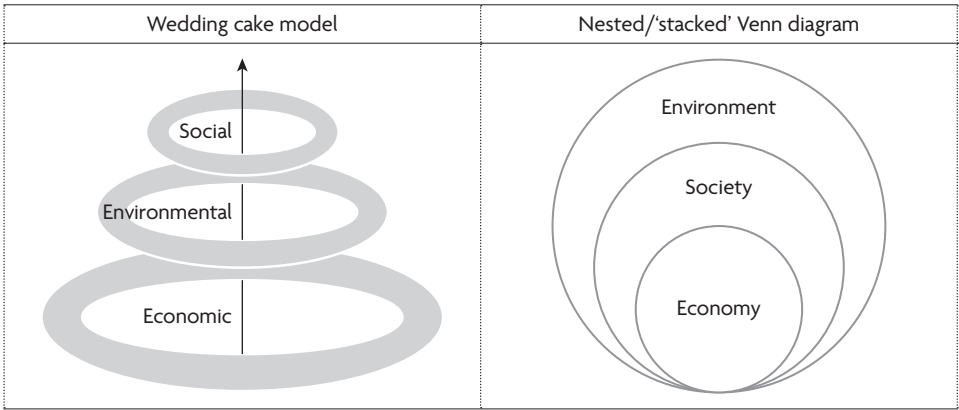
Figure 1. Alternative ways of presenting the SDGs



² Some targets were affected.

³ Most targets under the Goal are considered unachievable. Achieving some of them would have helped to mitigate the impacts of the pandemic.

⁴ Achieving the target would have exacerbated the impacts of the pandemic.



Source: Author's own compilation based on UNDGC [2019]; Purvis, Mao, Robinson [2019]; de León [2021].

In these circumstances – a weak global economy, sharply higher spending on basic, country-specific needs and a likely diversion of funds away from existing SDG efforts – some have proposed reducing the number of targets and adopting a small set of priorities⁵ (replacing a ‘forest of targets’) that could be achieved in a less connected world with a sluggish global economy [Naidoo, Fisher, 2020]. To date, the UN has made no changes to originally adopted SDGs.

2. Implementation of the SDGs in EU member states

Introductory remarks

Progress towards the SDGs can be assessed using official SDG indicators, voluntary national reviews and reports by various institutions and organisations. The literature documents a range of approaches to measuring SDGs implementation. In practice, assessment is challenging, mainly because of data constraints. Some gaps prevent global comparisons, the number of data points needed to track all SDG targets is vast, some indicators must be inferred, and for others no methodology or data yet exist.⁶ The SDG Index and Dashboards⁷ are widely considered to be the

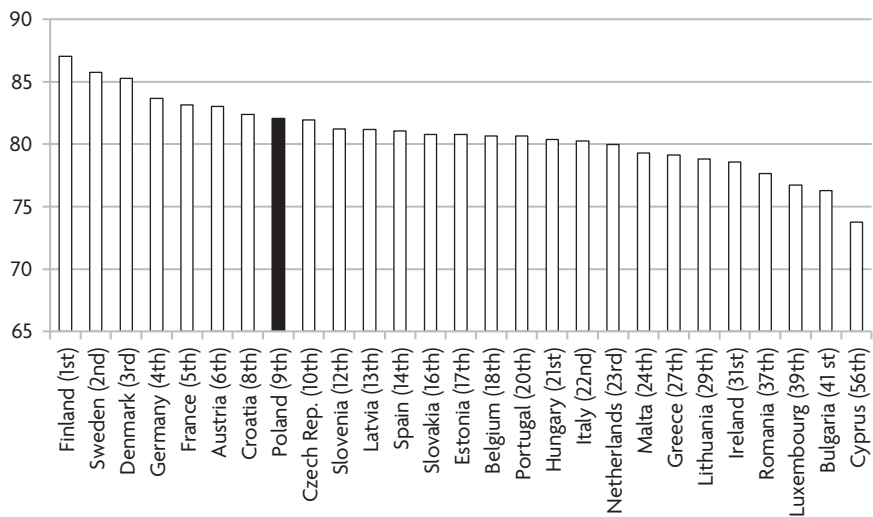
⁵ According to the proposal, each goal and target should be assessed against three criteria: whether it is a post-COVID-19 priority; whether it focuses on development rather than growth; and whether the pathway to achieving it is resilient to global disruptions [Naidoo, Fisher, 2020].
⁶ Some limitations were discussed in detail, for example, in report by Goessmann, Idele, Jauer, Loinig, Melamed and Zak [2023].
⁷ The annual SDG Index and Dashboards were launched on 20 July 2016 by the Sustainable Development Solutions Network (SDSN) and the Bertelsmann Stiftung. The SDSN has operated since 2012 under the auspices of the UN Secretary-General. The methodology has been peer-reviewed

most comprehensive global review of SDG indicators. A few methodological remarks regarding these indicators are worth noting. First, the SDG Index does not fully reflect the impact of ongoing wars and other geopolitical and security crises [Sachs et al., 2025, p. 48]. Second, the SDG Index assesses each country’s overall performance across the 17 SDGs, while the accompanying SDG trend indicators track progress towards each goal since implementation (2015). Third, each goal carries equal weight in the Index; however, a country’s score for a given goal is based on the two targets on which it performs worst [Sachs et al., 2025, pp. 49–60].

Results

Looking at the past ten years, EU member states perform strongly on the SDGs, and this remains the case in 2025.⁸ Nonetheless, major challenges persist, not least due to unsustainable consumption patterns and negative international spillover effects [Sachs et al., 2025].

Figure 2. Implementation of the SDGs in EU member states according to the SDG Index – overall score and ranking, 2025



Source: Author’s own compilation based on Sachs et al. [2025].

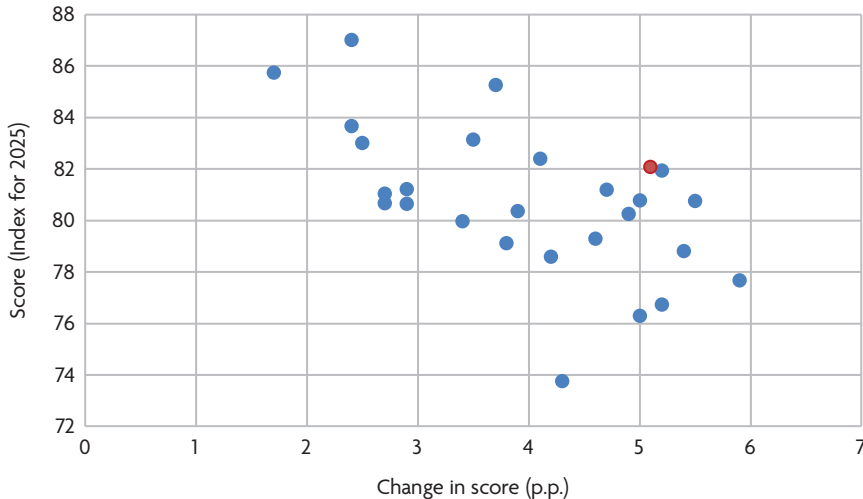
and was audited in 2019 by the European Commission’s Joint Research Centre [SDG Transformation Center, 2016].

⁸ On average, the world is far off track on the SDGs. It appears that none of the 17 goals will be achieved by 2030. The main obstacles include conflict, structural vulnerabilities and limited fiscal space. Only 17% of targets are currently on track globally [Sachs et al., 2025, p. VIII].

According to the 2025 SDG Index, nine EU member states are in the global top ten and a further seven rank 11th–20th. Finland, Sweden and Denmark lead the table. Cyprus is the lowest-ranked EU member state, in 56th place (Figure 2).

Since the SDGs were launched, the largest improvements in SDG Index scores among EU countries – gains of more than five percentage points – have been recorded in Romania (5.9 p.p.), in Estonia, Lithuania, the Czech Republic, Luxembourg and Poland (5.1–5.5 p.p.; see Figure 3). By contrast, the smallest gains were observed in Sweden (1.7 p.p.) and in Germany, Finland, Austria, Belgium and Spain (2.4–2.7 p.p.). Most countries in this latter group were already among the best performers, so even modest improvements further consolidate their high ranking.

Figure 3. SDG performance in EU member states – overall score (2025) and change since 2015 (based on headline indicators)



Note: The red dot marks Poland.

Source: Author's own compilation based on Sachs et al. [2025].

The EU's frontrunners have already achieved four (Sweden and Denmark) or three (Finland) goals out of the 17 set for 2030 (see Table 3). Eight countries have achieved two SDGs so far, and ten have achieved one. Six member states have not yet achieved any SDG. On current trends, two member states (Croatia and the Netherlands) are on track to achieve three additional goals by 2030, two (France and Latvia) are expected to reach two more, and thirteen are likely to add one more. In other words, no member state is on course to achieve a majority of the 17 SDGs by 2030. Based on performance to date, Croatia and the Netherlands are expected

to achieve five SDGs in total by 2030; Denmark, Finland and Sweden four; Austria, Cyprus, the Czech Republic, France and Malta three; and Belgium, Bulgaria, Latvia, Luxembourg, Poland, Portugal, Romania and Slovenia two. The remaining countries are likely to achieve one, or none at all (as in Lithuania's case).

All member states face challenges or significant challenges on most goals. With the exception of Romania, every member state grapples with at least some major challenges. The most difficult situation occurs in Cyprus, Italy, Latvia, Luxembourg and Spain (each facing five major challenges), followed by Estonia, Ireland, Malta, the Netherlands, Portugal, Slovakia, Slovenia and Sweden (each facing four). Croatia and Hungary face one major challenge each; Austria, Bulgaria, Denmark, France and Germany face two. Poland faces three major challenges, as do Belgium, the Czech Republic, Finland, Greece and Lithuania.

In terms of individual goals, the environmental dimension is the most problematic. For SDG 13 (Climate Action) and SDG 14 (Life Below Water), the majority of member states face major implementation challenges – nineteen out of 27 for SDG 13 and eleven out of 22⁹ coastal member states for SDG 14 – and no member state has achieved either goal. The picture is more positive for the other two environmental goals: Finland and Sweden have achieved SDG 6 (Clean Water and Sanitation), and three member states – Bulgaria, the Czech Republic and Poland – have achieved SDG 15 (Life on Land). Three other countries (Luxembourg, Spain and Sweden) face major challenges on SDG 15.

The social goals look more encouraging, though few are likely to be fully met by 2030. Nineteen member states have achieved SDG 1 (No Poverty), and three have achieved SDG 4 (Quality Education) and SDG 5 (Gender Equality). The greatest difficulties are with SDG 2 (Zero Hunger): 17 of the 27 member states face major challenges and none has achieved the goal. SDG 17 (Partnerships for the Goals) is also demanding, with nine member states facing major challenges. The remaining social goals are marked by a mix of challenges and significant challenges.

Among the economic goals, the weakest results are for SDG 12 (Responsible Consumption and Production), where 23 of 27 member states face major challenges and their progress is stagnating. Three countries face serious problems with SDG 9 (Industry, Innovation and Infrastructure) and one with SDG 10 (Reduced Inequalities). On the other hand, five countries have achieved SDG 7 (Affordable and Clean Energy), one has achieved SDG 9 and another has achieved SDG 10.

⁹ Austria, the Czech Republic, Hungary, Slovakia and Luxembourg were not assessed against SDG 14 (Life Below Water) because they are landlocked countries.

Table 3. SDGs implementation in EU member states, 2025 results

	Environmental dimension					Social dimension					Economic dimension						
	SDG6	SDG13	SDG14	SDG15	SDG1	SDG2	SDG3	SDG4	SDG5	SDG11	SDG16	SDG17	SDG7	SDG8	SDG9	SDG10	SDG12
Austria	S	S	x	S	S	S	M	S	M	M	S	M	T	M	T	D	S
Belgium	M	S	S	S	T	S	M	S	M	M	S	S	M	M	M	T	S
Bulgaria	S	S	S	M	T	M	M	S	S	M	S	M	M	M	M	D	S
Croatia	M	D	S	S	T	M	M	M	M	T	S	S	T	M	M	T	D
Cyprus	S	D	S	M	S	S	S	T	S	S	S	S	M	M	M	T	S
Czech Rep.	M	M	x	M	T	S	M	M	M	T	S	M	M	M	M	M	S
Denmark	M	M	S	M	T	S	M	S	M	M	M	M	T	M	M	S	S
Estonia	M	M	M	M	M	S	M	S	M	T	M	M	M	M	M	S	S
Finland	M	S	S	S	M	S	M	S	M	M	M	S	T	S	T	S	S
France	M	M	M	M	S	S	M	S	T	M	S	M	M	M	M	T	S
Germany	M	M	M	S	D	S	M	S	S	T	M	M	M	M	M	D	S
Greece	M	M	M	M	T	S	M	S	S	M	S	M	M	M	M	M	D
Hungary	M	S	x	M	M	S	M	S	M	M	S	S	M	M	M	S	S
Ireland	S	S	M	S	T	S	M	S	M	M	S	M	M	M	M	M	D
Italy	S	M	S	M	T	S	M	S	M	M	M	S	M	M	M	S	S
Latvia	M	S	M	M	M	S	M	S	M	T	M	M	T	M	M	S	S
Lithuania	M	D	S	M	M	S	M	S	M	M	M	S	M	S	M	S	S
Luxembourg	S	M	x	M	T	S	M	M	M	M	S	M	T	M	M	S	S
Malta	S	S	S	T	S	S	M	S	M	M	S	M	M	M	M	D	M
Netherlands	S	M	S	S	T	S	M	S	T	T	S	S	M	M	M	S	T
Poland	S	M	S	M	T	S	M	M	M	M	S	M	M	M	M	M	S
Portugal	M	M	D	S	T	S	M	S	M	M	S	M	T	M	M	S	S
Romania	M	S	S	S	T	M	M	T	M	M	S	M	M	S	M	M	D
Slovakia	M	S	x	M	M	S	M	M	M	M	S	M	M	M	M	M	S
Slovenia	M	S	S	S	T	S	M	S	S	T	M	M	M	M	M	M	S
Spain	S	M	M	S	M	M	M	M	T	M	S	S	M	M	M	M	S
Sweden	S	S	M	M	S	S	M	M	T	M	S	M	T	S	M	S	S

Notes:

- Colours: green indicates the goal has been achieved; yellow that challenges remain; orange that challenges are significant; red that challenges are major.
 - Letters: T – on track or maintaining SDG achievement; M – situation is moderately improving; S – performance is stagnating; D – performance is decreasing.
- Source: Author's own compilation based on Sachs et al. [2025].

3. Detailed results for Poland

On the 2025 SDG Index, Poland ranks ninth among the 167 UN member states assessed and eighth among EU countries, with an overall score of 82.08 (out of 100). This is about five percentage points lower than Finland's score (87.02), which tops the ranking. Norway and Croatia, which sit just ahead of Poland, score only slightly higher (by 0.6 and 0.3 percentage points, respectively). On the other hand, Poland is only marginally ahead of the Czech Republic and Latvia. Compared with Cyprus, the lowest-ranked EU member state, at 73.76, Poland's score is more than eight percentage points higher. Poland has improved over time, narrowing the gap with Finland while maintaining a clear lead over the lowest-ranked EU country.

An assessment of Poland's progress across individual SDGs presents a mixed picture (see Table 3). Poland has fully achieved two SDGs. For most goals (12), trends over the past decade are positive but only moderately, and not sufficient to meet the targets. For the remaining goals (SDGs 2, 6, 12, 14 and 16), performance has been broadly flat since 2015 – and, worryingly, three of these face major challenges. Poland has not recorded deterioration on any goal relative to 2015.

In this section, Poland's progress across three dimensions – environmental, social and economic – is presented, starting with the environmental goals, which are widely regarded as fundamental, followed by the social and economic goals. Given differences in how the literature allocates individual goals to these dimensions (see Table 1), each SDG is assigned here to the dimension in which it most frequently appears across the sources reviewed.

In terms of the environmental dimension, Poland performs best on SDG 15 (Life on Land) – it has already achieved the goal, including all associated targets. By contrast, performance on SDG 14 (Life Below Water) is weak, with major challenges to meeting the goal by 2030. Some targets have been met – 'mean area that is protected in marine sites important to biodiversity', 'fish caught that are then discarded' and 'marine biodiversity threats embodied in imports' – but others remain problematic, with significant challenges for 'fish caught by trawling or dredging' and major challenges for the 'Clean Waters score' and 'fish caught from overexploited or collapsed stocks'. Trends on these are largely stagnant or deteriorating.

For SDG 13 (Climate Action), there has been moderate improvement since 2015, but significant challenges persist. The most problematic targets are 'CO₂ emissions from fossil fuel combustion and cement production' (major challenges; progress stagnant) and 'CO₂ emissions embodied in imports' (significant challenges; performance worsening). The 'Carbon Pricing Score' still requires improvement,

though Poland is on track to achieve it. The target for 'CO₂ emissions embodied in fossil fuel exports' has been achieved.

Challenges also remain under SDG 6 (Clean Water and Sanitation), particularly for four targets: 'Population using at least basic drinking water services', 'Population using safely managed water services', 'Freshwater withdrawal' and 'Scarce water consumption embodied in imports'. Performance on the first two has deteriorated since 2015. Overall, progress on SDG 6 is stagnating.

Poland's performance on the social dimension of sustainable development is also mixed. SDG 1 (No Poverty) has been fully achieved, with all targets met. Poland still faces challenges on SDG 3 (Good Health and Well-being), SDG 5 (Gender Equality) and SDG 11 (Sustainable Cities and Communities), though in all three cases results have improved moderately since 2015. Most targets under SDG 3 have been achieved; relatively weaker outcomes persist for the age-standardised death rate, life expectancy at birth and the gap in self-reported health status by income. Under SDG 5, two targets have been achieved – the ratio of female-to-male mean years of education and the ratio of female-to-male labour force participation – while three require further progress: demand for family planning satisfied by modern methods; seats held by women in the national parliament; and the gender pay gap. For SDG 11, Poland has achieved three targets: the proportion of the urban population living in slums; the share of the urban population with access to points of interest within a 15-minute walk; and the proportion of the urban population with convenient access to public transport in cities. It still faces challenges in access to piped improved water sources (with a declining trend in recent years), the rent-overburden rate (only moderate improvement) and the annual mean concentration of PM2.5.

For the next three goals – SDG 4 (Quality Education), SDG 16 (Peace, Justice and Strong Institutions) and SDG 17 (Partnerships for the Goals) – significant challenges remain. Trends are improving for SDGs 4 and 17, while performance on SDG 16 is broadly stagnant. Under SDG 4, the main weakness is in PISA mathematics scores, which have fallen since 2015; other targets linked to this goal have been achieved. For SDG 17, the most problematic areas are international concessional public finance and government spending on health and education, where major or notable challenges coincide with stagnating performance. By contrast, Poland has achieved the targets for the Corporate Tax Haven Score, shifted profits of multinationals and the Statistical Performance Index, and is on track for the Financial Secrecy Score. Under SDG 16, most targets are achieved, but Poland underperforms on the Corruption Perceptions Index, exports of major conventional weapons,

timeliness of administrative procedures, and lawful and adequately compensated expropriations. In all four areas, trends have worsened over the past decade.

SDG 2 (Zero Hunger) faces major challenges and shows stagnating progress. Although some targets have been achieved – including the prevalence of undernourishment; stunting and wasting among children under five; minimum dietary diversity among children aged 6–23 months; and cereal yield – substantial further effort is needed on the prevalence of obesity, the Human Trophic Level and the Sustainable Nitrogen Management Index (all showing major challenges with worsening performance), as well as yield gap closure (major challenges).

None of the goals assigned to the economic dimension has yet been achieved in Poland. Challenges remain under SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation and Infrastructure) and SDG 10 (Reduced Inequalities), although there has been moderate improvement in recent years. For SDG 8, the most problematic targets are effective guarantees for fundamental labour rights and fatal work-related accidents embodied in imports (both showing a decreasing trend), as well as victims of modern slavery. By contrast, Poland has already achieved the targets for the adjusted GDP growth index, the share of adults with an account at a bank or other financial institution or with a mobile-money service, and the employment-to-population ratio.

Challenges under SDG 9 (Industry, Innovation and Infrastructure) relate to total patent applications, which have declined since 2015, as well as to the gap in internet access by income and R&D expenditure, both of which are on track to be achieved. For SDG 10 (Reduced Inequalities), the key concern is the elderly poverty rate, where performance is worsening. Most other targets for these two goals have been achieved.

SDG 7 (Affordable and Clean Energy) still presents major challenges. Major challenges persist in CO₂ emissions from fuel combustion, and there are further challenges with the share of renewable energy in total energy consumption; performance on both indicators has stagnated since the Goals were adopted. By contrast, the targets on access to electricity and access to clean fuels and technologies for cooking have been achieved.

Within the economic dimension, the weakest area is SDG 12 (Responsible Consumption and Production), where major challenges persist and progress has stalled. While Poland has met the targets on electronic waste that is not collected and non-recycled municipal solid waste, several others are far from attainment. Production-based air pollution and nitrogen emissions pose major challenges, as

do nitrogen emissions embodied in imports and exports of plastic waste. Continued stagnation on these indicators is a cause for concern.

Overall, Poland has achieved 69 of the 123 targets assessed in the report and is on track to achieve a further seven. Progress is moderate on five targets, stagnant on 20 and worsening on 22. For 25 targets, no progress information is available.

Conclusions

The Sustainable Development Goals are a set of internationally agreed objectives to make the world better and more sustainable. They span environmental, social and economic domains, allowing every country to reach at least some of them. The COVID-19 pandemic revived discussion about prioritisation: although the goals were often treated as equal, a growing body of work argues that environmental goals are fundamental to sustainable development. Reflecting this shift, this chapter assessed the progress of EU member states – including Poland – across the three dimensions.

EU member states rank highly on implementation of the SDGs overall, yet even these countries face substantial challenges on several goals – notably SDG 2 (Zero Hunger), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action) and, for many countries, SDG 15 (Life on Land). Finland, Sweden and Denmark top the global SDG ranking.

Poland performs relatively well by international standards. It ranks ninth among the UN member states assessed and eighth within the EU, with an overall score of 82.08 – more than four-fifths of the way to full achievement on average. Poland has improved its standing since the SDGs were adopted and narrowed the gap to the leader, Finland. It has fully achieved two goals – one environmental (Life on Land) and one social (No Poverty) – but is not on track to achieve any additional goals by 2030. Major challenges remain on three goals: SDG 14 (Life Below Water), SDG 2 (Zero Hunger) and SDG 12 (Responsible Consumption and Production).

Compared with many other member states, Poland's environmental performance is relatively good. Most EU countries have not achieved any environmental goal and are unlikely to do so by 2030. Poland is among the few that have met at least one, alongside Bulgaria, the Czech Republic, Finland and Sweden. Almost all member states – with the exception of Hungary, Latvia and Romania – face at least one environmental goal with major challenges; in seven countries, including Sweden, two environmental goals are marked as major challenges.

The picture is less positive for the social goals. Poland has achieved one of the eight social goals. Five EU member states are in a better position, having achieved two. In this dimension, Poland faces a major challenge on one goal (as do eight other countries), whereas nine member states face no major challenges. Overall, Poland is moving in the right direction, but its efforts remain insufficient, with only moderate improvement over the past decade.

Poland has not achieved any of the economic SDGs and is not on track to meet any of them by 2030; fourteen other member states are in the same position. Denmark (two goals achieved), together with Austria, Finland, the Netherlands, Portugal and Sweden, has the strongest results on the economic dimension among EU member states. Poland faces a major challenge on one economic goal, as do most member states, and progress in this area is largely stagnant.

The good news is that the Sustainable Development Goals are an integral part of the European Commission's political agenda and are embedded in its proposals, policies and strategies. They are at the heart of policymaking across sectors, in both the internal market and external relations. Policy initiatives under the European Green Deal are linked to 12 of the 17 SDGs [Schwabe, 2022, p. 82], increasing the chances of accelerating their implementation in the EU.

The bad news is that no country is on track to achieve the SDGs by 2030 without stepping up efforts. The outlook may be even worse than presented. The 2025 Sustainable Development Report does not fully capture the impact of ongoing wars and other geopolitical and security crises, which have shifted policy attention towards short-term issues and away from medium- and long-term objectives, including the SDGs. In such circumstances, the risk of a slowdown – or even stagnation – in SDG implementation is high. Progress on some goals, including SDG 7 (Affordable and Clean Energy), may accelerate as a result of the European Green Deal and REPowerEU, while others may slow, such as SDG 2 (Zero Hunger).

REFERENCES

- D'Adamo, I., Gastaldi, M., Imbriani, C., Morone, P. (2021). Assessing Regional Performance for the Sustainable Development Goals in Italy, *Scientific Reports*, 11(1), article 24117. DOI: 10.1038/s41598-021-03635-8.
- de León, E.A., Shriwise, A., Tomson, G., Morton, S., Lemos, D.S., Menne, B., Dooris, M. (2021). Beyond Building Back Better: Imagining a Future for Human and Planetary Health, *The Lancet Planetary Health*, 5(11), pp. e827–e839. DOI: 10.1016/S2542-5196(21)00262-X.

- Goessmann, C., Idele, P., Jauer, K., Loinig, M., Melamed, C., Zak, T. (2023). *Pulse of Progress: Mapping the State of Global SDG Data in 2023*. New York: United Nations. DOI: 10.3929/ethz-b-000630718.
- Holmström, Ch. (2020). *Systemic Approach to Agenda 2030*, <https://www.timerepaircorp.com/blog/systemic-approach-to-agenda-2030> (accessed: 09.08.2022).
- Naidoo, R., Fisher, B. (2020). *Reset Sustainable Development Goals for a Pandemic World*. *Nature*, 583(7815), pp. 198–201. DOI: 0.1038/d41586-020-01999-x.
- Pal, S., Sarker, P.Ch., Odhikari, S. (2022). Raising Perceptions on Corporate Social Responsibility for Achieving Sustainable Development Goals, *Business and Economic Research*, 12(1), pp. 1–16. DOI: 10.5296/ber.v12i1.19223.
- Palomares, I., Martínez-Cámara, E., Montes, R., García-Moral, P., Chiachio, M., Chiachio, J., Alonso, S., Melero, F., Molina, D., Fernández, B., Moral, C., Marchena, R., Vargas, J., Herrera, F. (2021). A Panoramic View and SWOT analysis of artificial intelligence for achieving the Sustainable Development Goals by 2030: Progress and Prospects, *Applied Intelligence*, 51(9), pp. 1–31. DOI: 10.1007/s10489-021-02264-y.
- Purvis, B., Mao, Y., Robinson, D. (2019). Three Pillars of Sustainability: In Search of Conceptual Origins, *Sustainability Science*, 14, pp. 681–695. DOI: 10.1007/s11625-018-0627-5.
- Rockström, J., Sukhdev, P. (2016). *How Food Connects All the SDGs* [Keynote speech at Stockholm EAT Food Forum], <https://www.stockholmresilience.org/research/research-news/2016-06-14-how-food-connects-all-the-sdgs.html> (accessed: 17.08.2022).
- Sachs, J.D., Lafortune, G., Fuller, G., Iablonski, G. (2025). *Financing Sustainable Development to 2030 and Mid-Century*. *Sustainable Development Report 2025*. Paris: SDSN; Dublin: Dublin University Press. DOI: 10.25546/111909.
- Schwabe, M. (2022). Economy That Works for People: Is Poland on Track to Achieve the Economy-Related Sustainable Development Goals by 2030? In: *Poland in the European Union. Report 2022* (pp. 79–101), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.
- SDG Transformation Center (2016). *Introducing the SDG Index & Dashboards*, <https://www.sdgindex.org/news/introducing-the-sdg-index-and-dashboards/> (accessed: 09.10.2022).
- Sociology.Institute (2025). *Divergent Perspectives on Sustainable Development: Developed vs Developing Countries*, <https://sociology.institute/india-democracy-development/sustainable-development-perspectives-developed-vs-developing/> (accessed: 16.10.2025).
- Tracking Progress (2022). *Global SDG Data & Indicators at Year Five: Are We on the Right Track?* <https://sdg.tracking-progress.org/wp-content/uploads/sites/9/2020/05/Global-SDG-Data-Indicators-at-Year-5-Indicator-Analysis.pdf> (accessed: 15.06.2022).
- UN General Assembly (2015). *Transforming our World: The 2030 Agenda for Sustainable Development*, <https://docs.un.org/en/A/res/70/1> (accessed: 18.08.2022).
- UN General Assembly (2020). *Draft Omnibus Resolution on the COVID-19 Pandemic*, <https://www.un.org/pga/74/2020/09/10/draft-omnibus-resolution-on-the-covid-19-pandemic-2/> (accessed: 10.08.2022).
- UNDESA (2022). *SDG Indicators*, <https://unstats.un.org/sdgs/indicators/indicators-list/> (accessed: 12.09.2022).

- UNDGC (2019). *Sustainable Development Goals: Guidelines for the Use of the SDG Logo Including the Colour Wheel, and 17 Icons*, https://www.un.org/sustainabledevelopment/wp-content/uploads/2019/01/SDG_Guidelines_AUG_2019_Final.pdf (accessed: 18.08.2022).
- UNDP (2022a). *What Are the Sustainable Development Goals*, <https://www.undp.org/sustainable-development-goals> (accessed: 09.10.2022).
- UNDP (2022b). *Sustainable Development Goals: Background on the Goals*, <https://www.undp.org/sdg-accelerator/background-goals> (accessed: 09.10.2022).
- United Nations (2022). *Sustainable Development Goals – Communications Materials*, <https://www.un.org/sustainabledevelopment/news/communications-material/> (accessed: 18.08.2022).

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THE NEW APPROACH TO EU INDUSTRIAL POLICY. THE CASE OF THE NET-ZERO INDUSTRY ACT AND POTENTIAL CONSEQUENCES FOR POLAND

Introduction

There has been a radical change in the EU's approach to industrial policy in recent years. Firstly, industrial policy was only introduced to the Treaty establishing the European Community at the beginning of the 1990s. At that time, there was a belief in the superiority of a horizontal approach to industrial policy, which focused on solving problems regardless of industry, over the sectoral approach that had prevailed from the 1960s to the 1990s. However, recently, especially after the 2008–2009 financial crisis, the COVID-19 pandemic and the current energy crisis caused by the war in Ukraine, there has been a shift towards a mission-oriented approach to industrial policy, focused on specific goals such as reducing gas emissions or environmental pollution. Regardless of the approach, EU industrial policy should be subordinate to the Treaty's objective of creating conditions that improve the competitiveness of EU industry.

In response to the need for a more active and proactive industrial policy, the European Commission has introduced a series of sector-specific legal acts to regulate particular areas of economic activity, including the Net-Zero Industry Act (NZIA) [Regulation (EU) 2024/1735]. The NZIA is the EU's political response to the US Inflation Reduction Act of August 2022 [IRA, 2022]. The latter allows subsidies for

the production of clean technologies and support for the demand for such devices, provided they are manufactured exclusively within the United States [Ambroziak, Przeździecka, 2024a]. In response to this, the European Council adopted conclusions a few months later, in which it underlined the importance of safeguarding Europe's economic, industrial and technological base and of preserving the global level playing field [European Council, 2022]. The focus was primarily on an ambitious European industrial policy to make Europe's economy fit for the green and digital transitions and reduce strategic dependencies, particularly in the most sensitive areas, while ensuring a level playing field. Therefore, this addressed the main goals of the twin transitions being pursued at the European level despite successive external shocks, as well as the EU's dependency on third countries, which became particularly evident during the aforementioned crises [Ambroziak, Przeździecka, 2024b]. In this context, the European Council invited the Commission to conduct an analysis and present proposals by the end of January 2023 with a view to mobilising all relevant national and EU tools and improving framework conditions for investment, including through streamlined administrative procedures. This was a clear call for the Commission to propose solutions within two months, enabling the use of available national and European tools to make the EU more attractive for investment. In such a short timeframe, the Commission could not deploy additional financial resources or introduce administrative rules to facilitate the operations of existing businesses and new investors in the EU.

Under pressure from several EU member states advocating more flexible state aid rules, the European Commission opted for simple and swift action: it relaxed the rules on state aid, entering the race for subsidies to increase the EU's investment appeal for clean-tech projects. To that end, the European Commission amended the Temporary Crisis and Transition Framework (TCTF) for State Aid measures to support the economy following the Russian aggression against Ukraine, adding new areas eligible for state support for investment in manufacturing projects based on zero-emission technologies across all EU member states [European Commission, 2023]. This occurred despite the fact that in its conclusions the European Council clearly recalled in that context the need for a coordinated response to enhance Europe's economic resilience and its global competitiveness while preserving the integrity of the single market [European Council, 2022]. One safeguard incorporated into the solution introduced by the Commission is the duration of the new rules, set to last until the end of 2025. However, the Commission issued the Framework for State Aid measures to support the Clean Industrial Deal (CISAF) [European Commission, 2025a], which, apart from aid to accelerate the rollout of clean energy

and support electricity costs, and aid for decarbonisation of industry, introduced conditions of admissibility of aid to ensure sufficient manufacturing capacity in clean technologies [European Commission, 2025b].

As competences in the field of industrial policy have not been transferred to the EU level, EU member states, including Poland, have full autonomy in industrial policy at the national level. The only exception to this rule is state aid, which is particularly important. While EU member states ultimately decide whether to grant financial support to specific entrepreneurs, the European Commission decides whether support may be granted and, if so, on what conditions. This is intended to limit or eliminate distortions of competition in the European single market. However, recent years have seen new legal solutions that have led to larger and richer member states granting particularly intensive aid compared to smaller and less wealthy ones [Ambroziak, 2023a].

The EU legislation currently being introduced to support new investments in clean technologies may pose a significant problem for cohesion countries, including Poland. This is because it concerns the possibility of supporting investments in clean technology industries, which, until now and despite the absence of sectoral restrictions, has been predominantly granted in cohesion countries under the regional state aid guidelines (RAG) [European Commission, 2021]. This represents a significant change in terms of equal competition conditions and the possibility of supporting new, forward-looking technologies. Failure to take advantage of this opportunity could lead to delays in development and a widening cohesion gap between EU member states. Therefore, this study aims to identify advantageous and disadvantageous legislative arrangements for countries such as Poland, as introduced by new legal acts concerning state aid for the clean technology industry. To this end, the regulatory framework of the new legal acts (NZIA), and, more importantly, the permissible financing rules, will be outlined. To capture the differences in the current approach to supporting investment, an analysis of the new state aid rules (CISAF) will be carried out in comparison with existing regional state aid solutions. Additionally, experiences gained from granting regional state aid and state aid measures approved by the European Commission will be presented. Finally, conclusions and recommendations will be formulated.

1. Regulatory framework

The Net-Zero Industry Act (NZIA) was adopted in 2024. One of its aims is to improve the functioning of the internal market by establishing a legal framework in order to ensure the Union's access to a secure and sustainable supply of net-zero technologies, including by scaling up the manufacturing capacity of net-zero technologies and their supply chains to safeguard their resilience while contributing to achieving the Union's climate targets and climate neutrality objective ... with a view to the decarbonisation of the Union's economy and society, and by contributing to quality jobs in net-zero technologies, and thereby also improving the competitiveness of the Union [Regulation, 2024, Article 1(1)].

Although the NZIA clearly addresses the production capacities of EU companies and the EU's competitiveness, as referred to in Article 173 TFEU, and is essentially focused on making investing in the net-zero technologies sector more attractive to businesses, its sole legal basis is Article 114 TFEU, which pertains to the harmonisation of member states' laws across the European single market. This issue was resolved by specifying the objective of the regulation, which is to improve the functioning of the internal market by establishing a framework in order to ensure the Union's access to a secure and sustainable supply of net-zero technologies, while at the same time acknowledging that this would be achieved by scaling up the manufacturing capacity of net-zero technologies and their supply chains [Regulation, 2024, Article 1].

This is also an example of a legal solution being introduced at the EU level to address the existing risk that, given the complexity and the transnational character of net-zero technologies, uncoordinated national measures to ensure access to those technologies could distort competition and fragment the internal market. This appears to directly refer to the situation with state aid during the COVID-19 pandemic and subsequently the energy crisis triggered by Russia's aggression against Ukraine. Through the NZIA, the European Commission aims to eliminate significant disparities in administrative procedures and in access to clean technologies within the EU member states.

The NZIA primarily aims to streamline administrative and permitting processes. To this end, member states are to designate contact points, which are national bodies responsible for facilitating and coordinating the process of obtaining all necessary administrative decisions for businesses. At the same time, the NZIA provides that the duration of the permit-granting process for net-zero technology manufacturing

projects must not exceed 12 months for projects with a yearly manufacturing capacity of less than 1 GW and 18 months for projects with a yearly manufacturing capacity of 1 GW or more.

Moreover, the NZIA defines the enabling conditions for net-zero technology manufacturing, with the Commission required to prepare implementing legislation setting out guidelines to ensure uniform conditions for the implementation of the criteria. The benefits of a project being granted such status include even further reductions in the timeframe for the permit-granting process (9 months for projects with a yearly manufacturing capacity of less than 1 GW, 12 months for projects with a yearly manufacturing capacity of 1 GW or more, and 18 months for CO₂ storage sites – for which additional special provisions regarding availability have been introduced). Furthermore, such projects will have access to advice on financing from private and public sources, the EIB Group, or other international financial institutions, including the European Bank for Reconstruction and Development, as well as relevant EU funding programmes. This financing structure is to be developed by the Net-Zero Europe Platform, established under the Act, which includes representatives of member states and the European Commission. The Platform's main task, in addition to providing financial advice, would be to strengthen cooperation between businesses and EU member states, share best practices, determine the scope for building appropriate relations with third countries, and notably, identify ways of incentivising the production of net-zero technologies in the Union, by addressing funding, the regulatory framework and investment and location guarantees.

The NZIA also provides for the possibility of designating net-zero Acceleration Valleys as clusters to accelerate the implementation of net-zero technology manufacturing projects, including net-zero strategic projects to test innovative net-zero technologies. To facilitate market access, the NZIA incorporates sustainability and resilience criteria into public procurement and auction procedures, which should ensure demand for European production of clean technologies. Two additional aspects regulated by the NZIA are also noteworthy: the introduction of regulatory sandboxes to develop and test innovative net-zero technologies, and the creation of Net-Zero Industry Academies to provide appropriate training and development of skills for workers that are in demand by modern industry.

The above measures constitute a precisely structured framework for the functioning of a specific sector: net-zero technologies. The NZIA provides for joint and coordinated actions, as permitted under Article 173 TFEU, performed by EU member states in terms of initiating and implementing special investment projects in the net-zero industry, securing financing from private and public sources, both

national and international, including EU programmes, testing new regulatory solutions, and preparing a skilled workforce.

A separate issue is the access to public procurement focused on ensuring sustainable development. In this context, member states may not discriminate against or unjustifiably treat differently suppliers of net-zero technologies from other member states. No such requirement has been formulated for third countries, although the existing WTO non-discrimination rules should apply. However, special procedures have been introduced for contracting authorities if:

- the share of a given technology or its main specific components originating from a third country exceeds 50% of the supply, or
- the share of supply in the Union of a specific net-zero technology or its main specific components originating from a third country has increased on average by at least 10 percentage points and reaches at least 40% of the supply in the Union.

In such cases, contracting authorities are required to take into account additional conditions limiting the import of such products into the EU. These rules do not apply to the signatories of the 2012 Agreement on Government Procurement, i.e. 49 WTO member countries, such as the US and Japan (but excluding China and other Asian countries) [GPA, 2012].

This appears to be the first such comprehensive treatment of a specific sector within a new approach to EU industrial policy. On the one hand, member states still make decisions regarding the designation of strategic projects, the creation of net-zero Acceleration Valleys, the inclusion of sustainability criteria in public procurement, or educational collaboration. On the other hand, all these activities are aligned with specific proposals put forward by the European Commission, which is a clear example of the European Commission's sectoral approach to leading the EU Industrial Policy.

From Poland's perspective, it is crucial to participate in the EU's new industrial policy coordination formula. The disruption to supply chains and the exposure of dependencies on unreliable external partners should draw attention to the benefits of coordinated action within the EU, particularly on the international stage. This requires a change in political approach towards transferring greater powers to EU institutions – a notion that is often questioned in Poland – as well as skilful administrative cooperation.

2. Financial framework

Objective of state aid

Due to the sector-specific nature of the permitted support, the NZIA and the CISAF stipulate that aid may be granted to incentivise investment projects that facilitate development of the production (including with secondary raw materials) of final products or main components and new or recovered critical materials in the following technologies: solar, onshore wind and offshore renewable, battery and energy storage, heat pumps and geothermal energy, hydrogen, sustainable biogas and biomethane, carbon capture and storage (CCS), electricity grid and nuclear fusion, as well as sustainable alternative fuels, hydropower and other renewable energy. Moreover, the objective has been introduced as a benchmark for the annual capacity of the Union's net-zero technologies, which should account for at least 40% of annual deployment needs by 2030.

In the CISAF, the targeted state aid for the development of the clean technology sector was considered justified by the Commission due to Europe's low investment attractiveness compared to the US or China. The Commission noted in the CISAF that the NZIA should eliminate certain administrative and bureaucratic barriers to increase the competitiveness of the carbon-neutral technology sector, attract investment and improve access to the EU market for clean technologies. However, to speed up the process, additional public aid was permitted. It is a reference to traditional market failures, given both the awareness of the need for such investments and the growing demand [Bator, 1958]. It is worth noting that, until now, support based on low investment attractiveness was only permissible as regional state aid, the majority of which was granted in EU cohesion countries [European Commission, 2021; Ambroziak, 2023b].

Forms of state aid

The CISAF allows various forms of state aid for investments in clean technologies: from direct grants, tax incentives and subsidised interest rates on new loans to credit guarantees. In general, the eligible costs for which aid limits are defined encompass a broad range of costs of investment in tangible assets (such as land, buildings, plant and machinery) and intangible assets (such as patent rights, licences, know-how and other intellectual property). These provisions are comparable to traditional regional state aid rules under the RAG.

Moreover, it is worth noting that operating aid is permitted in limited circumstances. While the Commission has stated that clean technology producers should be able to cover their costs independently, it has permitted this type of support in situations involving unfair global competition or uncertainty about future demand. In such situations, aid in the form of equity instruments on market terms is admissible, which should limit potential distortions to competition within the European single market.

State aid intensity

Under EU law, the intensity of public aid is calculated in relation to the eligible costs. In the case of investment aid under the CISAF, the classification set out in the 2021–2027 Guidelines on regional State aid (RAG) [European Commission, 2021; Ambroziak, 2023b] was used. This is justified insofar as the successively updated regional state aid guidelines have enabled investment support for companies, with the aim of attracting investors to EU areas by compensating for additional costs compared to more developed territories in terms of human capital, infrastructure and potential local partners.

The regional state aid guidelines identify assisted areas where investment support throughout the EU is justified under Article 107(3)(a) and (c) TFEU, whereas admissible support for new investments stemmed from exemptions based on provisions allowing the Commission to recognise them as compatible with the internal market principles:

- Article 107(3)(a) TFEU – aid to promote the economic development of areas where the standard of living is abnormally low or where there is serious underemployment,
- Article 107(3)(c) TFEU – aid to facilitate the development of certain economic activities or of certain economic areas, where such aid does not adversely affect trading conditions to an extent contrary to the common interest.

Based on this, the Commission distinguishes between two groups of regions: the least developed regions ('a' areas), and certain slightly more developed regions ('c' areas). The criterion adopted for the first group is a gross domestic product (GDP) per capita in the NUTS-2 region below or equal to 75% of the EU-27 average. On the other hand, 'c' areas comprise the remaining slightly more developed areas, whose population is calculated by subtracting the population of eligible 'a' areas in the EU-27 from the total maximum coverage: 48% of the total EU-27 population [European Commission, 2021]. Moreover, 'c' areas are:

- a) designated by EU member states without further justification ('pre-defined "c" areas'). This category includes regions that were part of the 'a' areas in the 2014–2020 financial perspective but which now have a GDP per capita that exceeds 75% of the EU average, and which are characterised by low population density.
- b) designated at NUTS 2 or NUTS 3 level at EU member states' discretion, provided that it is demonstrated that such areas fulfil certain socio-economic criteria ('non-predefined "c" areas'). These criteria are a GDP per capita below or equal to the EU-27 average, or an unemployment rate above or equal to 115% of the national average.

It is worth emphasising that there are many detailed exemptions and special rules that enable the regional aid map in a given EU member state to be tailored to the specific domestic requirements. One of the most significant is the considerable autonomy in designating 'c' areas. EU member states report these at the NUTS-3 level when the only constraint is the population ceiling for areas where regional state aid is permitted, but with many exemptions for individual administrative units. Consequently, almost all NUTS-3 regions in France and Luxembourg include areas where such aid is permitted (though this does not mean it can be granted throughout their entire territory).

As regards Poland, the current regional state aid map, developed under the 2021–2028 regional state aid guidelines, permits this type of public financial intervention in all Polish regions, except for the city of Warsaw and selected neighbouring municipalities in the western part of the Mazowieckie voivodeship. The rest of Poland is categorised as an 'a' area, with an admissible intensity of 30–50%. The two most developed voivodeships, Dolnośląskie and Wielkopolskie, are categorised as an 'c' area, with an admissible intensity of 15–25% [Ambroziak, 2023b].

Under the CISAF rules on aid for accelerated investments in sectors strategic for the transition towards a net-zero economy, permissible levels of aid intensity have been introduced, as under the RAG, on the one hand, to encourage companies to invest in clean technologies, and on the other hand, to limit negative effects on competition within the European single market. As a rule, the basic intensity level is 15% of eligible costs in non-assisted regions (i.e. those not identified under the RAG [European Commission, 2021] (Figure 1). This cap applies to support for large enterprises (all further limits will be provided unless otherwise specified for large enterprises, with the option to increase them by 10 percentage points for medium-sized enterprises and by 20 percentage points for small enterprises), and provided that the total aid amount cannot exceed EUR 150 million per project per member state. However, in areas in regional state aid maps under regional state

aid guidelines, higher admissible aid levels are specified: in ‘a’ areas – up to 35% of eligible costs with an investment limit of EUR 350 million, while in ‘c’ areas – up to 20% and EUR 200 million per project per member state (Table 1).

Table 1. Admissible intensity of investment state aid for accelerated investments in sectors strategic for the transition towards a net-zero economy under the CISAF and the RAG for 2022–2027

Region	Aid for accelerated investments in sectors strategic for the transition towards a net-zero economy under the CISAF			RAG for 2022–2027		
	Large	Medium	Small	Large	Medium	Small
‘a’ areas	35%	45%	40%	30–50%	40–60%	50–70%
‘c’ areas	20%	30%	40%	10–20%	20–30%	30–40%
Non-assisted areas	15%	25%	35%	0%		

Source: Author’s own compilation based on the CISAF [European Commission, 2025c] and the RAG [European Commission, 2021].

For comparison, under the 2012–2027 RAG, the maximum intensities of regional state aid for the least developed regions for ‘a’ areas are [European Commission, 2021]:

- a) 50% in NUTS 2 areas whose GDP per capita is below or equal to 55% of the EU-27 average;
- b) 40% in NUTS 2 areas whose GDP per capita is above 55% and below or equal to 65% of the EU-27 average;
- c) 30% in NUTS 2 areas with a GDP per capita above 65% of the EU-27 average.

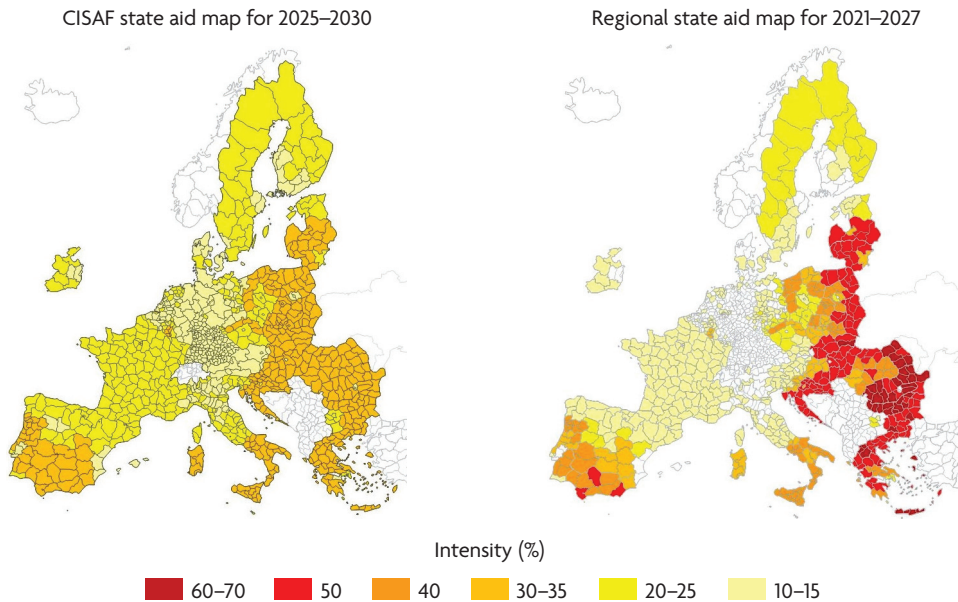
For ‘c’ areas, the admissible intensity ranges from 10% to 25%. However, there are many specific exemptions that allow these thresholds to be raised in connection with an expected population decline or proximity to ‘a’ areas or former ‘a’ areas. Additionally, the above limits for both groups of regions can be increased by 10 or 20 percentage points, for small and medium-sized enterprises, respectively (Figure 1).

The CISAF stipulates that, in contrast to the RAG, aid supporting new investments in clean technologies is, in principle, permitted in all EU regions, including the most developed ones (with the intensity ceiling of 15% of eligible costs). On the one hand, the scope of these investments is limited to clean technologies; however, on the other hand, it is the fundament of the energy transition and further industrial and service innovations.

Taking into account the existing regional state aid rules, the smallest percentage of areas, in terms of population share, covered by this type of investment aid, was found in countries with the highest GDP per capita in relation to the EU-27 average.

This was particularly evident in Luxembourg, Ireland, Denmark, the Netherlands, Austria, Belgium, Germany, Sweden and Finland, as well as in Italy and France – countries that are significantly more developed than those in the ‘cohesion’ category (see Figure 2). In these countries, the percentage of areas where ‘c’ areas occur (due to the appropriate matching of areas with a specific population coverage) is high, though still lower than in places where new companies can receive financial support under regional state aid. These countries can benefit most from the new CISAF rules. This is because they are able to support companies located outside relatively underdeveloped regions to a comparable extent, i.e. in areas with relatively better human capital and higher-quality infrastructure.

Figure 1. Intensity of CISAF state aid and regional state aid in the EU member states (NUTS-3)

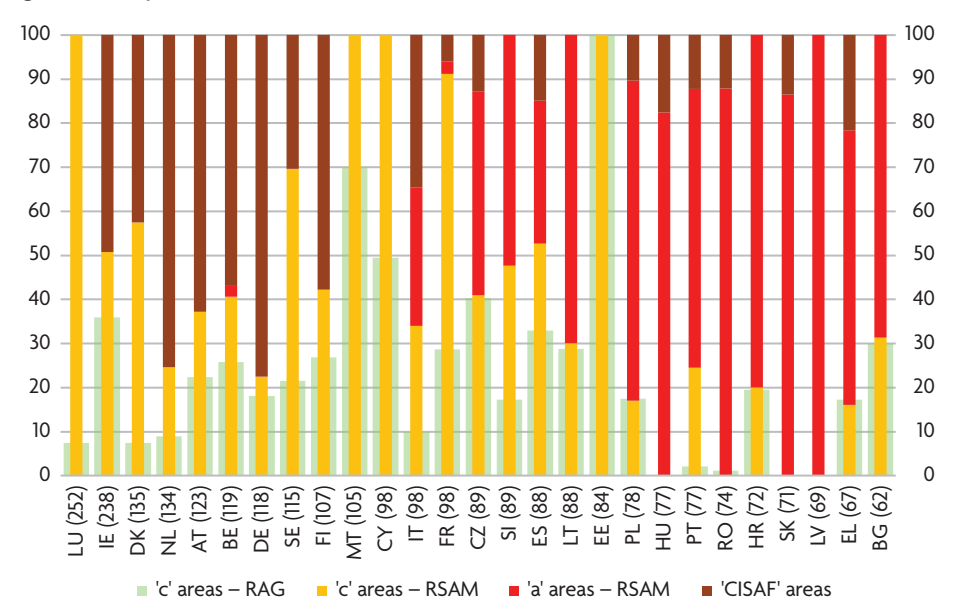


Source: Author's own calculations. Maps developed by Magdalena Cybulska (University of Warsaw, Faculty of Geography and Regional Studies).

The second group consists of Central and Eastern European countries, including Poland, where ‘a’ areas predominate and the intensity of investment aid is the highest (50%+). Although these countries usually have ‘c’ areas too (with the exception of Hungary, Slovakia and Latvia), these regions typically cover the remainder of the territory, and the permissible intensity is usually above the standard level of admissible aid under the CISAF (15% of eligible costs).

This is due to increased competition between public aid regimes, such as regional investment aid, which still plays an important role in Poland and other Central and Eastern European countries in attracting new investments, and state aid rules under the CISAF. Although the latter is subject to lower intensity ceilings for state aid, it is possible to invest anywhere in the EU, including the most developed regions and countries with the best-educated workforces, the best infrastructure and the highest-quality services, including R&D&I, professional services and financial services, as well as endowed with substantial financial resources. This could be a game changer for the future development of not only the EU as a whole, but especially for Central and Eastern European countries. From the perspective of cohesion countries, including Poland, where most NUTS 2 areas are lagging behind better-developed ones, the new rules introduced by the NZIA and the CISAF can be seen as competing with existing preferences offered under the RAG.

Figure 2. Population share of ‘a’ and ‘c’ areas under the RAG vs the CISAF



Source: Author's own compilation based on the CISAF and RAG [European Commission, 2021, 2025b].

Offering solutions that support clean-tech investment at even slightly lower admissible ceilings compared to those under traditional regional state aid in the EU (10–20 percentage points below the ceilings for regional state aid) may have two types of effects. In the short term, new investors may be more inclined to invest in the more developed regions of Western Europe, which have a better-trained workforce

and a higher quality of infrastructure for new clean-tech plants with substantial support opportunities in comparison to cohesion countries, including Poland. In the long term, this could lead to a gap in economic development and an increase in disparities of socio-economic development and cohesion within the EU.

To limit the possibility of investment relocation within the European Economic Area (including the EU), the CISAF (similarly to the RAG) provides for verification that the beneficiary has not relocated its activity within the past two years and will not do so for two years following the completion of the investment. This is to protect the European single market against competition between EU member states in the provision of state aid. However, this solution can be ineffective because the sectoral scope of the eligible investments under the CISAF only allows support to be given to those (new and innovative) activities that are not widely present in EU member states, which means that no relocation pressure could be expected (as such facilities do not exist in the EU territory).

There is also a specific exemption from these rules, which can have a significant impact on the attractiveness of the CISAF and competition not only in the European single market but also in the global market. An extraordinary exception to the above rules limiting state aid is the possibility of granting individual aid up to the amount of the subsidy which the beneficiary could demonstrably receive for an equivalent investment in a third country (outside the European Economic Area – EEA). Moreover, a potential state aid beneficiary has to prove that it needs the minimum amount needed to incentivise the aid beneficiary to locate the investment in a specific area in the EEA rather than in an alternative location outside the EEA. As a rule, ‘a’ and ‘c’ areas should be preferred locations, but the CISAF allows for individual aid to be provided outside these regions. However, the member state must demonstrate that the investment could not be implemented as efficiently in an assisted area.

In fact, this solution constitutes acceptance of the subsidy race between EU member states and partners outside the EU. The above rules are a certain modification of the provisions reflected in the 2006 and 2022 Framework on State aid for research and development and innovation [European Commission, 2022]. It stated that under the matching clause, higher aid intensity than that generally permissible under the Framework for State aid for R&D&I could be allowed, if – directly or indirectly – competitors located outside the Community have received (in the last three years) or are going to receive, aid of an equivalent intensity for similar projects, programmes, research, development or technology. It also provided that this period could be extended given the particular nature of the sector in question. While this solution allowing R&D&I aid similar to that obtained in other countries worldwide could be

justified by the existence of failures in the European single market, the investment support amounts to straightforward competition over the size of the aid granted for establishing a new undertaking.

Finally, as with other rules concerning state aid in the EU, including the RAG, the CISAF measures include verification of the incentive effect, stemming from the risk that a company would not proceed with such an investment or would do so to a lesser extent without the support. This criterion is intended to ensure that the proposed subsidy is proportionally and genuinely necessary, and that potentially positive effects outweigh negative ones.

3. Experience in investment aid (regional state aid)

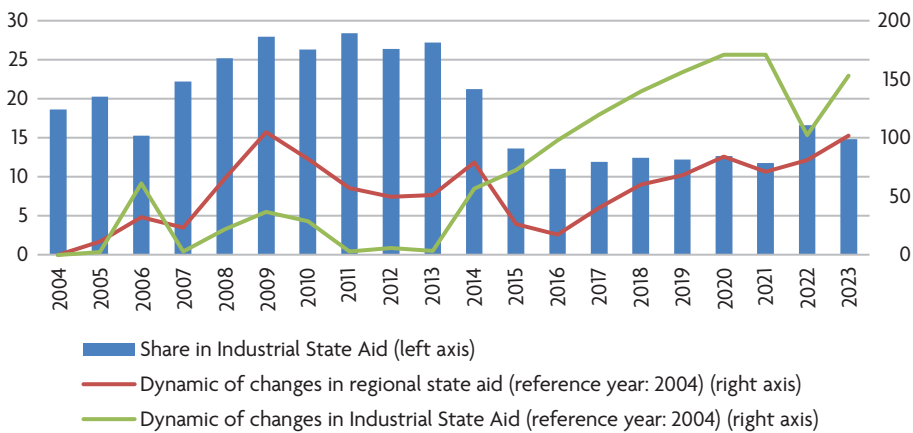
While the value of regional state aid granted by EU member states doubled from EUR 7.6 billion in 2004 to almost EUR 15.4 billion in 2023, its share in Industrial State Aid fell significantly, from 18.6% to 14.9% (see Figure 3). This indicates that the role of other categories of state aid in the EU has increased at the expense of regional aid, primarily in the areas of environmental protection and energy saving, as well as research, development and innovation. The share of regional state aid increased significantly during the first years after the 2004 enlargement and the first full Multiannual Financial Perspective (2007–2013). This was mainly due to countries in Central and Eastern Europe wanting to improve the attractiveness of their lagging regions to foreign companies by offering investment incentives. However, at the beginning of the next Multiannual Financial Framework (2014–2021), the growth rate declined. Despite a gradual improvement in subsequent years, it remained significantly lower than the growth of other categories of Industrial State Aid (Figure 3). This indicates an exhaustion of the model of supporting business investment in the least developed regions of the EU in favour of new objectives primarily related to environmental protection, energy efficiency, and research and development [Ambroziak, 2024].

While the RAG were drawn up to improve the investment attractiveness of lagging regions in the EU, the CISAF was developed primarily to support the reindustrialisation of the EU (as a whole) through innovative clean production and product technologies, rather than in response to the needs of the least developed regions and countries in the EU. Nonetheless, in order to capture the relationship between regional (investment) state aid and the degree of industrialisation of each EU member state, the countries were ranked according to their share of the

industrial component in gross value added (GVA) over the period 2004–2023. Seen in comparison to the EU average, EU member states can be divided into three groups:

- leading industrialising countries, where the share of the industrial component (economic activities) in GVA increased to a level above the EU average;
- modestly industrialising countries, where the above-average share of industrialised economic activities declined; and
- de-industrialising countries, where an already low percentage of this indicator decreased even further below the EU average.

Figure 3. Share and dynamics of change in regional state aid in 2004–2023

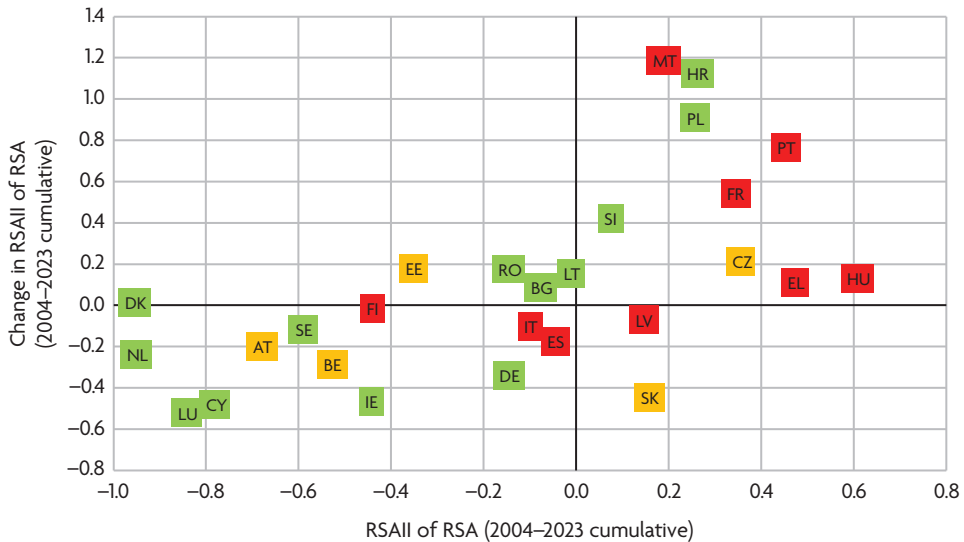


Source: Author's own compilation based on European Commission [2025c].

Taking into account the cumulative value of regional (investment) aid granted by EU member states between 2004 and 2023, the highest and fastest-growing intensity (calculated on the basis of the Revealed State Aid Intensity Index) [Ambroziak, 2021] in relation to the EU average was recorded in countries undergoing de-industrialisation: Hungary, Greece, Portugal, France and Malta, and in selected leading industrialising countries, such as Croatia, Poland and Slovenia (Figure 3). Modestly industrialising countries, represented by the Czech Republic and Slovakia, also recorded intensities, although these increased and decreased, respectively, compared to 2004. However, the vast majority of other member states representing the aforementioned three groups recorded, as mentioned above, a decline in regional state aid intensity. This suggests that the level of industrialisation was not a relevant factor in the intensity of regional aid granted by member states in 2004–2023. At this same time, a correlation was found between intensity, geographical location and membership of the cohesion group of countries: notably, this group comprised

all countries with the highest regional intensity of public aid, with the exception of France, where the possibility of granting aid to overseas territories must be considered.

Figure 4. Changes in intensity (RSAII) of Regional State (RSA) in 2004–2023 (cumulative)



Note: Background colours represent: **green** – **leading industrialising countries**, where the share of the industrial component (economic activities) in GVA increased to a level above the EU average, **yellow** – **modestly industrialising countries**, where the above-average share of industrialised economic activities declined; and **red** – **de-industrialising countries**, where an already low percentage of this indicator decreased even further below the EU average. The RSAII is calculated as the ratio of the value of regional state aid in a given country or in the EU as a whole, to the cumulative GVA of selected economic activities related to industrial policy (industrial component) in the aforementioned member states or the EU. When the final value of the RSAII is above 0, it means that state aid intensity in each country in relation to GVA is higher than for the EU average. When it is below 0, it means that the intensity is lower than the EU on average [Ambroziak, 2021].

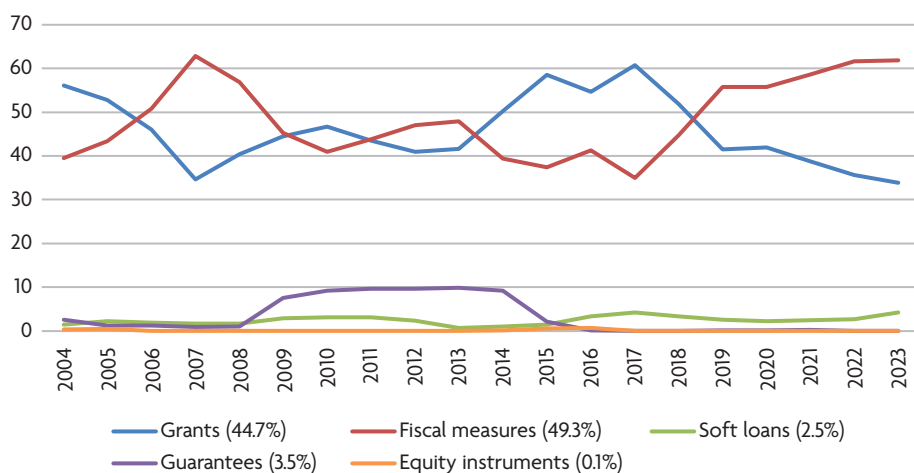
Source: Author's own compilation based on European Commission [2025c].

As regards forms of regional (investment) state aid, two were the most important: grants and fiscal measures. Although grants dominated in the early years of the period under review and in 2014–2018, in recent years they have begun to give way to fiscal measures (Figure 5). Ultimately, their share in the cumulative value of regional state aid amounted to 44.7% for grants and 49.3% for fiscal measures. Other forms of aid in this category were chosen much less frequently, with the following shares: guarantees 3.5%, soft loans 2.5% and equity instruments 0.1%.

In 2023, the largest share of grants in the cumulative value of regional state aid was recorded in smaller EU member states, both those covered by cohesion policy and those not using its funds. The intensity of regional aid was irrelevant in this case: the countries included those with the highest rates (Hungary, Slovenia, Greece

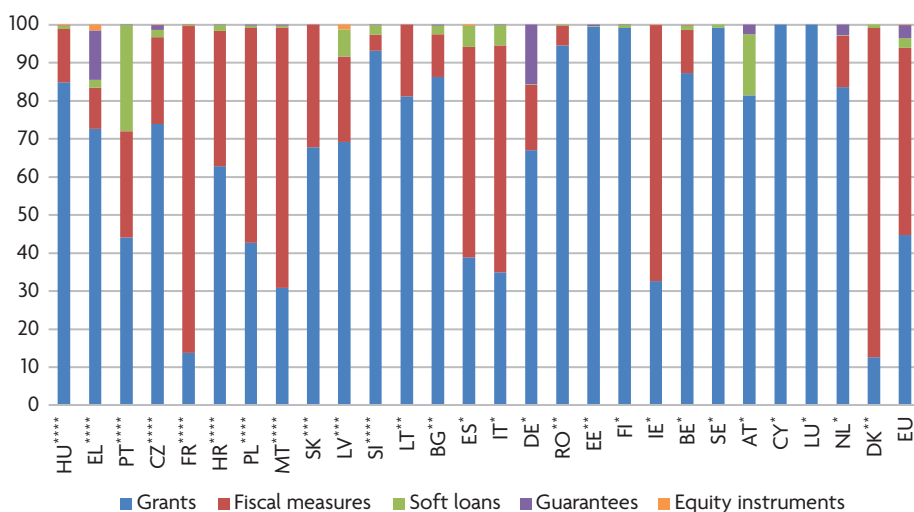
and the Czech Republic), those with slightly lower but growing rates (Bulgaria and Romania), and those with the lowest rates (Germany, the Netherlands, Austria, Sweden and Finland). Interestingly, a lower intensity of grant use was recorded in countries such as Poland, Spain, Portugal, Ireland and France, which had the highest regional aid intensity, as well as in Italy and Denmark (Figure 6).

Figure 5. Changes in forms of regional state aid in 2004–2023



Source: Author's own compilation based on European Commission [2025c].

Figure 6. Forms of regional state aid in 2004–2023 (cumulative)



Note: Asterisks next to the country names represent the intensity of regional aid.

Source: Author's own compilation based on European Commission [2025c].

Fiscal measures were definitely not as popular as grants. The highest relative share was recorded in France, Poland and Malta – countries with a high level of regional state aid intensity – as well as in Denmark, Spain and Italy, which had a significantly lower RSAIL. In the remaining countries that used this instrument, the index was significantly lower (Croatia, Slovakia, the Czech Republic, Germany, Hungary and the Netherlands).

In summary, it can be concluded that, in its current form, regional (investment) aid has been particularly important for cohesion countries in the form of direct grants. This confirms its correct design and purpose. The intensity of its provision has consistently matched the availability of EU funds under successive Multiannual Financial Frameworks. This means that these countries have been unable to support investments from national funds alone and have relied mainly on European funds. It is worth noting that in recent years, it is mainly Western European countries, as well as some CEECs, including Poland, that have moved away from this category of aid in favour of supporting more advanced EU objectives.

4. Recent experience in state aid under the TCTF and the CISAF

Experience with state aid in the context of COVID-19 has shown that larger and richer EU member states have provided more support in relative terms than less wealthy countries [Ambroziak, 2023a]. By September 2025, 12 member states, including Poland, had already submitted state aid schemes and obtained approval from the European Commission (Table 2). This could raise legitimate concerns among other EU member states about maintaining workable competition within the European single market.

However, it is worth noting that, when the relative intensity of approved aid is considered based on Section 2.8 TCTF (the predecessor of the CISAF), the highest relative RSAIL is found for support announced in Finland, Slovakia, Portugal and the Czech Republic. Spain and Poland reported slightly lower values. Conversely, Germany and France recorded a relatively balanced level of approved aid under Section 2.8 TCTF, which is noteworthy. Thus, the countries that have applied for the highest amounts of aid for investments in new clean technologies so far are both those with high and low industrialisation rates and those with varying rates of traditional regional aid intensity. However, it should be emphasised that these values indicate the intentions of EU member states, as expressed in notifications of

state aid schemes approved by the European Commission, regarding their impact on competition within the European single market. This does not mean, however, that the listed measures have been or will be granted to undertakings in reality – these are the maximum values declared by member states.

There is also a noticeable trend towards gradually narrowing the range of proposed state aid instruments to direct grants only, which, while providing slightly less aid due to lower limits of permissible aid intensity, are effective immediately, providing significant incentives and investment support for businesses, although they are the most likely to distort competition in the EU market.

Table 2. State aid schemes for the clean technology industry approved by the European Commission under the TCTF by September 2025

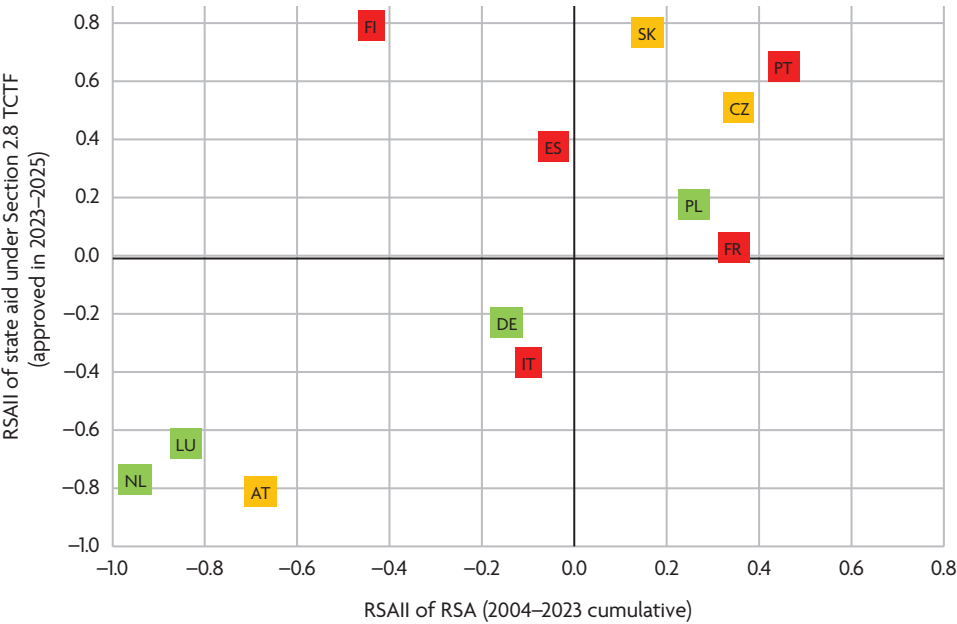
Date of approval	EU member state	Amount of state aid (EUR)	Forms of state aid	European Commission's decision
May 2023	Spain	1.437 bn	▪ direct grants ▪ preferential loans	SA.107094 SA.108920 SA.110744
July 2023	Germany	3 bn	▪ direct grants ▪ tax advantages ▪ subsidised interest rates ▪ guarantees on new loans	SA.108068
October 2023	Italy	100 m	▪ direct grants	SA.108953
November 2023	Austria	60 m	▪ direct grants	SA.109170
November 2023	Spain	1.1 bn	▪ direct grants	SA.108653
December 2023	Slovakia	1 bn	▪ direct grants ▪ income tax relief ▪ transfer or lease of immovable property	SA.109989
January 2024	France	2.9 bn	▪ tax credit	SA.109334
February 2024	Denmark	241 m	▪ direct grants ▪ preferential loans and guarantees	SA.110777 SA. 118341
March 2024	Portugal	350 m	▪ direct grants	SA.110254
March 2024	Italy	1.1 bn	▪ direct grants	SA.112546
May 2024	Spain	120 m	▪ direct grants	SA.113231
July 2024	Netherlands	158 m	▪ direct grants	SA.109761
July 2024	Spain	1.2 bn	▪ direct grants	SA.114137
September 2024	Poland	1.2 bn	▪ direct grants	SA.109581
September 2024	Portugal	1 bn	▪ direct grants	SA.113456
October 2024	Luxembourg	20 m	▪ direct grants	SA.107987
January 2025	Finland	400 m	▪ direct grants	SA.113721

cont. Table 2

Date of approval	EU member state	Amount of state aid (EUR)	Forms of state aid	European Commission's decision
February 2025	Finland	2.3 bn	▪ tax credits	SA.114934
March 2025	Czech Rep.	960 m	▪ direct grants	S.A.117292
April 2025	France	380 m	▪ direct grant ▪ repayable advances	SA.117244

Source: Author's own compilation based on the European Commission Decisions [European Commission, 2026].

Figure 7. RSAll for Regional State Aid in 2004–2023 (cumulative) and the value of state aid approved under Section 2.8 TCTF in 2023–2025.



Note: Background colours represent: **green** – **leading industrialising countries**, where the share of the industrial component (economic activities) in GVA increased to a level above the EU average, **yellow** – **modestly industrialising countries**, where the above-average share of industrialised economic activities declined; and **red** – **de-industrialising countries**, where an already low percentage of this indicator decreased even further below the EU average.

Source: Author's own compilation based on European Commission [2025c] and European Commission decisions [European Commission, 2026].

Conclusions

Recently, there has been a significant change in the EU's approach to industrial policy. Prior to the recent wave of crises, industrial policy was virtually non-existent in the EU, with state aid being the only area of policy impact at a national level.

Although the European Commission has exclusive competence in assessing and approving state aid schemes under the unchanged treaty rules, it is now trying to more systematically guide EU member states regarding industry. The Net-Zero Industry Act (NZIA), together with the Clean Industrial Deal State Aid Framework (CISAF), is an example of this approach. Together, they provide the legal framework for establishing a clean technology industry in the EU, with significant ongoing contributions from member states' public funds.

The NZIA imposes additional obligations on EU member states concerning clean tech investments, such as reducing the waiting time for business permits, establishing contact points within public authorities and introducing additional criteria in public procurement. On the other hand, the NZIA supports them by creating training systems for workers, and in conjunction with the measures provided for in the TCTF and more recently in the CISAF, facilitates investment aid across the EU for selected technologies.

The adoption these legal acts should be seen as another tool of sectoral EU industrial policy carried out by the European Commission, using the efforts and resources of EU member states. Firstly, although the NZIA covers a very broad set of net-zero technologies, only those selected by the European Commission and specified in the CISAF qualify for simplified support with specified incentive levels. Secondly, the recognition of projects as strategic net-zero projects is decided by member states but based on criteria developed by the European Commission.

The above rules, which were introduced by way of regulation, are directly applicable in all EU member states. However, there is still some uncertainty surrounding their implementation in the real economy, as the success of reindustrialising Europe and reducing dependence on third-country partners hinges on public and local administrations creating conditions that facilitate the operation of clean technology entrepreneurs, as well as on the interest and investment opportunities of these entrepreneurs. Active involvement by individual member states, including Poland, is therefore necessary in this case, although member states do not have much experience in this due to the nature of the EU's industrial policy to date.

Financing is a separate issue raising serious doubts regarding the assurance of a level playing field within the European single market. The possibility allowed in the CISAF to provide support related to investments in clean technologies marks a departure from previous EU rules on (investment) regional state aid. Although targeted at specific net-zero technologies, specifically those that are innovative and forward-looking, investment aid has been permitted across the entire EU, rather than, as previously, only in the least developed regions. This could have several significant

socio-economic consequences for competition within the European single market and for cohesion within the EU, which is of the highest importance to Poland. On the one hand, the relative investment attractiveness of traditional regional state aid in the EU's least developed regions (which concerns almost the whole territory of Poland) decreases, which contradicts the previous logic of economic, social and territorial cohesion within the EU. On the other hand, while certain preferences based on the CISAF for 'a' and 'c' areas have been introduced in the form of increased aid intensity, these remain below the existing thresholds for regional investment state aid in most Central and Eastern European countries. It can even be assumed that businesses may be more interested in using the traditional regional aid maps. However, due to their nature, net-zero investments in these areas require not so much state aid as a highly skilled workforce, which less developed regions often cannot provide.

Considering the above, it will be up to the European Commission to ensure a level playing field within the European single market. This concerns not only the aforementioned issues relating to the least developed regions but also individual member states, particularly in cases where individual aid is approved up to the amount of a subsidy offered elsewhere in the world. In such cases, we face a race for financial support not only with countries outside the EU but also within the EU itself, with all its negative consequences for competition within the EU market. This is particularly important, as the state aid measures approved under the TCTF and the CISAF primarily envisage direct grants rather than repayable instruments, which are somewhat less likely to distort competition within the European single market. This means that potential investors are more inclined to seek direct grants rather than any other instruments, which they perceive to be considerably less useful. This approach clearly indicates the danger of significantly distorting competition within the European single market by favouring member states that are larger and wealthier in relative terms, as well as those more willing to intervene. Although Poland has notified a scheme providing state aid for clean technologies, no data on its practical implementation is currently available, which calls for further research.

REFERENCES

- Ambroziak, A.A. (2021). Poland Towards a New Approach to State Aid Policy After Accession to the European Union. In: *Poland in the European Union. Report 2021* (pp. 37–56), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.

- Ambroziak, A.A. (2023a). COVID-19 State Aid in Poland in 2020–2022. In: *Poland in the European Union. Report 2023* (pp. 151–160), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.
- Ambroziak, A.A. (2023b). Evolution of Geographical Distribution of Regional State Aid in Poland Following European Union Accession. In: *Poland in the European Union. Report 2023* (pp. 73–100), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.
- Ambroziak, A.A. (2024). State Aid Policy in the Visegrad Group Countries After Their Accession to the European Union, *Przegląd Europejski – European Studies Quarterly*, 2(2), pp. 49–66. DOI: 10.31338/1641-2478pe.2.24.3.
- Ambroziak, A.A., Hartwell, Ch.A. (2018). The Impact of Investments in Special Economic Zones on Regional Development: The Case of Poland, *Regional Studies*, 52(10), pp. 1322–1331. DOI: 10.1080/00343404.2017.1395005.
- Ambroziak, A.A., Przeździecka, E. (2024a). Finansowe instrumenty wsparcia przemysłu czystych technologii w USA i UE. Na drodze od konkurencji do interwencjonizmu państwowego, *Ruch Prawniczy, Ekonomiczny i Socjologiczny*, 86(4), pp. 231–249. DOI: 10.14746/rpeis.2024.86.4.13.
- Ambroziak, A.A., Przeździecka, E. (2024b). Granice pomocy publicznej w Stanach Zjednoczonych i Unii Europejskiej w związku z kryzysem energetycznym i zmianami klimatycznymi. Wybrane zagadnienia. In: *Polska gospodarka wobec nowych wyzwań w trzeciej dekadzie XXI wieku* (pp. 161–185), E. Przeździecka, A.A. Ambroziak (Eds.). Warsaw: SGH Publishing House.
- European Commission (2021). Communication from the Commission – *Guidelines on Regional State Aid*, 2021/C 153/01, OJ C 153, 29.4.2021.
- European Commission (2022). Communication from the Commission – *Framework for State Aid for Research and Development and Innovation*, 2022/C 414/01, OJ C 414, 28.10.2022.
- European Commission (2023). *Temporary Crisis and Transition Framework for State Aid Measures to Support the Economy Following the Aggression Against Ukraine by Russia*, Communication from the Commission, OJ C 101/03, 17.3.2023.
- European Commission (2025a). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – *The Clean Industrial Deal: A Joint Roadmap for Competitiveness and Decarbonisation*, COM(2025) 85 final, 26.2.2025.
- European Commission (2025b). Communication from the Commission – *Framework for State Aid measures to support the Clean Industrial Deal (Clean Industrial Deal State Aid Framework)*, C (2025) 7600 final, OJ C/2025/3602, 4.7.2025.
- European Commission (2025c). *State Aid Scoreboard*, https://competition-policy.ec.europa.eu/state-aid/scoreboard/scoreboard-state-aid-data_en (accessed: 01.01.2025).
- European Commission (2026). *Competition Policy. Competition Case Search*, <https://competition-cases.ec.europa.eu/search?search=TCTF&caseInstrument=SA&pageNumber=3&pageSize=50&sortField=caseLastDecisionDate&sortOrder=DESC> (accessed: 01.01.2026).
- European Council (2022). *Conclusions, 15 December 2022*. EUCO 34/22.

GPA (2012). Agreement on Government Procurement, https://www.wto.org/english/docs_e/legal_e/rev-gpr-94_01_e.pdf (accessed: 01.01.2026).

IRA (2022). Inflation Reduction Act, <https://www.irs.gov/inflation-reduction-act-of-2022> (accessed: 01.01.2026).

Regulation (EU) 2024/1735 of the European Parliament and of the Council of 13 June 2024 on establishing a framework of measures for strengthening Europe's net-zero technology manufacturing ecosystem and amending Regulation (EU) 2018/1724, OJ L, 2024/1735, 28.6.2024.

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NIS 2 DIRECTIVE AND ITS IMPLEMENTATION IN EUROPEAN UNION MEMBER STATES

Introduction

This study aims to identify a workable model for implementing the NIS 2 Directive [Directive (EU) 2022/2555], i.e. to determine which legislative solutions should be adopted to achieve its objectives, pursuant to Article 288 of the Treaty on the Functioning of the European Union (TFEU), which leaves national legislators free to choose the form and methods of implementation, and as adopted in practice by EU member states.

The research examines legal and regulatory solutions in a selection of member states: Austria, the Czech Republic, Finland, Ireland, Germany, Slovakia, Italy, Hungary and Poland. The selection is broad, spanning countries sufficiently diverse to offer a general picture of how the NIS 2 Directive is being implemented. Substantively, the analysis compares the solutions adopted in these countries in areas most relevant to the Directive's impact on national economies and on their economic relations with the countries in which digital technology providers affected by this instrument are established, namely:

- a) the role of the technology provider's country of origin (covering products, services and systems) in regulating businesses operating in sectors classified as important and critical under the NIS 2 Directive;
- b) the material scope of restrictions applied to technology providers based on their country of origin;

- c) the scope of restrictions stemming from the 5G Toolbox, in particular the nature of those restrictions (whether directed at suppliers or at equipment) and the services and products to which they apply, whether limited to those deemed critical under the European Commission's coordinated risk assessment, or extended to any products or services, as contemplated in the Polish draft amendment to the National Cybersecurity System (KSC) Act.

The 5G Toolbox – more precisely, the EU Toolbox of risk mitigating measures for 5G cybersecurity – is a set of recommendations adopted in January 2020 by the NIS Cooperation Group with the support of the European Commission and ENISA.¹ It was designed to set standards for the 5G technology alone (or, more specifically, an array of 5G mobile communications technologies). Its legal nature, meanwhile, is that of non-binding soft law, as reflected in the final sentence of Article 288 TFEU: recommendations and opinions have no binding force. The same classification applies to interpretative and decisional instruments, a category that includes the 5G Toolbox. Even so, CJEU case-law indicates that such recommendations – including those contained in interpretative and decisional instruments – are to be taken into account by member states,² in particular as guidance on:

- a) the implementation of directives (addressed to national legislators); and
- b) the application of binding national measures implementing directives (addressed to all entities subject to those rules).

In particular, the 5G Toolbox calls on member states to ensure that, as part of their cybersecurity arrangements, they conduct risk assessments of 5G suppliers, examining their independence, links to third countries, transparency of ownership and compliance with EU data protection and network security law. Under the Toolbox, member states may designate high-risk suppliers and restrict their involvement in key network elements, including network cores and critical functions such as network management, configuration and security. It also recommends avoiding vendor lock-in – whether in hardware or software. Meanwhile, it urges operators to adopt stricter security requirements – for example, certification of compliance with ENISA and ISO-EU standards – together with appropriate risk-management procedures and robust access control, identification and monitoring.

When considering the applicability of the Toolbox's proposals, it is worth noting that, as regards supply chain management, the relevant binding standards are set out

¹ ENISA, the EU agency for cybersecurity, was originally established by Regulation (EU) No 526/2013; that act has since been repealed. ENISA is now governed by Regulation (EU) 2019/881.

² See, for example, *Salvatore Grimaldi v Fonds des maladies professionnelles* [1989]; see also Senden [2004, esp. pp. 138–154].

in Commission Implementing Regulation (EU) 2024/2690. It applies to DNS service providers, operators of TLD name registries, cloud-computing service providers, data centre service providers, content delivery network providers, managed service providers, managed security service providers, providers of online marketplaces, online search engines and social-networking platforms, and trust service providers.

In principle, the issues addressed in this study have yet to receive detailed scholarly attention. In particular, the literature contains no comparative studies on the implementation of the NIS 2 Directive across the legal orders of member states. However, the NIS 2 Directive has been examined through the lens of digital sovereignty [Kianpour, Davis, Windekilde, 2025]. By this is meant a state's control over its IT infrastructure (at least its core), the ability to devise and implement an autonomous digital security and resilience strategy, the existence of institutions commensurate with cybersecurity challenges, and, ultimately, the capacity to choose its own balance between systemic openness and sovereign technological choices. The literature on this theme is extensive; beyond the authors just cited, see Pohle and Thiel [2020] and Amiot, Palencia, Buena and de Pommerol [2020]. Digital sovereignty has also been discussed in the broader context of public goods theory by Nordhaug and Harris [2021]; again, though, these are not studies of NIS 2 implementation.

1 . Essential standards for implementing the NIS 2 Directive

The key provision that sets the Directive's place within national legal orders – and thus the parameters for its implementation – is Article 5, which makes NIS 2 a minimum-harmonisation instrument. It states that the Directive:

shall not preclude Member States from adopting or maintaining provisions ensuring a higher level of cybersecurity, provided that such provisions are consistent with Member States' obligations laid down in Union law.

Member states may therefore, when transposing it, introduce additional measures to raise cybersecurity levels as understood under NIS 2. The Directive does not define 'cybersecurity' of its own; instead, it refers to Article 2(1) of the Cybersecurity Act [Regulation (EU) 2019/881], which provides:

'cybersecurity' means the activities necessary to protect network and information systems, the users of such systems, and other persons affected by cyber threats;

and Article 2(8) of that Regulation defines a 'cyber threat' as:

any potential circumstance, event or action that could damage, disrupt or otherwise adversely impact network and information systems, the users of such systems and other persons.

Within the latitude inherent in minimum harmonisation, Article 5 of NIS 2 requires member states to ensure that any such national provisions remain consistent with their obligations under Union law. In particular, they must not infringe the rules of the internal market by establishing direct or indirect barriers to trade between member states (within the meaning of Articles 34 and 35 TFEU), save where justified on grounds such as *ordre public*. Indirect barriers are those which, while not prohibiting or impeding the import of products already covered by the *Cassis de Dijon* principle,³ nonetheless impose a legal regime that restricts or even prevents their use [e.g. Nowak-Far, 2018, pp. 37–66]. When framing national cybersecurity rules, member states may rely on the exception recognised in the so-called doctrine of mandatory requirements, which is anchored in Article 36 TFEU. That provision reads:

The provisions of Articles 34 and 35 shall not preclude prohibitions or restrictions on imports, exports or goods in transit justified on grounds of public morality, public policy or public security; the protection of health and life of humans, animals or plants; the protection of national treasures possessing artistic, historic or archaeological value; or the protection of industrial and commercial property. Such prohibitions or restrictions shall not, however, constitute a means of arbitrary discrimination or a disguised restriction on trade between Member States.

This means that even when transposing minimum-harmonisation measures such as NIS 2, member states risk infringing internal market rules if, while professing to pursue a public interest (for example, cybersecurity), they adopt measures that are:

- a) discriminatory, including towards products that benefit from the *Cassis de Dijon* principle; or
- b) contrary to the principle of proportionality, which requires measures to be suitable, necessary and the least restrictive means of achieving a clearly defined public interest objective – see Tridimas [2007, pp. 89–162] and, for EU digital law, Czarnocki and Pałka [2024].

Accordingly, any national measures – legislative or administrative – that go beyond the Directive’s minimum requirements must be assessed against these

³ Under the *Cassis de Dijon* principle, products lawfully marketed in one member state must be permitted to circulate freely in any other member state. See *Rewe-Zentral AG v Bundesmonopolverwaltung für Branntwein* [1979].

two fundamental criteria. Only measures that genuinely aim to raise the level of cybersecurity are neither arbitrary nor discriminatory (as regards goods covered by the *Cassis de Dijon* principle and services protected by the freedom to provide services and the freedom of establishment) and respect proportionality will generally be unproblematic. Solutions that stray beyond this comparatively narrow margin may fall outside Article 5 NIS 2.

Moreover, Article 346 TFEU offers a further, specific basis for limiting the reach of the internal market rules in certain fields of state activity. Paragraph 1 provides:

1. The provisions of the Treaties shall not preclude the application of the following rules:

...

(b) any Member State may take such measures as it considers necessary for the protection of the essential interests of its security which are connected with the production of or trade in arms, munitions and war material; such measures shall not adversely affect the conditions of competition in the internal market regarding products which are not intended for specifically military purposes.

That said, member states do not enjoy unfettered discretion when relying on this clause. They must interpret Article 346 TFEU narrowly and adopt only those measures that are strictly necessary and appropriate to clearly identified security interests. Those interests cannot be hypothetical, nor can the threats they address. Moreover, such measures must be proportionate to the legitimate threats and, as Article 346(1)(b) itself makes clear, ‘shall not adversely affect the conditions of competition in the internal market regarding products which are not intended for specifically military purposes’ [see e.g. *Commission v Spain*, 1999].

2. Status of NIS 2 implementation in the EU member states

Transposition has proceeded slowly across the EU, and most member states missed the deadline. As at 13 October 2025, according to the European Commission’s website, those that had notified transposition were Belgium [Loi NIS 2, 2024], Croatia,⁴ Greece [Νόμος 5160/2024], Romania [Legea 124/2025], Slovakia⁵ and

⁴ See the dedicated subchapter.

⁵ See the dedicated subchapter.

Italy.⁶ Meanwhile, Finland⁷ and Hungary⁸ should also be included, as they completed transposition after 7 May 2025, though the Commission's website had not yet been updated to reflect this. The remaining member states had yet to transpose NIS 2, with preparatory work at varying stages of progress. Among those that had finalised draft legislation were Austria, the Czech Republic, Germany, Ireland, Poland and Sweden.

Notification alone does not guarantee correct transposition, though there is a presumption that the notified measures are compliant.

3. Status of NIS 2 implementation in Poland

As noted above, work on a bill to transpose the NIS 2 Directive in Poland was well advanced at the time the analysis presented in this article was made. In January 2026, the implementation took the form of an act (promulgated in the Journal of Laws of 2026, item 252), in force since April 2026. The act does not depart from the bill analysed, as it:

- a) gives significant weight to the country-of-origin criterion when selecting technology suppliers (products, services and systems) for businesses operating in sectors classified as important and critical;
- b) introduces a category of high-risk suppliers, which may include providers from third countries; for such suppliers, the bill allows for general restrictive measures applying across the board, excluding them from the market for supplying services and technologies to essential and important entities;
- c) provides for the measures drawn from the 5G Toolbox framed by reference to suppliers' origin or corporate control, rather than the characteristics of the equipment, services or products themselves.

4. Criteria for assessing the quality of the NIS 2 Directive implementation

Assessing how far individual legal systems uphold technological neutrality is central to a broader question about NIS 2: does it create scope for technological arbitrage? In this context, technological neutrality means that rules determining

⁶ See the dedicated subchapter.

⁷ See the dedicated subchapter.

⁸ See the dedicated subchapter.

which technologies may be used in information systems and networks turn solely on the quality of the technology itself, not on extraneous factors such as the supplier's or manufacturer's origin or nationality. On the classic view, security – including safety – is an essential dimension of quality. Technological neutrality therefore does not preclude legal standards whose purpose is to ensure the cybersecurity of technology.

Technological arbitrage, by contrast, arises where businesses exploit materially divergent national transpositions of NIS 2 to secure unwarranted advantages, for example by lowering their costs. A typical scenario would be one in which one country prohibits the use of a particular technology supplied at a competitive price by a third-country provider, whilst another does not. Firms in the latter country – especially essential and important entities – would then acquire cheaper non-EU technologies, foregoing costlier domestic or intra-EU alternatives. Meanwhile, purchasers in the former country would be compelled to buy more expensive technologies, including from the latter country or elsewhere in the Union. The result, at least as regards the digital component within the internal market, would be a lasting competitiveness penalty for those obliged to purchase dearer technologies and a corresponding advantage for those free to procure cheaper ones.

5. Implementation of the Directive in member states

Croatia

Croatia transposed the NIS 2 Directive by the Act of 26 January 2024 on cybersecurity (*Zakon o kibernetičkoj sigurnosti*) [ZKS, 2024]. The ZKS lays down rules for identifying and registering essential (*ključni subjekti*) and critical (*kritični subjekti*) entities, using basic criteria (relating to the entities' own characteristics) and additional criteria (reflecting their market role and resulting significance for cybersecurity).⁹ The ZKS requires that critical – though not important – entities be identified within sectors that the Act designates as critical, with a distinction between high and lower levels of criticality.¹⁰ Under the ZKS, high-criticality sectors comprise: energy; transport; banking; financial market infrastructures; healthcare; water supply; wastewater management; digital infrastructure; ICT service management

⁹ See Article 52 ZKS.

¹⁰ The ZKS defines sectors of lower criticality as 'other critical sectors' (*drugi kritični sektori*).

(B+B); the public sector; and the space sector. Sectors of lower criticality include postal and courier services; solid-waste management; the production, processing and distribution of chemicals; the production, processing and distribution of food; the manufacture of certain industrial goods; the provision of digital services; as well as the research, education and space sectors.

The principal consequence of classifying an entity within the higher- or lower-criticality group – that is, as an essential or critical entity for the purposes of Part II, Chapter I of the ZKS – is the obligation to register (Part II, Chapter III), which in turn entails inclusion in a dedicated data exchange regime with other entities (Part II, Chapter II), specific risk-management obligations (Part III, Chapter I, Articles 26–36) and supervisory oversight by the cybersecurity administrative authorities, performed in Croatia primarily by the National Cybersecurity Centre (*Nacionalni centar za kibernetičku sigurnost, NCSC-HR*) in Zagreb.

As part of these risk-management duties, Article 27 ZKS requires essential and critical entities to establish their own management systems encompassing risk management. The measures adopted must be proportionate to the degree of exposure (*stupanj izloženosti*), the size of the entity, and the likelihood and severity of incidents, and must be assessed with regard to their potential societal and economic impact (*društveni i gospodarski učinak*).

The ZKS does not introduce measures that would exclude, restrict or otherwise discriminate against particular technologies or suppliers, provided they meet the Act's general requirements and, for essential and important entities, the ICT-specific ones. The key provision here is Article 28 ZKS, which states:

(1) Cybersecurity risk-management measures shall be applied in such a way as not to impose obligations or discriminate in favour of a particular type of technology, taking into account the best available technologies employed in the most secure cybersecurity practices, together with European and international standards and technical specifications appropriate to the security of network and information systems, while also taking into account the costs of implementation.

(2) Essential and important entities shall, when implementing cybersecurity risk-management measures, use specific ICT products, ICT services and ICT processes that have been certified under European cybersecurity certification schemes or national cybersecurity certification systems, provided that such an obligation arises from:

- binding European Union legislation,
- specific regulations governing the provision of certain services in relation to the performance of specific activities,
- this Act or regulations adopted under Article 24 of this Act.

In substance, particularly in paragraph 1, this amounts to a BAT-type standard in technological terms, requiring the use of the best available technology that does not entail excessive costs when selecting security measures.

Certain specific aspects of cybersecurity management in Croatia are set out in Government Regulation No 135/2024 on Cybersecurity (*Uredba o kibernetičkoj sigurnosti*) [UKS, 2024], adopted under the enabling provision in Article 24 ZKS. The Regulation lays down, in particular, the criteria for classifying entities as essential or important, procedures for cyber-risk assessment and threat management, incident response, and requirements on the conformity of technologies and systems with the national cybersecurity framework. It applies to entities whose level of criticality has been determined and imposes obligations on them to conduct risk assessments (including with regard to security of supply) and to implement proportionate technical and organisational measures as part of cyber-threat management and to prevent incidents affecting service recipients, other services and the physical environment. These measures must encompass supply chain security, including the security of contractual arrangements with each entity's direct suppliers and service providers. These requirements align with NIS 2.

Article 30(2) ZKS further provides that entities whose level of criticality has been determined (i.e. essential and important entities), when applying the measures referred to above – notably those concerning supply chain security – must act in accordance with the principle of proportionality and have regard to

the specific vulnerabilities of each direct supplier and service provider and the general practices regarding product quality and cybersecurity applied by their suppliers and service providers, as well as the results of coordinated cybersecurity risk assessments of ICT service supply chains, ICT systems and ICT products, carried out by a cooperation group jointly [established under the EU law with representatives of Member States] with the European Commission and ENISA.

The only apparent legal basis for introducing generalised restrictions on the use of particular technologies in Croatia is found in Part Eight of Chapter III ZKS. Those provisions concern the deployment of countermeasures where significant cybersecurity threats are identified and apply only to entities whose level of criticality has been determined (i.e. essential and important entities).

Finland

Finland transposed the NIS 2 Directive by Act No 124/2025 on Cybersecurity (Finnish: *Kyberturvallisuuslaki*; Swedish: *Cybersäkerhetslag*), published on 7 April 2025. Hereinafter, it will be referred to as the CSL [2025].

In particular, Section 5 CSL is central for present purposes. It governs how the CSL cross-refers to other instruments – national or EU – that lay down standards in the same field. Where such instruments exist, Section 5 gives them effect unless other legislation applicable to the same matters (cyber-threat management or the notification of serious incidents) provides otherwise and, moreover, only where applying those measures achieves at least the same outcome as compliance with the CSL. In the words of Section 5:

...if the NIS 2 Directive requires an entity to apply cybersecurity risk management measures or notify serious incidents, and these requirements have at least the same effect as the corresponding obligations set out in this Act [i.e. in the CSL], then those provisions shall apply in place of the provisions of Chapters 2, 4 and 5 and Section 41 of this Act.

By analogy – under the principle of *lex specialis derogat lex generalis* – the CSL also defers, for personal data protection and certain aspects of risk management in the electricity, natural gas, chemicals, explosives and radar operations markets, to directly applicable EU law, such as the GDPR [Regulation 2016/679], or to specific national provisions [e.g. Act, 2013].

The sectors concerned, listed in Annexes I and II to the CSL, are not labelled as ‘critical’ or ‘important’. Even so, Section 3 defines their activities as ‘essential for maintaining critical social or economic functions’ (*är väsentlig för att upprätthålla kritiska samhällseliga eller ekonomiska funktioner*) and not performed by other entities. The list broadly mirrors Croatia’s, with minor differences.

The entities listed in the CSL’s annexes are subject to specific obligations on cyber-threat management, including where threats materialise as incidents. These duties are set out in Chapter 2 (Sections 7–9). Obligated entities must identify, assess and manage cyber risks so as to ensure the security of networks and information systems. The aim is to prevent incidents or, failing that, to minimise their impact on the entity’s operations, ensure business continuity and limit any adverse effects on other services. Measures must be suitable to the risks, proportionate and effective. In particular, Section 9 requires entities to apply proportionate (*proportionella*) technical, operational or organisational measures consistent with

their adopted risk-management model and effective in preventing or minimising harm to communications networks and information systems¹¹ ('... *proportionella tekniska, driftsrelaterade eller organisatoriska hanteringsåtgärder i enlighet med handlingsmodellern för hantering av cybersäkerhetsrisker för att hantera sådana risker som hänför sig till säkerheten i kommunikationsnät och informationssystem samt förhindra eller minimera skadliga verkningar.*'). Proportionality is to be gauged, among other things, by reference to the potential impact on the entity's operations, on other parts of the network or system, on other services and on the physical environment (*fisiska miljön*).

As regards supply chain management, Section 5(2) CSL has the effect that Commission Implementing Regulation (EU) 2024/2690 applies, at least for certain categories of entity. These include DNS service providers; operators of TLD name registries; cloud computing service providers; data centre service providers; content delivery network providers; managed service providers; managed security service providers; providers of online marketplaces, online search engines and social networking platforms; and trust service providers.

The CSL does not lay down especially extensive crisis management provisions of its own, so the rules already outlined continue to apply. Meanwhile, in the event of a crisis, Section 43 requires Traficom to draw up a national plan for handling large-scale cybersecurity incidents and crises (*plan för hantering av storskaliga cybersäkerhetsincidenter och cybersäkerhetskriser*). The plan must, among other things, set national objectives for crisis planning in the field of cybersecurity, identify the tools to achieve those objectives, and specify the entities obliged to act and the state authorities responsible for crisis management. In particular, Section 44 provides for the designation of the authorities responsible for managing cybersecurity crises, and Section 45 sets the rules for cooperation between authorities.

In the Finnish system, suppliers or technologies cannot be excluded on grounds other than those arising from a risk analysis – notably one conducted in the context of a serious incident or crisis. There is, therefore, no category of 'high-risk suppliers' in the sense contemplated by the Polish bill implementing NIS 2.

¹¹ The model should cover, inter alia: risk and vulnerability management procedures; supply chain security; resource and access management; encryption and authorisation policies; incident detection and response; backup; crisis management; and business continuity arrangements.

Slovakia

In Slovakia, NIS 2 has been implemented primarily by Act No 366/2024 Coll. of 28 November 2024, which amends and supplements Act No 69/2018 Z. z. on digital security and certain other acts [ZKB, 2024]. A substantial part of the underlying Act [2018] remains unchanged.

The ZKB employs the term ‘basic service operator’ (*prevádzkovateľ základnej služby*). Pursuant to Section 17 ZKB, this includes central and supreme public administration bodies (‘central state administration bodies and other state bodies with nationwide competence’ – ‘*ústredný orgán štátnej správy a iný orgán s celoštátnou pôsobnosťou*’), third parties with a particular impact on ensuring cybersecurity, critical entities, and persons who, regardless of their size, operate in sectors regarded as critical (at both higher and lower levels of criticality, discussed below) whilst at the same time performing a specific systemic role, for example by providing network and electronic communications services to the public sector or by being the sole national provider of a service classified as critical. These entities must be entered in the register of basic service operators. Their key obligation is set out in Section 19(1), which provides:

A basic service operator is obliged, within 12 months of registration in the register of basic service operators, to establish general security measures, comply with them and implement them, in line with the risk analysis carried out, at least in relation to the security measures specified in §20, and to execute them in order to ensure cybersecurity and resilience. In order to fulfil the obligations set out in the first sentence, the basic service operator shall adopt, comply with and implement sectoral security measures, if any have been established. This shall not affect the obligations to adopt measures in accordance with §20(4). A person providing services or taking measures in accordance with §2(2) shall implement security measures on the basis of other provisions.

As referred to in §19 and set out more particularly in §20 ZKB, security measures include ‘tasks, processes, functions and technologies in the organisational, personnel, physical and technological areas, the purpose of which is to achieve, ensure and maintain cybersecurity throughout the life cycle of networks, information systems and operational technologies’. The provision further stipulates that ‘security measures shall be applied on the basis of the latest security trends [analysis] and international standards and in accordance with security standards in the area of cybersecurity...’. These measures are to be adopted for the purposes set out in the same provision of

the ZKB, including the prevention of damage and the addressing of it when it occurs, as well as the elimination or limitation of its impact upon legally protected goods.

In no case do Slovak regulations impose a general obligation to exclude particular technologies from use. Nor, as a rule, is such an obligation introduced even in remedial proceedings. In particular, under Section 29 – which governs such proceedings – the competent authority may, among other things, determine the scope and manner of remedying harm suffered by recipients of digital services as a result of a provider's breach of cybersecurity rules, and order the application of 'measures to prevent similar breaches of obligations in the future' (Slovak: '*opatrenia na predchádzanie vzniku podobných porušení povinností v budúcnosti*').

Meanwhile, entities are not classified under the ZKB itself but under a separate statute: Act No 367/2024 on critical infrastructure and amending and supplementing certain acts [ZKI, 2024].¹² The ZKI also introduces the category of 'critical entities of special European significance' (*kritické subjekty osobitného európskeho významu*). According to Section 9(6) ZKI, this group comprises entities already registered as critical, which provide the same or similar essential services in at least six EU countries and have been notified by the competent authority of their inclusion in this category.

As for supply chain security – a point central to this study – the ZKI broadly mirrors the NIS 2 Directive and also draws on elements of the 5G Toolbox. It requires critical and important entities to manage cyber risks proactively in this area, notably by adopting supplier security policies covering identification and registration of suppliers, assessment of the risks associated with them, and analysis of the security measures applied to them. Moreover, the ZKI requires security requirements to be written into contracts with direct suppliers and for those contracts to reserve the right to terminate with immediate effect and to bar suppliers' access to key infrastructure elements where security concerns arise.

Hungary

In Hungary, the NIS 2 Directive has been implemented by the Hungarian Cybersecurity Act (*Törvény a Magyarország kiberbiztonságáról*) [MKV, 2024]. Fundamental aspects of cybersecurity for critical entities are also governed by the Act on Critical Entities (*Törvény a kritikus szervezetek ellenálló képességéről*) [KSZETY, 2024], as well as by the Act on the Coordination of Defence and Security Activities (*Törvény a védelmi es biztonsági tevékenységek összehangolásáról*) [VBÖ, 2021].

¹² As amended by ZKB [2024].

Articles 5–10 MKV set out the scope of the regime. According to these provisions, the Act covers four groups of entities:

- a) essential (*alapvető fontosságú szervezetek*);
- b) important (*fontos szervezetek*);
- c) public sector entities – central and local government offices, as well as entities financed from public funds;
- d) companies with Hungarian State Treasury participation – provided that they are important for economic security.

Entities are classified as essential or important by reference to the criticality of the services they provide – in particular, their importance for the functioning of the state, society and the economy – taking into account the size of the entity, the nature of its services and its market position. The Act designates as essential those operating in specified industries, on a list broadly comparable to Croatia's. Meanwhile, the MKV treats as important those entities that are not deemed critical but operate in postal and courier services, IT services (including programming) and large-scale data management. Micro and small enterprises – that is, those with fewer than 50 employees and turnover below EUR 10 million – fall outside the scope of the Act unless they operate in high-risk sectors or provide services to critical entities.

Articles 37 to 39 MKV set out requirements for risk analysis and cybersecurity management, including incident management. Under these provisions, in-scope entities must conduct regular assessments of cyber threats and implement proportionate measures to reduce them, such as adopting a cybersecurity policy, putting robust identity and access management in place, encrypting data, segmenting networks, and commissioning cybersecurity audits and penetration tests (simulated attacks that verify the effectiveness of security controls). They are also responsible for assessing risks arising from products and services supplied by providers of IT hardware and software, cloud computing and hosting, and other outsourced functions (including IT), and must ensure their supplier relationships are properly structured in contractual terms. Contracts should set out security requirements (for example, encryption, access control and business continuity), prescribe procedures for suppliers to report incidents, and provide for audits or appropriate tests to be carried out by the customer or by independent third parties appointed by the customer. Entities must classify the risks associated with supplier-sourced IT systems and services as basic (*alap*), significant (*jelentős*), high (*magas*) or critical (*kritikus*) and, where technologies are assessed as high or critical risk, apply additional measures to oversee and control their suppliers.

Issues relating to cybersecurity incidents are addressed in Articles 33–38 MKV. Under these provisions, any incident that seriously threatens cybersecurity must be reported to the national cybersecurity authority as defined under the NIS 2 Directive (CSIRT). In Hungary, this function is performed by the Regulatory Authority for Regulated Activities (*Szabályozott Tevékenységek Felügyeleti Hatósága, SZTFH*) in Budapest.

Articles 28–29 MKV, meanwhile, deal with supply chain security. They require entities to assess the security posture of their suppliers – especially those with access to critical data or systems – and to embed compliance obligations in their contracts. The Act expressly provides that the security of outsourcing providers, equipment manufacturers and cloud providers forms part of the operator’s own responsibility.

Articles 81–83 MKV concern the prohibition on the use of certain assets. In particular, Article 81 empowers the Government to:

- a) restrict or prohibit the use of specific products, services or technologies (notably ICT equipment and software; ICT services, including cloud services; critical system components such as telecommunications infrastructure; data centres; and SCADA systems);
- b) order the withdrawal of assets from use (for example, by temporarily disabling services or systems) if continued use poses a risk to national security, the integrity of critical services or public order; and
- c) require the implementation of critical updates.

The primary purpose of these prohibitions is to safeguard national security, the integrity of critical services and the stability of supply chains. They may be applied where:

- a) a high risk is identified in the supply of equipment or services;
- b) there is suspicion of foreign interference in the functioning of ICT systems; or
- c) critical vulnerabilities arise and the supplier has not remediated them, or they could be exploited in an attack.

This prohibition mechanism is essentially preventive: its chief function is to limit or neutralise risks and thereby forestall incidents.

Pursuant to §81(b–i) and §82(2) of the implementing regulation to the MKV [2024] those prohibitions may be applied to domestic and foreign suppliers alike. This reflects the MKV’s adoption – and, evidently, that of its implementing measures – of the principle of non-discrimination, expressed through technological neutrality. Articles 57–60 MKV emphasise that the choice of suppliers and equipment should be driven by risk analysis and compliance with security requirements, rather than nationality or political criteria. There are, though, exceptions for threats to national

security and for cases where a supplier or its equipment presents an unacceptable cyber risk (for example, non-compliance with certification requirements or links to a country deemed a threat). To rely on such exceptions, specific procedures must be followed: either reliance on SZTFH assessments or the operator's own assessment procedures as part of its cybersecurity management system and proportionate to the level of risk (*arányos a kockázattal*). Accordingly, Hungarian law does not provide for any general, criteria-based prohibition on cooperating with suppliers by reference to their country of origin, or on the use of particular technologies by reference to their place of supply.

Italy

In Italy, the NIS 2 Directive has been transposed by Legislative Decree No 138 of 4 September 2024 (*Decreto legislativo 4 settembre 2024*) [DLI, 2024]. The Decree contains both substantive cybersecurity rules and institutional and procedural provisions. The latter set out the national governance architecture for cybersecurity, including the remit of the National Cybersecurity Agency (*Agenzia per la Cybersicurezza Nazionale*, ACN).

For the purposes of this study, the pertinent rules on protecting national interests, including economic interests, are found in Article 4 (Protection of national and commercial interests), Article 9 (National cybersecurity strategy) and, to a limited extent, Article 13(2). The central principle in Article 4 is that the DLI does not prejudice the application of other provisions whose purpose is to safeguard national security and ensure the performance of other essential state functions, including the maintenance of territorial integrity and public order.

Meanwhile, Article 9 addresses the registration of essential and important entities, the identification of assets relevant to cybersecurity and the content of the national cybersecurity strategy. In particular, it may cover:

- a) security measures for the supply chain of ICT products and services used by entities subject to the DLI to provide their services;
- b) the definition of cybersecurity requirements that ICT products or services must meet for use in public procurement, which may include, among other things, requirements for cybersecurity certification, encryption and the use of open-source cybersecurity products; and
- c) vulnerability management.

In exceptional circumstances – that is, in the event of a critical incident – Article 13(2) empowers the national cybersecurity authority (the ACN and, for

essential and important entities, *CSIRT Italia*)¹³ to determine, as part of IT crisis management, (*‘... individuano le capacità, le risorse, e le procedure che possono essere impiegate in caso di crisi...’*).

The DLI does not, however, designate any products, services or systems that would, at the level of the Decree itself, be subject to restrictions on trade or access to digital infrastructure. Nor does it provide for the exclusion of specific entities from the market by reason of their links to a particular third country or their ownership or control structures.

More pertinent here is Article 27(2) DLI. Until a European cybersecurity certification scheme is established (as envisaged by Article 49 of the Cybersecurity Act [Regulation (EU) 2019/881], the competent Italian cybersecurity authority under the NIS framework (in practice, the ACN) may, following the procedure in Article 40(5) DLI, require essential or important entities to use ICT products, services and processes supplied either by another essential or important entity or by third parties, but only where they have been certified under recognised national or European schemes (*‘...che siano certificati nell’ambito di schemi di certificazione riconosciuti a livello nazionale o europeo’*).

Read as a whole, Article 27 of the DLI sets out non-binding guidance rather than imposing absolute obligations. Article 28(3) confirms this: the choice of technical specifications (literally ‘a list’ – *elenco*) made under Article 28(2) is neither binding nor exhaustive (*‘... non ha carattere vincolante o esaustivo ...’*) and is published simply to ‘guide’ essential and important entities towards the relevant national and European standards established for this purpose. This characterisation of technical standards accords with the EU’s approach to technical regulation, under which legislation – whether EU or national – may not compel compliance with any specific standard [see e.g. Eliantonio, Volpato, Röttger-Wirtz, 2025]. Article 31 further constrains the imposition of the obligations discussed in this paper – effectively restrictive measures – by requiring that they be framed and applied in line with the principles of proportionality and a graduated approach (*proporzionalità e gradualità*). Those principles apply to the powers and duties set out in Articles 23, 24, 25, 27, 28 and 29, which largely concern risk management. Proportionality also governs market surveillance and any ensuing interventions (Article 34), which must take account, for example, of the gravity, scale and duration of breaches of cybersecurity standards and their consequences.

¹³ See Article 15 DLI.

Article 31 further specifies how proportionality is to be ensured: account must be taken of each entity's level of exposure to risk, its scale, the likelihood of incidents, and the significance of those incidents for the functioning of society and the economy.

Austria

Austria missed the transposition deadline for NIS 2. At present, the measure is before Parliament in the form of a final draft Federal Act to ensure a high level of cybersecurity for network and information systems (*Netz- und Informationssystemssicherheitsgesetz*) [NISG, 2024]. As with other comprehensive NIS 2 transpositions, the draft requires covered entities to register. Pursuant to §29(1) NISG, the register is kept by the supervisory authority (*Cybersicherheitsbehörde*). Under §29(5), the Federal Minister of the Interior (*Bundesminister für Inneres*) is to lay down the detailed procedure by regulation.

The relevant provisions on cybersecurity risk management – broadly understood to include incident handling and other crisis situations – are:

- a) §32 NISG, on risk-management measures in the field of cybersecurity (*Risikomanagementmaßnahmen im Bereich der Cybersicherheit*);
- b) §33 NISG, on demonstrating the effectiveness of those measures (*Nachweis der Wirksamkeit von Risikomanagementmaßnahmen*);
- c) §34 NISG, on reporting obligations; and
- d) §31 NISG (Governance), on organisational arrangements and management responsibilities within obliged entities.

As regards management duties, §32 requires essential and important entities to establish a cybersecurity risk-management system comprising technical, operational and organisational measures designed to prevent risks to their networks and information systems and to ensure proper service provision and business continuity where disruptions occur, including those caused by incidents. As part of that system, entities must conduct periodic risk analyses and assess potential impacts on their networks and information systems, as well as on the physical context in which they operate. In doing so, they are to take account of applicable national, European and international standards, best practice and the costs of implementation – in effect, an extended BAT approach (best available technology not entailing excessive cost) to the choice of security measures.

Measures adopted under the cybersecurity management system must be proportionate (*verhältnismäßig*), that is, calibrated to the degree of exposure to risk,

the size of the entity, and the likelihood and severity of cybersecurity incidents, together with their social and economic impact (see §32(1) as read with §32(3) NISG).

As regards supply chains (*Lieferketten*), §32(2) NISG requires obliged entities to assess their direct suppliers of products and services in terms of their specific vulnerabilities (*spezifischen Schwachstellen*), the overall quality of their products and the cybersecurity practices they apply in dealing with their own suppliers, as well as the security of their product and service development processes. They must also take into account the results of any coordinated risk assessment of critical supply chains carried out under Article 22(1) of the NIS 2 Directive.

These rules will be further fleshed out by regulations issued by the Federal Minister of the Interior (*Bundesminister für Inneres*). Under §32(4) NISG, the Minister is empowered to define in detail the technical, operational and organisational requirements referred to in paragraph 3, and to lay down sector-specific requirements for the cybersecurity management measures mentioned there.

Incident response is addressed in §§34–38 NISG. §34 sets out the core obligations of essential and important entities in responding to incidents. §§35–36 lay down the reporting duties, with particular emphasis on significant incidents (*erhebliche Cybersicherheitsvorfälle*). §37 deals with the procedure and powers of the competent cybersecurity authority (the *Cybersicherheitsbehörde*) in the event of cross-border incidents. §38 governs the flow of information relating to incidents.

Under the draft, the *Cybersicherheitsbehörde* is the central authority responsible for ensuring that essential and important entities comply with the Act and for coordinating cybersecurity activity with peer authorities in other member states and at EU level. Its enforcement powers are bounded by the principles of proportionality and non-discrimination, which in effect presuppose technological neutrality. These powers are set out, for example, in Chapter 4 (4. *Abschnitt*) on supervision and enforcement (*Aufsicht und Durchsetzung*) of the authority's directions. Under §38 NISG, the *Cybersicherheitsbehörde* may carry out system audits of obliged entities, including security scans (*Sicherheitsscans*) of their cybersecurity management systems.

Czech Republic

As noted, the Czech Republic has yet to enact national measures implementing the NIS 2 Directive. Even so, the legislative process is well advanced. The Senate is in the final stages of scrutinising the bill implementing NIS 2 – hereinafter, the NZKB [2024] – with the scrutiny period ending on 12 July 2025. A central concept in the NZKB is that of 'regulated services' (*regulované služby*), introduced in §4. The

provision of such services is subject to registration. Under §4, regulated services are those intended to secure essential or important (*důležitých*) societal or economic functions in the Czech Republic, or their security, for example: public administration, energy, manufacturing, processing of agricultural products, the chemical industry, water management, waste management, transport, digital infrastructure, the financial market, healthcare, science, research and education, postal and courier services, and the defence and space industries, where the operator in question is a medium-sized or large enterprise.

The NZKB establishes two compliance regimes:

- a) a regime of enhanced obligations (*režim vyšších povinností*); and
- b) a regime of reduced obligations (*režim nižších povinností*).

Pursuant to §8, the enhanced obligations regime applies to operators of regulated services which, by virtue of their size, user base, territorial coverage, impact on the functioning of the economy or on other regulated service operators, or the heightened risk inherent in their activities, are of significant economic, social or security importance to the Czech Republic. Operators that do not meet these criteria fall under the reduced regime. The allocation is not the result of an abstract, general categorisation; rather, it follows from a decision of the competent cybersecurity authority (see §8(2)). An entity must be placed under the enhanced regime if it operates in the sectors listed in §4 and, inter alia, holds a monopoly over the provision of the relevant service, or if disruption to its service could significantly affect the security of the Czech Republic, public order, or the life and health of its citizens.

Under §11(1), a regulated service operator must provide the competent cybersecurity authority – in this case, the National Office for Cyber and Information Security (*Národní úřad pro kybernetickou a informační bezpečnost, NÚKIB*) in Brno – with supplementary information, including details of its ownership structure, technical particulars of the services provided and the geographic scope of the regulated service, including any cross-border aspects.

Beyond data administration and the handling of critical incidents, there are further duties laid down in §§12–14 NZKB. These require operators to compile an inventory of primary assets (*primární aktiva*), namely those necessary for the provision of the regulated service, and supporting assets (*podpůrná aktiva*), that is, other assets used within the service delivery system. Operators must ensure the provision of these services through organisational and technical arrangements that safeguard those assets. Under §14, measures for meeting the enhanced obligations regime include organisational and technical solutions covering asset management (*řízení aktiv*) and supplier management (*řízení dodavatelů*). Such measures may,

where justified by specific circumstances, entail excluding certain assets or suppliers; there is no scope for automatic exclusions.

Specific technologies or providers may only be excluded from services covered by the NZKB regulation as a result of serious incidents. In such cases, §18(2) NZKB refers to implementing regulations that may be issued by the European Commission. In addition, with regard to operators of regulated services who have their main establishment outside the Czech Republic (i.e. in another EU or EEA country) and who conduct legal transactions through a representative designated under the cybersecurity regulations, NÚKIB (i.e. the competent national cybersecurity authority) may apply its own security measures. However, this provision does not apply to entities providing authentication services.

Restrictions may also flow from the preventive measures (*protiopatření*) set out in §§20–23 NZKB, namely:

- a) alarms (*výstrahy*);
- b) warnings (*varování*);
- c) reactive preventive measures (*reaktivní protiopatření*).

These measures must comply with the constitutional principle of proportionality. They may not, under any circumstances, consist simply – and without adequate justification – in restricting the use of a particular technology or of technology from a particular supplier.

Provisions of the NZKB relevant to this study concern supply chain security (*dodavatelské řetězce*). This is dealt with in Chapter 5 (i.e. §§27–32 NZKB). These rules establish a mechanism to secure supply chains of strategic importance. In particular, they require the competent cybersecurity authority to gather information on who – ‘directly or indirectly (*přímo nebo zprostředkovaně*) – supplies the entities of particular strategic importance with services that relate to possible threats to the security of the Czech Republic or internal order’ (... *kdo ... poskytuje plnění do strategicky významné služby, a které se týkají možné hrozby pro bezpečnost České Republiky nebo vnitřní pořádek*).

Meanwhile, another set of provisions of relevance are those on a ‘cyber threat state’ (*stav kybernetického nebezpečí*) (§§36–41 NZKB), which amounts to a form of state of emergency for cybersecurity management. Under §36, a cyber threat state may be declared where there is ‘a serious threat to or disruption of information security in cyberspace, which may result in a negative impact on the provision of regulated services or a threat to the security of the Czech Republic, internal order, life and health, property or the natural environment’ (... *je značně ohrožena nebo narušena bezpečnost informací v kybernetickém prostoru, což může mít za následek*

negativní dopady na poskytování regulovaných služeb nebo může dojít k ohrožení bezpečnosti České republiky, vnitřního pořádku, života a zdraví, majetkových hodnot nebo životního prostředí). It may be declared only for justified reasons and only for as long as is necessary to neutralise the threat – in any event, for no more than 30 days. For important reasons, the cybersecurity authority (NÚKIB) may extend it for a further 30 days upon notifying the Government. If further measures are required to address the underlying causes, NÚKIB must request the Government to declare a state of emergency (*nouzový stav*) appropriate to the situation, at which point the Government assumes responsibility for action.

The Czech bill implementing the NIS 2 Directive therefore contains no provisions introducing a general or blanket prohibition on cooperation with specific suppliers by reference to their country of origin, nor a prohibition on the use of particular technologies by reference to their place of origin. In this respect, the bill is technologically neutral.

Ireland

As noted above, Ireland did not transpose the NIS 2 Directive into national law by the deadline set by the Directive. By August 2024, the Government had published the General Scheme of the National Cyber Security Bill [GS-NCS, 2024], together with the National Cyber Security Bill 2024: Heads of Bill [NCSB, 2024]. The latter provides the basis for analysing the legislative plans to implement NIS 2 in Ireland.

As an interim measure – without purporting to implement NIS 2 in full – Ireland's National Cyber Security Centre (NCSC) issued guidelines on risk management measures (RMMs) [NCSC, 2025] on 24 June 2025 and launched the Cyber Fundamentals (CyFun) framework to help organisations, particularly businesses, meet the Directive's essential requirements. Under this approach, organisations in the essential and important sectors must identify and assess cyber threats, including supply chain risks and those posed by high-risk suppliers. The RMMs also set minimum security requirements for network operators and digital service providers; address supply chain security, including the assessment and management of supplier risk; and require the application of good security practice in the design, operation and maintenance of critical infrastructure, as well as in responding to serious incidents.

In the draft, the NCSB divides regulated entities into essential entities and important entities. The NCSB treats essential entities (Chapters 5–6) as those operating in critical sectors, namely: energy, transport, banking, credit institutions

operating under licence in Ireland, financial market infrastructure, investment (financial) services, operators of payment and clearing systems, drinking water supply and wastewater treatment, operators of water supply and sewerage systems, healthcare, digital infrastructure, public administration (but only specified central authorities), ministries and other bodies critical to national security.

Relevant provisions are contained in Chapter 5 NCSB, concerning risk-management measures and reporting obligations. The provisions in this Chapter apply to both essential and important entities. Under these provisions, such entities must carry out regular risk assessments, implement appropriate security measures, and develop and keep their incident and crisis response plans up to date. It should be emphasised that, in accordance with Head 29(1) NCSB, the obligation to adopt security measures encompasses a requirement to put in place technical, operational and organisational measures that are ‘appropriate and proportionate’ to manage risks to the security of the network and information systems used by the entities in their operations or in providing their services, and to prevent or minimise the impact of incidents on recipients of those services or on the services of other entities. In accordance with Head 29(2) NCSB, obliged entities must have regard to the latest European and international standards, as well as the cost of implementation, and select solutions that ‘ensure a level of security of network and information systems appropriate to the risks posed’.¹⁴ Paragraph 3 of the same chapter leaves no doubt that this is a matter of proportionality, as it requires that:

[w]hen assessing the proportionality of those measures, due account shall be taken of the degree of the entity’s exposure to risks, the entity’s size and the likelihood of occurrence of incidents and their severity, including their societal and economic impact.

In addition, Head 29(4) NCSB requires that the selection of risk-management measures be based on a comprehensive, all-hazards risk analysis and aim to protect IT networks and systems, as well as the physical environments in which those systems operate, against incidents.

To assess whether supply chain security measures are appropriate, obliged entities must, in accordance with Head 29(5), take into account the vulnerabilities specific to each direct supplier of products (including technology) and services, together with the overall quality of those products and the cybersecurity practices of suppliers of products and services. The assessment must also cover suppliers’ R&D procedures and

¹⁴ From a technical perspective, this provision gives effect to the extended BAT principle.

should include the findings of any coordinated assessment of critical supply chains carried out by the Cooperation Group under the NIS 2 Directive (see Article 22(1)).

As noted, essential and important entities are required to carry out regular risk assessments and to apply security measures commensurate with those assessments. In relation to suppliers, this entails assessing the potential risks arising from contractual relationships with them and, in particular, incorporating cybersecurity requirements into contracts with suppliers (see Head 30 NCSB for further detail). Entities must then monitor compliance with those contractual provisions – particularly the security requirements – and verify any supplier declarations of conformity or certificates submitted.

Germany

Germany has yet to transpose the NIS 2 Directive. However, legislative work to implement it in German law is well advanced. It currently takes the form of a government draft entitled ‘Draft Law on Implementation of the NIS 2 Directive and on Regulating the Essential Features of Information Security Management in the Federal Administration’ (*Entwurf eines Gesetzes zur Umsetzung der NIS-2-Richtlinie und zur Regelung wesentlicher Grundzüge des Informationssicherheitsmanagements in der Bundesverwaltung*) [GISM, 2024]. The draft is relatively mature: it contains not only the legislative provisions themselves but also elements of a regulatory impact assessment and explanatory guidance on how particular measures should be applied.

As to scope, §28 GISM provides that the core obligations set out therein apply to essential entities (*wesentliche Einrichtungen*) and ‘particularly important entities’ (*besonders wichtige Einrichtungen*), and separately to important entities (*wichtige Einrichtungen*). The classification largely mirrors the sectoral taxonomy in the NIS 2 Directive; key sectors include energy, transport, healthcare, banking, digital infrastructure, drinking water supply, waste management and the manufacture of certain product categories specified in the GISM. The ‘particularly important entities’ category corresponds to the ‘essential entities’ category and, under German law, encompasses entities whose significance for society, the economy or other specific public interests brings them within scope – namely operators of critical infrastructure (*Betreiber kritischer Anlagen*). Separately, §29 GISM addresses federal public administration bodies (*Einrichtungen der Bundesverwaltung*).

Under §41(1) GISM, an operator of critical installations (the aforementioned *Betreiber kritischer Anlagen*) must notify the Federal Ministry of the Interior

(*Bundesministerium des Innern*) before the first deployment of a critical component. The notification must identify the component and state its intended use. This requirement does not apply if the operator has already notified the use of another critical component of the same type for the same application and the competent cybersecurity authority – in this case, the Federal Ministry of the Interior – has not prohibited its use. §41(2) GISM provides that the Ministry, in consultation with the relevant agencies and the Federal Foreign Office, may, within two months of receiving the notification under paragraph 1, prohibit the operator from proceeding with the first deployment of the critical component, or issue appropriate general directions, if such deployment could undermine public order or the security of the Federal Republic of Germany. In assessing the likelihood of a threat to public order or security, the authority must pay particular attention to whether:

- a) the manufacturer of the component is directly or indirectly controlled by the government of a third country, including that country's other government agencies or its armed forces;
- b) the manufacturer has been, or is, involved in activities detrimental to public order or security in the Federal Republic of Germany or in another member state of the European Union, the European Free Trade Association or the North Atlantic Treaty Organisation (NATO), or to facilities located in their territories; or
- c) the deployment of the critical component is consistent with the security policy objectives of the Federal Republic of Germany, the European Union or NATO.

Authorisation to make the component available may not be granted until two months have elapsed from the date of notification. Pursuant to §41(2) GISM, the Federal Ministry of the Interior may extend that review period by a further two months where the examination presents particular factual or legal difficulties (... *wenn die Prüfung besondere Schwierigkeiten tatsächlicher oder rechtlicher Art aufweist*).

Under §41(3) GISM, critical components may be used only if the manufacturer has provided the operator of the critical system with a declaration of conformity (in literal translation 'guarantee of trustworthiness': *Erklärung der Vertrauenswürdigkeit – Garantieerklärung*). That declaration must accompany the notification required by paragraph 1. It must explain how the manufacturer ensures that the critical component contains no technical features specifically designed for misuse, in particular:

- 1) sabotage;
- 2) espionage;
- 3) terrorism; or
- 4) compromising the security, confidentiality, integrity, availability or functionality of a critical system.

The Federal Ministry of the Interior, in consultation with the relevant ministries and the Federal Foreign Office, is empowered by regulation to prescribe the minimum content of the declaration of conformity. Those requirements must be guided by the objectives of protecting the security, confidentiality, integrity, availability and functionality of the critical component and must address risks to public security and order associated with the manufacturer, in particular its organisational structure.

Crucially, these rules (as set out in sentences 1 and 2 of the cited provision) apply only from the date the regulation is published and do not extend to critical components already in use before that date. Any subsequent amendments to the regulation will not affect declarations of conformity already issued. By way of exception, however, §41(4) provides that the Federal Ministry of the Interior, in consultation with the relevant ministries and the Federal Foreign Office, may prohibit the continued use of a critical component, or issue directions, if continued use could jeopardise public order or the security of the Federal Republic of Germany – particularly where the manufacturer is deemed untrustworthy (*nicht vertrauenswürdig*). Paragraph 2, sentence 2 applies *mutatis mutandis*.

Under §41(6) GISM, where further use of a critical component has been prohibited under paragraph 4, the Federal Ministry of the Interior may, in consultation with the relevant ministries and the Federal Foreign Office, prohibit the planned deployment and any further deployment of critical components of the same type from the same manufacturer, allowing a reasonable grace period.

In serious cases of untrustworthiness under paragraph 5, the Federal Ministry of the Interior may prohibit the use of all critical components from a given manufacturer. It must then issue its decision in consultation with the relevant ministries and the Federal Foreign Office.

The position is slightly different where assets are to be withdrawn from use – whether preventively or as a corrective measure – following security incidents. On a literal reading of the provisions, incidents alone are not sufficient grounds to trigger the restrictions described above. However, §41(5) GISM sets out grounds for treating a manufacturer of critical components as untrustworthy, including: a lack of adequate security controls and penetration testing of the product and its production environment; or failing to remedy identified product vulnerabilities and to notify the operator of critical installations. Accordingly, if a security incident occurs as a result of such omissions, the restrictions in §41 GISM may be applied.

In addition, the Federal Office for Information Security (BSI), may deploy a range of enforcement and supervisory measures – powers that are particularly relevant in crisis situations triggered by incidents. In particular, BSI may order additional

audits and inspections to verify whether an entity is meeting its obligations (§61(5) of the draft). If it identifies deficiencies, it may issue directions requiring specific corrective or preventive measures (§61(6)–(7) GISM) and require submission of a plan to remedy the deficiencies, together with evidence of implementation. BSI is also empowered to require that potentially affected persons be informed of the nature of the risk and the protective measures, and to publicise information about the breaches.

If BSI's directions to particularly important entities (*besonders wichtige Einrichtungen*) are not complied with, the competent supervisory authority may, under §61(9) GISM:

- a) temporarily suspend all or part of the licence granted to that entity, and
- b) temporarily bar untrustworthy management from performing the functions of their office (i.e. suspend the management board).

These measures are available only where the particularly important entity fails to comply with the directions. They must be lifted as soon as the entity returns to compliance.

As regards securing the supply chain, according to §30(1) of the draft GISM:

[p]articularly important entities and important entities are required to take appropriate, proportionate and effective technical and organisational measures ... to prevent disruptions to the availability, integrity and confidentiality of the information systems, components and processes they use to provide their services, and to minimise the impact of security incidents.

When determining whether measures are 'appropriate, proportionate and effective' (*geeignete, verhältnismäßige und wirksame ... Maßnahmen*), regard must, in accordance with sentence 1, be had to the extent of the entity's risk exposure, the size of the organisation, the costs of implementation, and the likelihood and severity of security incidents, including their social and economic impact. Entities must keep records demonstrating compliance with sentence 1. At a minimum, the measures must include supply chain security, including security-relevant aspects of relationships with direct suppliers or service providers (§30(2) (4) GISM).

§38 of the draft GISM also places duties on the management bodies of particularly important entities and important entities to implement and monitor compliance with §30 GISM, and to undergo training accordingly. The explanatory memorandum to §30(2) is instructive. It indicates that the requirements set out in the draft – especially on supply chain security and incident response – may also encompass scanning (EAS testing). Supply chain security measures may include,

for example, appropriate contractual terms with suppliers and service providers on risk management, cybersecurity incident management and patch management, and the incorporation of BSI recommendations relating to their products and services; they may also involve encouraging suppliers and service providers to adhere to core principles such as security by design and security by default. In identifying appropriate measures, the obliged entity must take into account specific vulnerabilities identified in the products or services of individual direct suppliers and service providers, as well as the overall quality of those suppliers' and service providers' products and cybersecurity practices, including the security of their R&D processes. When identifying and selecting specific measures, entities must also have regard to the results of coordinated risk assessments of critical supply chains carried out under Article 22(1) of the NIS 2 Directive.

Conclusions

The NIS 2 Directive requires EU member states to establish a legal framework under which entities of particular systemic importance to society and the economy must implement a cybersecurity management system that secures their supply chains and supplier relationships. As part of that framework, member states must also impose risk-management measures on suppliers of critical ICT products and services, including mandatory risk assessments. The Directive further sets out rules for proportionate responses to cybersecurity incidents and crises. However, it does not create a regime empowering member states to exclude particular suppliers or technologies solely by reference to their country of origin or capital ties to entities from certain third countries. In that respect, NIS 2 is technologically neutral. Accordingly, the exclusion of any supplier or technology from supply chains must be justified by a cyber threat of sufficient gravity to satisfy the requirement of proportionality.

The 5G Toolbox is not an autonomous implementation standard for NIS 2; it must be interpreted in light of the Directive, which has superior status in the EU legal order. In that sense, the Toolbox helps to clarify the Directive's rules – for example, on the exclusion of providers or technologies and their isolation within systems – but only to the extent and in the circumstances that the Directive itself permits or requires such measures (notably in response to serious incidents or crises). The Toolbox also provides guidance on how to apply the principle of proportionality in those situations.

All of the national implementing measures examined, adopted by EU member states other than Poland, reflect the principle of technological neutrality, including as regards essential and important entities within the meaning of the Directive. None of these measures creates a free-standing basis to restrict or exclude a particular technology or supplier through discretionary action unconnected to specific findings that the systemic risk they pose has risen to a level that renders such restriction or exclusion proportionate.

Each national cybersecurity management model permits entities that are critical or important (labelled differently across legal systems, but corresponding to the two NIS 2 categories) to restrict or exclude specific technologies or suppliers, but only where a risk assessment indicates a high level of cyber threat, or where serious incidents or a crisis in the national cybersecurity system have occurred.

Some frameworks – for example, the Hungarian Cybersecurity Act and the German Draft Law – allow preventive exclusion of a technology or supplier on grounds that include political criteria (such as a supplier's involvement in activities hostile to the state). Any such exclusion is specific rather than general and follows a request concerning a particular supplier or technology, grounded in an adequate technical assessment. Even where the assessment reaches an adverse conclusion about a class of technology, the resulting measures apply to that class only insofar as the technology is sourced from the supplier concerned.

Each national model requires not only a well-founded justification for any prospective restriction but also that its personal and material scope be calibrated to the scale of the identified cyber threats, having regard both to specific personal or material characteristics and to the impact of the relevant technologies and suppliers on critical and important infrastructure in the country, as well as on the physical environment (e.g. German *Umwelt*, Swedish *miljö*).

The differences between the solutions examined are neither significant nor material; they consist chiefly of procedural variations and of greater or lesser specificity as to the factors to be weighed when assessing proportionality. They are also reflected in the way legislators treat the principle of escalation (i.e. increasing the intensity of the response) as distinct from proportionality – a distinction made expressly in Italy's draft implementation of the NIS 2 Directive. In incident or crisis scenarios, moreover, Italian law permits the imposition on critical or important entities of an obligation to restrict their suppliers and technologies to those that themselves qualify as critical or important entities, or to products certified under a scheme recognised in Italy. A broadly similar approach is under consideration in Germany and has already been adopted in Hungary.

Differences also arise in the scope of obligations by reference to entity size. In particular, Italian law provides broader exemptions on size grounds: the core obligations in this area may apply only to large entities.

It is also worth noting that some media portrayals of certain final or draft measures implementing the NIS 2 Directive are not borne out by the adopted or proposed texts. A particularly notable example is the Austrian draft (and, to some extent, the German draft), which has at times been presented as a regime that would radically exclude suppliers and technologies from third countries. That is not the case: the final draft provisions are designed to ensure compliance with the principle of proportionality.

REFERENCES

- Act (2013). Lag om tillsyn över el- och naturgasmarknaden, *Finlands Författningsamling*, 590/2013, 14.09.2013.
- Act (2018). Zákon č. 69/2018 Z. z. o kybernetickej bezpečnosti a o zmene a doplnení niektorých zákonov, *Zbierka Zákonov Slovenskej Republiky*, 09.03.2018.
- Amiot, E., Palencia, I., Buena, A., de Pommerol, C. (2020). *European Digital Sovereignty: Syncing Values and Value*, <https://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2020/october/European%20Digital%20Sovereignty.pdf> (accessed: 20.02.2026).
- Commission Implementing Regulation (EU) 2024/2690 of 17 October 2024 laying down rules for the application of Directive (EU) 2022/2555 as regards technical and methodological requirements for cybersecurity risk-management measures and further specifying when an incident is to be considered significant with regard to DNS service providers, TLD name registries, cloud computing service providers, data centre service providers, content delivery network providers, managed service providers, managed security service providers, providers of online marketplaces, online search engines and social networking platforms, and trust service providers, OJ L 2024/2690, 18.10.2024.
- Commission Implementing Regulation (EU) 2024/2690 of 17 October 2024 laying down rules for the application of Directive (EU) 2022/2555 regarding technical and methodological requirements for cybersecurity risk-management measures and further specifying cases in which an incident is deemed significant for DNS service providers, TLD name registries, cloud computing service providers, data centre service providers, content delivery network providers, managed service providers, managed security service providers, providers of online market places, of online search engines and of social networking services platforms, and trust service providers, OJ L 2024/2690, 18.10.2024.
- Commission v Spain* (1999). CJEU judgment of 16 September 1999 in Case C-414/97 *Commission v Spain (control of investments in strategic undertakings)*, ECLI:EU:C:1999:417.

- CSL (2025). Kyberturvallisuuslaki / Cybersäkerhetslag (124/2025) 4.4.2025, viimeksi muutettuna / ändrad senast genom (369/2025), 27.06.2025.
- Czarnocki, J., Palka, P. (Eds.). (2024). *Proportionality in EU Digital Law: Balancing Conflicting Rights and Interests*. Oxford: Hart Publishing.
- Directive (EU) 2022/2555 of the European Parliament and of the Council of 14 December 2022 on measures to achieve a high common level of cybersecurity across the Union, amending Regulation (EU) No 910/2014 and Directive (EU) 2018/1972, and repealing Directive (EU) 2016/1148 (the NIS 2 Directive), OJ L 333, 27.12.2022.
- DLI (2024). Decreto Legislativo 4 settembre 2024 – Recepimento della direttiva (UE) 2022/2555, relativa a misure per un livello commune elevato di cibersicurezza dell’Unione, recante modifica del regolamento (UE) n. 910/214 e della direttiva (UE) 2018/1972 e che abroga la direttiva (UE) 2016/1148, *Gazzetta Ufficiale*, 230, 01.10.2024.
- Eliantonio, M., Volpato, A., Röttger-Wirtz, S. (2025). *Global Standards and EU Law: Challenges for EU Principles of Good Governance*. Cheltenham: Edward Elgar Publishing.
- GISM (2024). Entwurf eines Gesetzes zur Umsetzung der NIS-2-Richtlinie und zur Regelung wesentlicher Grundzüge des Informationssicherheitsmanagements in der Bundesverwaltung (NIS-2-Umsetzungs- und Cybersicherheitsstärkungsgesetz), <https://dserver.bundestag.de/btd/20/131/2013184.pdf> (accessed: 20.03.2026).
- GS-NCS (2024). *General Scheme of the National Cyber Security Bill 2024*, <https://www.gov.ie/en/department-of-justice-home-affairs-and-migration/publications/general-scheme-of-the-national-cyber-security-bill-2024/> (accessed: 20.03.2026).
- Kianpour, M., Davis, P.A.E., Windekilde, I.M. (2025). Digital Sovereignty in Practice: Analysis of the EU’s NIS2 Directive, *International Journal of Information Security*, 24(4), article 167. DOI: 10.1007/s10207-025-01090-4.
- KSZETY (2024). 2024. évi LXXXIV. törvény a kritikus szervezetek ellenálló képességéről, *Magyar Közlöny*, 131, 20.12.2024.
- Legea 124/2025 pentru aprobarea Ordonanței de Urgență a Guvernului nr 155/2024 privind măsuri pentru asigurarea unui nivel comun ridicat de securitate cibernetică în Uniunea Europeană, prin care se transpune Directiva (UE) 2022/2555 a Parlamentului European și a Consiliului din 14 decembrie 2022 (Directiva NIS 2) și alte prevederi, Monitorul Oficial al României, Partea I, nr 638 (Law No 124/2025 approving Government Emergency Ordinance No 155/2024 on measures to ensure a high common level of cybersecurity in the European Union, transposing Directive (EU) 2022/2555 (the NIS 2 Directive), *Official Gazette of Romania*, Part I, No 638).
- Loi NIS 2(2024). Loi du 26 avril 2024 établissant un cadre pour la cybersécurité des réseaux et des systèmes d’information d’intérêt général pour la sécurité publique, *Moniteur belge/Belgisch Staatsblad*, 17.5.2024, p. 63179. Νόμος 5160/2024: Ενωμάτωση της Οδηγίας (ΕΕ) 2022/2555 του Ευρωπαϊκού Κοινοβουλίου και του Συμβουλίου της 14ης Δεκεμβρίου 2022 σχετικά με μέτρα για υψηλό κοινό επίπεδο κυβερνοασφάλειας σε ολόκληρη την Ένωση, τροποποίηση του Κανονισμού (ΕΕ) αριθ. 910/2014 και της Οδηγίας (ΕΕ) 2018/1972 και κατάργηση της Οδηγίας (ΕΕ) 2016/1148 (Οδηγία NIS 2) και άλλες διατάξεις, ΦΕΚ Α' 195 (Law 5160/2024 implementing Directive (EU) 2022/2555 (the NIS 2 Directive) and other provisions, *Official Gazette*, Series A, No 195).

- MKV (2024). Kormányrendelet – Magyarország kiberbiztonságáról szóló törvény végrehajtásáról, *Magyar Közlöny*, 135, 23.12.2024.
- NCSB (2024). *The National Cyber Security Bill 2024: Heads of Bill*, <https://www.iisf.ie/files/UserFiles/Documents/2024/General-Scheme-of-the-National-Cyber-Security-Bill-2024.pdf> (accessed: 20.03.2026).
- NCSC (2025). *Guidance Documents*, <https://www.ncsc.gov.ie/guidance/> (accessed: 31.07.2025).
- NISG (2024). Entwurf. Bundesgesetz zur Gewährleistung eines hohen Cybersicherheitsniveaus von Netz- und Informationssystemen (Netz- und Informationssystemssicherheitsgesetz 2024 – NISG 2024) erlassen wird und das Telekommunikationsgesetz 2021 und das Gesundheitstelematikgesetz 2012 geändert werden, 326/ME XXVII GP – Ministerialentwurf – Gesetzestext.
- Nordhaug, L.M., Harris, L. (2021). Digital public goods: Enablers of digital sovereignty. In: *Development Co-operation Report 2021: Shaping a Just Digital Transformation* (pp. 256–264). Paris: OECD Publishing.
- Nowak-Far, A. (2018). National Versus European Component in the European Union Product Conformity Regulation. In: *Renationalisation of the Integration Process in the Internal Market of the European Union* (pp. 37–66), R. Grzeszczak (Ed.). Baden-Baden: Nomos Verlag.
- NZKB (2024). Vládní návrh zákona o kybernetické bezpečnosti, 759/0, 25.06.2024.
- Pohle, J., Thiel, T. (2020). Digital Sovereignty, *Internet Policy Review*, 9(4). DOI: 10.14763/2020.4.1532 (accessed: 20.03.2026).
- Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), OJ L 119, 4.5.2016.
- Regulation (EU) 2019/881 of the European Parliament and of the Council of 17 April 2019 on ENISA (the European Union Agency for Cybersecurity) and on information and communications technology cybersecurity certification and repealing Regulation (EU) No 526/2013 (Cybersecurity Act), OJ L 151, 7.6.2019.
- Regulation (EU) No 526/2013 of 21 May 2013 concerning the European Union Agency for Network and Information Security (and repealing Regulation (EC) No 460/2004), OJ L 165/41, 18.6.2013.
- Rewe-Zentral AG v Bundesmonopolverwaltung für Branntwein* (1979). Judgment in Case 120/78 *Rewe-Zentral AG v Bundesmonopolverwaltung für Branntwein*, ECLI:EU:C:1979:42.
- Senden, L. (2004). *Soft Law in European Community Law*. Oxford: Hart Publishing.
- Tridimas, T. (2007). *The General Principles of EU Law*. Oxford: Oxford University Press.
- UKS (2024). Uredba o kibernetičkoj sigurnosti, *Narodne Novine*, 135/2024, 22.11.2024.
- VBÖ (2021). 2021. évi XCIII. törvény a védelmi és biztonsági tevékenységek összehangolásáról, *Magyar Közlöny*, 120, 25.06.2021.
- ZKB (2024). Zákon 366/2024 Z. z. z 28. novembra 2024, ktorým sa mení a dopĺňa zákon č. 69/2008 Z. z. o kybernetickej bezpečnosti a o zmene a doplnení niektorých zákonov v znení neskorších predpisov a ktorým sa menia a dopĺňajú niektoré zákony. *Zbierka Zákonov Slovenskej Republiky*, 366/2024, 28.11.2024.
- ZKS (2024). Zákon o kibernetičkoj signurnosti, *Narodne Novine*, 14/2024, 07.02.2024.

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THE EU INTERNAL MARKET IN THE CASE-LAW OF POLISH ADMINISTRATIVE COURTS

Introduction

Pursuant to Article 26(1) and (2) of the Treaty on the Functioning of the European Union (TFEU),

[t]he Union shall adopt measures with the aim of establishing or ensuring the functioning of the internal market, in accordance with the relevant provisions of the Treaties. ... The internal market shall comprise an area without internal frontiers in which the free movement of goods, persons, services and capital is ensured, in accordance with the provisions of the Treaties.

The European single market, regarded as a cornerstone of the European Union, is one of the most significant achievements of the European integration process. The instrumental and normative expression of the realisation of the internal market is found in the fundamental freedoms, namely: the free movement of goods (Articles 28–29 TFEU); the free movement of persons (workers) (Articles 45–48 TFEU); the freedom of establishment (Articles 49–55 TFEU) and the freedom to provide services (Articles 56–62 TFEU); and finally, the free movement of capital (Articles 63–66 TFEU). The content of these principles (freedoms) has been developed and specified primarily through the case-law of the Court of Justice of the European Union (CJEU), to mention only, by way of example, such landmark judgments as *Cassis de Dijon* (Case 120/78), *Bosman* (Case C-415/93), *Gebhard* (Case C-55/94) and *Commission*

v Portugal (Case C-367/98). In parallel, the CJEU's *acquis* has been implemented and further elaborated in cases pending before national courts that involve an EU-law component. In particular, the administrative courts have been active in this respect, considering in their case-law the significance of the above fundamentals of the functioning of the internal market in subject-matter-diverse disputes, *inter alia* concerning tax obligations, the regulation of economic activity, state aid and a range of other matters. Even a necessarily cursory review of the case-law shows that the essence and practical significance of the EU freedoms are analysed by the judiciary primarily through the lens of the cross-cutting principle of proportionality, without which the design of the internal market – grounded in the principle of mutual recognition – would, to put it mildly, be difficult to sustain [Cieśliński, 2013, p. 230]. The objective of this study is therefore to demonstrate the impact of the EU freedoms on the application of administrative law and thus to illustrate the harmonisation of the national legal system with EU law at the operative level, i.e. in the practice of law application, in matters relating to the internal market. The thesis advanced here is that the internal market is perceived in the practice of Polish administrative courts as an autonomous value, as well as fundamental freedoms, while the principle of proportionality constitutes the means by which those values are realised in public legal transactions.

1. The meaning and theoretical contours of the principle of proportionality

The principle of proportionality is regarded – particularly in the case-law of the Court of Justice – as a general principle of EU law, now finding its normative basis in Article 5(4) of the Treaty on European Union (TEU), according to which (first sentence), '[u]nder the principle of proportionality, the content and form of Union action shall not exceed what is necessary to achieve the objectives of the Treaties'. This principle fulfils two essential functions. First, it prevents the introduction of unnecessary restrictions on the free movement of goods, persons, services or capital; that is to say, it is an instrument serving the integration of the markets of EU member states. Secondly, it guarantees to participants in the internal market that the rights conferred by the Treaty provisions cannot be infringed without justification; it thus ensures the protection of individual rights and interests [Maliszewska-Nienartowicz, 2009, pp. 14–16]. Since the *Cassis de Dijon* precedent, the role of this test has increased markedly: the catalogue of values capable of being set against the freedoms – and

thereby limiting them – has expanded significantly, whilst the scope of the freedoms themselves has developed so as to permit the challenge of national measures that are non-discriminatory. The principle now determines the specific design of the freedoms and, more generally, shapes the manner of their application by the Court of Justice as well as the limits of the obligations arising for member states in concrete cases. Since it ultimately allows the scope of permissible restrictions to be specified, it effectively decides on the division of powers and the degree of deregulation. Its role stems from the very nature of the freedoms as subjective rights and norms that leave a significant margin of discretion and expose conflicting interests – economic integration and non-market interests, national and supranational concerns, public and private values – which require highly individualised adjudication and balancing that only proportionality can ensure [Cieśliński, 2013, p. 233]. It therefore needs no extended justification to observe that it is precisely in the context of reviewing the compatibility of national rules with EU law that the special role of the courts in protecting the subjective rights of the ‘actors’ of the internal market becomes apparent.

As Mudrecki notes, although the Court of Justice has not developed a coherent theory of the principle of proportionality, it generally refers to infringements of this principle in the sense of a proportionality test *sensu stricto* as understood by Alexy [Mudrecki, 2020, Chapter II.4]. That test rests on a dichotomous division of legal norms into rules and principles. The latter – unlike rules, which operate on an ‘all-or-nothing’ basis – function according to a ‘more-or-less’ scheme, which gives rise to the problem of competing principles in a manner that departs from classical conflict-of-laws reasoning [Peczenik, 1989, p. 76]. Classical conflict rules do not apply in the case where principles, in the above sense, are in conflict: principles cannot be ‘set aside’ or ‘invalidated’ *en bloc*; rather, they may be fulfilled to a greater or lesser degree depending on the case at hand. This entails determining the weights of competing principles in a given case and according to conditional priority to one of them [Alexy, 2010, pp. 80–87]. On this basis, Alexy’s theory of principles is defined by three core propositions: the optimisation thesis, the law of collision, and the law of balancing. According to the first, the normative structure of principles takes the form of optimisation commands, imposing an obligation to realise a given state of affairs to the highest extent possible in the circumstances.

As indicated, this means they may be realised to varying degrees depending on the factual and legal context. Where competing principles arise, one must determine to what extent and which of them is to take precedence so that each is realised to the highest possible degree. Principles may thus be fulfilled gradationally, i.e. to a greater or lesser extent. The collisional nature of principles is another defining feature;

collisions of principles are derivative of collisions of values. Correspondingly, the gradual fulfilment of principles reflects the gradual realisation of values. There is no possibility of resolving *ex ante* all theoretically possible collisions of principles. Accepting such a possibility would require a comprehensive hierarchy of principles mirroring a hierarchy of values, which does not seem feasible given the worldview pluralism of contemporary societies. The complexity of social reality therefore necessitates assessing the priority of one principle over another through the prism of a fragment of reality situated at a specific time and place. Such preference is, as noted, conditional in the sense that the priority of principle A over principle B in circumstances X does not exclude the priority of principle B over principle A in circumstances Y. As a mechanism for resolving such collisions, Alexy proposes the law of balancing, i.e. determining, based on the circumstances of the particular case, the conditional (relative) priority of one principle over others, which in substance entails applying the proportionality test. The essence of proportionality is to realise one principle in a manner that causes the least possible detriment to the realisation of a competing principle. The permissible degree of the non-fulfilment or infringement of one principle depends on the degree of importance of fulfilling another – the greater the degree of non-fulfilment of one principle, the more important the fulfilment of the other must be. The principle of proportionality comprises three sub-principles: suitability (appropriateness), necessity, and proportionality in the narrow sense. The last of these expresses the very essence of balancing colliding principles (the *sensu stricto* test), as it delineates the legal limits of the fulfilment of competing principles. The balancing referred to here proceeds in three stages. First, one must determine the degree of non-fulfilment or infringement of the first principle (P1). Secondly, one must determine the significance of fulfilling the competing principle (P2). This means that the degree of importance of P2 is the same as the degree to which non-infringement of P1 would infringe P2. The third stage consists in juxtaposing and evaluating the results of the two preceding stages, i.e. assessing whether the importance of satisfying the competing principle P2 justifies the infringement (non-fulfilment) of principle P1. This phase captures the essence of the balancing of principles and, at the same time, is what the Court of Justice in fact undertakes when assessing cases for which the normative template consists in the EU freedoms and the assessment of their restrictions in the light of proportionality [Alexy, 2010, pp. 97–99, 132–133].

It should be emphasised that the resolution of collisions of principles is no longer the exclusive domain of constitutional courts in the broad sense – i.e. courts operating within both national and international jurisdictions (in particular, the Court of Justice) – but has become part of the operative discourse of the courts of fact,

including the administrative courts. Thus, the courts *a quo* have themselves become exponents of the constitutional system of values and, accordingly, guardians of the Treaty freedoms. In dispensing justice and performing the tasks of administrative adjudication, the courts are therefore not oriented solely towards decision-making by reference to a narrowly understood criterion of legality but take into account the law's complex character, facing the necessity of balancing the principles and values relevant to the given (hard) case [Grzybowski, Sarnowiec-Cisłak, 2018, pp. 69–70]. In the European economic space, that balancing takes place, as noted, on the basis of the Treaty freedoms constitutive of the internal market.

From the foregoing observations it follows, first, that the limits of the freedoms (of the common market) have become the subject of a judicial dialogue between the national courts and the Court of Justice. Secondly, what has become the common denominator – the interpretative and operational tool – for the Treaty freedoms is the proportionality formula, universal across the European legal space and the juridical model of law application. The content of that formula, albeit open-textured, nonetheless has theoretical contours that describe the essence of judicial statements in which values (principles) realising the assumptions of the internal market are balanced. These conclusions will be illustrated with selected examples from the case-law of the administrative courts.

2. Fundamental and instrumental values in the judicial practice of Polish administrative courts

The case-law of administrative courts emphasises that the principle of proportionality is a fundamental systemic principle of the European Union, which applies, *inter alia*, when enacting and applying national law intended to realise Union objectives. This principle performs a role analogous to the constitutional systemic principles of the member states. The proportionality test developed in the case-law of the Court of Justice has been invoked, *inter alia*, in relation to administrative fines connected with the incorrect accounting of harmonised taxes, in particular VAT. As is well known, value-added tax is a means of achieving the aim of establishing the internal market. It is a turnover tax which, in principle, does not distort competition or hinder the free movement of goods and services (Article 113 TFEU; fourth recital of the VAT Directive) [Council Directive 2006/112/EC]. Although this is the overarching aim of the common VAT system, one must not overlook the fact that VAT is vulnerable to fraud (in particular, so-called carousel fraud). Combating fraud, tax evasion and

potential abuse is therefore an objective recognised and supported by the VAT system [Tanoarch, 2011, para. 50 et seq.]. Consequently, one of the measures countering pathologies of the common VAT system is the imposition of various administrative sanctions –in Poland, the so-called ‘additional tax liability’. The essence of this measure is to protect the tax system from the financial consequences of tax fraud; the mechanism adopted allows a defaulting entity to be charged with an administrative sanction of up to 100% of the amount of the tax shortfall. In this connection, drawing on the CJEU’s case-law, the Supreme Administrative Court has underscored that:

where acts have been committed with the aim of perpetrating a VAT fraud resulting in an understatement of liability or the obtaining of an undue refund of excess input tax, the importance of the objective of preventing such fraud empowers the legislature, in pursuing that objective, to employ legal measures whose effects for taxpayers are marked by a significant degree of severity. By its very nature, ... the proportionality criterion *sensu stricto* implies that where the measure subject to the proportionality test is intended to realise the above objective, the level of severity may be commensurately high relative to the rank of that objective. In such a situation even a very considerable severity of the protective measure does not give rise to a sense of loss of reasonable proportion between that severity and the importance of the objective protected. Accordingly, ... a sanction consisting in the obligation to pay 100% of the input tax which the taxpayer deducted in breach of the law does not infringe the principle of proportionality where the taxpayer committed that breach knowingly, being aware of his participation in tax fraud. ... The serious and negative nature of such conduct justifies the introduction into the legal system of provisions with a preventive effect. In such circumstances, the application to the taxpayer of a sanction which ... may be regarded as open to justified criticism, cannot, in view of the taxpayer’s deliberate action to obtain an undue deduction, be assessed as infringing the principle of proportionality. In such a case, the requirement to maintain a rational proportion between the degree of severity caused by the sanction and the weight of the objective pursued by the sanction is satisfied. [CBOSA, 2022a]

At the same time, it goes beyond what is necessary and indispensable to achieve the above preventive aim to impose an additional tax liability on a taxpayer where the irregularity stems from interpretative divergences, i.e. does not constitute material unreliability. An error is not the same as fraud. Where an understatement of the taxable amount is the consequence of an error in applying the VAT mechanism, the measure cannot be regarded as necessary to achieve the aims of ensuring proper tax collection and preventing tax fraud (see e.g. judgment of the Warsaw Voivodeship

Administrative Court, ref. III SA/Wa 926/23, CBOSA). In other words, the principle of proportionality serves to demarcate both the limits of protection and the scope of permissible interference with the taxpayer's rights within the common economic area.

The administrative courts also analysed the limits of the freedom to conduct a business (right of establishment) by undertakings operating within the European Union. An illustration is provided by the case-law concerning the register of domain names used for the offering of gambling services contrary to statute. The purpose of that register is to restrict (block) access to illegal websites offering gambling (online casinos, betting, etc.) that do not hold the requisite authorisation issued by the Polish authorities. It is thus a tool allowing for the exclusion from the market of undertakings which do not submit to the regulation of gambling activity under the rules in force in Poland and which, for that purpose, intentionally use domains registered outside the country. In this context, the case-law stresses 'the lack of harmonisation at EU-law level of the market in games of chance', with the consequence that

it must be regarded as a natural corollary of this state of affairs that Member States enjoy a wide regulatory discretion in determining the rules governing gambling, justified by the specific nature of gambling and, above all, by the serious risks associated therewith for those who participate and for those who organise it. Gambling creates dangers for the economic, social and family situation of those who take part and may lead to addiction comparable to addiction to narcotics and alcohol. In the case of gambling, the benefits associated with the operation of a free market therefore do not arise. The principle governing gambling is that players lose more than they win. Those who organise gambling in effect 'sell' the illusion of rapid enrichment at the cost of the real impoverishment of those consumers who engage in such games. From a societal perspective, opening the free market to this sector would therefore produce exclusively negative effects, since the competition underpinning that market does not deliver the expected consumer benefits in this field. Hence, it is accepted that the morally and financially harmful consequences of gambling for individuals and society may justify a wide regulatory competence of Member States as regards determining the necessary level of consumer and public-order protection. That regulatory competence encompasses the discretion to set the objectives of their policy on games of chance and, where necessary, to specify in detail the level of protection sought, which at the same time constitutes the criterion for assessing the legality of national measures, provided, of course, that restrictions adopted in that regard meet – as shaped by the Luxembourg Court's case-law – the requirements of proportionality. Moreover, the mere fact that a given State chooses a different system of protection from that adopted by another Member State cannot affect the assessment of the necessity and proportionality of the measures adopted in this field. [CBOSA, 2024]

Therefore, if in the field of gambling the benefits associated with the free market do not materialise, and in relation to economic activity in gambling – which, by reason of its nature, is subject to strict regulation – member states may enjoy a relatively broad regulatory competence, then ensuring the necessary and indispensable level of consumer and public-order protection may justify the adoption of legal solutions consisting in authorising gambling on the basis of exclusivity (a monopoly). This has the advantage of channelling games into a controlled circuit and preventing the risk of their being organised for fraudulent and criminal purposes; in other words, in granting exclusive rights to conduct online gambling to a single entity subject to strict public control [CBOSA, 2024].

In the view of the Supreme Administrative Court, the national solutions, including those concerning the register of domains used for offering gambling contrary to statute, accord with these assumptions. As the case-law puts it:

the legal solutions adopted in national law do not, in any degree or respect, diverge from – indeed they correspond to – the approach endorsed in the Luxembourg case-law as regards the possibility and permissibility of establishing, in the present field, a rule of exclusivity (monopoly), i.e. granting exclusive rights to conduct online gambling to a single entity subject to strict public control. [CBOSA, 2024]

At the same time,

introducing the possibility of blocking access to illegal domains ensures that players will have no doubt as to whether they are using the services of a lawful gambling operator. Experience to date shows that many persons participating in illegal gambling are unaware that they are infringing statutory provisions. This is due to the broad availability of illegal websites and the low level of public awareness of statutory restrictions applicable to the catalogue of games that may be offered online. The legislator hopes to raise public awareness in this respect. ... in connection with the granting of the right to organise certain games online to an entity exercising the state monopoly in that field, that entity will in large measure be burdened with new obligations. This clearly indicates coherence and systemic approach to ensuring the highest level of protection of citizens against the negative effects of gambling. ... ensuring appropriate public oversight of that segment of the gambling market which encompasses online casino games (among the most addictive forms of gambling) may be achieved solely through supervision of the entity exercising the state monopoly. This will enable the establishment of a legal framework ensuring the achievement of the objective through an offer adjusted to it both quantitatively and qualitatively. It will also increase the percentage of players using the lawful, state-controlled offer. The effect of the above solutions

will be to increase the market share of lawful operators and the consequent rise in the level of consumer protection. The aim ... is to restrict the possibility for entities without the requisite authorisation to offer online gambling. Such entities do not meet the requirements relating to ensuring the highest possible level of player protection. This concerns protection both against the negative social and economic consequences of gambling and addiction and against the refusal by entities to honour financial commitments to players. [CBOSA, 2024]

Accordingly, it is accepted that

a measure ensuring the enforcement of national rules establishing the principle of exclusivity (monopoly) as regards games of chance ... may consist in a mechanism for blocking (an order to block) access to websites through which unlawful gambling services are offered; serving to prevent their use, this is treated as an indispensable element of the protection that a Member State may and intends to ensure in its territory in the field of games of chance... [CBOSA, 2024]

The courts do not discern in this respect an infringement of the freedom to provide services and, crucially, emphasise – by reference to the CJEU's position – that

there is no obligation to examine, in each individual case, whether an implementing measure intended to ensure compliance with that regulation is suitable for guaranteeing attainment of the objective pursued by it and whether it is consistent with the principle of proportionality, provided that the measure is indispensable to ensuring the effectiveness of that regulation and does not contain any additional restriction beyond that which follows from the regulation itself. [CBOSA, 2024]

The said register serves solely to ensure the attainment of the Act's objectives (in particular securing the said monopoly) and does not entail any additional restrictions.

The judiciary also invokes the EU freedoms in matters concerning access to state aid in a broad sense. For example, in its judgment, the Warsaw Voivodeship Administrative Court considered the access of a foreign (EU-based) undertaking to exemption from social security contributions under special measures intended to counter and remedy the effects of the COVID-19 pandemic. As a rule, this support was granted to undertakings operating in sectors particularly affected by the pandemic (including, inter alia, tour operators). The problem addressed by the court was that the undertaking was not listed in the REGON register and thus its principal activity qualifying it for exemption could not be determined on the basis of that register, as required by national implementing measures (regulation). There was, however,

no doubt that the undertaking provided, within the territory of Poland, tour operator services – i.e. services falling within the scope of the support. Addressing this issue, the court observed that the administrative authority's position

in effect runs counter to the constitutional hierarchy of sources of law, consistent at both national and EU level. It should be noted that among the fundamental principles of EU law is the prohibition of discrimination on grounds of nationality..., which must be related also to the freedom of establishment. [CBOSA, 2022b]

Consequently, the authority's rationale for a formal restriction on access to support – namely that an EU-based foreign undertaking conducting the supported activity is not eligible for exemption from contributions on account of the lack of a relevant entry in the REGON register – is irreconcilable both with the general principles governing the pursuit of economic activity in the territory of the Republic of Poland and 'is discriminatory on grounds of nationality'. In substance, this amounts to 'an attempt to interpret constitutional and statutory principles through the prism of ... the understanding of a sub-statutory act, which does not withstand scrutiny in the light of systemic arguments' [CBOSA, 2022b].

The examples of rulings cited above indicate that Polish administrative courts undoubtedly uphold the internal market and its fundamental freedoms. At the same time, certain differences can be observed in the operationalisation of internal market principles, manifested particularly in whether the court invokes the principle of proportionality in its reasoning.

Conclusions

The foregoing considerations show first and foremost that the taxonomy of the general principles of EU law is perceived similarly in the case-law of the Court of Justice and of national courts. In particular, the CJEU appears to draw a distinction between principles that have an autonomous normative force and those that require recourse to other principles. It should be recalled, for example, that the CJEU has indicated that there is no basis for the autonomous application of the principle of non-discrimination (Article 18 TFEU) or the principle of ensuring the functioning of the internal market (Article 26 TFEU) where the Treaty contains specific provisions on the freedoms guaranteeing the functioning of that market, in particular the freedom of establishment or the free movement of goods and the freedom to provide services [see e.g. *Tesco-Global Áruházak*, 2020, paras 55–56]. At

the same time, the cross-cutting principle of proportionality is the means by which the internal market freedoms are realised and their limits determined. Although the scope of application of proportionality extends well beyond the internal market, its application in this field is of particular significance. The interests of EU member states are pursued primarily within the internal market, and one of the conditions justifying derogations from the free movement of goods, persons, services and capital is precisely the principle of proportionality [Frąckowiak-Adamska, 2009, pp. 15–16]. Likewise, in the necessarily selective case-law presented, the fundamental importance of the Treaty freedoms is highlighted alongside the proportionality formula as the instrument delimiting, on the one hand, the freedom of Union entrepreneurs and, on the other, the extent of permissible public intervention with that freedom. In other words, the content of the rules defining the internal market freedoms is specified with regard to proportionality. It is also important that the proportionality formula has a defined theoretical structure which is reflected in the judicial dialogue between national courts and the Court of Justice. In particular, legal assessments appear to rest upon the model distinction between the elements of the proportionality test: suitability, necessity and proportionality *sensu stricto* [Frąckowiak-Adamska, 2009, pp. 269–274].

One may therefore venture the claim that proportionality, although recognised in the case-law as a general principle of EU law, performs a subsidiary role in relation to the objective of ensuring the functioning of the internal market and the freedoms that constitute that market. Its character is thus, so to speak, instrumental. By contrast, the freedoms themselves, as well as the internal market, constitute fundamental (intrinsic) values within the meaning of the TFEU. This distinction has a long philosophical pedigree, referring in particular to Kant's division between categorical and teleological values, i.e. values that embody the assumed end and those that are associated with the means of attaining that end. This bears not only upon the perception (classification) of the above EU-law principles but should also affect the way assessments are formulated concerning the limits of the Union freedoms. In particular, such assessments may be relativised systemically or instrumentally [Wróblewski, 1973, pp. 51–53]. This thesis is likewise illustrated by the case-law of Polish administrative courts.

The first type of assessment addresses the question whether a given regulation corresponds to the fundamental assumptions upon which the legal system is founded –in this case, the internal market as the very warp of the European Union. An example of system-relativised assessments, as they point to the intrinsic significance of the freedom of establishment and the freedom to provide services, is provided

by the judgments discussed above concerning the register of domains used to offer gambling contrary to statute and access to support measures countering the effects of the COVID-19 pandemic. In the former, the court essentially emphasised that, given the acceptance within the internal market of the rule of exclusivity (monopoly) for online gambling by a single entity subject to strict public control, there is no obligation to carry out a proportionality test *sensu stricto* in order to assess the compatibility of that institution with EU law. In the latter, attention was drawn to the inadmissibility of introducing restrictions, by way of sub-statutory acts (regulations), on access to public support for EU undertakings providing services in Poland – and, indirectly, on the fundamental rights of Union entrepreneurs – thus underlining the importance and rank of the fundamental freedoms constitutive of the internal market. Instrumental assessments, by contrast, address whether particular regulations properly serve the realisation of intrinsic (fundamental) values, i.e. those posited by law. An example of an instrumental assessment is the case-law concerning administrative fines (sanctions) connected with fraud within the common VAT system. The essence of the administrative courts' reasoning in this respect is that the severity of a fine is justified to the extent, first, that it is linked to fraud and, secondly, that it is calibrated (by rate or amount) to the degree of culpability of the participant engaging in fraud. The source of the justification for the level of sanctions thus lies in the proportionality test, in the light of which measures countering the distortions of the VAT system should not, in conflict with the principle of VAT neutrality, go beyond what is necessary to achieve the fundamental objective of the proper functioning of the VAT system and hence of the internal market.

Perceiving the relationship between intrinsic values (the internal market, the EU freedoms) and proportionality as a means to an end (an instrumental value) may have not only a taxonomic value for doctrinal knowledge but also an operative dimension. It may assist in conceptualising problems relating to the functioning of the internal market, in particular by facilitating their legal characterisation (e.g. whether they concern a 'direct' breach of a Treaty freedom or the delimitation thereof).

REFERENCES

- Alexy, R. (2010). *Teoria praw podstawowych*, B. Kwiatkowska, J. Zajadło (Trans.). Warsaw: Sejm Publishing Office.
- CBOSA (2022a). Judgment of the Supreme Administrative Court, ref. I FSK 1552/22.

- CBOSA (2022b). Judgment of the Warsaw Voivodeship Administrative Court, ref. V SA/Wa 3777/21.
- CBOSA (2023). Judgment of the Warsaw Voivodeship Administrative Court, ref. III SA/Wa 926/23.
- CBOSA (2024). Judgment of the Supreme Administrative Court, ref. II GSK 2432/21.
- Cieśliński, A. (2013). *Konstrukcja prawna swobód rynku wewnętrznego Unii Europejskiej*. Wrocław: Prawnicza i Ekonomiczna Biblioteka Cyfrowa.
- Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax, OJ L 347, 11.12.2008.
- Frąckowiak-Adamska, A. (2009). *Zasada proporcjonalności jako gwarancja swobód rynku wewnętrznego Wspólnoty Europejskiej*. Warsaw: Wolters Kluwer.
- Grzybowski, T., Sarnowiec-Cisłak, M. (2018). Ważenie zasad prawa w orzecznictwie sądów administracyjnych, *Zeszyty Naukowe Sądownictwa Administracyjnego*, 6, pp. 47–71.
- Maliszewska-Nienartowicz, J. (2009). Sądowe stosowanie wspólnotowej zasady proporcjonalności, *Europejski Przegląd Sądowy*, 1, pp. 11–17.
- Mudrecki, A. (2020). *Zasada proporcjonalności w prawie podatkowym*. Warsaw: Wolters Kluwer.
- Peczenik, A. (1989). *On Law and Reason*. Dordrecht: Kluwer Academic Publishers.
- Tanoarch (2011). Judgment in Case C-504/10 *Tanoarch s.r.o. v Daňové riaditeľstvo Slovenskej republiky*, ECLI:EU:C:2011:707 3.8.
- Tesco-Global Áruházak (2020). Judgment in Case C-323/18 *Tesco-Global Áruházak Zrt. v Nemzeti Adó- és Vámhivatal Fellebbviteli Igazgatósága*, ECLI EU.C.2020:140.
- Wróblewski, J. (1973). *Wartości a decyzja sądowa*. Wrocław: Zakład Narodowy im. Ossolińskich.

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MIGRATION DYNAMICS IN THE NEW EU MEMBER STATES SINCE 2004: POLAND IN COMPARATIVE PERSPECTIVE

Introduction

The accession of the Central and Eastern European states to the European Union after 2004 marked a turning point that reshaped nearly every aspect of their economic, political and social life. Accession was accompanied by far-reaching institutional reforms, including market liberalisation and the lifting of barriers to cross-border movement. Among the most significant consequences were new migration patterns – initially outward, then inward – that became a defining feature of the post-accession period. This chapter examines Poland's migration dynamics in comparative perspective, setting the Polish experience within the wider context of the countries that joined the EU from 2004 onwards.

When analysing migration trends in the majority of countries that joined the EU in the twenty-first century, i.e. **Poland, Bulgaria, Croatia, Cyprus, the Czech Republic, Estonia, Lithuania, Latvia, Malta, Romania, Slovakia, Slovenia, Hungary**¹ – it is important to recognise that, despite certain shared features of their recent histories – many having been within the Soviet sphere of influence and some having formed part of the USSR² – these countries also

¹ Throughout this chapter, Poland, Bulgaria, Croatia, Cyprus, the Czech Republic (Czechia), Estonia, Lithuania, Latvia, Malta, Romania, Slovakia, Slovenia and Hungary are referred to collectively as the *new EU member states*.

² With the exception of Cyprus and Malta.

differ markedly in their migration experiences. The chapter therefore highlights both the similarities and the principal differences in migration trends across these countries, with particular attention to movements beyond the EU and inflows from outside it. From a theoretical perspective, international migration is driven chiefly by two forces: economic differentials that generate voluntary labour migration, and crises – such as wars or natural disasters – that prompt forced displacement. In voluntary labour migration, people typically view socio-economic conditions at home as unsatisfactory and believe that moving abroad will, or is at least likely to, improve their prospects. Yet the realisation of these aspirations is constrained by migration barriers, understood as structural constraints that significantly reduce the number of people who actually move. Such barriers most commonly take the form of formal legal restrictions intended to shield the labour markets of highly developed countries from large-scale inflows of foreign workers. In the Central and Eastern European economies examined here, these forces have all shaped migration patterns over recent decades; the chapter considers them in that regional context.

1. Historical background

From the end of the Second World War, the countries of Central and Eastern Europe (CEE) lay within the Soviet sphere of influence, and the socialist authorities imposed tight restrictions on emigration to the West. The migration literature often cites the CEE states in 1945–1990 as rare cases of the imposition of emigration controls – a practice now uncommon and largely confined to authoritarian regimes. Such restrictions complicate the analysis of international migration in the region, as between 1945 and 1990 the authorities kept no meaningful statistics, recording only official exit permits [Iglicka, 2007]. In Poland, for example, just 52 permits to emigrate to ‘capitalist countries’ were registered in 1954 [Stola, 2001]. For the Baltic republics, reliable sources are even scarcer, not least because Soviet demographers argued that there were hardly any reasons for emigration from socialist states [Rosset, 1975; Kaczmarczyk, 2005].

Despite the paucity of official data, estimates suggest that between 1945 and 1990 more than one million people left Poland, nearly half a million left Czechoslovakia [Drbohlav et al., 2009], and around 400,000 left Hungary [Gödri, Soltész, Bodacz-Nagy, 2014]. Similar figures to those for Hungary are reported for Bulgaria [Markova, 2010] and for Romania. Emigration was higher in Yugoslavia, where the liberalisation of

exit policy in the 1960s is estimated to have enabled over one million people to move to Western countries. Also notable are the departures of several hundred thousand Italians from territories annexed to Yugoslavia after the war, and of more than one hundred thousand Muslims to Turkey.

It is obvious that emigration from CEE to Western Europe would have been far greater had state authorities not curbed both emigration and foreign travel through numerous restrictions. In demographic terms, the countries of Central and Eastern Europe were net emigration countries in the post-war decades (that is, they recorded negative net migration), but actual outflows were heavily suppressed by state policy.

2. Systemic transformation

The end of the socialist system and the lifting of exit controls fundamentally changed migration from the countries of the former Eastern bloc. In the first years after the barriers came down, people who had long intended to emigrate but had been unable to do so finally exercised that choice; family reunification was a common motive. A second, gradual shift concerned the very form of mobility: permanent or long-term emigration gave way to temporary labour migration, encouraged by favourable exchange rates for Western currencies. Crucially, people could now migrate abroad to work and return home without fear of sanctions or of being barred from re-entry – in stark contrast to the pre-transformation period.

During the 1990s, Romania experienced the largest outflows among the CEE states, especially in the latter half of the decade as the costs of economic restructuring became acute. Similar pressures – rising unemployment and the contraction of inefficient industrial sectors – were felt across the region and spurred labour migration to Western Europe. The notable exception was the Czech Republic, whose economy performed comparatively well, and which gradually became a country of immigration, particularly for Slovaks. The former Yugoslav republics of Slovenia and Croatia were a special case. Their pursuit of independence in the early 1990s led to armed conflict. In Slovenia, the war was brief, lasting ten days, but in Croatia the war of independence was prolonged and had major consequences for large-scale migration. Many Croats were forced to leave their homes in the war-affected areas; most moved elsewhere within Croatia, but a significant proportion left the country. After 1995 and the end of hostilities, around 200,000 Serbs also left Croatia. Post-war emigration of Croats continued, driven by economic hardship, war damage and ethnic tensions. Cyprus and Malta likewise merit separate mention, as their migration dynamics

differ in several respects owing to geography. In Cyprus, the unresolved division of the island has played a significant role, prompting both movements within the island and emigration to other EU member states. Malta, by contrast, has long been shaped by substantial emigration, particularly to English-speaking countries.

3. EU accession and post-2004 migration

A watershed for migration in these countries was their accession to the European Union – most in 2004, with Bulgaria and Romania following in 2007, and Croatia in 2013. Enlargement was accompanied by the phased opening of EU-15 labour markets to citizens of the new member states, under transitional arrangements set out in the accession treaties (see Tables 1–3).

Table 1. Transitional arrangements for the 2004 enlargement (Poland, Czechia, Slovakia, Hungary, Slovenia, Lithuania, Latvia, Estonia)³

Country	Year labour market opened
United Kingdom	2004
Ireland	2004
Sweden	2004
Finland	2006
Spain	2006
Portugal	2006
Greece	2006
Denmark	2006
Netherlands	2006
Italy	2008
France	2008
Luxembourg	2007
Belgium	2009
Germany	2011
Austria	2011

Source: Author’s own compilation based on Ulceluse and Kahanec [2023].

³ Cyprus and Malta, which also joined the EU in 2004, were not subject to labour-market restrictions under the transitional arrangements; their nationals had immediate access to EU-15 labour markets.

Table 2. Transitional arrangements for the 2007 enlargement (Bulgaria, Romania)

Country	Year labour market opened
Sweden	2007
Finland	2007
Spain	2007 (temporary suspension for Romanian citizens, 2009–2014)
Portugal	2009
Greece	2009
Denmark	2009
Italy	2012
Ireland	2012
Netherlands	2012
Belgium	2012
France	2014
Luxembourg	2014
United Kingdom	2014
Germany	2014
Austria	2014

Source: Author's own compilation based on Ulceluse and Kahanec [2023].

Table 3. Transitional arrangements for the 2013 enlargement (Croatia)

Country	Year labour market opened
Germany	2015
Austria	2020
All other EU countries	2013

Source: Author's own compilation based on Ulceluse and Kahanec [2023].

As noted, in the pre-accession years, the CEE economies faced serious economic difficulties. In some, unemployment approached 20 per cent, fuelling emigration for work. Most of those who left in the immediate post-accession years were young, not highly specialised and relatively free of family commitments [Schwabe, 2023]. The literature has described this pattern as ‘liquid migration’ [Okólski, Salt, 2014]: on arrival, migrants often did not set a firm time horizon for their stay. Crucially, EU membership meant they no longer had to decide this in advance; free movement allowed them to cross borders legally – and to return – whenever they wished. Between 2004 and 2007, Poland recorded the largest outflow in absolute terms, with more than one million people leaving. The United Kingdom was the principal destination for

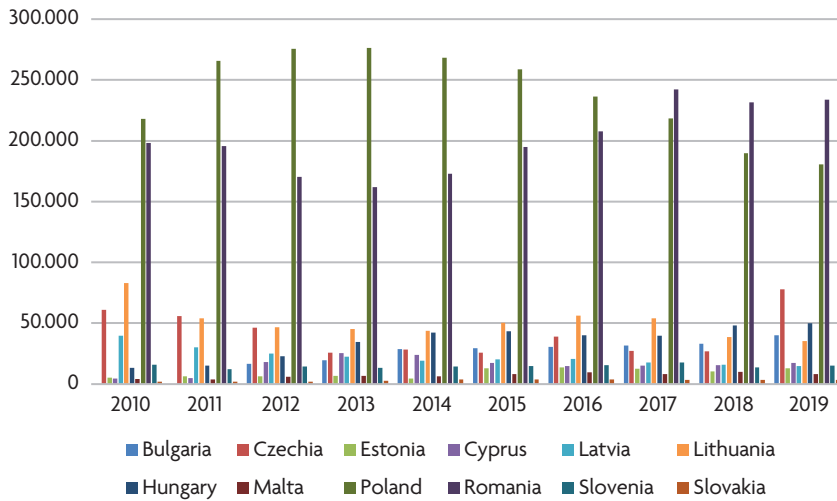
many CEE nationals, having opted not to impose transitional restrictions in 2004 (see Table 1). According to the Worker Registration Scheme data [UK Border and Immigration Agency, 2007], over 600,000 Poles, nearly 100,000 Slovaks and more than 85,000 Lithuanians registered in that period; registrations also included over 44,000 Latvians, more than 41,000 Czechs and over 35,000 Hungarians. From accession onwards, Romania had the next-largest annual outflows after Poland [Schwabe, 2023]. Cyprus and Malta, by contrast, joined the EU with comparatively higher GDP per capita and lower unemployment than most CEE states, limiting large-scale post-accession labour emigration to Western Europe. Instead, both faced growing immigration pressures, notably irregular arrivals across the Mediterranean. In migration terms, therefore, their post-accession challenges differed: while the new CEE member states were predominantly countries of emigration, Cyprus and Malta were more exposed to inflows of migrants and asylum seekers. Malta also saw rising legal immigration linked to the expansion of its services sector.

The late-2000s global financial crisis (subprime mortgage crisis) sharply worsened economic conditions in many advanced economies and reduced labour demand. Although it prompted some temporary returns, it did not generate the mass return migration that some had predicted; rather, it slowed departures among those who had planned to emigrate.

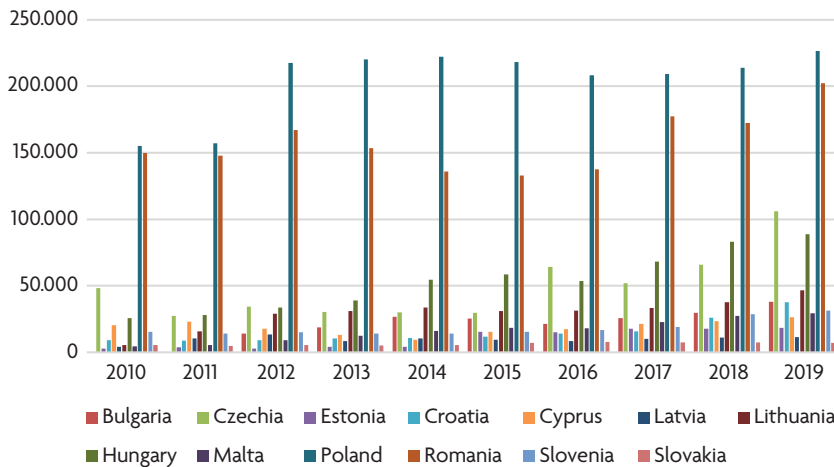
4. Migration dynamics in the pre-pandemic decade

The second decade of the twenty-first century was marked by a return to global economic growth, which, in this context, meant that many workers from the CEE countries who had postponed migration in the preceding years were more incentivised to proceed with their migration plans. During this period, Poland and – following its EU accession – Romania recorded by far the largest outflows (Figure 1). The United Kingdom remained the principal destination, a pattern sustained by migrant networks that reinforced and expanded earlier flows.

Even so, the decade mattered less for emigration than for the steady rise in immigration into the CEE region. As shown in Figure 2, immigration increased across these countries, albeit at different speeds and scales. Poland and Cyprus consistently recorded the largest inflows, approaching 200,000 a year. Czechia also saw substantial inflows, particularly after 2016, when annual immigration rose above 50,000. By contrast, most other Central and Eastern European countries attracted comparatively modest numbers, generally below 50,000 per year.

Figure 1. Emigration from the new EU member states during the pre-pandemic decade (2010–2019)

Source: Author's own compilation based on Eurostat [2025a].

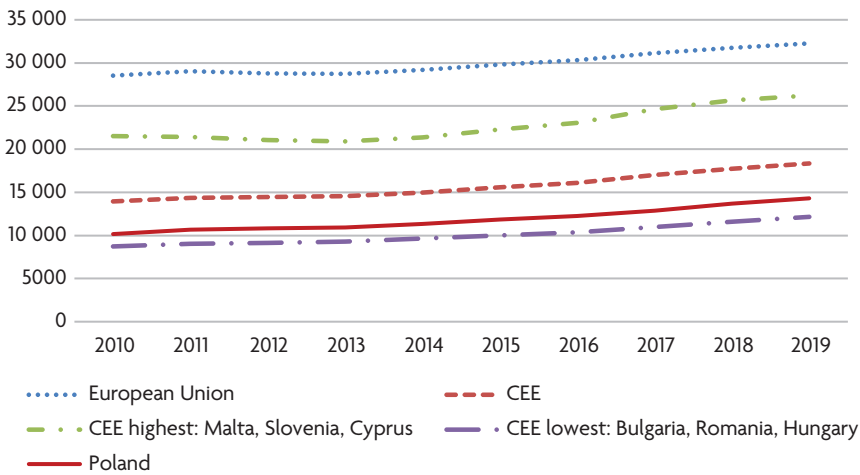
Figure 2. Immigration to the new EU member states during the pre-pandemic decade (2010–2019)

Source: Author's own compilation based on Eurostat (2025b).

The growth of immigration to the CEE countries during that period was driven by two main sets of factors: economic and political. Economically, renewed growth and increases in GDP per capita were associated with falling unemployment and tightening labour markets, thereby generating stronger demand for foreign labour.

Across 2010–2019, GDP per capita rose throughout the region. Nevertheless, the regional average remained below the EU average (see Figure 3). There were also marked differences within the CEE group. As Figure 3 indicates, the EU average in the period still exceeded the average of the three best-performing CEE economies – Malta, Slovenia and Cyprus. For its part, Poland’s GDP per capita, despite steady gains, was closer to the average of the three lowest-performing CEE countries in this respect (Bulgaria, Romania and Hungary) than to the regional leaders.

Figure 3. GDP per capita in the new EU member states vs EU in the pre-pandemic decade (2010–2019)



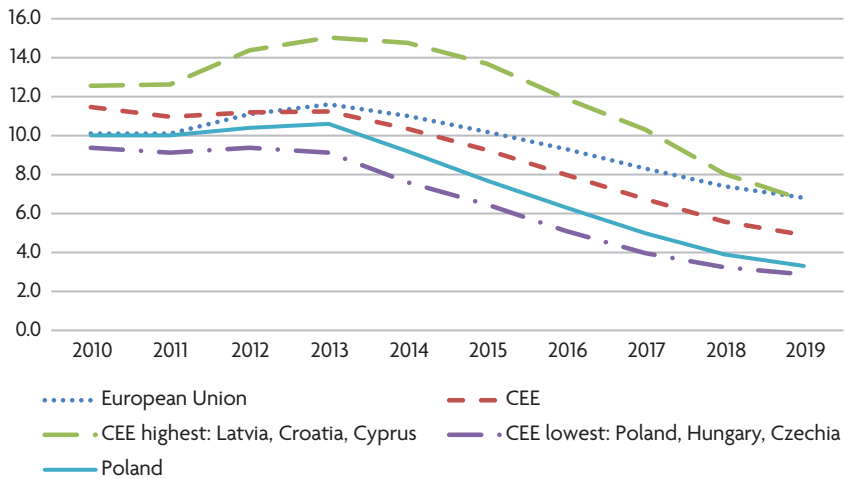
Source: Author's own compilation based on Eurostat (2025c).

Consideration of unemployment dynamics, notably the reduction of average unemployment rates in the new member states to below the EU average, helps to explain the observed migration trends. As shown in Figure 4, the average unemployment rate in the EU was higher not only than the average for all of the analysed countries but also significantly higher than the average for the three new member states with the highest unemployment rates. Unlike in the pre-accession period, Poland emerged as one of the regional leaders – alongside Hungary and Czechia – with among the lowest unemployment rates in the EU. An exception in this regard was Croatia, where a decrease in unemployment rates was recorded only after the country’s accession to the EU in 2013.

Beyond economic drivers, rising immigration to the CEE countries was also shaped by a set of non-economic factors. A major trigger after 2010 was Russia’s annexation of Crimea in 2014. From that point, the CEE countries became destinations

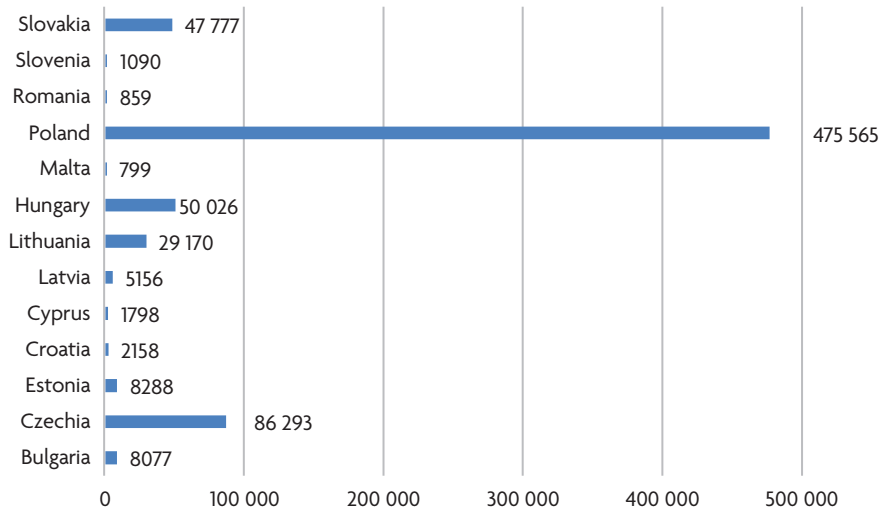
for a growing number of migrants, primarily from Ukraine. Figure 5 shows the increase in the Ukrainian population across EU countries from early 2014 to the year before Russia's full-scale invasion of Ukraine.

Figure 4. Unemployment rates in the new EU member states vs EU in the pre-pandemic decade (2010–2019)



Source: Author's own compilation based on Eurostat (2025d).

Figure 5. Nominal growth in Ukrainian migrant population in the new EU member states: from the annexation of Crimea to Russia's full-scale invasion



Source: Author's own compilation based on Eurostat (2025e).

Most CEE countries recorded percentage increases well above the EU average. Poland saw the largest absolute rise, with more than 650,000 Ukrainian residents by the end of the period. Substantial increases also occurred in Czechia, Hungary and Slovakia (see Figure 5).

5. Russia’s full-scale invasion of Ukraine and beyond

From a migration perspective, the defining event of the post-accession period for all the countries considered has been Russia’s invasion of Ukraine and the unprecedented wave of forced displacement that followed. In the first six months after the outbreak of war, Ukraine’s borders were crossed an estimated 12 million times, with roughly 60 per cent of crossings through the Polish border.

Table 4. Border crossings between Ukraine and CEE countries, February–August 2022

Country	Number of border crossings
Poland	5,796,748
Romania	1,127,998
Hungary	1,292,632
Slovakia	736,387

Source: Author’s own compilation based on UNHCR (2022).

The CEE countries faced a situation unprecedented in their post-war history: a large-scale inflow of people displaced by war. This challenge was addressed not only through government action but, perhaps above all, through civic engagement – most notably in Poland, where nearly 80% of citizens reported providing some form of assistance – alongside the efforts of numerous NGOs, volunteers, and regional and local authorities. At the EU level, the most significant step was the first-ever activation of the Temporary Protection Directive, which granted Ukrainians access to public services and to member states’ labour markets.

According to UNHCR, by the end of 2025 nearly seven million Ukrainians who had fled the war had applied for protection outside their country. The largest numbers were in Germany, Poland and Czechia. All CEE countries, however, played an important role as destinations during that displacement (Table 5).

Table 5. Ukrainian refugee population in the new EU member states (2025)

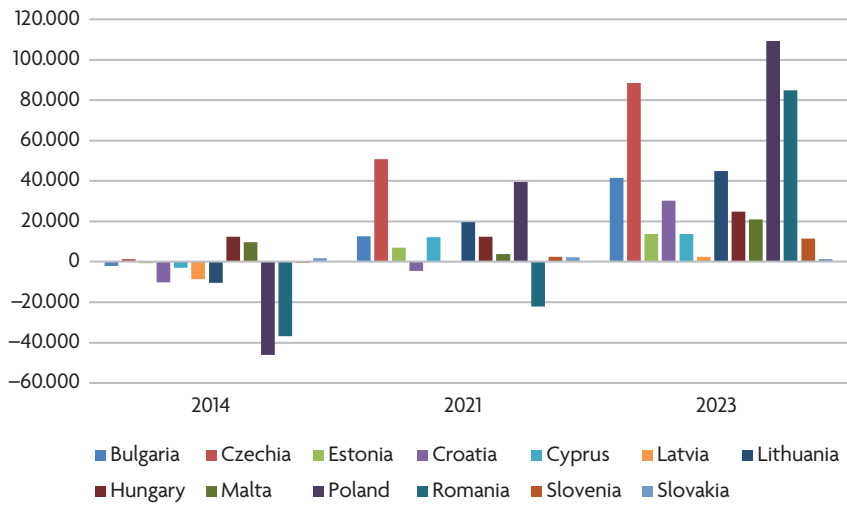
Country	Ukrainian refugee population
Bulgaria	67,730
Czechia	379,120
Estonia	41,400
Croatia	27,070
Cyprus	24,440
Latvia	30,920
Lithuania	47,680
Hungary	64,190
Malta	2,490
Poland	1,000,240
Romania	188,270
Slovenia	10,860
Slovakia	146,200

Source: Author's own compilation based on UNHCR (2025).

As shown in Table 5, among the new member states, the largest number of Ukrainian refugees was by far recorded in Poland (approximately one million), followed by Czechia (around 380,000) and Romania (about 188,000). Notably, the number recorded in Poland has declined over time, reflecting onward migration – primarily to Germany and other Western European countries – driven by higher wage levels and more generous social support systems. Across the 2004–2013 accession countries, Romania recorded the largest increase relative to its pre-war stock of Ukrainian residents – over 179,000, up from fewer than 2,500 before the war. By contrast, Hungary was the only country for which post-2022 arrivals remained below the pre-invasion Ukrainian resident population.

It should be emphasised that the foreign-born population in the CEE countries has continued to grow steadily since EU accession. While Ukrainians remain the most numerous group, the increase is not limited to them. Figure 6 shows net migration in the countries analysed at three points: 2014, a year after the last EU enlargement; 2021, just before Russia's full-scale invasion of Ukraine; and 2023, the most recent data available when this chapter was prepared. Within a relatively short period after accession, the new member states moved from being predominantly countries of emigration to countries of net immigration. This not only signals their emergence as important destinations for migrants but also points to a marked fall in outflows.

Figure 6. Net migration in the new EU member states in 2014, 2021 and 2023



Source: Author's own compilation based on United Nations [2025].

Table 6. Selected macroeconomic indicators of CEE countries (2024)

Country	Real GDP per capita (EUR)	Unemployment rate (%)	Real GDP growth (%)
Czechia	21,910	2.6	1.1
Estonia	21,060	7.6	-0.3
Croatia	16,710	5.0	3.9
Latvia	17,510	6.9	-0.4
Lithuania	19,580	7.1	2.8
Hungary	16,190	4.5	-0.9
Poland	16,460	2.9	2.9
Romania	13,130	5.4	0.8
Slovenia	25,480	3.7	1.6
Slovakia	19,130	5.3	2.1
Bulgaria	11,300	4.2	2.8
Malta	34,650	3.1	5.9
Cyprus	29,190	4.9	3.4
EU-27 (avg.)	33,620	5.9	1.0

Source: Author's own compilation based on Eurostat (2025f, 2025g, 2025h).

While the war in Ukraine was undoubtedly the principal driver of these increases, the region's relatively sound economic fundamentals have also provided an additional

pull (Table 6). Very low unemployment – especially in Poland, Czechia and Malta – together with comparatively high GDP per capita in smaller economies (Cyprus, Malta, Slovenia) and solid GDP growth (Cyprus, Malta, Poland) have made these countries more attractive to international migrants.

For the purpose of this chapter, it is also worth underlining that in these economies the largest foreign communities – both at end-2019 and end-2023 – mostly originated outside the CEE region. The sole exception is Slovakia, where Czechs form the largest group, reflecting the 1993 division of Czechoslovakia (Table 7). In Poland, Hungary, Romania and Czechia, Ukrainians were the largest foreign nationality both before and after the outbreak of the war. This underscores the strength of migrant networks and the role of geographical proximity in shaping both labour and forced migration. As the table indicates, Poland also has the highest share of Ukrainians in its foreign-resident population, suggesting it could see further sizeable inflows from Ukraine should the conflict persist or escalate.

Table 7. Largest foreign populations (by nationality) as a share of total foreign population, in per cent, 2019 vs 2023

Country	Largest foreign population 2019	%	Largest foreign population 2023	%
Bulgaria	Ukraine	38	Russia	23.8
Croatia	Bosnia & Herzegovina	40	Bosnia & Herzegovina	22.4
Czechia	Ukraine	50	Ukraine	54.9
Estonia	Russia	90	Russia	34.2
Lithuania	Russia	60	Ukraine	51.3
Latvia	Russia	80	Stateless persons ⁴	67
Poland	Ukraine	68	Ukraine	78
Romania	Ukraine	30	Ukraine	24
Slovakia	Ukraine	45	Czechia	17.1
Slovenia	Bosnia & Herzegovina	40	Bosnia & Herzegovina	46.1
Hungary	Ukraine	30	Ukraine	15.9

Source: Author's own compilation based on Eurostat (2025i).

⁴ In Latvia, the largest group among foreign residents are persons without citizenship. This reflects decisions taken after independence in 1991, when citizenship was not automatically granted to all residents from neighbouring countries; some have never applied for, or obtained, Latvian citizenship.

Conclusions

An analysis of migration in the countries that joined the European Union in the twenty-first century reveals both similarities rooted in shared history and differences reflecting national contexts.

During the socialist period (1945–1990), Central and Eastern European states such as Poland, Czechoslovakia, Hungary, Bulgaria and Romania were subject to stringent state controls on emigration. Although both legal and irregular departures occurred, their scale was modest relative to latent demand. Yugoslavia was a partial exception, having liberalised emigration in the 1960s. By contrast, Malta and Cyprus lay outside the Soviet sphere of influence; their migration patterns in that era followed different trajectories shaped by their colonial legacies and economic development.

In the 1990s transition, rising emigration across Central and Eastern Europe was driven by restructuring, high unemployment and falling living standards. Romania saw the largest labour outflows. An exception was the Czech Republic (Czechia), whose comparatively strong economic performance made it the region's first net immigration country – largely due to inflows from Slovakia after the 1993 division of Czechoslovakia. At the same time, the wars following the break-up of Yugoslavia generated large-scale forced displacement across the Western Balkans.

The accession of most of these states to the European Union in 2004 marked a turning point. A common feature was a sharp rise in labour emigration to the EU-15, subject to the transitional arrangements, driven by wage differentials and better job prospects. This pattern – often termed ‘liquid migration’ – was most evident in Poland, which saw more than one million departures between 2004 and 2007, making it the regional leader. Romania followed as another major sender after its own accession, while smaller states such as Slovakia, Lithuania and Latvia experienced large outflows relative to their populations. Malta and Cyprus, although part of the 2004 enlargement, diverged from this pattern, with lower emigration and a greater focus on immigration, reflecting their location and specific labour market needs.

Between 2010 and 2019, the dynamics shifted. Emigration continued, but the main development was a steady increase in immigration, underpinned by improved economic conditions, falling unemployment and stronger labour demand. Poland again stood out as a key destination, attracting large numbers of Ukrainian migrants after the annexation of Crimea in 2014; similar trends were visible in Czechia and the Baltic states. Over that period, most of the analysed countries moved from net emigration to net immigration.

Russia's war against Ukraine triggered an unprecedented wave of forced displacement, with Poland becoming the principal receiving country among the new member states – in absolute terms and, by regional standards, in relative terms. Others in the group also received substantial numbers, but Poland's role as the primary destination underscored its distinctive position in the region.

Overall, the new EU member states share a broad trajectory: constrained emigration under socialism; large post-accession outflows; and rising immigration since the 2010s. There are, however, clear differences in scale, timing and underlying causes. It is also worth noting that Malta and Cyprus stand apart, their migration patterns shaped less by post-socialist transition than by their Mediterranean location and economic structure.

In migration terms, Poland can serve as a reference point for the CEE region: first as a major source of labour emigrants; later as the major destination country for Ukrainian labour migrants as it shifted to net immigration; and today as a central hub for regional mobility and for people displaced by the war in Ukraine.

This position calls for a well-designed integration strategy: successful labour-market inclusion can turn a challenge into an opportunity for development, with employment and consumer spending acting as key drivers of growth.

REFERENCES

- Drbohlav, D., Lachmanová-Medová, L., Čermák, Z., Janská, E., Čermáková, D., Dzúrová, D. (2009). The Czech Republic: On Its Way From Emigration to Immigration Country, *IDEA Working Papers*, 11, https://is.muni.cz/el/fss/jaro2004/SOC732/um/Drbohlav_et.al._2009_The_Czech_Republic.On_its_way_from_emigration_to_immigration_country.pdf (accessed: 23.09.2025).
- Eurostat (2025a). *Emigration by Age and Sex*, https://ec.europa.eu/eurostat/databrowser/product/page/migr_emi2__custom_14820706 (accessed: 15.09.2025).
- Eurostat (2025b). *Immigration by Age and Sex*, https://ec.europa.eu/eurostat/databrowser/product/page/migr_imm8__custom_14820685 (accessed: 23.09.2025).
- Eurostat (2025c). *Real GDP per Capita*, https://ec.europa.eu/eurostat/databrowser/product/page/sdg_08_10 (accessed: 21.09.2025).
- Eurostat (2025d). *Unemployment Rates – Annual Data*, <https://ec.europa.eu/eurostat/databrowser/product/page/tipsun20> (accessed: 12.09.2025).
- Eurostat (2025e). *Ukrainian Citizens in the EU*, https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Ukrainian_citizens_in_the_EU (accessed: 15.09.2025).
- Eurostat (2025f). *Real GDP per Capita*. https://ec.europa.eu/eurostat/databrowser/view/sdg_08_10/default/bar?lang=en (accessed: 23.09.2025).

- Eurostat (2025g). *Real GDP Rate of Change*, https://ec.europa.eu/eurostat/statistics-explained/images/c/c0/Real_GDP_rate_of_change%2C_2005%E2%80%932025.png (accessed: 24.09.2025).
- Eurostat (2025h). *Unemployment Rate by Sex, EU, 2015 – 2024*, <https://ec.europa.eu/eurostat/statistics-explained/images/d/d8/DATA-2024-UPDATE-2025-SE-UNEMPLOYMENT-STATISTICS-AND-BEYOND.xlsx> (accessed: 24.09.2025).
- Eurostat (2025i). *Foreign-Born Population*, <https://ec.europa.eu/eurostat/databrowser/product/page/tps00178> (accessed: 25.09.2025).
- Gödri, I., Soltész, B., Bodacz-Nagy, B. (2014). *Immigration or Emigration Country? Migration Trends and Their Socio-Economic Background in Hungary: A Longer-Term Historical Perspective*. Budapest: Hungarian Demographic Research Institute.
- Iglicka, K. (2007). A Note on Rebirth of Migration Research in Poland After 1989. In: *State of the Art of the Migration Research in Poland* (pp. 12–17), A. Kicingier, A. Weiner (Eds.). Warsaw: Centrum Badań Migracyjnych, Uniwersytet Warszawski.
- Kaczmarczyk, P. (2005). *Migracje zarobkowe Polaków w dobie przemian*. Warsaw: Wydawnictwo Uniwersytetu Warszawskiego.
- Markova, E. (2010). *Effects of Migration on Sending Countries: Lessons from Bulgaria*, <https://www.lse.ac.uk/Hellenic-Observatory/Assets/Documents/Publications/GreeSE-Papers/GreeSE-No35.pdf> (accessed: 24.09.2025).
- Okólski, M., Salt, J. (2014). Polish Emigration to the UK After 2004: Why Did So Many Come? *Central and Eastern European Migration Review*, 3(2), pp. 11–37.
- Rosset, E. (1975). *Demografia Polski*. Warsaw: PWN.
- Schwabe, M. (2023). *Czynniki migracji zarobkowych w świetle emigracji Polaków do Wielkiej Brytanii po akcesji Polski do UE*. Warsaw: Wolters Kluwer.
- Stola, D. (2001). Międzynarodowa mobilność zarobkowa w PRL. In: *Ludzie na huśtawce. Migracje między peryferiami Polski i Zachodu* (pp. 62–100), E. Jaźwińska-Motyłska, M. Okólski (Eds.). Warsaw: Scholar.
- UK Border and Immigration Agency (2007). *Accession Monitoring Report: A8 Countries, May 2004–September 2007*. London: UK Home Office.
- Uceluse, M., Kahanec, M. (2023). Eastward Enlargements of the European Union, Transitional Arrangements and Self-Employment, *Journal of Population Economics*, 36(2), pp. 719–742. DOI: 10.1007/s00148-022-00904-2.
- UNHCR (2022). *Ukraine Situation Flash Update #28*, <https://data.unhcr.org/en/documents/download/95314> (accessed: 15.09.2022).
- UNHCR (2025). *Ukrainian Refugee Situation*, <https://data.unhcr.org/en/situations/ukraine> (accessed: 22.09.2025).
- United Nations (2025). *Population Data*, <https://data.un.org/Data.aspx?d=PopDiv&f=variableID%3A85> (accessed: 30.09.2025).

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INDIA AS A PARTNER OF THE EUROPEAN UNION IN TRADE IN SERVICES AND POLAND'S POSITION

Introduction

The European Union and India rank among the most prominent players in global trade in services. Both are characterised by a diversified service economy. This sector represents a significant share of GDP and employment. In the European Union, services account for over 70% of gross value added and exports, while India excels in knowledge-driven segments such as information and communication technologies (ICT), business process outsourcing (BPO) and professional services. The potential gains from cooperation are therefore considerable, even though the two compete strongly in specific fields.

Negotiations on a free trade agreement (FTA) between the European Union and India were formally resumed in 2022 after a several-year pause caused by differences in their approach to market liberalisation. The negotiating mandate covers, *inter alia*, trade in services. Both parties view the talks as part of their strategic partnership, the objective of which is to deepen their economic integration and amplify bilateral trade flows.

For Poland and other EU member states, India could become both an attractive destination for export expansion and a source of competitive pressure in certain segments. It is expected that the prospective free trade agreement will remove some of existing barriers, such as market access irritants, mandatory licensing requirements, discriminatory treatment of service providers, restrictions on the

temporary movement of contractual workers, and limitations on the cross-border supply of services. The liberalisation of services will, in turn, test the resilience and competitiveness of European companies, including Polish firms.

The purpose of this article is to assess the competitive position of the European Union, as an integration bloc, and of India in trade in services over the period 2020–2024. It employs the Revealed Symmetric Comparative Advantage (RSCA) and Net Exporter (NX) indices to identify which service sectors qualify as ‘star performers’ and which remain areas with untapped potential or even at risk of losing their position, as well as those whose trade brings more costs and thus weigh on the economy. The analysis aims to identify the strengths and weaknesses of the partners, and to indicate areas where market liberalisation under the agreement currently in the negotiation pipeline could yield the greatest benefits or pose the greatest risks. The study has been extended to include information on the role played by Poland in EU trade in services with India and assesses its capacity to compete with Indian service providers.

Existing research on EU–India negotiations on services has largely focused on regulatory barriers [Nordås, 2023; Dash, Bhattacharjee, 2024], broad assessments of the potential implications of liberalisation [EPRS, 2020], and case studies of selected service sectors, such as the health sector [Chanda, 2011]. However, the literature still lacks a comprehensive, sector-level quantitative assessment of sectoral competitiveness that would allow the industries with the greatest potential to gain from liberalisation. Moreover, existing studies do not take into account the distinctive characteristics of individual EU member states, including Poland, nor do they cover the most recent period of 2020–2024, marked by both the COVID-19 pandemic and the subsequent dynamic recovery of trade in services. This article addresses these gaps by providing a rigorous quantitative analysis of the competitive positions of the EU, India and Poland in trade in services, disaggregated by sector and tracked over time.

The article posits three research hypotheses. First, India does not play a substantial role as a trading partner of the European Union in trade in services. Second, the competitive positions of the EU and the Republic of India in the global services market differ. Third, the significance of access to the market of India varies across EU member states. In particular, Poland does not feature among the leading EU exporters and importers of services to and from this geographical area.

1. Research method

The article combines logical and conceptual analysis with quantitative and statistical techniques. The study comprises three components. First, it examines the European Union's services trade balance and India's share therein, and traces the dynamics of bilateral trade. Second, it analyses the composition of EU services exports to and imports from India. Third, it identifies the competitive positions of the EU and India in the global services market and separately compares India with Poland.

To describe changes in trade flows, year-on-year (y/y) dynamics and the Compound Annual Growth Rate (CAGR) were used, whereas the analysis of competitive position was based on the mapping technique.

This approach involves combining several selected indicators and using them to generate a graphical representation in the X – Y coordinate system. This tool was developed by Tri Widodo [Widodo, 2009] for the analysis of trade in goods, and it has since been applied by researchers also to the analysis of trade in services. The author of this study also employed this technique and, for the construction of the matrix, incorporated the following two variables: RSCA [Dalum, Laursen, Villumsen, 1998] and NX [UNIDO, 1982]. The former represents the Revealed Symmetric Comparative Advantage (RSCA) index. For the purposes of the study, the original formula for this indicator was modified in the following manner:

$$RSCA_j^A = (RCA_j^A - 1) / (RCA_j^A + 1),$$

where

$$RCA_j^A = (X_j^A / X^A) / (X_j^W / X^W),$$

where X_j^A represents the volume of exports of a given category of services from country A, and X^A denotes the total exports of services from country A, X_j^W stands for the value of global exports of a given service, and X^W is the total volume of global exports of commercial services (i.e. excluding government services). The RCA is a comparative advantage indicator proposed by Balassa [1965]. The RSCA indicator ranges between $[-1; 1)$. A country has a comparative advantage if its RSCA is positive, and it shows lack of advantage if the index is negative.

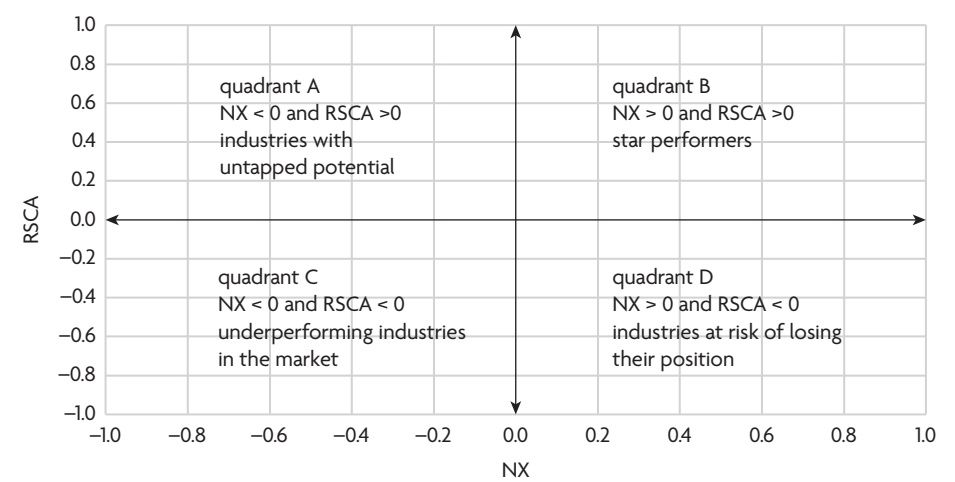
Meanwhile, the NX measure, also referred to in the literature as the Trade Balance Index (TBI), which was adapted for the purpose of the study, was calculated using the following formula:

$$NX_j^A = (X_j^A - M_j^A) / (X_j^A + M_j^A),$$

where X_j^A and M_j^A represent, respectively, the volume of exports and imports of a specific service industry of a given entity A. As a result, NX_j^{EU} , NX_j^{IN} and NX_j^{PL} are obtained, which indicate whether the EU, India and Poland, respectively, are net exporters of a given service. The calculated NX_j^A indices range between $[-1; 1]$. Positive values indicate that the country's exports of a given service exceed its imports. The closer the score is to unity, the stronger the country's capacity to generate a surplus in its trade balance. Conversely, if expenditures exceed revenue, the country is classified as a net importer of that service.

As a result of the mapping, a given type of service can be presented in one of the four quadrants of the chart or on the axes [Mongialo, 2025] (Figure 1). Quadrant A presents industries with untapped potential. Their distinctive feature is that their trade balance is negative, even though the country has a comparative advantage in providing the services. Quadrant B groups the so-called 'star performers'. These services are distinguished, on the one hand, by their comparative advantage, and on the other hand by the fact that the country records a trade surplus. From the country's point of view, the larger the group of such services, the better the overall national competitive position. Quadrant C of the chart presents services in which the country has no comparative advantage and it is labelled as their net importer. This group is referred to as 'underperforming sectors'. Meanwhile, quadrant D of the chart includes services in respect of which the country sells more than it buys, yet does not enjoy a comparative advantage. These industries may be forced out of the market by competition and they are therefore at risk of losing their position.

Figure 1. Matrix for mapping service sectors



Source: Author's own compilation based on Mongialo [2025].

The raw statistical data used in the article derive from Eurostat and the WTO. The figures concerning exports and imports of services cited in the article are taken from the IMF's Balance of Payments, which records transactions between residents and non-residents of the economy [IMF, 2009]. This source is currently the most comprehensive, detailed and reliable study on international trade in services, albeit not devoid of certain limitations. These imperfections arise from the specific nature of trade in services, which, unlike trade in goods, is carried out in the following four modes: (1) cross-border supply of services, (2) consumption abroad, (3) commercial presence, (4) movement of natural persons. A distinctive feature of the mode 1 is that it is only the service itself that can cross national borders. For instance, an IT company in India provides cloud services and remote server management to customers in Germany. Consumption abroad, by contrast, may involve two situations. One is when the consumer travels to the country where the foreign service supplier is based. The other is when the owner sends goods to another country, where they are repaired, maintained or improved on-site by local service providers. For instance, consumption abroad happens when Indian students go to France to study at private business schools offering MBA programmes. The third mode of supply of services (commercial presence) occurs when a foreign service provider establishes a branch, subsidiary or affiliate in another country in order to provide services directly to customers residing in that country. For instance, a German consulting firm opens an office in Bengaluru to provide services to local clients in the financial sector. Finally, the fourth mode of supply takes place when, for instance, specialists from India come to Poland to carry out an IT contract, or when engineers from Romania go to India to work on infrastructure construction.

The form in which services are delivered to consumers is important for measuring the volume of service flows. The data presented in the balance of payments (BoP) are a relatively reliable source of information on trade carried out in modes 1, 2 and 4, but do not, in principle, record transactions related to the sale of services in the form of commercial presence. In practice, this means that the actual volume of trade in services for both the EU and India is much greater than official BoP statistics show.

The study has analysed exports and imports of total services, as well as the trade broken down into 11 main service categories, which are defined according to the BoP methodology: SA – manufacturing services on physical inputs owned by others, SB – maintenance and repair services not included elsewhere (n.i.e.), SC – transport, SD – travel, SE – construction, SF – insurance and pension services, SG – financial services, SH – charges for the use of intellectual property not included elsewhere (n.i.e.), SI – telecommunications, computer and information services, SJ –

other business services, SK – personal, cultural and recreational services [United Nations et al., 2012]. Given the availability of data, the SC, SJ and SK groups were disaggregated into the subcategories: SC into SC1, SC2, SC3, SC4; SI into SI1, SI2, SI3; SJ into SJ1, SJ2, SJ3; and SK into SK1 and SK2. In total, the study covered 19 types of services.

As regards the timeframe, the dataset covers exports and imports for the period from 2020 to 2024 inclusive, which made it possible to track changes in trade flows over five years of developments and growth to be assessed in both value and percentage terms. The baseline year is 2020, coinciding with the onset of the COVID-19 pandemic, which has had a profound and lasting impact on global services trade. The endpoint, 2024, reflects the most recent year for which statistics are available. The competitive mapping position is shown for 2024, providing a current snapshot of the positions of the EU, India and Poland in the global services market. Through this approach, it was possible to show a medium-term trend in trade in services and to present in detail export specialisation (the RSCA indicator), and the capacity to generate a trade surplus (NX indicator) on an industry-specific basis.

The values of exports and imports of services and the EU trade balance were taken from Eurostat. However, for the purposes of calculating RSCA and NX, data from the WTO on expenditures and revenues of trade in services with the rest of the world were employed (i.e. EU trade with world, Poland's trade with world, India's trade with world). Consequently, in the case of the EU, volume of the intra-EU trade is included, which may potentially lead to an overestimation of this integration bloc's share in global exports and imports of services. Nevertheless, adopting the same reference point (i.e. the world) was necessary in order to compare the competitive position of these actors in the global market.

2. Results of the study

Analysis of total EU–India trade in services

EU exports to India and EU imports from India

As shown in Table 1, total EU–India trade in services grew steadily between 2020 and 2024 on both the export and import sides. The value of EU services sold to customers in India rose from just under EUR 15.5 billion in 2020 to almost EUR 28.3 billion in 2024, which corresponds to a compound annual growth rate

(CAGR) of 16.3%. Growth was strongest in the immediate post-pandemic years: in 2021, EU exports to India increased by 40.8%, followed by a further 22.4% in 2022. A correction occurred in 2023 (−2.7%), before growth resumed in 2024 (+9.0%). These figures suggest that the market of India offers considerable potential for EU service providers, albeit with some volatility.

Imports followed a similar path. The value of services purchased by the EU from India increased from EUR 19.3 billion in 2020 to EUR 35.8 billion in 2024, corresponding to a CAGR of 16.7%. Here, the year-on-year profile was more even than on the export side: growth remained positive throughout, ranging from +5.9% in 2024 to +32.9% in 2022.

Table 1. Value of EU services exports to India and imports from India, with y/y change and CAGR

	EU export to India			EU import from India		
	Value (EUR millions)	Y/y change (%)	CAGR (%)	Value (EUR millions)	Y/y change (%)	CAGR (%)
2020	15,482.1			19,297.7		
2021	21,791.8	+40.8		23,108.6	+19.7	
2022	26,681	+22.4		30,694.4	+32.9	
2023	25,954.8	−2.7		33,831.5	+10.2	
2024	28,286.1	+9.0		35,819.8	+5.9	
CAGR (2020–2024)			+16.3			+16.7

Source: Author's own compilation based on Eurostat [2025].

Trade balance between the EU and India

Over the period under review, the European Union remained a net importer of services from India. As shown in Table 2, the services trade deficit stood at EUR 3.8 billion in 2020. It narrowed markedly in 2021 to EUR 1.3 billion, reflecting a sharp acceleration in EU exports to India (+40.8% year on year), almost twice the pace of growth on the import side. From 2022, the deficit widened again, reaching EUR 4.0 billion, and almost doubled in 2023 to EUR 7.9 billion. By 2024, it had narrowed slightly to EUR 7.5 billion but remained substantial.

These movements in the EU's balance with India point to the growing competitiveness and market penetration of Indian services suppliers in the European market.

Table 2. EU trade balance in services with India, EUR millions

	2020	2021	2022	2023	2024
Balance	-3,815.6	-1,316.8	-4,013.4	-7,876.7	-7,533.6

Source: Author's own compilation based on Eurostat [2025].

India's share in total EU exports and imports with the rest of the world and its dynamics

As Table 3 indicates, India's role in the European Union's trade in services with the rest of the world increased between 2020 and 2024, particularly on the import side.

India's share of EU services exports remained relatively stable, fluctuating between 1.6% and 1.9%. It peaked in 2021 amid the post-pandemic rebound, edged up again in 2022, and eased in 2023 and 2024, ending the period at 1.8%.

Growth was markedly stronger on the import side. In 2020, India accounted for 2% of total EU services imports. Over the next three years, it steadily consolidated its role as a supplier to European customers. In 2024, its share eased slightly from the level reached in 2022, from nearly 2.7% to 2.6%. Taken together, these figures indicate that India has consistently strengthened its position in EU imports, with growth largely steady and sustained.

Taken together, these trends reveal a clear asymmetry in India's role in the EU's services trade over 2020–2024: while India's weight in EU exports has been broadly stable, its importance in EU imports has risen, underscoring that India is a considerably more important supplier to the EU than a purchaser of EU services.

Table 3. India's share of total EU trade in services, in %, 2020–2024

	2020	2021	2022	2023	2024
in EU exports	1.63	1.93	1.90	1.82	1.82
in EU imports	2.04	2.34	2.51	2.66	2.63

Source: Author's own compilation based on Eurostat [2025].

3. Individual shares of EU member states in EU trade with India

As Table 4 shows, EU–India trade in services was highly geographically concentrated over 2020–2023. On the export side, Ireland was by far the leading player, with a share ranging from 27% to almost 33%. Germany ranked second, at

18–21%, and France third, at 11–18%. The Netherlands also featured as a significant exporter, with a 6–10% share, while Denmark likewise stood out with 7–12%.

The geographical pattern of imports differs from that of exports. Instead of Ireland, the largest importer of services from India, with a share of almost 24% in 2021, rising to 32% in 2023, was Germany. The Netherlands was the second largest, at 19–26%. Together, these two member states accounted for nearly half of the EU's total imports from India. Ireland ranked third, with a 20–24% share. The shares of other member states were much smaller, although Sweden's (about 8–9%) and France's (11–16%) were relatively significant.

As regards the dynamics of member states' shares, Germany and Ireland steadily strengthened their positions on the import side, whilst the Netherlands regained ground in 2022–2023. On the export side, France saw a marked decline: it accounted for nearly 18.2% of total EU exports of services to India in 2021 but only about 11.3% two years later. By contrast, Sweden increased its export share from 2.8% in 2020 to 5.7% in 2023. Set against the overall structure of EU–India services trade, Poland occupied a peripheral position throughout the period. Its share of EU exports to India ranged from 0.8% in 2021 to 1.2% in 2023, placing it among the less significant exporters. Poland's role as a purchaser of services from India was likewise limited: services bought by Polish residents accounted for around 0.51–0.72% of total EU imports from India over 2020–2023.

To sum up, in 2020–2023, EU trade in services with India was dominated by a handful of member states. On the export side, Ireland and Germany led, followed by France, the Netherlands and Denmark. The composition of the top five importers broadly mirrored this, with Sweden replacing Denmark. Other member states played only a modest role – here defined as an average annual share of 1–6% of EU exports to and/or imports from India – or a marginal one (below 1%). Table 4 shows in particular that Sweden belonged to the group with a modest role in EU exports to India, whilst Denmark's share on the import side was comparatively modest. As for Poland, its exports accounted for between 0.9 and 1.2% of total EU exports to India, while its imports from India were smaller still, at roughly 0.6–0.7%.

These patterns reflect pronounced intra-EU diversity in the intensity of commercial links with the economy of India.

Table 4. Individual share of EU member states in trade with India, % of total EU trade with this partner

	EU export to India				EU import from India			
	2020	2021	2022	2023	2020	2021	2022	2023
Belgium	1.84	1.82	1.53	1.70	3.75	3.16	2.71	2.87
Bulgaria	0.08	0.06	0.08	0.08	0.03	0.04	0.03	0.05
Czech Republic	0.29	0.29	0.30	0.45	0.88	0.79	0.77	0.87
Denmark	8.17	9.26	11.80	6.65	5.56	4.17	5.28	5.46
Germany	18.34	18.71	20.80	18.87	30.41	23.90	26.39	31.94
Estonia	0.05	0.07	0.07	0.09	0.05	0.05	0.08	0.06
Ireland	32.81	30.56	27.10	31.10	19.49	22.73	23.33	24.27
Greece	3.46	3.34	3.40	2.90	0.43	0.36	0.42	0.45
Spain	1.27	1.40	2.81	2.73	1.42	1.65	2.34	2.06
France	12.49	18.19	14.07	11.25	15.02	11.06	13.15	15.94
Croatia	0.03	0.04	0.08	0.18	0.04	0.04	0.04	0.05
Italy	2.06	1.28	1.61	2.33	1.72	0.99	1.22	1.83
Cyprus	0.18	0.12	0.14	0.16	2.14	1.77	2.00	2.53
Latvia	0.17	0.06	0.06	0.08	0.06	0.07	0.10	0.17
Lithuania	0.07	0.08	0.04	0.09	0.02	0.03	0.03	0.04
Luxembourg	0.70	0.79	0.68	0.66	0.90	0.98	0.89	1.15
Hungary	0.09	0.79	0.28	0.42	0.30	0.19	0.20	0.20
Malta	0.15	0.14	0.18	0.08	0.13	0.10	0.64	0.24
Netherlands	9.77	5.75	7.03	9.19	25.73	18.70	19.90	23.56
Austria	0.88	0.53	0.61	0.91	1.09	1.04	1.09	1.16
Poland	0.89	0.81	1.03	1.18	0.56	0.51	0.71	0.72
Portugal	0.32	0.33	0.30	0.37	0.70	0.87	0.99	0.82
Romania	0.42	0.52	0.49	0.60	0.32	0.28	0.32	0.25
Slovenia	0.05	0.06	0.07	0.07	0.08	0.07	0.08	0.06
Slovakia	0.05	0.04	0.04	0.04	0.06	0.08	0.08	0.08
Finland	2.59	1.77	2.50	2.14	4.95	3.85	4.17	5.24
Sweden	2.76	3.18	2.90	5.68	8.80	8.56	8.08	8.29

Source: Author's own compilation based on Eurostat [2025].

Competitive position of the EU and India in the global services market

The competitive positions of the EU and India in 2024 are assessed using a mapping technique that combines the RSCA and NX indicators. Table 5 reports the indicators' values, and Figures 2–3 present the sectoral maps.

Table 5. NX and RSCA values in 2024 for the EU and India by service sector

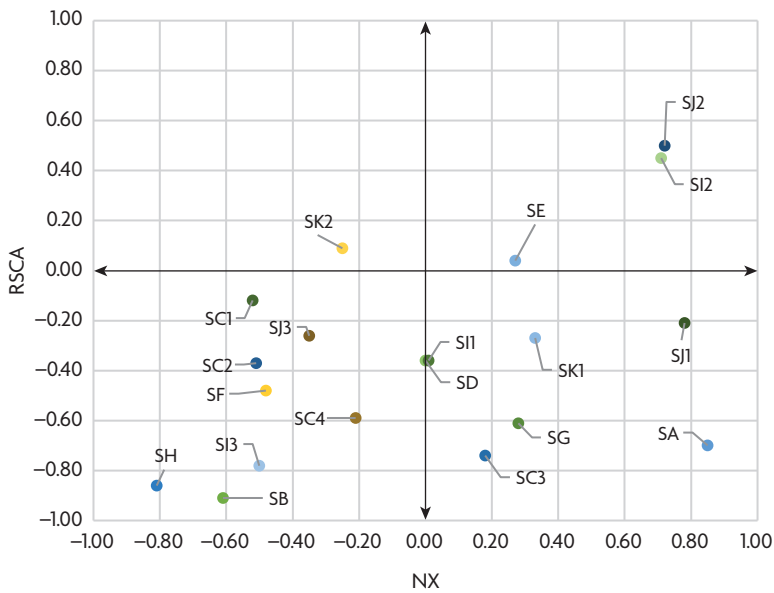
Service sectors	India		EU	
	NX	RSCA	NX	RSCA
SA. Manufacturing services on physical inputs owned by others	0.85	-0.70	0.12	0.20
SB. Maintenance and repair services n.i.e.	-0.61	-0.91	0.12	0.04
SC1. Sea transport	-0.52	-0.12	0.10	-0.13
SC2. Air transport	-0.51	-0.37	0.06	-0.16
SC3. Other modes of transport	0.18	-0.74	-0.04	0.28
SC4. Postal and courier services	-0.21	-0.59	0.24	0.28
SD. Travel	0.00	-0.36	0.08	-0.13
SE. Construction	0.27	0.04	0.14	-0.13
SF. Insurance and pension services	-0.48	-0.48	0.08	-0.03
SG. Financial services	0.28	-0.61	0.17	-0.06
SH. Charges for the use of intellectual property n.i.e.	-0.81	-0.86	-0.26	-0.01
SI1. Telecommunications services	0.01	-0.36	0.01	0.01
SI2. Computer services	0.71	0.45	0.39	0.13
SI3. Information services	-0.50	-0.78	0.20	0.12
SJ1. Research and development services	0.78	-0.21	-0.08	0.11
SJ2. Professional and management consulting services	0.72	0.50	-0.07	-0.13
SJ3. Technical, trade-related and other business services	-0.35	-0.26	0.03	0.10
SK1. Audiovisual and related services	0.33	-0.27	0.03	0.00
SK2. Other cultural and recreational services	-0.25	0.09	0.22	0.05

Source: Author's own compilation based on WTO [2025].

For India, computer services (SI2) and professional and management consulting services (SJ2) stand out as the principal star performers, with relatively high values for both NX and RSCA. It should be borne in mind that SJ2 is a broad, heterogeneous category encompassing, among others, legal services, accounting, tax advisory, advertising and marketing, and opinion and market research. In the absence of more granular data, it is not possible to pinpoint export specialisation or trade balances within these subsegments. Quadrant B of the chart also includes construction (SE), although India's revealed comparative advantage is slight, as indicated by the point's proximity to the vertical axis. When comparing India with the EU, it can be seen that on the EU side, the set of star performers is noticeably larger. It includes manufacturing services on physical inputs owned by others (SA), maintenance and repair services n.i.e. (SB), postal and courier services (SC4), computer services (SI2), information services (SI3), technical, trade-related and other business services (SJ3),

and other cultural and recreational services (SK2). According to Table 5, RSCA and NX for the EU were also marginally positive for telecommunications services (SI1) and for audiovisual and related services (SK1), but the values are so close to zero that it is not clear whether they should be classed as the block's star performers.

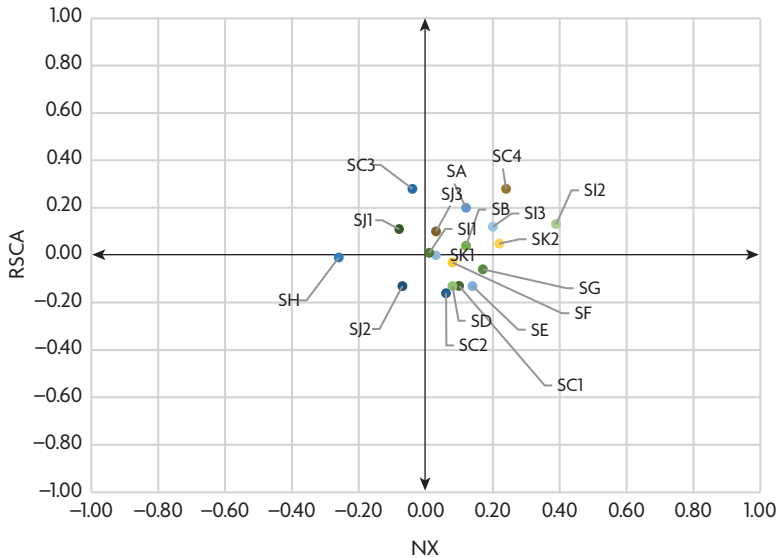
Figure 2. India's competitive position in global trade in services, by sector, 2024



Source: Author's own compilation based on WTO [2025].

The results of the comparison, on the other hand, certainly confirm that, in 2024, the EU's services export model was more diversified than India's, with a broader set of high-performing sectors. Figures 2–3 also show that EU–India competition is sharpest in computer services, where Indian providers hold a clear advantage in global markets.

As regards industries with untapped potential (quadrant A), in India this category comprises only audiovisual and related services, where an existing comparative advantage has not yet translated into a trade surplus. In the EU, a similar pattern is observed in research and development services and in 'other modes of transport', covering modes other than sea and air (for example, road transport and inland waterways). In both cases, India and the EU exhibit some comparative advantage in these segments but have not yet been able to convert it fully into export gains.

Figure 3. The EU's competitive position in global trade in services, by sector, 2024

Source: Author's own compilation based on WTO [2025].

In the case of India, seven service categories met the criteria for being at risk of losing their market position and thus fell into quadrant D. This refers to: (1) manufacturing services on physical inputs owned by others, (2) other modes of transport, (3) financial services, (4) telecommunications, (5) research and development and (7) audiovisual services. In addition, travel services were placed at the borderline of this quadrant. The RSCA index calculated for India was negative and NX was equal to zero. This positioning indicates a high risk of travel services moving to quadrant C, where underperforming industries are located. In principle, the same holds true for telecommunication industry.

In the European Union, a large, albeit smaller, group of services also lay in quadrant D. Besides travel, these included sea transport (SC1), air transport (SC2), construction (SE), insurance and pension services (SF), and financial services (SG). The strongest downward pressure towards a deficit and hence a move into quadrant C was observed in air transport, where in 2024 a relatively small positive NX coincided with a clearly negative RSCA. By contrast, conditions were most favourable in financial services, where a relatively slight comparative disadvantage was accompanied by a comparatively high NX.

The mapping shows that, in India's trade pattern, as many as eight service categories displayed the hallmarks of underperforming industries. It concerns

(1) manufacturing services on physical inputs owned by others, (2) travel, (3) charges for the use of intellectual property, (4) sea transport, (5) air transport, (6) insurance and pension services, (7) information services and (8) postal and courier services. This was the largest cluster among the 19 types analysed and points to a generally weak competitive position of India in these areas. Lacking comparative advantage and running a deficit, these services tend to generate more costs than benefits. Within this set, India's weakest performance is in intellectual property rights, where both NX and RSCA are at their lowest, indicating a persistent deficit and strong reliance on imports. The picture is comparatively less adverse in sea transport, where the negative readings are less pronounced than for other services in this quadrant. By comparison, the European Union's position is more favourable in terms of the number of underperforming industries. Only professional services and IP rights fell into quadrant C. In the latter, the comparative disadvantage is relatively small, suggesting scope to improve competitiveness. In professional services, EU expenditure only slightly exceeded revenue, which likewise bodes well for a potential move into surplus.

In conclusion, the models of India and the EU differ fundamentally. India is highly specialised in selected knowledge-intensive segments, whereas the EU benefits from a more diversified portfolio spanning both traditional and modern services. The most direct head-to-head competition is in computer services, where India currently holds a clear lead.

4. Poland's position in the global services market vis-à-vis India

To compare Poland's position as a global supplier and purchaser of services with that of India, the same mapping technique was used as in the previous section, combining the RSCA and NX indicators. Table 6 reports Poland's RSCA and NX values for 2024, and Figure 4 presents the corresponding map.

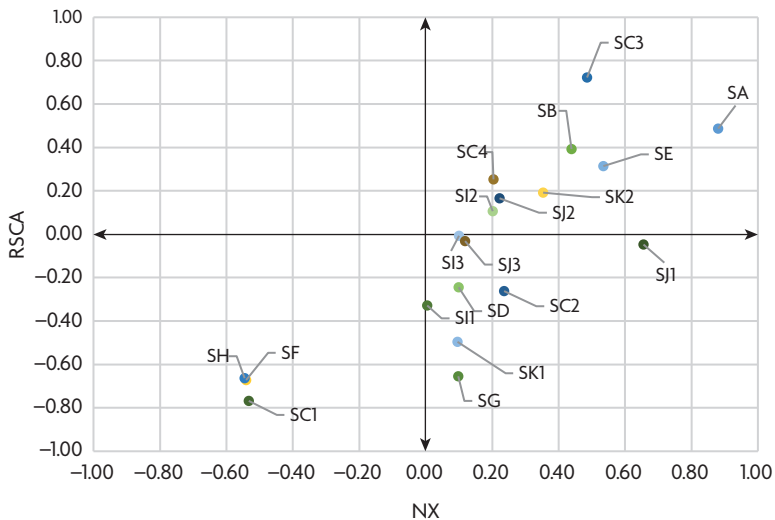
Table 6. RSCA and NX indicators for Poland, 2024

Service sectors	NX	RSCA
SA. Manufacturing services on physical inputs owned by others	0.88	0.49
SB. Maintenance and repair services not included elsewhere (n.i.e.)	0.44	0.39
SC1. Sea transport	-0.53	-0.77
SC2. Air transport	0.24	-0.26

Service sectors	NX	RSCA
SC3. Other modes of transport	0.48	0.72
SC4. Postal and courier services	0.20	0.25
SD. Travel	0.10	-0.24
SE. Construction services	0.53	0.31
SF. Insurance and pension services	-0.54	-0.67
SG. Financial services	0.10	-0.65
SH. Charges for the use of intellectual property not included elsewhere (n.i.e.)	-0.55	-0.66
SI1. Telecommunications services	0.00	-0.33
SI2. Computer services	0.20	0.11
SI3. Information services	0.10	-0.01
SJ1. Research and development services	0.66	-0.05
SJ2. Professional and management consulting services	0.22	0.17
SJ3. Technical, trade-related and other business services	0.12	-0.03
SK1. Audiovisual and related services	0.10	-0.50
SK2. Other cultural and recreational services	0.35	0.19

Source: Author's own compilation based on WTO [2025].

Figure 4. Poland's competitive position in global trade in services, selected industries, 2024



Source: Author's own compilation based on WTO [2025].

For Poland, the NX and RSCA values show that, in 2024, the country had a markedly larger set of star performers than India. No less than eight branches

belong to quadrant B of the chart, compared with three industries in the case of India. Poland's stars span both traditional and modern activities. The strongest surplus (highest value of NX) was recorded in manufacturing services on physical inputs owned by others (SA), while export specialisation measured by RSCA was highest in other modes of transport (SC3). The weakest of Poland's star performers, judged by both trade balance and comparative advantage, were computer services (SI2), followed by professional and management consulting (SJ2). The research also revealed the performance was somewhat stronger in postal and courier services (SC4) and in other cultural and recreational services (SK2). Poland also fared relatively well in maintenance and repair (SB) and in construction (SE). A comparison of Poland's and India's indices shows that Poland held a stronger global position in construction, whereas it lagged behind India in professional services; Indian providers also clearly outperformed Poland in computer services.

The mapping makes it clear that, in 2024, Poland, unlike India, had no services with untapped potential (i.e. those in quadrant A). By contrast, Poland's trade profile featured a relatively large group of services at risk of losing their competitive position, larger than in India's case. As Figure 5 demonstrates, the following industries fell into quadrant D in 2024: (1) travel, (2) air transport, (3) financial services, (3) research and development (R&D), (4) technical, trade-related and other business services; (5) audiovisual and related services and (6) information services. Export specialisation was weakest in the financial and audiovisual sectors, where RSCA values were negative and very low. Conversely, two branches (information services and technical, trade related and other business services) displayed the greatest potential to develop comparative advantage (RSCA negative but close to zero). Telecommunication services present a more complicated case, as their NX index was equal to zero. Regardless of the fact that RSCA for this industry was negative, this branch should rather be treated as borderline, and not be considered as belonging to part D of the chart. As a consequence, Poland's model includes no more than 6 categories characterised by the risk of losing market position.

As regards underperforming industries, three Polish service branches met this criterion: sea transport; insurance and pension services; and charges for the use of intellectual property. The same categories also appeared in India's model. The difference was that, in India's case, this part of the chart also included sea transport. At the same time, the indicator values show that Poland was in a relatively more favourable position than India in the financial sector and in sales and purchase of IP rights, where the negative values were higher. By contrast, in sea transport, Poland displayed a more pronounced comparative disadvantage.

In summary, as in the case of the European Union, the competitive positions of Poland and India in the global services market are not alike. Poland stood out in 2024 with a larger cohort of star performers, while simultaneously a sizeable set of service categories was at risk of losing market position. In several underperforming areas, Poland's position was comparatively more favourable than India's, while in others, such as sea transport, it was weaker. In professional and management consulting, computer services, and construction where both countries recorded positive RSCA and NX values, they compete directly, albeit with differing intensity. India holds the stronger position in professional and computer services, while Poland compares more favourably in construction.

Conclusions

The study showed that India did not play a significant role as an EU partner in trade in services in the years 2021–2024. Its share did not exceed 2% of the EU'S global exports and 2.7% of its imports annually. Over the period examined, the volume of services purchased by the European Union from this trading partner exceeded the volume of services sold. At the end of 2024, the trade balance closed at EUR –7.5 billion. Furthermore, India and the EU did not occupy identical competitive positions in the global services market, but EU service providers generally performed better than their competitors. Finally, the significance of access to the market of India for individual EU member states was not identical. In particular, Poland played a negligible role as a supplier and recipient of services from India, with a slightly larger share in EU exports to India than in imports from this geographical location. The findings confirm prior conclusions in the literature concerning the nature of EU – India relations, and the added value of this research lies in extending the analytical scope to cover the period up to 2024, and in employing a broader, more comprehensive approach that takes into account both the sectoral structure and the differences between EU member states, including empirical evidence that Poland does indeed play a peripheral role.

In addition, the findings of the study may shed light on the effects of the further liberalisation of bilateral trade in services between the EU and India. According to the theory of regional integration, one can expect an increase in the volume of bilateral export and import of services. The removal of barriers to the flow of services should contribute primarily to trade creation and trade diversion effects, but will also affect, *inter alia*, the competitiveness of domestic service providers. This

environment would favour firms already operating effectively in sectors identified as star performers. The improved access to a large consumer market would allow them to deepen specialisation and consolidate their advantages. Conversely, entry by foreign competitors may compress prices and lift quality in the home market. At the same time, there are likely to be adjustment costs as domestic and foreign providers face fiercer competition. Underperforming sectors, and those at risk of losing ground, may be squeezed or even forced out.

The analysis also underscores that the negotiations between the European Union and India cannot be viewed solely through the lens of the EU as a single bloc, since their effects will vary markedly across member states. Moreover, the gains from liberalisation may be distributed unevenly between the parties. The question of who would gain more from removing barriers to bilateral trade in services: the EU or India, can only be answered once both parties have agreed on the terms under which they will allow freedom to provide services.

REFERENCES

- Balassa, B. (1965). Trade Liberalisation and 'Revealed' Comparative Advantage, *The Manchester School of Economic and Social Studies*, 33(2). DOI: 10.1111/j.1467-9957.1965.tb00050.x.
- Dalum, B., Laursen, K., Villumsen, G. (1998). Structural Change in OECD Export Specialisation Patterns: Despecialisation and 'Stickiness', *International Review of Applied Economics*, 12(3). DOI: 10.1080/02692179800000017.
- Dash, A., Bhattacharjee, A. (2024). India's FTA With the EU: Opportunities and Challenges in the Services Sector, *ARTNeT Working Paper Series*, 232, <https://hdl.handle.net/20.500.12870/6763> (accessed: 27.04.2026).
- European Commission (2023). *Trade Sustainability Impact Assessment (SIA) in Support of the Free Trade Agreement and Investment Protection Agreement Negotiations Between the European Union and the Republic of India. Final Report*, <https://www.eu-india-tsia.eu/resources> (accessed: 02.10.2025).
- Eurostat (2025). *International Trade in Services. Database*, <https://ec.europa.eu/eurostat/web/international-trade-in-services/database> (accessed: 23.09.2025).
- IMF (2009). *Balance of Payments and International Investment Position Manual* (6th ed.). Washington: International Monetary Fund.
- Mongialo, D. (2025). Changes in Trade Performance of Poland in Extra-EU Trade in Services. In: *Poland in the European Union: Report 2025* (pp. 107–129), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.
- Navarra, C. (2020). *Assessing the Potential Impact of an EU–India Trade Agreement*, [https://www.europarl.europa.eu/RegData/etudes/STUD/2020/642841/EPRS_STU\(2020\)642841_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2020/642841/EPRS_STU(2020)642841_EN.pdf) (accessed: 27.04.2026).

- Nordås, H.K. (2023). Services in the India–EU Free Trade Agreement, *International Economics*, 176, 100460. DOI: 10.1016/j.inteco.2023.100460.
- UNIDO (1982). *Changing Patterns of Trade in World Industry: An Empirical Study on Revealed Comparative Advantage*. New York: United Nations Industrial Development Organisation.
- United Nations, International Monetary Fund, Organisation for Economic Co-operation and Development, Statistical Office of the European Union, United Nations Conference on Trade and Development, World Tourism Organisation and World Trade Organisation (2012). *Manual on Statistics of International Trade in Services 2010*, https://www.wto.org/english/res_e/statis_e/its_manual_e.htm (accessed: 27.04.2026).
- Widodo, T. (2009). Comparative Advantage: Theory, Empirical Measures and Case Studies, *Review of Economic and Business Studies*, 4, pp. 57–82.
- WTO (2025). *WTO Stats Portal: Trade in Services Statistics*, <https://stats.wto.org> (accessed: 27.09.2025).

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THE SIGNIFICANCE OF THE EUROPEAN UNION'S AUTONOMY IN OUTER SPACE FOR SECURITY AND DEFENCE: A POLISH PERSPECTIVE

Introduction

The contemporary global economy is characterised by a high degree of interdependence among the entities that constitute it, with states playing a fundamental role through actions undertaken at both the national and supranational levels. Engagement in international activities is often exercised through integration groups and is driven by the pursuit of greater influence in global affairs, the provision of collective security and the enhancement of competitiveness relative to other states or international organisations. A prominent example of such a group is the European Union, which comprises 27 member states and strengthens the standing of both its members and the Union itself within the global economic order.

Cooperation within integration groups is conditioned, among other things, by the need to respond to the internationalisation of contemporary threats. With the growing interdependence of entities, not only benefits but also global challenges are passed through. In particular, ensuring internal security, traditionally perceived as

the domain of sovereign states, is becoming internationalised and is currently being tackled by international organisations. This is evident within the European Union, for which security is a key area of activity.

In the contemporary economic landscape, technological autonomy in outer space, expressed through space capabilities, is becoming the basis for ensuring security. In fact, space technologies are essential for access to navigation, communication and early warning systems, among other things. Space capabilities are the foundation of security and defence strategies [ESPI, 2025]. As part of international space cooperation, the European Union is undertaking initiatives to strengthen its position as one of the key global players with advanced space capabilities, comparable to those of the United States and China.

Given that outer space constitutes a key domain enabling, *inter alia*, the conduct of military operations, the research objective of this chapter is to identify the significance of developing the European Union's space capabilities for international security and defence, as well as to determine Poland's role in the construction of the EU's space autonomy. The chapter employs the method of critical literature analysis combined with logical reasoning.

1. The importance of outer space for international security and defence

Outer space, or more broadly, the cosmos, has not been defined within international space law [Myszona-Kostrzewa, 2025]. In other words, it has no legal definition [Butchard, 2022]. However, the literature on the subject follows the Federation Aéronautique Internationale (FAI) in assuming that it is the space above airspace, with its lower boundary at least 100 km from the Earth's surface [Sanz Fernández de Córdoba, 2004].

An analysis of the documents prepared by the Committee on the Peaceful Uses of Outer Space concerning the delineation of outer space's boundaries and its definition indicates the existence of two primary positions among states regarding the necessity of establishing a legal definition of outer space [UNOOSA, 2020].

1. The first group of countries – for example, Greece, Mexico, Mozambique and Qatar – emphasises the numerous benefits of having a uniform and legally binding definition, which include avoiding international disputes, enhancing security and providing legal clarity.

2. The second group of countries – e.g. France, Germany, Norway and Turkey – does not seek to establish a uniform definition, and in their view, this is not a priority. This is justified by the absence of disputes arising from the lack of a definition and the lack of evidence for the need to formulate such a concept.

Despite the lack of a legal definition of outer space, countries recognise its importance in ensuring freedom of decision-making in the area of security and defence. This is reflected in the treatment of space as a defence domain [Pataki, 2025] and the designation of technologies placed in space as critical national infrastructure. This position is held by France, Belgium and the United Kingdom, among others [OECD, 2025]. Space technologies and ground-based support systems enable:

- satellite imaging, including near real-time observation,
- internet connectivity in remote locations,
- communication services, including satellite radio,
- early warning of military attacks,
- geospatial intelligence,
- interception of ballistic missiles,
- navigation and positioning.

Outer space can be considered in two ways: (1) as a space in which technologies supporting activities on Earth are located and (2) as an area for military operations. Focusing on the second approach, it should be noted that outer space is treated as a fully-fledged domain of military operations, analogous to land, airspace or seas and oceans, where armed operations can potentially be conducted. To date, there has been no armed conflict in outer space; however, it is worth noting that technological advances and growing geopolitical tensions make such a scenario possible [Pataki, 2025].

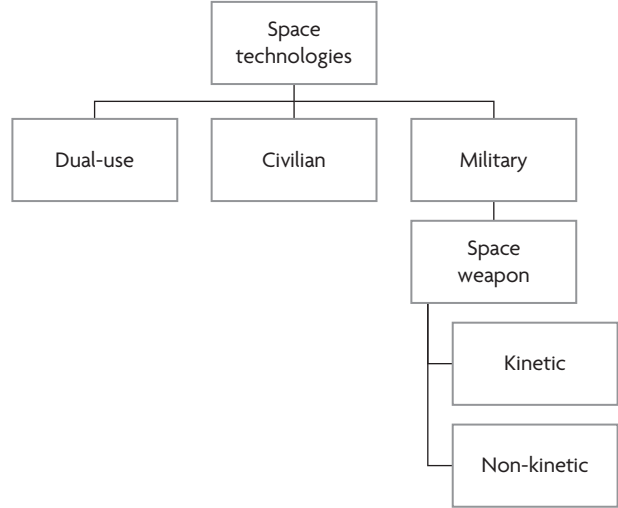
On the other hand, outer space plays a fundamental role in providing the infrastructure necessary to carry out military operations on land, at sea or in the air. Thanks to space technologies and ground support systems, it is possible to support infrastructure such as transport, energy and finance. Notably, numerous space technologies complement ground-based technologies. An example is the acquisition of Earth observation data. To ensure the accuracy and reliability of the data, satellite data must be calibrated using ground-based observations. This is an example of the need to have infrastructure located both in space, most often in low earth orbit and geostationary orbit, as well as on Earth.

In contemporary security studies, outer space is considered one of the militarised domains [Pobjie, Azcárate Ortega, 2024]. This means that it is an area where military technologies are deployed, but for peaceful purposes. Accepting this definition, it

must be said that outer space is militarised but not armed, if by armament is meant the use of these technologies in a destructive manner.¹

It should be noted that although the placement of nuclear weapons and other weapons of mass destruction in outer space is prohibited, outer space is not a domain free from the deployment of conventional weapons. Moreover, the scholarly literature indicates that even civilian technologies may be transformed into weapons. When distinguishing the nature of space technologies, three categories are typically identified: civilian, military and so-called dual-use technologies (Figure 1). The last-named category includes technologies that may serve both civilian and military purposes. Such technologies can support military operations conducted on Earth or directly in outer space.

Figure 1. Classification of space technologies according to their application



Source: Authors' own compilation based on ESPI [2011].

2. The European Union’s space capabilities

Space capabilities can be understood as the ability to access, utilise and contribute to the creation of space infrastructure, as well as the ability to access and utilise shared natural resources in space [Croschier, 2023]. Space infrastructure consists

¹ The literature on the subject generally accepts that outer space is militarised but not armed. However, it is worth noting that the concept of ‘militarisation’ is sometimes equated with ‘armament’ [Pobjie, Azcárate Ortega, 2024].

of satellites and related ground systems [Croshier, 2023]. Therefore, a country's autonomous space capabilities should be understood primarily as its ability to build and launch satellites into orbit. In terms of militarisation, space capabilities include, in particular, positioning and navigation systems, payload delivery into orbit, as well as early warning and synchronisation capabilities [Bielawski, 2022]. The objectives of possessing autonomous space capabilities are:

1. Aiming to ensure decision-making autonomy in relation to security, which is possible by reducing dependence on external entities. Having one's own space infrastructure provides control over output data and the ability to obtain data almost in real time. This is important because the use of data available in the public domain, for example, may result in poorer image quality, longer waiting times for data, or less accurate images of different regions [Croshier, 2023]. An example of the development of proprietary space capabilities is the development of GNSS satellite positioning systems by actors such as the European Union and Russia, despite access to the American GNSS system, i.e. GPS (Global Positioning System).
2. Ensuring continuity in maintaining the civilian nature of major space projects. This is one of the reasons indicated by the European Union [Council of the EU, European Council, 2025].

The European Union's space capabilities can be assessed based on the Space Power Index [Aliberti, Cappelli, Prain, 2023]. This index identifies countries and entities that are classified as space powers. This term refers to an entity that possesses space capabilities and benefits from them in order to support autonomously set objectives [ESPI, 2023]. The Space Power Index is composed of 94 indicators, grouped into four leading categories: hard capacity, soft capacity, technical autonomy and political autonomy. From the perspective of space capabilities, material resources and the ability to conduct space operations independently are key. These fall under hard capabilities and technical autonomy, respectively.

According to the above indicator, Europe is not considered a space power [ESPI, 2023]. This is due, among other things, to insufficient hard capabilities, which include space control, as well as insufficient military autonomy in space. Furthermore, dependence on external entities, such as the US, and insufficient resources related to launch vehicles are also highlighted. However, it is worth noting that, according to the European Parliament Resolution of 23 November 2023, the European Union defines itself as a space power [European Parliament, 2023]. According to the Space Power Index, the space powers include the United States of America, China and Russia. Nevertheless, it should be emphasised that the European Union also

has several programmes that enhance its autonomy in space and develop its space capabilities. Key programmes include Copernicus, Galileo and EGNOS. These are European Union initiatives.

The Copernicus programme was developed by the European Commission. It is an Earth observation system consisting of a ground segment and space components. This means that it utilises satellites, specifically Sentinel, as well as ground-based elements. Most of the data obtained is publicly available and free of charge. Copernicus services are classified into six main categories: atmosphere, marine environment, land areas, climate change, security and emergencies [Copernicus, 2025]. Within these groups, further areas of service provision and data delivery are identified. For example, in the area of security, its key activities include border protection, maritime surveillance and support for the European Union's external actions [Copernicus, 2025]. Border protection is primarily carried out using the Sentinel 1 and Sentinel 2 satellites, with the primary objective of reducing cross-border crime and enhancing security by providing data in near real-time. One result of using this data is, for example, the creation of a map of the main migration routes to the European Union [Frontex, 2025]. The second area is maritime surveillance, which aims to monitor compliance with maritime law and control maritime activities such as fishing. The third area is support for the EU's external activities, which may involve assisting third countries. An example of the use of the Copernicus programme outside the EU is assistance to third countries in preventing crisis situations that could cause destabilisation in such a country.

The second fundamental system of the European Union is Galileo, which is the European GNSS system. It consists of satellites and Earth-based stations. Thanks to Galileo, entities have access to accurate navigation and positioning, among other things. It is emphasised that Galileo provides more accurate data than the American GPS. Five operational services are currently available (Open Service, High Accuracy Service, Public Regulated Service, Search and Rescue Service, Open Service Navigation Message Authentication), and three are under development. Among the services under development, an important service in terms of security and, indirectly, defence, is the Emergency Warning Satellite Service (EWSS), which will be used to warn residents of disaster-threatened areas. Additionally, Galileo can be utilised, for example, by border control services and to enhance transport safety. However, it is worth noting that this system is entirely under civilian control.

The third key system contributing to the enhancement of the European Union's autonomy in outer space is EGNOS. It is a navigation system for aviation, shipping and land users, offering services throughout the EU that are essential for safety, as it

supports the GPS system, GLONASS and, above all, Galileo. EGNOS also introduces new security features: (1) a space situational awareness programme to monitor space threats and (2) government satellite communications providing national authorities with access to secure satellite communications. This system also consists of satellites and ground infrastructure.

3. The European Union Space Programme 2021–2027

The European Union recognises the significant importance of outer space for ensuring security and defence, which has led to this domain being designated as strategic in the EU Strategic Compass.² This is explicitly confirmed by the emphasis placed on the fact that outer space plays a crucial role, *inter alia*, in monitoring and the provision of communication [Council of the European Union, 2022]. The Strategic Compass is an action plan that includes, among other things, the objectives and vision for the development of the European Union's security and defence until 2030. Its main objectives are to strengthen defence capabilities, manage threats and cooperate with NATO and other partners. It identifies four priority areas: (1) crisis management (ACT); (2) resilience/security (SECURE); (3) capability (INVEST); (4) partnerships (PARTNER) [Council of the European Union, 2022]. In the SECURE area, attention is drawn, among other things, to ensuring secure access to the so-called strategic domains, *i.e.* space, cyberspace and the sea. The need to increase presence in space for defence and security purposes is highlighted. In the INVEST area, on the other hand, focus is on the need to expand investment capacity in order to develop new-generation capabilities in space. The aim is to achieve technological sovereignty in critical technology areas.

A significant stage in recognising the importance of space for the security of the European Union was the adoption of a regulation [Regulation (EU) 2021/696], which established **the first EU space programme for 2021–2027**. It is a civilian programme which sets out five main objectives: to provide up-to-date, secure and high-quality space-related data and services; to derive greater benefits from the use of space-related data and services; to enhance security and autonomy for the European Union; to play a stronger role for the EU as a player in the space sector; and to increase the sustainability of space activities. The third objective is particularly important from a security perspective. It emphasises the need to strengthen the

² The EU Strategic Compass was adopted by the Council of the EU on 21 March 2022.

security and protection of the EU and to increase the organisation's autonomy in space. The Regulation also contains specific objectives, among which the fifth objective, which is to ensure independent access to space in the context of security needs, should be highlighted. Importantly, Regulation (EU) 2021/696 establishes the European Union Space Programme Agency (EUSPA) as a specialised body of the Union. One of the key tasks of EUSPA is to provide security accreditation for space programme components.

Member states play a crucial role in the EU space programme, as it involves them sharing their know-how and information, as well as, among other things, providing access to infrastructure located in their territory. Another important entity in the programme is the European Space Agency, which, for example, in relation to the Copernicus system, is responsible for building and developing space infrastructure.

An important element from the European Union's perspective is that the programme addresses areas crucial for building EU autonomy in space. One such area is the development of launch infrastructure and payload delivery systems. However, as indicated, there is no separate budget for this area. The total budget for the space programme is EUR 14.88 billion, of which EUR 9.017 billion will be allocated to the Galileo and EGNOS systems, EUR 5.421 billion to the Copernicus system, and EUR 0.442 billion to SSA and GOVSATCOM.

The EU space programme will encompass activities within the framework of the systems already discussed (Copernicus, Galileo, EGNOS), as well as GOVSATCOM and SSA. GOVSATCOM is a satellite communication service. SSA stands for Space Situational Awareness and includes NEO (Near Earth Objects) subcomponents, i.e. systems for monitoring objects approaching our planet, SEW subcomponents, i.e. observation parameters related to space weather, and SST subcomponents, i.e. a system for observing and tracking space objects, including space debris.

Furthermore, in March 2023, the Council of the EU adopted a Regulation on the EU Secure Communications Programme for 2023–2027 [Regulation (EU) 2023/588]. The programme sets the European Union the goal of introducing the IRIS2 component, among other things. This is a multi-orbital satellite constellation designed to provide secure and ultra-fast communication services. Security will be ensured through encryption, including quantum cryptography.

In order to secure its autonomy in space, the EU is also investing in its industrial base, specifically:

1. Coordinated funding: the EUR 13 billion EU space programme exploits synergies with defence initiatives such as the European Defence Fund and Horizon Europe to ensure seamless research and development.

2. Technological autonomy: actions are being taken to reduce dependence on non-EU suppliers while securing critical components and materials for space systems [Council of the EU, European Council, 2025].

4. The role of Poland in shaping the European Union's space autonomy

As a member state of the European Union, Poland is also a member of the European Space Agency (ESA). This status entails an obligation to pay a mandatory contribution, which is allocated to the financing of the Science Programme and the so-called Core Activities. In addition to the mandatory contribution, ESA operates a system of optional programmes under which member states may determine the level of their additional financial contributions. The assessment of ESA contributions indirectly allows for determining a country's role in building and developing European space capabilities. It is worth noting that Poland's contribution has been steadily increasing (Table 1).

Table 1. Poland's ESA contribution in 2017–2023 (in EUR millions)

Type of ESA contribution	2017	2018	2019	2020	2021	2022	2023
Mandatory contribution	21.8	23.0	23.3	24.1	25.7	26.8	27.4
Optional contribution	12.8	11.6	11.3	14.3	13.4	18.4	17.4

Source: Authors' own compilation based on POLSA [2024].

Additionally, it should be emphasised that there will be a significant increase in financial commitment in 2026–2028, as Poland's contribution to the European Space Agency's optional programmes will amount to approximately EUR 550 million. This is more than double the amount for 2023–2025 (EUR 251 million) [POLSA, 2024].

Due to the significant increase in Poland's contribution to the ESA, it is worth analysing the latest results from the meeting of the European Space Agency Council at the ministerial level.³ This will enable Poland's financial involvement in European space projects to be determined, with a particular emphasis on activities related to security and defence. For this purpose, Table 2 has been prepared, showing selected programmes.

³ The Ministerial Council meeting of the European Space Agency took place in Bremen on 26–27 November 2025.

Table 2. The amount of Poland's declared financial commitment to selected ESA programmes related to science, exploration, Earth observation, navigation and space safety for the years 2026–2028 (in EUR millions)

Programme	Poland	Total
Science		
Scientific Experiment Development Programme (PRODEX)	76.34	1,760.87
Exploration		
European Exploration Envelope Programme Period 4	61.00	3,773.00*
Earth observation		
Copernicus Space Component	11.94	3,124.11*
Future Earth Observation	35.00	1,904.00*
European Earth Watch (Digital Twin Earth Element)	3.19	86.23*
European Earth Watch (InCubed Element)	8.00	60.00*
European Resilience from Space to Earth Observation (ERS EO Element 1 – Phase 1)	55.00	100.00*
European Resilience from Space to Earth Observation (ERS EO E2 FNOC)	3.00	29.77*
European Resilience from Space to Earth Observation (ERS EO E2 Cluster 1 ALPSTAR)	6.00	25.00*
European Resilience from Space to Earth Observation (ERS EO E2 Cluster 2 ESCA+)	–	325.01*
European Resilience from Space to Earth Observation (ERS EO E2 Space Resilience Nodes)	45.00	112.10*
Navigation		
Navigation Innovation and Support Programme (total)	8.00	208.55*
FutureNAV (FutureNAV Component 1 LEO PNT)	10.65	608.72*
FutureNAV (FutureNAV Component 2 GENESIS)	–	110.34*
FutureNAV (FutureNAV Component 3 PNT Demonstrators)	10.00	236.05*
Space safety		
Space Safety Programme (S2P) Period 3	59.30	955.26*

* Envelope, i.e. the total approved budget allocated to a given programme or its component for a specific period of time.
Source: Authors' own compilation based on ESA [2025].

An analysis of the data in Table 2 indicates that between 2026 and 2028, Poland will have a significant share in several ESA programmes related to science, exploration, earth observation, navigation and space safety. Examples include Earth observation programmes, as seen, among others, in the European Resilience from Space to Earth Observation programme (ERS EO Element 1 – Phase 1).

Poland's increasing role in building and developing EU space autonomy is evident in the activities of the Polish Space Agency (POLSA), which is involved in the implementation of the EU space programme [POLSA, 2025]. Additionally, there are several EU programmes in which Polish entities are involved. One example is the SALTO project, funded by the European Union, which aims to create the first stage of a reusable launch vehicle. One of the participants in this project is SpaceForest. It is a Polish limited liability company that has received EUR 835,687.50, which places it among the seven main participants in terms of funding received [European Commission, 2025].

Focusing on strictly domestic activities related to the development of space autonomy, it should be emphasised that Poland has a Space Strategy, which provides a significant impetus for the development of the space sector and indicates the desired directions for this development until 2030. The Strategy sets out three main objectives:

1. The Polish space sector will be able to compete effectively in the European market, with its turnover amounting to at least 3% of the total turnover of that market (in proportion to Poland's economic potential).
2. The Polish public administration will utilise satellite data to carry out its tasks more efficiently and effectively, while domestic enterprises will be able to fully meet internal demand for such services and export them to other markets.
3. The Polish economy and public institutions will have access to satellite infrastructure enabling them to meet their needs, especially in the field of security and defence [Ministry of Development and Technology, 2022].

It should be noted that, in light of the considerations presented in this chapter, the objective related to access to satellite infrastructure in order to support national security and defence is significant [POLSA, 2024]. Furthermore, the Polish Space Strategy specifies detailed objectives, the third of which provides for the development of national security and defence capabilities through space technologies and satellite techniques. The following implementation tools are envisaged as part of this objective:

- a) Development of a national satellite Earth observation system.
- b) Construction of a space situational awareness system.
- c) Ensuring the availability of satellite communication and navigation services.
- d) Development of rocket technologies.

However, it was this specific objective that POLSA identified as being at risk of not being achieved, which could have negative consequences for the achievement of the other objectives as well. Activities such as the development of rocket technology and ensuring access to satellite services are at high risk of not being achieved by

2030. Furthermore, it is pertinent to note that Poland does not have a national space programme.

Considering Polish projects related to the development of space capabilities for defence purposes, what also deserves a mention is the groundbreaking significance of the launch of the Polish radar satellite as part of the Transporter-15 mission, carried out using a Falcon 9 rocket. This is the first Polish military satellite under the MikroSAR programme. The satellite remains under the direct control of the Polish Armed Forces. However, although the launch of the satellite is an important step towards increasing national autonomy in the space domain, the process was carried out using the resources and infrastructure of a foreign entity, the American company SpaceX.

Conclusions

The strategic significance of outer space for defence and security is currently widely recognised at the international level. Within the European Union, this is reflected, among other things, in the establishment of the EU Space Programme for 2021–2027. The Programme is of an international nature, which is significant given that in Europe, the strengthening of space capabilities critically relies on international cooperation. This is due to the fact that no European country holds the status of a space superpower.

It is worth noting, however, that although Europe has not historically been a significant player in space, the EU is currently developing its autonomous capabilities in space through the efforts of both the European Union and the European Space Agency. A good example of this is the Galileo system, which operates independently of other global navigation satellite systems (GNSS), such as the American GPS.

Poland's membership of the European Space Agency, coupled with the country's increasing contribution to ESA, enables the Polish industry to participate in national and international contracts in high-tech sectors with significant growth potential. Through this collaboration, the Polish space sector is expected to develop at an accelerated pace, gradually closing the technological gap and establishing national areas of specialisation. It should be noted, however, that several domains still require further action in order to fully realise the potential of Poland's space sector.

REFERENCES

- Aliberti, M., Cappelli, O., Praino, R. (2023). *Power, State and Space: Conceptualizing, Measuring and Comparing Space Actors*. Cham: Springer Nature Switzerland. DOI: 10.1007/978-3-031-32871-8.
- Bielawski, R. (2022). Rozwój zdolności w domenie kosmicznej przez potentatów kosmicznych, *Kultura Bezpieczeństwa. Nauka – Praktyka – Refleksje*, 42(42), pp. 58–69. DOI: 10.5604/01.3001.0015.9477.
- Butchard, P. (2022). *International Regulation of Space*. London: House of Commons Library.
- Copernicus (2025). *Copernicus Services*, <https://www.copernicus.eu/en/copernicus-services> (accessed: 01.12.2025).
- Council of the EU, European Council (2025). *Space, Security and Defence*, <https://www.consilium.europa.eu/en/policies/space-security-and-defence/> (accessed: 08.11.2025).
- Council of the European Union (2022). *The Strategic Compass of the European Union*, <https://www.strategic-compass-european-union.com/> (accessed: 09.12.2025).
- Croshier, R. (2023). *Handbook for Space Capability Development*, <https://www.cgdev.org/sites/default/files/handbook-space-capability-development.pdf> (accessed: 30.11.2025).
- ESA (2025). *Public Release Cover Note. Outcome of CM25*, https://esamultimedia.esa.int/docs/corporate/CM25_document100.pdf (accessed: 04.12.2025).
- ESPI (2011). *Economic and Policy Aspects of Space Regulations in Europe Part 2: Space Related Regulations – On Track for Space Technologies and Space Based Services*, https://www.files.ethz.ch/isn/130797/ESPI_Report_36.pdf (accessed: 04.12.2025).
- ESPI (2023). *Europe as a Space Power*, <https://www.espi.eu/briefs/europe-as-a-space-power/> (accessed: 30.11.2025).
- ESPI (2025). *Security & Defence. Protecting Europe and Its Values*, <https://www.espi.eu/security-defence/> (accessed: 30.11.2025).
- European Commission (2025). *reusable Strategic space Launcher Technologies & Operations*, <https://cordis.europa.eu/project/id/101082007> (accessed: 04.12.2025).
- European Parliament (2023). European Parliament resolution of 23 November 2023 – *Strategic compass and EU space-based defence capabilities (2022/2078 (INI))*, OJ C/2024/4221, 24.7.2024.
- Frontex (2025). *Monitoring and Risk Analysis*, <https://www.frontex.europa.eu/what-we-do/monitoring-and-risk-analysis/migratory-map/> (accessed: 01.12.2025).
- Ministry of Development and Technology (2022). *Polska Strategia Kosmiczna*, <https://www.gov.pl/web/rozwoj-technologie/polska-strategia-kosmiczna> (accessed: 03.01.2026).
- Myszona-Kostrzewa, K. (2025). Status prawny kosmosu. In: *Prawo kosmiczne międzynarodowe, europejskie i krajowe*, (pp. 14–26), K. Myszona-Kostrzewa, Z. Kulińska-Kępa (Eds.). Warsaw: C.H. Beck.
- OECD (2023). *The Space Economy in Figures. Responding to Global Challenges*, https://www.oecd.org/content/dam/oecd/en/publications/reports/2023/12/the-space-economy-in-figures_4c52ae39/fa5494aa-en.pdf (accessed: 06.12.2025).

- Pataki, G.Z. (2025). *EU Capabilities in Space: Scenarios for Space Security by 2050*, [https://www.europarl.europa.eu/RegData/etudes/IDAN/2025/765792/EPRS_IDA\(2025\)765792_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/IDAN/2025/765792/EPRS_IDA(2025)765792_EN.pdf) (accessed: 01.12.2025).
- Pobjie, E., Azcárate Ortega, A. (2024). *Outer Space and Use of Force*, https://unidir.org/wp-content/uploads/2024/09/UNIDIR_Outer_Space_and_Use_of_Force.pdf (accessed: 06.12.2025).
- POLSA (2024). *Ewaluacja Polskiej Strategii Kosmicznej*, https://polsa.gov.pl/wp-content/uploads/2024/05/POLSA_Ewaluacja_Polskiej_Strategii_Kosmicznej.pdf (accessed: 20.12.2025).
- POLSA (2025). *Ocena stanu rozwoju badań i użytkowania przestrzeni kosmicznej w Polsce za rok 2024*, https://polsa.gov.pl/wp-content/uploads/2025/09/Ocena-stanu-rozwoju-badan-i-uzytkowania-przestrzeni-kosmicznej-w-Polsce-za-2024-rok_fin.pdf (accessed: 20.12.2025).
- Regulation (EU) 2021/696 of the European Parliament and of the Council of 28 April 2021 establishing the Union Space Programme and the European Union Agency for the Space Programme and repealing Regulations (EU) No 912/2010, (EU) No 1285/2013 and (EU) No 377/2014 and Decision No 541/2014/EU, OJ L 170/69, 12.5.2021.
- Regulation (EU) 2023/588 of the European Parliament and of the Council of 15 March 2023 establishing the Union Secure Connectivity Programme for the period 2023–2027, OJ L 79, 17.3.2023.
- Sanz Fernández de Córdoba, S. (2004). *100 km Altitude Boundary for Astronautics*, <https://www.fai.org/page/icare-boundary> (accessed: 07.11.2025).
- UNOOSA (2020). *Historical Summary on the Consideration of the Question on the Definition and Delimitation of Outer Space*, https://www.unoosa.org/oosa/oosadoc/data/documents/2020/aac.105/aac.105769add.1_0.html (accessed: 19.11.2025).

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NATIONAL CHAMPIONS AND SME ECOSYSTEMS IN THE EUROPEAN UNION: COMPARATIVE INSIGHTS FROM FRANCE, GERMANY AND POLAND

Introduction

The concept of national champions has long occupied an important place in debates on industrial policy, competitiveness and economic sovereignty in the European Union. In recent years, the relevance of national champions has increased in the context of geopolitical uncertainty, supply chain disruptions and the EU's renewed emphasis on strategic autonomy. Despite their prominence in public discourse, national champions remain a controversial policy instrument. Critics argue that their promotion may distort competition, crowd out smaller firms and reduce incentives for innovation. Supporters, by contrast, view them as key companies capable of mobilising capital, technology and organisational capacity at a scale that smaller firms cannot achieve. Importantly, this debate has increasingly shifted from the question of whether national champions should exist to how they should be embedded within broader economic ecosystems.

This chapter aims to analyse the role and specific functioning of national champions in France, Germany and Poland. By comparing selected institutional and policy models, an attempt was made to identify the main challenges and opportunities related to building cooperation ecosystems between national leaders and small and medium-sized enterprises (SMEs) in Poland, formulating policy-oriented recommendations relevant to Poland's future position in the EU.

1. National champions

Research indicates that the term ‘national champion’ lacks a universally accepted definition and is highly context-dependent, reflecting the complex interplay of political, economic and legal conditions. It generally denotes a state-firm relationship intended to enhance a company’s global competitiveness (Table 1).

Table 1. National champions – definitions and key attributes

Source (author/ institution)	Definition / Key approach	Key attributes of the definition
Baer [2025]	A large corporation receiving support and incentives from the state in the hope that it will better compete in the global market	State support, a symbol of economic strength and national pride
Kociubiński [2023]	Domestic and state-controlled enterprises active in international markets, considered politically important	Domestic ownership and control, international competitiveness, support for strengthening the position
Molski [2015]	As a political concept: large corporations in strategic sectors, pursuing the public interest	A mission beyond profit, the state cannot afford the bankruptcy of such enterprises
Stanikunas and Burinskas [2011]	Large companies dominating in their fields, favoured by the government in the belief that their success is in the national interest if the companies are successful in foreign markets	Significant market power, the result of deliberate government intervention
Viallet-Thévenin [2015]	An institution in which officials consider the dominance of public enterprises in a given sector to be optimal	Sectoral dominance, state support for growth, evolution towards an international champion
Falck and Heblich [2007]	Companies operating at or near the technological frontier, highly competitive in global markets	Innovation, dynamism and being network pilots in their regions

Source: Author’s own compilation based on literature review.

Despite variations in emphasis, the literature identifies a common core in defining national champions. The authors highlight the role of state intervention (Table 2), viewing champion status as the outcome of targeted public support closely linked to national interests, including economic security and the international image of the state (flagship companies). At the same time, definitions differ with regard to ownership and normative interpretation: while some emphasise state ownership, others recognise privately-owned firms supported mainly through regulation or R&D policy. Moreover, the term carries contrasting meanings across policy domains,

functioning as a pejorative concept in competition law and a positive one in industrial policy, where national champions are seen as engines of economic development.

Table 2. Forms of support for national champions received from the state

Type of support	Description
Financial and capital support	Includes direct flows of public funds, such as grants, subsidies, tax breaks, as well as preferential loans or loan guarantees. The state may also use capital contributions or share acquisitions (e.g. through sovereign funds) to prevent or increase the scale of foreign takeovers
Legal and regulatory intervention	Involves modifying the regulatory environment to the advantage of the national champions, including limiting regulatory oversight or providing exemptions from antitrust law. This intervention may include facilitating mergers to achieve 'critical mass', imposing tariffs on foreign competitors, and protecting against foreign takeovers (e.g. through 'golden shares' or tightened foreign direct investment (FDI) screening procedures)
Public demand (public procurement)	Harnessing the state's purchasing power through preferential public procurement. Strategic public procurement can serve as a guaranteed outlet for national champions and is particularly important in strategic sectors (e.g. defence, infrastructure). This instrument is less subject to international restrictions
R&D and innovation support	Funding for research and development (R&D), including tax breaks for R&D, is available. This support may include promoting cooperation between businesses and research institutions (e.g. through European programmes such as EUREKA or IPCEI)
Structural and crisis support	Interventions aimed at rescuing struggling enterprises (so-called 'lame ducks') or restructuring declining sectors. This includes temporary aid measures to address serious economic disruptions (e.g. during a financial crisis) to prevent the collapse of systemically important enterprises

Source: Author's own compilation based on Baer [2025], Bulfone [2020], Bürken et al. [2020], Germann [2023], Molski [2015], OECD [2009], Owen [2012], Stanikunas and Burinskas [2011], Schneider [2022], UNIDO [2024], Zettelmeyer [2019].

2. National champions in France

The history of national champions in France, as outlined by Hayward [1995] and Cohen [2007], is closely linked to the country's distinctive *dirigisme* approach, which embraced strong state intervention in industrial development, sectoral targeting and the promotion of national champions, especially in technologically advanced industries. The government played a key role in shaping the economy's structure and guiding modernisation [Hayward, 1995]. French industrial policy was characterised by 'high-tech Colbertism', focusing on large-scale projects [Cohen, 2007; Buigues, Cohen, 2020; Warlouzet, 2019], known as '*grands projets*', which are major initiatives of strategic, often political-military, significance aimed at creating and

supporting companies considered crucial to national economic interests. Buigues and Cohen [2020] identify the factors behind the success of large projects as the state's active support through a form of offensive protectionism: it promotes the financing of industrial development, funnels the results of public research to chosen firms, ensures investment through public procurement, enables long production runs to recover fixed costs, and mobilises public resources to help grow national champions, whether publicly or privately owned.

Since the late 1960s, and especially with the deepening of European integration, France has gradually moved away from a model of national self-sufficiency, leading to the internationalisation of its national champions and the sharing of development costs at the European level. Nevertheless, state-led economic governance has remained a defining feature of French industrial policy, with the national champion strategy retaining a central role [Hayward, 1995]. European integration and market liberalisation since the 1980s have constrained direct state intervention, prompting a shift from vertical sectoral policies to more horizontal frameworks, while the state has adapted its role through public ownership structures, innovation clusters and SMEs support [Cohen, 2007; Buigues, Cohen, 2020; Viallet-Thévenin, 2015].

At the same time, French industrial policy has increasingly emphasised internationalisation and strategic openness to global capital. While early efforts sought to build globally competitive national champions, many firms have remained dependent on domestic and European markets, as illustrated by the automotive sector [Savary, 1995]. More recently, France has pursued a form of 'directed internationalised statism', selectively attracting foreign investments, particularly from sovereign wealth funds, while maintaining a strong discourse of economic patriotism [Thatcher, Vlandas, 2021].

The sectoral orientation of French industrial policy remains pronounced, with continued emphasis on high-technology industries such as aerospace, energy and digital technologies [Cohen, 2007; Bora, Schramm, 2023]. The state has promoted competitiveness clusters (*pôles de compétitivité*) to foster innovation and regional specialisation, while also supporting the country's reindustrialisation through digital transformation initiatives [Cohen, 2007].

Recent trends in French industrial policy include a renewed focus on economic sovereignty, the green transition and the development of European champions in cooperation with Germany and other EU partners. The COVID-19 pandemic and geopolitical tensions have accelerated debates on strategic autonomy and the role of state activism in industrial policy. France has also played a leading role in shaping EU-level initiatives, such as the revision of the Solvency II Directive,

to redirect private investment towards national and European industrial priorities [Benoît, 2025]. It is also worth noting President Macron's approach, expressed in his speech at the Sorbonne, in which he linked European sovereignty to the creation of European champions in high-tech industries [Macron, 2017; Bora, Schramm, 2023]. The interplay of national interests and European integration continues to shape the evolving landscape of French industrial policy.

Since the early 2000s, French industrial policy has increasingly supported collaboration between national champions, SMEs and research institutions through the creation of competitiveness clusters. They aim to build regional innovation ecosystems, promote knowledge transfer, collaborative R&D, and develop new value chains [Gadille et al., 2021; Cohen, 2007]. Cluster management typically involves both large firms and SMEs, with public authorities facilitating collaboration and resource sharing. Within these clusters, national champions often act as anchor firms, offering market access, while SMEs act as technology providers and R&D partners. Cluster policy supports the shift towards more horizontal innovation ecosystems, enhancing SMEs' access to resources and networks and contributing to higher R&D investment, employment growth and innovation performance among participating firms [Gadille et al., 2021; Mar, Massard, 2021]. Nevertheless, significant challenges persist. Collaboration between SMEs and national champions is often hindered by issues related to trust, knowledge protection and power asymmetries. As a result, many SMEs continue to operate as subcontractors rather than equal partners, and the benefits of cluster participation are not distributed equitably [Gadille et al., 2021; Parker, 1999].

3. National champions in Germany

The historical development of German industrial policy is deeply rooted in ordoliberalism, a post-war economic philosophy emphasising free markets, robust competition, and a limited government role in enforcing the 'rules of the game' [OECD, 2009; Zettelmeyer, 2019]. Unlike the French tradition of *dirigisme*, Germany's post-war approach was characterised by a subtle and subdued style [Warloutzet, 2019; Bulfone, 2020]. The government prioritised horizontal support measures, such as developing a world-class scientific base through the Fraunhofer Institutes, establishing connections between public research institutions and industry, and supporting the *Mittelstand* (SMEs) rather than creating monopolistic national champions [Bulfone, 2020; Owen, 2012].

Germany's long-standing commitment to market neutrality experienced a major shift in early 2019 with the release of the National Industrial Strategy 2030 (NIS 2030), launched by the Ministry of Economic Affairs and Energy [BMWi, 2019], where national champions are defined as large firms achieving 'critical mass' in strategic technologies like AI, quantum computing and green energy, enabling them to compete internationally [Schneider, 2022]. This plan marks a shift from Germany's traditional horizontal, technology-neutral approach to targeted interventions, including state aid, syndicates, FDI screening and temporary state shareholdings to prevent foreign takeovers. Champions are elevated to matters of national and economic interest, with policy aiming to preserve value chains and foster mergers, even if it challenges EU competition rules [Schneider, 2022]. Central to this shift are the perceived necessity of scale, the pursuit of technological sovereignty and the preservation of manufacturing capacity, reflecting growing concerns over global competition and strategic dependencies.

The current situation is defined by a move towards defensive mercantilism, driven by what scholars describe as the 'external scourge of necessity' [Schneider, 2022; Germann, 2023]. Technological advancements in the US and China raise concerns because they could destabilise the core sectors of the German economy, particularly automotive and mechanical engineering. In response, Germany has started to increasingly use state tools. This includes a proposal to create a state-owned participation fund that would buy shares in key companies to prevent foreign takeovers [Zettelmeyer, 2019]. Additionally, Germany, often together with France, has lobbied for changes to EU competition and merger laws [Zettelmeyer, 2019; Schneider, 2022]. Currently, the German government depends heavily on Important Projects of Common European Interest (IPCEI). These projects allow for substantial state subsidies in strategic sectors such as semiconductors and hydrogen, while remaining compliant with EU law [Schneider, 2022; UNIDO, 2024].

At the same time, efforts to promote national champions face significant institutional constraints. The National Industrial Strategy 2030 has encountered resistance from the ordoliberal-conservative business community, mainly representing the *Mittelstand* and economic think tanks, who warn against risks of rent-seeking, inefficiency and the erosion of competitive incentives [Zettelmeyer, 2019; Schneider, 2022; OECD, 2019]. Unlike France or China, Germany lacks a highly centralised governance structure, which complicates the coordination of champion-oriented policies [Germann, 2023; Viallet-Thévenin, 2015]. Balancing support for large firms with the preservation of Germany's 'hidden champions' – highly specialised, world-leading SMEs, niche global leaders, often family-owned SMEs [Rohrbeck,

2009; Stanikunas, 2011]. While the national champions policy emphasises large-scale consolidation, Germany's true economic strength has traditionally come from these specialised producers who compete rather than rely on state protection [Owen, 2012]. Policy indirectly supports SMEs through ecosystem initiatives like R&D programmes and digitalisation but mainly focuses on large firms for sovereignty.

Empirical evidence suggests that German national champions can function as anchors within open innovation ecosystems. Case studies such as Deutsche Telekom illustrate how large firms collaborate with universities, established corporations, startups and specialised SMEs in R&D, co-development and market testing, thereby integrating smaller firms into broader innovation networks while maintaining international competitiveness [Rohrbeck et al., 2009].

In Germany, cooperation between national champions and SMEs is supported by a broad set of dedicated programmes focused on technology-oriented R&D, networking and collaboration with research institutions. They have evolved over time and currently form an integral part of Germany's innovation policy framework. These instruments, combined with long-term innovation financing and cluster policies such as Leading-Edge Cluster Competition and the 'go-cluster' programme, enable large firms, including Siemens, Bosch, Daimler, BASF and SAP, to act as leaders of innovation ecosystems, involving SMEs and start-ups in joint innovation activities rather than limiting cooperation to subcontracting.

4. The specific characteristics of Polish champions: between state and private ownership

In Polish public discourse, national champions are defined not only by their size but also by their efficiency, sectoral role, international activity and innovation capacity [Czerniak, 2022]. Criteria commonly used in both literature and practice include scale of operations, market leadership, presence in foreign markets, R&D intensity, strategic importance for the economy, fiscal contribution and financial stability [European Economic Congress, 2018].

The specificity of the Polish market is based on the duality of the ownership structure. Although state-owned companies have traditionally been considered champions, recent years have seen a dynamic increase in the importance of private entities [Czerniak, 2022] (Table 3). However, the highest status, that of International Champions, is held almost exclusively by state-controlled entities, such as PKN Orlen, KGHM and Grupa Azoty. This stems from the fact that the Polish state has

been reluctant to relinquish ownership rights in strategic sectors (energy, fuels), fearing loss of control over critical infrastructure to foreign capital. As a result, these companies often pursue political goals, such as emergency purchases of raw materials during crises [Czerniak, 2022].

Table 3. Classification and attributes of Polish national champions

Category of national champions	Characteristics and examples	Economic role
International Champions	Industry leaders, strong global presence, SSP dominance (e.g. PKN Orlen, KGHM)	Guarantors of strategic security; implementation of large-scale investments
National Champions	High innovation, stable domestic position, growing share of private companies (e.g. Selena FM, Asseco)	Engines of innovation and digitalisation; building domestic intellectual capital
Aspiring Champions	Companies with high growth dynamics, often export-oriented, but on a smaller scale (e.g. Wielton, LPP)	Flexible exporters; supply chain integrators for SMEs
Local Champions	Entities focused on the domestic market, often with a quasi-monopoly (e.g. Poczta Polska)	Ensuring the continuity of public services and local infrastructure

Source: Author's own compilation based on Czerniak [2022].

In Poland, national champions perform functions that go beyond profit generation and can be analysed across economic, political and foreign policy dimensions. In economic terms, they are expected to achieve economies of scale and scope that benefit the national economy, as illustrated by the expansion of firms such as Allegro, supported as a potential regional competitor to global platforms [Molski, 2015; Nowak-Far, 2025]. Politically, champions are often framed as national success stories, with major corporate decisions, such as the Orlen-PGNiG merger, explicitly justified by strategic objectives, including the energy transition [Czerniak, 2022; Kociubiński, 2023; Nowak-Far, 2025]. They also serve as instruments of economic diplomacy, functioning as elements of national soft power [Kociubiński, 2023].

Recent crises have further reshaped the role of Polish national champions. According to Czerniak [2022], the COVID-19 pandemic and the war in Ukraine shifted their function from purely economic towards safeguarding state security, particularly in areas such as energy, medicine and health, military and cybersecurity. As a result, selected state-controlled and private firms have increasingly been tasked with ensuring the resilience of critical sectors and reducing strategic dependencies.

National champions should be positioned as ‘network pilots’, boosting development across the entire economic ecosystem, especially for SMEs. Large companies generate

jobs not only directly but mainly through their suppliers and subcontractors [Molski, 2015; Bukowski, Śniegocki, 2017]. This collaboration resembles a symbiosis: national champions provide SMEs access to foreign markets and serve as a ‘springboard for innovation’, creating demand for modern solutions from startups and offering them references from initial implementations [Molski, 2015]. However, experts highlight the risk of continuing the peripheral economic model if Polish champions do not develop their own competence centres domestically but instead rely solely on technology transfer from abroad [Kawalec et al., 2022].

The literature points to significant risks associated with the Polish model of national champions. Kociubiński [2023] argues that a lack of transparency and strong political ties can lead to ‘crony capitalism’ and corruption, as well as treating national champions as ‘cash cows’ for those in power. Nowak-Far [2025] assesses the Polish policy of promoting super-national champions as chaotic and inconsistent in content, especially in the field of state aid and appropriate market supervision. Finally, Molski [2015] points to systemic risk, arguing that the concentration of resources in a few giants poses a threat to the stability of the entire national financial system in the event of their failure.

Conclusions

The comparative analysis of national champions in France, Germany and Poland shows that the role of large, state-supported enterprises varies greatly depending on institutional context, industrial structure and policy priorities. While France demonstrates a model of direct state intervention and strategic support for selected firms, Germany uses a more decentralised system where large corporations coexist with a strong and internationally competitive *Mittelstand*. Poland, by contrast, is a hybrid case where national champions mainly operate in strategic sectors and remain closely tied to the state.

For Poland, the key challenge lies in transforming national champions from relatively isolated companies into anchors of broader economic ecosystems. Given the dominant role of SMEs in the Polish economy, strengthening linkages between large enterprises and smaller firms should be treated as a central objective of industrial and innovation policy. This requires moving beyond ad hoc cooperation towards more systematic mechanisms, such as supplier development programmes, joint innovation projects and participation of SMEs in large-scale European initiatives.

From a policy perspective, the chapter argues that national champions can play a constructive role in Poland's integration into European value chains, provided that public support is conditional upon the creation of measurable domestic spillovers. Embedding SME inclusion criteria into public procurement, innovation funding and strategic investment projects could help reconcile the objectives of competitiveness, cohesion and economic resilience. In this sense, national champions should not be viewed as alternatives to the SME sector, but rather as potential catalysts for its upgrading and internationalisation. Properly designed, such an ecosystem-oriented approach could enhance Poland's economic position within the European Union while mitigating the risks traditionally associated with champion-based industrial policies.

REFERENCES

- Baer, B. (2025). *What the US Learned and the EU Should Consider About National Champions*, <https://www.promarket.org/2025/01/07/what-the-us-learned-and-the-eu-should-consider-about-national-champions/> (accessed: 17.10.2025).
- Benoît, C. (2025). Industrial Policy in Disguise: The French Treasury and the Reregulation of the European Insurance Sector, *Journal of Common Market Studies*, 64(1), pp. 194–213. DOI: 10.1111/jcms.13742.
- BMW (2019). *Industrial Strategy 2030. Guidelines for a German and European Industrial Policy*, <https://www.celis.institute/wp-content/uploads/2020/08/industrial-strategy-2030.pdf> (accessed: 18.11.2025).
- Bora, S., Schramm, L. (2023). Toward a More 'Sovereign' Europe? Domestic, Bilateral, and European Factors to Explain France's (Growing) Influence on EU Politics, 2017–2022, *French Politics*, 21, pp. 3–24. DOI: 10.1057/s41253-022-00203-y.
- Buigues, P., Cohen, É. (2020). The Failure of French Industrial Policy, *Journal of Industry, Competition and Trade*, 20, pp. 249–277. DOI: 10.1007/s10842-019-00325-0.
- Bukowski, M., Śniegocki, A. (2017). *Made in Europe. Polityka przemysłowa wobec wyzwań XXI wieku*. Warsaw: Instytut WiseEuropa.
- Bulfone, F. (2020). *The Political Economy of Industrial Policy in the European Union*, <https://www.econstor.eu/bitstream/10419/225981/1/1736681397.pdf> (accessed: 30.10.2025).
- Bürken, S., Yülek, M., Öngüt, E. (2020). Industrial Policy and Economic Planning: The Case of Development-Based Public Procurement and National Champions in Supporting Local Manufacturing Base? *Industrial Policy*, 1(1), pp. 1–11.
- Cohen, E. (2007). Industrial Policies in France: The Old and the New, *Journal of Industry, Competition and Trade*, 7(3), pp. 213–227. DOI: 10.1007/s10842-007-0024-8.
- Czerniak, A. (Ed.). (2022). *Czempioni narodowi. Jak dbają o nasze bezpieczeństwo*. Warsaw: Polityka Insight.

- European Economic Congress (2018). *Wspieranie narodowych czempionów bardzo nam się oplaci*, <https://www.eecpoland.eu/2022/pl/wiadomosci/wspieranie-narodowych-czempionow-bardzo-nam-sie-oplaci,424.html> (accessed: 08.12.2025).
- Falck, O., Heblich, S. (2007). Do We Need National Champions?: If So, Do We Need a Champions-Related Industrial Policy? An Evolutionary Perspective, *Jena Economic Research Papers*, 088, <https://scispace.com/pdf/do-we-need-national-champions-if-so-do-we-need-a-champions-2fn1s5wmya.pdf> (accessed: 12.12.2025).
- Gadille, M., Tremblay, D., Siarheyeva, A. (2021). How Can the Governance of the French Clusters (Pôles de Compétitivité) Improve SME's Competitiveness? *Open Journal of Social Sciences*, 9(3), pp. 118–146. DOI: 10.4236/jss.2021.93008.
- Germann, J. (2023). Wrestling With Unevenness: Sino-American Rivalry, State Strategy and the Reformation of German Capitalism, *Global Political Economy*, 2(1), pp. 77–97. DOI: 10.1332/WDGH8153.
- Hayward, J. (1995). *Industrial Enterprise and European Integration: From National to International Champions in Western Europe*. New York: Oxford University Press.
- Kawalec, S., Gurbiel, R., Kurek, M. (2022). *Skąd się wezmą przyszli czempioni polskiej gospodarki? Znaczenie rynku kapitału właścicielskiego dla rozwoju gospodarczego i cywilizacyjnego Polski*, <https://www.capitalstrategy.pl/wp-content/uploads/2022/01/Raport-Skad-sie-wezma-przyszli-czempioni-polskiej-gospodarki.pdf> (accessed: 12.12.2025).
- Kociubiński, J. (2023). Using the Free Market Against Itself? The Strategy of Promoting National Champions by Authoritarian Regimes – Motivations and Limitations, *Studia nad Autorytaryzmem i Totalitaryzmem*, 45(2), pp. 37–56. DOI: 10.19195/2300-7249.45.2.3.
- Macron, E. (2017). *President Macron Gives Speech on New Initiative for Europe*, <https://www.elysee.fr/en/emmanuel-macron/2017/09/26/president-macron-gives-speech-on-new-initiative-for-europe> (accessed: 23.10.2025).
- Mar, M., Massard, N. (2021). Animate the Cluster or Subsidize Collaborative R&D? A Multiple Overlapping Treatments Approach to Assess the Impacts of the French Cluster Policy, *Industrial and Corporate Change*, 30(4), pp. 845–867. DOI: 10.1093/icc/dtab002.
- Molski, R. (2015). *Prawne i ekonomiczne aspekty polityki promowania narodowych czempionów*. Warsaw: Wydawnictwo Naukowe Wydziału Zarządzania Uniwersytetu Warszawskiego.
- Nowak-Far, A. (2025). National Champions, European Union Competition, and Its Polish Policy Reflexes. In: *Poland in the European Union. Report 2025* (pp. 15–33), A. A. Ambroziak (Ed.). Warsaw: SGH Publishing House.
- OECD (2009). *Competition Policy, Industrial Policy and National Champions*, https://www.oecd.org/content/dam/oecd/en/publications/reports/2009/10/competition-policy-industrial-policy-and-national-champions_b249f2b4/c22d258d-en.pdf (accessed: 20.11.2025).
- Owen, G. (2012). *Industrial Policy in Europe Since the Second World War: What Has Been Learnt?*, <https://ecipe.org/wp-content/uploads/2014/12/OCC12012-revised.pdf> (accessed: 30.10.2025).
- Parker, R. (1999). From National Champions to Small and Medium-Sized Enterprises: Changing Policy Emphasis in France, Germany and Sweden, *Journal of Public Policy*, 19, pp. 63–89. DOI: 10.1017/s0143814x99000185.

- Rohrbeck, R., Hoelzle, K., Gemuenden, H.G. (2009). Opening up for Competitive Advantage – How Deutsche Telekom Creates an Open Innovation Ecosystem, *R&D Management*, 39(4), pp. 420–430.
- Savary, J. (1995). Competitive Strategies in the World Market: The Case of Renault and the Emergence of a European Group? In: *Towards a New Map of Automobile Manufacturing in Europe?* (pp. 147–172), R. Hudson, E.W. Schamp (Eds.). Berlin: Springer. DOI: 10.1007/978-3-642-79471-1_7.
- Schneider, E. (2022). Germany's Industrial strategy 2030, EU Competition Policy and the Crisis of New Constitutionalism. (Geo-) Political Economy of a Contested Paradigm Shift, *New Political Economy*, 28, pp. 241–258. DOI: 10.1080/13563467.2022.2091535.
- Stanikunas, R.A., Burinskas, A. (2011). National Champions – The Controversial Industry Policy, *Transformations in Business and Economics*, 10(1), pp. 98–112.
- Thatcher, M., Vlandas, T. (2021). *French Strategies of Directed Internationalized Statism, Foreign States in Domestic Markets: Sovereign Wealth Funds and the West*. Oxford: Oxford University Press. DOI: 10.1093/oso/9780198786085.003.0006.
- UNIDO (2024). *Industrial Development Report 2024. Turning Challenges into Sustainable Solutions, The New Era of Industrial Policy*. Vienna: United Nations Industrial Development Organisation.
- Viallet-Thévenin, S. (2015). Du champion national au champion international. Résistance et transformations d'un modèle de concurrence dans le secteur énergétique des années 1990–2000, *Revue Française de Science Politique*, 65 (5–6), pp. 761–783. DOI: 10.3917/rfsp.655.0761.
- Warlouzet, L. (2019). The EEC/EU as an Evolving Compromise Between French Dirigism and German Ordoliberalism (1957–1995), *Journal of Common Market Studies*, 57(1), pp. 77–93. DOI: 10.1111/jcms.12817.
- Zettelmeyer, J. (2019). *The Return of Economic Nationalism in Germany*, <https://www.piie.com/sites/default/files/documents/pb19-4.pdf> (accessed: 21.11.2025).

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THE WARSAW STOCK EXCHANGE AND THE PROCESS OF BUILDING AN EU CAPITAL MARKETS UNION

Introduction

The year 2026 will mark 35 years since the Warsaw Stock Exchange (WSE) resumed operations in the Polish economy – its first session took place on 16 April 1991. With Poland's accession to the European Union (EU) in May 2004, the Polish capital market became part of the European capital market. This required adopting European legal frameworks within the Polish capital market, while also exposing it to competition from the capital markets of other member states. Recent decades have seen a dynamic transformation of European capital markets, including stock exchanges, driven by financial globalisation and the development of stock exchanges in emerging countries, such as China. If European stock exchanges wish to maintain their significant role in international investment flows, they must remain competitive, as they now compete for capital buyers and sellers not only against each other but also against their global counterparts.

Previous research on financial flows within the EU, including capital investments, has often focused on the EU budget, as well as public agencies' revenues and expenditures [Kawecka-Wyrzykowska, 2023]. However, another source of funding for the economy has been developed over the past few years: the Capital Markets Union. Recently, in EU countries, investment capital is primarily channelled through the banking sector, with the capital market playing a secondary role – a stark contrast with the United States, where the capital market dominates. The EU attributes

America's higher economic growth, efficiency and flexibility to this market-based model. For years, the EU has sought to reshape its financial system by strengthening the role of the capital market, including through the latest Capital Markets Union (CMU) initiatives. The aim of this analysis is to assess this initiative from the perspective of the Polish stock exchange.

1. Movement of investment capital in a market economy in the light of the construction of a single EU financial market

The stock exchange is the cornerstone of the capital market, which functions as a primary component of the financial market, which in turn is part of the financial system. The financial system – specifically the banking market and the capital market – facilitates the flow of investment funds within the economy. In a given economy, the dominance of the banking market indicates a banking model, while the dominance of the capital market indicates a market model.

In the bank-based model, dominated by universal banks offering both commercial and investment banking services, the capital market plays a significantly smaller role in the allocation of investment resources; banks are the leading participants. Financial intermediaries, such as investment funds, also play a secondary role, while businesses primarily use investment loans offered by banks. In this system, banks are responsible for increasing the efficiency of businesses, as they determine the allocation of resources within the economy. Debt securities – primarily government bonds – dominate the market; households rarely hold shares or actively invest in the market. This model prevails across the EU, although efforts are currently underway (as discussed below) to increase the role of the capital market as an intermediary channel for the flow of investment funds.

Conversely, the market-based model utilises the capital market – specifically the stock exchange – as the primary mechanism for fund movement. The capital market largely supervises economic entities, continuously verifying their value. A characteristic feature of the market-based model is the presence of numerous institutional investors, such as investment funds, pension funds and insurance funds, as well as a wide variety of financial instruments. Entities operating within a market-based framework exhibit significantly less risk aversion than those operating under the banking model, which fundamentally informs their investment decisions. This model is present in the economies of the United States and the United Kingdom.

For many years, the EU has been unsuccessfully attempting to reshape its financial system towards a market-oriented structure, aiming to make it more similar to that of the United States [Janicka, 2018]. This stems from the perception that the market model is more efficient, flexible and significantly contributes to a country's higher economic growth. However, in 2015, European Commission noted that '[a]vailable research fails to provide a general rule determining which financial structures are optimal with respect to their contribution to economic growth' [European Commission, 2015b, p. 17].

In the EU, the single financial market – including an integrated capital market – has been under construction since the establishment of the European Economic Community in 1958. In May 1999, a plan to deepen the integration of European financial markets was presented – Financial Services Action Plan (FSAP) [European Commission, 1999]. The plan, in large part, focused on capital market integration. The lack of an integrated European capital market was identified as one of the main obstacles to realising the full development potential of EU countries. The FSAP focused on removing barriers to capital market integration (including the establishment of a single prospectus, uniform standards for corporate financial reporting, addressing market manipulation, and cross-border mergers and acquisitions). The FSAP was completed in 2005, when a subsequent document, the Green Paper, was published, which contained the Commission's proposals for financial market integration for the period 2005–2010 [European Commission, 2005]. The global financial crisis that reached European markets at the end of 2008 interrupted the process of deepening integration and led to emerging phenomena indicative of the disintegration of the European financial market.

In 2015, another Green Paper was published [European Commission, 2015], outlining the reasons and objectives for another attempt to deepen capital market integration. This was likely influenced by the lessons the EU learned after the 2007–2008 crisis [European Commission, 2015]:

Europe has traditionally been more reliant on bank finance, with bank lending playing a significantly larger role in the financing of the corporate sector than the issuance of debt securities in the market. This greater dependence on bank lending makes the European economy, especially SMEs, more vulnerable when bank lending tightens, as happened in the financial crisis. [p. 8]

Equity markets in the EU remain characterised by a home bias, meaning that potential risks and rewards are not shared across borders. Cross-border holdings of debt securities also remain lower than would be expected in a fully integrated

market. Even the best performing national markets in the EU lack critical size, leading to a smaller investor base and fewer financial instruments to choose from. [pp. 8–9]

It was assumed that its construction would be completed by 2019. The EU approached the construction of a CMU with great determination. It was noted that after the 2008 financial crisis, the US economy experienced a faster and more dynamic recovery than that of the EU, which was attributed to the capital market's leading role in the US economy [European Commission, 2015b, pp. 8–9]. The 2015 Green Paper also emphasised the need to increase the competitiveness of the EU economy to ensure a broader flow of foreign investment to its markets, which is an important source of additional investment capital.

In 2015, the European Commission presented the *Action Plan on Building a Capital Markets Union* [European Commission, 2015a]. As indicated, stronger capital markets will complement Europe's strong tradition of bank financing. Therefore, the banking sector and the capital market were considered complementary, not competitive, sectors – a premise that remains contentious regarding the movement of investment funds. The main objectives of the CMU are defined as follows [European Commission, 2015a, p. 3]:

- Unlock more investment from the EU and the rest of the world.
- Better connect financing to investment projects across the EU.
- Make the financial system more stable.
- Deepen financial integration and increase competition.

In 2020, both the EU's external environment (the COVID-19 pandemic) and its internal environment (the UK's exit) underwent significant changes, the consequences of which had a significant impact on how the European financial market functions. Consequently, in 2020, the European Commission presented *A Capital Markets Union for people and businesses – a new action plan* [European Commission, 2020]. It indicated that only a fully integrated capital market would enable the sustainable development of the EU economy and strengthen its competitiveness and international position. The CMU is crucial to achieving the EU's economic goals, including recovery from the COVID-19 pandemic, the transition to a digital and sustainable economy, and the realisation of strategically open autonomy on a global scale.

Building a single capital market proved more difficult than initially anticipated – its foundations were not laid until 2019, and when adopting a new plan for deepening integration in 2020, it was also noted that EU capital markets remained fragmented. Not only are legal changes important for ongoing processes, but also the real changes that result from them. For this reason, the EU has decided to define and annually

publish indicators illustrating the progress of changes taking place in the financial markets of member states [European Commission, 2021] to assess their pace and scope. A list of indicators (currently 31) to monitor progress towards the CMU objectives is published annually. Table 1 presents the market funding ratio, which illustrates the share of investment financing by manufacturing and service enterprises using capital market instruments – the higher the indicator, the higher the financing through equity and bond issues, and the lower the financing through bank loans. The evolution of this indicator reflects the progress of the transformation from a bank-based system to a market-based one.

Table 1. Market funding ratio, EU-27, 2015–2022 (%)

Country	2015	2016	2017	2018	2019	2020	2021	2022	Average 2015–2022
EU-27	40.5	41.3	41.4	41.2	41.4	41.7	42.3	41.2	41.4
Austria	35.3	36.1	35.0	33.8	32.5	34.2	32.3	29.6	33.6
Belgium	62.2	65.9	65.0	63.7	62.6	62.3	61.0	58.9	62.7
Bulgaria	15.3	18.4	17.1	15.5	15.4	13.7	12.4	19.9	16.0
Croatia	52.9	53.6	53.7	53.9	54.9	53.6	54.1	48.7	53.2
Cyprus	12.1	11.9	13.0	15.0	19.9	20.5	21.3	22.2	17.0
Czech Republic	52.1	49.9	48.2	47.0	46.0	46.0	41.7	40.9	46.5
Denmark	45.0	45.1	44.8	42.4	41.4	40.2	38.2	35.2	41.5
Estonia	23.1	21.7	23.1	24.5	24.1	22.2	22.3	20.4	22.7
Finland	62.8	63.9	64.4	63.8	62.7	62.5	61.8	61.1	62.9
France	60.2	59.9	59.0	58.1	57.7	56.0	55.7	53.7	57.5
Germany	54.9	54.9	54.1	53.6	52.0	50.7	51.0	49.9	52.6
Greece	19.3	19.9	21.5	23.2	25.6	25.9	32.2	30.2	24.7
Hungary	38.7	38.9	35.2	33.1	32.5	35.7	40.1	39.8	36.8
Ireland	79.1	81.8	81.2	81.4	83.3	85.2	88.0	88.2	83.5
Italy	29.5	29.2	31.6	34.0	35.2	35.4	37.3	38.0	33.8
Latvia	8.5	9.1	13.0	13.8	15.7	16.6	21.3	20.8	14.9
Lithuania	15.4	14.6	18.0	21.7	22.3	36.7	36.2	33.1	24.8
Luxembourg	73.1	70.1	65.8	65.7	63.0	64.7	66.8	65.7	66.9
Malta	23.8	31.3	32.8	32.9	35.7	34.4	37.7	35.7	33.0
Netherlands	47.2	51.0	52.1	50.3	50.0	44.9	49.8	47.8	49.1
Poland	51.2	51.7	48.3	46.0	44.9	48.2	48.0	45.3	48.0
Portugal	40.1	41.2	42.8	43.7	45.2	45.8	45.9	46.5	43.9
Romania	28.8	29.5	29.7	27.5	27.2	27.8	25.5	23.6	27.5

cont. Table 1

Country	2015	2016	2017	2018	2019	2020	2021	2022	Average 2015–2022
Slovenia	33.1	33.5	34.0	34.0	32.2	32.2	30.6	27.9	32.2
Slovakia	32.1	31.6	29.9	28.9	28.0	25.2	24.2	22.3	27.8
Spain	36.3	38.1	40.9	42.1	43.7	43.2	44.4	44.1	41.6
Sweden	60.8	61.9	62.6	62.6	63.7	63.4	63.3	61.9	62.5

Note: Sum of volume of corporate bonds and listed shares by non-financial corporations relative to the sum of volumes of those two and bank loans to non-financial corporations, listed shares at constant prices.

Source: Author's own compilation based on European Commission [2024].

Data analysis confirms that the EU failed to achieve a key CMU goal in the 2015–2022 period: an increase in financing through the capital market and a decrease in the use of bank loans. Poland, however, showed a positive trend, with the share of investment financing via capital market instruments rising by five percentage points.

Table 2 presents data on direct and indirect investment by households in EU countries, revealing important information about the choices of the primary capital providers, i.e. households, between keeping savings in cash, bank deposits, or investing them directly or indirectly in capital market instruments. The share varied considerably across the EU between 2015 and 2022, ranging from an average of 80% in the Netherlands to just over 16% in Greece. In Poland, the average share hovers around 30%. The volatility of this share is also important. While Greece saw modest growth of about 1–2 percentage points annually, Poland experienced a decline, from nearly 40% in 2017 to only 25% in 2022. This change cannot be attributed solely to increased risk aversion resulting from political events (i.e. the Russia – Ukraine war), as Latvia showed the opposite trend: rising from about 28% in 2015 to 37% in 2022.

Table 2. Direct and intermediated investment by households, 2015–2022 (%)

Country	2015	2016	2017	2018	2019	2020	2021	2022	Average 2015–2022
EU-27	59.8	60.0	60.2	58.5	59.8	59.1	59.5	55.9	59.1
Austria	48.0	47.5	48.3	46.3	47.5	46.8	47.9	44.8	48.4
Belgium	61.6	61.9	61.6	58.8	59.8	59.3	60.1	55.6	59.8
Bulgaria	23.3	24.4	27.0	26.0	27.7	27.6	29.2	27.1	26.5
Croatia	33.8	35.7	37.2	37.5	40.4	39.5	40.1	39.0	37.9
Cyprus	18.8	19.3	21.3	22.0	22.4	21.7	23.3	22.4	21.4
Czech Republic	31.9	31.7	32.5	32.1	32.8	31.6	32.8	34.2	32.5
Denmark	79.9	80.9	81.3	80.4	80.9	80.6	82.3	79.9	80.8

Country	2015	2016	2017	2018	2019	2020	2021	2022	Average 2015–2022
Estonia	46.9	47.5	49.1	47.2	48.1	46.3	47.2	43.7	47.0
Finland	55.2	55.0	55.3	52.0	53.9	53.7	57.2	52.8	54.4
France	63.8	64.7	64.4	62.3	63.3	61.5	60.8	59.6	62.6
Germany	55.1	54.7	55.0	53.4	54.4	53.9	55.4	53.9	54.5
Greece	15.0	14.4	15.3	15.0	17.4	17.2	19.1	18.0	16.4
Hungary	45.8	45.4	47.0	44.6	49.8	49.7	50.6	50.4	47.9
Ireland	57.4	57.9	57.7	56.0	58.7	56.9	57.9	54.0	57.1
Italy	60.2	59.5	60.4	58.6	59.5	58.8	59.0	56.0	59.0
Latvia	28.3	31.0	33.7	34.1	38.0	38.4	39.7	37.0	35.0
Lithuania	25.4	27.0	28.2	26.3	27.9	26.9	29.4	27.9	27.4
Luxembourg	44.5	44.2	43.9	42.0	43.5	43.1	45.6	42.3	43.6
Malta	42.3	42.0	40.0	39.0	38.7	35.1	34.4	31.0	37.8
Netherlands	79.9	80.8	80.5	80.4	81.9	81.9	80.3	75.3	80.1
Poland	32.2	31.7	33.9	29.3	28.8	27.1	28.3	25.0	29.5
Portugal	36.1	34.7	36.0	34.6	35.3	33.4	32.8	28.6	33.9
Romania	27.1	27.4	29.3	29.1	30.7	30.6	33.4	32.0	30.0
Slovenia	30.6	30.1	30.6	28.9	29.9	28.8	30.4	27.4	25.9
Slovakia	33.7	33.6	35.6	34.9	35.7	36.1	38.0	39.0	35.8
Spain	46.9	47.5	49.1	47.2	48.1	46.3	47.2	43.7	47.0
Sweden	79.8	79.5	79.7	78.3	80.4	80.2	81.5	78.2	79.7

Note: Sum of volumes of bonds and listed shares, investment funds, claims against insurance and pension funds held by households relative to the sum of volumes of these items and cash holdings and deposits. It can also be read as 100% minus the ratio of cash and deposits to the sum of all investment products, including cash and deposits.

Source: Author's own compilation based on European Commission [2024].

Despite the EU's efforts, the progress of CMU construction remains unsatisfactory. As the European Securities and Markets Authority (ESMA) pointed out in its report, 'gradual progress has been made to improve efficiency, scale and resilience in this period, but EU capital markets remain underdeveloped. At the end of 2023, for example, the EU-27 share of global equity market capitalisation stood at just 11% compared to 45% for the US. Moreover, this share declined over the past 15 years; in 2009, it was 16% for the EU-27 and 34% for the US' [ESMA, 2024, p. 4]. Therefore, significant regulatory, infrastructural and organisational barriers have not been overcome; the market itself remains fragmented, and its role in the movement of investment capital in the EU is not changing significantly.

The document *Savings and Investments Union: A Strategy to Foster Citizens' Wealth and Economic Competitiveness in the EU* [European Commission, 2025], adopted by

the European Commission in March 2025, is geared to support the construction of a CMU. It notes that EU households hold approximately EUR 10 trillion in bank deposits, and, 'According to ECB's analysis, if EU households were to align their deposit-to-financial assets ratio with that of US households, a stock of up to EUR 8 trillion could be redirected into market-based investments – or a flow of around EUR 350 billion annually' [European Commission, 2025, p. 2]. It can therefore be concluded that the US financial market remains the main point of reference for the EU, and the announcement of yet another strategy to build a new union represents one more attempt to switch from the European banking model to the US market model.

2. Key stock exchanges in the global economy and in the European Union

The capital market's role in the movement of investment funds is usually assessed through the prism of its key segment: the stock market. Thus, the stock exchange, where capital providers and recipients meet, is a key intermediary in the market system. Historically, stock exchanges were considered key players in domestic capital markets, concentrating the supply and demand for domestic investment capital. This role was primarily shaped by regulatory arrangements that limited foreign capital providers' and recipients' access to domestic markets in the post-war period. Driven by financial globalisation and the associated liberalisation since the 1980s, stock exchanges have undergone significant transformation, increasingly engaging in consolidation and internationalisation. The operation of stock exchanges now reflects a regional or even global dimension, driven by growing competition in international markets.

Stock exchanges that want to limit their operations to the domestic market cannot effectively compete for significant capital with leading exchanges and exchange alliances. This is clearly demonstrated by the data in Table 3. Among the ten largest global exchanges by market capitalisation, there is not a single domestic exchange from an EU member state. The Euronext exchange alliance occupies the third position in the ranking, owing to the combined market potential of the stock markets of six EU member states: Belgium, France, Ireland, Italy, the Netherlands and Portugal, as well as the Norwegian stock exchange (Norway is not a member of the EU). The position of the European capital market in the global system changed with the United Kingdom's exit from the EU in 2020. The London Stock Exchange ranks

sixth globally and is therefore one of the world's leading exchanges. While it may still be European, it can no longer be classified as an EU exchange.

For comparison, Table 3 also includes data on the market capitalisation of the selected exchanges in 2017. The largest increase was recorded by the American Nasdaq stock exchange, although the capitalisation of the Indian stock exchange almost doubled, and Euronext also saw significant growth. Chinese exchanges also recorded increases in capitalisation.

Table 3. Market capitalisation of the world's largest stock exchanges, December 2017 and December 2023 (USD trillions)

No	Stock exchange	Country	Market capitalisation – December 2017	Market capitalisation – December 2023
1	New York Stock Exchange	United States	22.08	25.56
2	Nasdaq-US	United States	10.04	23.41
3	Euronext	Europe (Belgium, France, Ireland, Italy, the Netherlands, Norway, Portugal)	4.39	6.89
4	Shanghai Stock Exchange	China	5.09	6.52
5	Japan Exchange Group	Japan	6.22	6.15
6	London Stock Exchange Group*	United Kingdom	4.46	4.50
7	National Stock Exchange of India	India	2.35	4.34
8	Shenzhen Stock Exchange	China	3.62	4.29
9	Hong Kong Exchanges	Hong Kong SAR	4.35	3.97
10	TMX Group	Canada	2.37	3.09

* 2023 data in GBP have been converted to USD using the average exchange rate of December 2023.

Source: Author's own compilation based on Focus [2024], Statista [2025].

In assessing the initiative to build a CMU from a global perspective, it is clear that the national stock exchanges of individual EU countries have no chance of becoming dominant stock markets in the global economy. The only way to maintain the position of European stock exchanges is to build larger, integrated structures that attract both issuers and investors.

The global stock market has undergone a significant transformation in recent decades. Among the 10 largest stock exchanges in the world, two are from China, one is from Hong Kong (whose market significantly participates in transactions in Chinese securities), one is from India and one from Japan. This means that half of the largest stock markets are located in Asia. The growing importance of Asian

stock exchanges means a decline in the importance of European stock exchanges, including those within the EU. Building the CMU, which is intended to eliminate obstacles to deeper cooperation between EU stock markets, represents the EU's response to these shifts in the global market.

Table 4 presents data on the market capitalisation of European stock exchanges, taking into account existing stock exchange alliances. The share of capitalisation of individual stock markets in the total capitalisation of all European stock markets is also presented. The Euronext alliance, of course, has the largest share of the total capitalisation of EU stock markets, exceeding 55%. Second place is held by another alliance – the Nasdaq Nordic and Baltic exchanges – while the German stock exchange (Deutsche Börse AG) ranks third; each represents more than 16.5% of the total. In fourth place, the BME Group of Spanish stock exchanges has a share of just over 6%, followed by the Warsaw Stock Exchange with just under 1.7%. Given the capitalisation of the top ten global stock exchanges, only the Nasdaq Nordic and Baltic exchanges and the German Stock Exchange (Deutsche Börse AG) have a chance of joining this group in the future. While the Warsaw Stock Exchange is the largest in the region of Central and Southern Europe, it currently has no prospects of playing a larger role on either the global or European markets.

Table 4. EU stock exchanges, stock market capitalisation, December 2023
(USD trillions)

No	Country/Countries	Stock exchange	Capitalisation (USD trillions)	Share (%)
1.	France, Netherlands, Belgium, Portugal, Ireland, Italy, Norway*	Euronext	6.889	55.06
2.	Estonia, Latvia, Lithuania, Denmark, Finland, Sweden, Iceland*	Nasdaq Nordic and Baltic Exchanges	2.120	16.94
3.	Germany	Deutsche Börse AG	2.074	16.58
4.	Spain	BME Spanish Stock Exchange Group	0.770	6.15
5.	Poland	Warsaw Stock Exchange	0.212	1.69
6.	Austria	Vienna Stock Exchange	0.126	1.09
7.	Greece	Athens Stock Exchange	0.081	0.65
8.	Luxembourg	Luxembourg Stock Exchange	0.054	0.43
9.	Romania	Bucharest Stock Exchange	0.048	0.38
10.	Hungary	Budapest Stock Exchange	0.043	0.34
11.	Czech Republic	Prague Stock Exchange	0.035	0.28
12.	Croatia	Zagreb Stock Exchange	0.025	0.20

No	Country/Countries	Stock exchange	Capitalisation (USD trillions)	Share (%)
13.	Cyprus	Cyprus Stock Exchange	0.010	0.08
14.	Slovenia	Ljubljana Stock Exchange	0.010	0.08
15.	Bulgaria	Bulgarian Stock Exchange	0.008	0.06
16.	Malta	Malta Stock Exchange	0.005	0.04
17.	Slovakia	Bratislava Stock Exchange	0.002	0.01
Total			12.512	100.00

* Non-EU countries.

Source: Author's own compilation based on Focus [2024], BSSE [2024].

The Vienna Stock Exchange retains a share of just over 1% of the EU stock market capitalisation; with the exception of the Greek stock exchange, the share of the remaining exchanges does not exceed 0.5%. Therefore, the EU stock market is characterised by duality – on the one hand, exchange alliances and the stock exchange of the EU's largest economy, Germany (where the Frankfurt Stock Exchange plays a significant role, while other local exchanges are marginal). On the other hand, there is a large number of small national exchanges whose role in the European market is limited; these entities face a critical question regarding their future role not only in national economies but also within European structures.

3. Warsaw Stock Exchange – opportunities and threats related to the capital markets union

The Warsaw Stock Exchange (WSE), although the largest in the region, currently holds little significance in the European market. Maintaining independence and refraining from joining alliances implies a risk of marginalisation in the long term, as large entities and investors seek markets with high capitalisation and high liquidity. Over the years, the Polish stock exchange has sought a development plan to expand its role in the European market. One notable plan was the Warsaw City 2010 Agenda, which envisioned making the WSE the leading stock exchange in the region by 2010. This plan was never implemented; however, in November 2010, the WSE became a public company listed on its own trading floor. In 2009 and 2010, plans were made to privatise the exchange and sell its shares to an industry investor. However, discussions with Germany's Deutsche Börse, initiated in 2009, ended in failure, as did further efforts in 2010. In 2014, the WSE considered an alliance with its largest competitor in the region – the Vienna Stock Exchange. Following the formation of

the Euronext alliance in 2000, plans for an alliance between the WSE and Euronext emerged in 2001, which drew criticism from some financiers. There were fears that joining Euronext would diminish the WSE’s importance, and there were suggestions that it should focus on strengthening its position in the region. While the WSE has the strongest position in the region among smaller exchanges, its standing in the European market – not to mention the global market – lags behind the ambitions that guided previous development decisions.

Since 2015, the EU has been working to build a single, integrated European capital market. As noted above, this is driven by both regional conditions and global factors. The struggle to maintain the position of European stock exchanges in global structures is not the only reason for the creation of the CMU; a second objective is to increase the role of capital markets in the transfer of investment capital in the face of the decline of the banking sector. As the data in Table 1 demonstrate, there has been no significant success in this area. Progress depends largely on the sentiment and risk aversion of investors, which remains difficult to change, as evidenced by the data in Table 2. In countries like Poland, where the capital market and its associated investment opportunities are relatively new, changing these attitudes is even more difficult.

Table 5. Structure of investors on the Warsaw Stock Exchange, 2015–2024 – Main Market and New Connect (%)

Investors	Instruments	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Foreign	Shares – Main Market	51	53	53	59	63	56	57	64	65	68
	Shares – New Connect	7	8	8	3	3	4	6	5	7	8
Individual domestic	Shares – Main Market	12	13	16	12	12	25	22	17	16	13
	Shares – New Connect	74	73	76	83	86	92	88	84	84	84
Institutional domestic	Shares – Main Market	37	34	31	29	25	19	21	19	19	19
	Shares – New Connect	19	19	16	14	11	4	7	11	9	8

Source: Author’s own compilation based on WSE [2025a].

At the same time, the situation on the WSE is significantly dependent on the sentiment of foreign investors – transactions on the WSE’s main market are dominated by them, and this involvement is growing year by year (see Table 5).

The same cannot be said for the involvement of Polish individual or institutional investors. The Polish stock exchange currently has limited growth potential based on domestic capital, which should be taken into account when developing strategies for the WSE's future development. Although the WSE's NewConnect transactions are dominated by domestic individual investors, the value of transactions in this market is incomparably lower than in the main market, accounting for only 0.5% of the main market's transaction value. Due to the capitalisation of issuers and their liquidity, this segment is of no interest to foreign and domestic institutional investors.

The WSE position paper on building a CMU, published in 2015 [WSE, 2015], argued that efforts to create new impetus for its stable and sustainable development should be prioritised over eliminating barriers and restrictions on access to the capital market. It asserted that European capital markets require stimulation and incentives to motivate diverse categories of issuers and investors to participate in the market, rather than mere harmonisation and pushing for further legislative initiatives. Therefore, providing these incentives is crucial.

The paper also cautioned that the proposed solutions should not be implemented based on the 'one-size-fits-all' principle, but rather by taking into account the unique characteristics of EU member states' markets. The CMU should equally serve stakeholders from all member states; consequently, the growth of some markets cannot come at the expense of marginalising others. This is particularly important for less developed markets – if they weaken as a result of the actions by developed markets, access to capital for small and medium enterprises could be hindered. Many local capital markets operating in EU countries differ from the largest European financial centres in terms of capitalisation, turnover, the size of issuers and investment firms, and investor structure. However, such markets should not be discriminated against, and their interests should be equally considered in ongoing work [WSE, 2015].

The key threats to the WSE resulting from the changes in European capital markets include increasing marginalisation driven by the growing importance of key markets, such as Euronext, and the gradual outflow of issuers and investors to larger markets, i.e. the concentration of capital on leading European exchanges. In November 2024, the WSE adopted the Strategic Development Directions of the WSE Group for 2025–2027 [WSE, 2025b], which defined five priorities related to capital market development:

1. Activities for the development of the capital market in cooperation with its participants.
2. An increase in the number of companies raising capital through the stock exchange and active support for issuers.

3. Increasing and activating the domestic individual investor base.
4. Providing support for financial education, promotion, and building trust in the capital market.
5. Strengthening the role of the WSE as a regional financial centre and actively shaping market regulations.

Despite the passage of time, the WSE's priorities remain virtually unchanged. Given the ongoing development of key global stock markets, does the WSE have a chance to achieve a position commensurate with its aspirations within the European capital market? The idea of strengthening the WSE's role as a regional financial centre and developing offerings for SMEs is undoubtedly important. However, it is uncertain whether foreign investors, who currently dominate the WSE, will find this strategy attractive and maintain their interest in the Polish market. Developing the Polish capital market based on domestic resources remains a significant challenge, as evidenced by both corporate financing preferences and the structure of household savings.

Conclusions

The European capital market is facing significant challenges. Shifts in global financial markets – the strengthening of American stock exchanges, the growing importance of Asian exchanges, and the London Stock Exchange's exit from the EU – pose difficult challenges. The response has been an intensification of consolidation with EU stock markets, resulting in the emergence of alliances with a stronger global competitive position. To accelerate the development of the European capital market, the concept of building a capital markets union (CMU) was initiated.

The EU's difficulties lie not only in the insufficient development of some stock exchanges, which prevents them from competing regionally and globally, but also in the insufficient interest in capital market offerings among both businesses and investors. The solutions advanced by the EU prioritise global competitiveness as the core objective, followed by regional integration within EU stock markets, while the development of domestic markets is treated as a tertiary concern. The expectations of key European stock markets attracting large issuers and substantial capital may differ from those of local markets, which primarily target small and medium-sized domestic markets.

The common interest of all EU capital markets is to stimulate the growth of the capital market's share in the transfer of investment capital to enterprises. Dynamic

development of stock exchanges – whether global, regional or local – cannot come to be without issuers willing to enter public trading and investors willing to acquire their securities. This structural change is crucial not only for building the CMU but, above all, for increasing the market capitalisation and turnover of EU stock exchanges. Recent data underscore the importance of this issue: in 2024, the EU-27's stock market capitalisation represented 64% of GDP, a decline of 6 percentage points compared to 2023. Stock market capitalisation relative to GDP stood at 87% in China, 157% in Japan and 213% in the US. Capital raised by both newly and already-listed companies in the EU-27 declined by 3% from 2023, while the US experienced a strong rebound, with capital raising increasing by 89% year-on-year [Thomadakis, de Freitas, 2025].

REFERENCES

- BSSE (2024). *Factbook 2023*, <https://www.bsse.sk/bcpb/wp-content/uploads/2024/04/Factbook-BSSE-2023.pdf> (accessed: 06.12.2025).
- ESMA (2024). *Building More Effective and Attractive Capital Markets in the EU. Position Paper*. Luxembourg: Publications Office of the European Union.
- European Commission (1999). Communication from the Commission – *Implementing the Framework for Financial Markets: Action Plan*, COM(1999) 232 final, 11.5.1999.
- European Commission (2005). *Green Paper on Financial Services Policy (2005–2010)*, COM(2005) 177 final, 3.5.2005.
- European Commission (2015). *Green Paper. Building a Capital Markets Union*, COM(2015) 63 final, 18.2.2015.
- European Commission (2015a). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – *Action Plan on Building a Capital Markets Union*, COM(2015) 468 final, 30.9.2015.
- European Commission (2015b). Commission Staff Working Document. Economic Analysis accompanying the document Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – *Action Plan on Building a Capital Markets Union*, SWD (2015) 183 final, 30.9.2015.
- European Commission (2020). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – *A Capital Markets Union for people and businesses-new action plan*, COM(2020) 590 final, 24.9.2020.
- European Commission (2021). Commission Staff Working Document – *Monitoring Progress towards a Capital Markets Union: A Toolkit of Indicators*, SWD (2021) 544 final/2, 14.7.2021.

- European Commission (2024). Commission Staff Working Document *Monitoring progress towards a Capital Markets Union: a toolkit of indicators. SWD (2021) 544. Overview of CMU Indicators – 2024 Update*, https://finance.ec.europa.eu/document/download/60d966f8-8f3a-4133-a852-de7d6978e387_en?filename=240719-capital-markets-union-indicators_en.pdf (accessed: 06.12.2025).
- European Commission (2025). Communication from the Commission to the European Parliament, the European Council, the European Central Bank, European Economic and Social Committee and the Committee of the Regions, *Savings and Investments Union: A Strategy to Foster Citizens' Wealth and Economic Competitiveness in the EU*, COM(2025) 124 final, 19.3.2025.
- Focus (2024). Market Statistics – February 2024, <https://focus.world-exchanges.org/issue/february-2024/market-statistics> (accessed: 06.12.2025).
- Janicka, M. (2018), Capital Market Union – Perspectives on Changes in the Financial System Model in the European Union, *Acta Universitatis Lodzianis Folia Oeconomica*, 1(333), pp. 195–206. DOI: 10.18778/0208-6018.333.13.
- Kawecka-Wyrzykowska, E. (2023). Europejskie programy wsparcia finansowego dla Polski w okresie przedakcesyjnym oraz przepływy finansowe między Polską a unijnym budżetem po akcesji do Unii Europejskiej. In: *Polska w Unii Europejskiej: bilans korzyści* (pp. 33–64), S. Kluza (Ed.). Warsaw: Wydawnictwo Jedność.
- Statista (2025). *Market Capitalization of Companies Trading on the London Stock Exchange (LSE) from January 2015 to February 2025*, <https://www.statista.com/statistics/324578/market-value-of-companies-on-the-london-stock-exchange/> (accessed: 06.12.2025).
- Thomadakis, A, de Freitas, F.C. (2025). *2025 ECMI Statistical Package: Key Findings*, https://www.ecmi.eu/sites/default/files/ecmi_stat_pack_2025_-_key_findings_final.pdf (accessed: 06.12.2025).
- WSE (2015). *Unia rynków kapitałowych. Stanowisko Giełdy Papierów Wartościowych w Warszawie S.A. w sprawie koncepcji unii rynków kapitałowych*, https://www.gpw.pl/pub/GPW/files/PDF/Stnowisko_GPW_unia_rynkow_kapitalowych2.pdf (accessed: 06.12.2025).
- WSE (2025a). *Analizy – udział inwestorów w obrotach*, <https://www.gpw.pl/analizy> (accessed: 06.12.2025).
- WSE (2025b). *Strategic Development Directions GPW Group 2025–2027*, <https://www.gpw.pl/gpw-strategy> (accessed: 06.12.2025).

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THE ROLE OF EU MEMBERSHIP IN POLAND'S INTRA-INDUSTRY TRADE IN SERVICES: A GRAVITY MODEL APPROACH

Introduction

Over the last two decades there has been an unprecedented increase in the importance of services in international trade. As regards the European Union (EU), this rapid growth was, most of all, positively influenced by a revolution in information and communication technologies and efforts towards liberalisation of trade. However, despite the fact that the importance of services has increased significantly compared to goods and despite their dominance in GDP and job creation, trade in services has not developed as much as trade in goods, where it is almost completely liberalised in countries that are parties to the same regional trade agreements, including the EU or the European Economic Area (EEA).¹ For example, although in 2020 in the EU economy the value added in services as a share of GDP reported in 2020 was 65.6% (63.4% in 2004), services represented much less than half of international trade, i.e. the total trade in services (exports plus imports) as a share of GDP in 2020 reached 25.4% in the EU economy (15.2% in 2004) [Our World in Data, 2024]. A similar conclusion can be drawn for Poland.² Of course, this

¹ The EEA consists of the EU member states and three countries of the European Free Trade Associations (EFTA) (Iceland, Liechtenstein and Norway; excluding Switzerland) [Eurostat, 2025].

² Poland reported 57.2% of the value added in services as a share of GDP (56.4% in 2004) and 17.9% of the total trade in services as a share of GDP (10.9% in 2004).

is partly due to the fact that some services are not physically tradable. However, as shown by evidence, the lack of international competition results in services being underprovided; they are overly costly and lag in raising productivity. This is true even for EU members [cf. Ambroziak, 2023].

The above observations are justified by the theory of international trade, which explains the rationale, determinants and consequences of its development. Because the theory of comparative advantages [Ricardo, 1817] and the theory of factor proportions [Heckscher, 1919; Ohlin, 1933] did not provide a full explanation of actual intra-industry trade, over the years concepts began to develop to capture more complex trade relationships within individual industries. The Grubel and Lloyd's [1975] concept of the essence and importance of intra-industry trade (IIT) made it possible to look at international trade through the prism of simultaneous imports and exports of products within the same industry. However, while there is an increasing literature on IIT in goods, there are not many studies on IIT in services. This conclusion concerns also Poland's IIT in services. The first study dealing with IIT in services was carried out by Kierzkowski [1989] on transportation services (the author is not aware of any earlier publication). Before this work, international trade in services has been the subject of very limited theoretical and empirical efforts. Since then, relatively little research has been published on IIT in services [for a literature review, see Majerczyk-Graczykowska, 2025]. The literature review leads to the conclusion that there are research gaps including the estimation of the vectors and scale of factors behind changes in the intensity of Poland's IIT in services. Thus, the aim of this chapter is to fill some of the research gaps by assessing whether membership in the EEA (of which the EU is a core part) determined changes in the intensity of Poland's IIT in services and what was the direction of its impact.

Taking the above into account, as well as the literature review, the study puts forward the following research hypothesis: **Poland's membership of the EEA has contributed to the increase in the intensity of Poland's IIT in services.** Addressing this hypothesis, the following research question is to be answered: Has the membership in the EEA (of which the EU is a core part) contributed to the increase in the intensity of Poland's IIT in services?

The remainder of this chapter is organised as follows. The 'Research methodology' subchapter provides information on the research methodology, data collection and research limitations. The 'Results and discussion' subchapter presents a general overview of Poland's international trade in services in the years 2004–2020, and presents the most important results of the analysis regarding changes in Poland's IIT in services from the geographical and sectoral perspectives and provides an

estimation of the impact of Poland's membership in the EEA on the intensity of Poland's IIT in services, based on an extended gravity model. This part also briefly discusses the role played by knowledge-intensive services (KIS) and creative services (CS). This chapter concludes with a summary of scientific findings and suggestions for further research directions.

1. Research methodology

The analysis covers the period 2004–2020. The sectoral structure was determined by the balance of payments classification proposed by the OECD at the 2-/3-/4-digit level, and covers 28 service industries, as defined by Majerczyk-Graczykowska [2025, pp. 21–23]. These industries were selected due to need to ensure comparability of data for the entire period 2004–2020; however, calculations are made mostly at the 3-digit level. In identifying service industries, a similar approach was applied by Majerczyk-Graczykowska [2023] and, for IIT in goods, e.g. by Kawecka-Wyrzykowska, Ambroziak, Molendowski and Polan [2017, p. 29].

In order to show changes in the structure of IIT and understand the extent of Poland's IIT in services, the Grubel and Lloyd (GL) index [Grubel, Lloyd, 1975] was applied. The index is the most commonly used measure in studies concerning IIT in goods or services. This study does not include an analysis of horizontal IIT and vertical IIT [as in Sichei, Harmse, Kanfer, 2007, p. 17; Majerczyk-Graczykowska, 2023, 2025]. The analysis of IIT was performed based on data for bilateral trade between Poland and all its partners where data were available at analysed digit-level.

In order to identify the vectors of factors driving changes in Poland's IIT in services, including membership in the EEA, the Poisson pseudo-maximum-likelihood (PPML) log-linear regression model was used. The extended gravity model had the form as described by Majerczyk-Graczykowska [2025, p. 138].

With a view to answering the research question, two OECD datasets were used, i.e. Extended Balance of Payments Services classifications: from 2002 (EBOPS 2002 providing data until 2009) and from 2010 (EBOPS 2010 providing data since 2010). The following databases were also used in the model: OECD (<http://stats.oecd.org>), Our World In Data (<https://ourworldindata.org>) and Fraser Institute (<https://www.fraserinstitute.org/>). The analysed categories of services (service industries) are compatible with the OECD classifications EBOPS 2002 and EBOPS 2010.

2. Results and discussion

General overview of Poland's trade in services

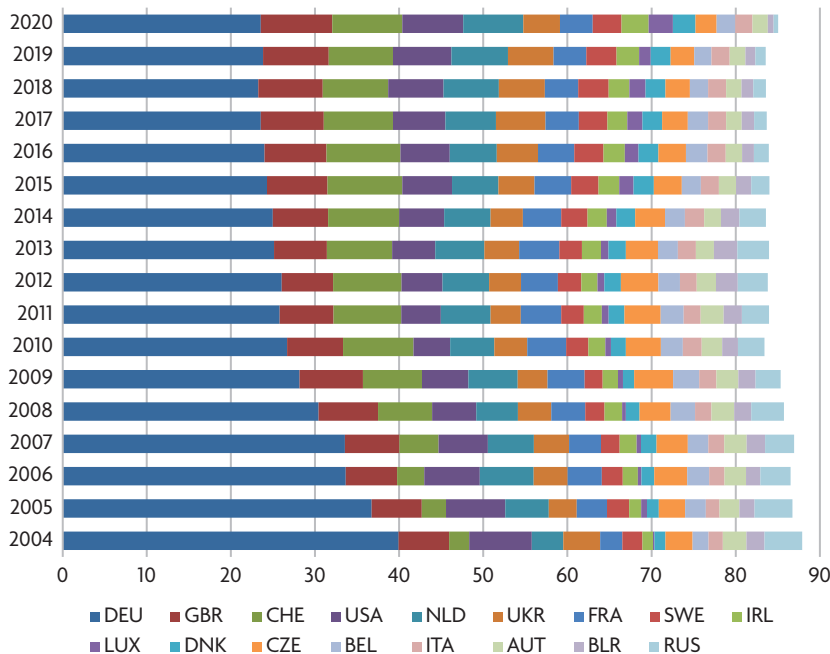
As regards a geographical context of Poland's trade in services, it is worth pointing out that shares of Poland's services exports to the EU-27 in Poland's total services exports varied in the years 2004–2020 between around 73.7% in 2004 and 63.5% in 2020 (the lowest share was recorded in 2017, at 61.5%, and the highest in 2006, reaching 74.7%) and shares of Poland's services imports from the EU-27 in total Poland's services imports varied between 75.5% in 2004 and 69.7% in 2020 (the lowest share, 69%, was reported in 2010 and the highest, at 76.7%, in 2009). Exports and imports of services to and from the EFTA countries are quite interesting. Shares of Poland's services exports to these countries in Poland's total services exports varied in the years 2004–2020 between almost 3.2% (the lowest 2004 level) in 2004 and 9.4% in 2020 (the highest level was recorded in 2014 and 2015, at 10.4%). Shares of Poland's services imports from these countries fluctuated between 3.4% in 2004 (the lowest level) and 6.5% in 2016 of Poland's total services imports (vs 5.6% in 2020). Major fluctuations were observed in exports and imports of services in the case of the Visegrad Group (V4). Shares of Poland's services exports to the V4 ranged in the years 2004–2020 between 5.3% in 2004 and 7.7% in 2010 of Poland's total exports of services (4.5% in 2020) and shares of Poland's services imports from V4 varied between 7.1% in 2005 and 9.4% in 2011 of Poland's total services imports (7.3% in 2004 and 6.9% in 2020).

In turn, shares of Poland's services exports to the OECD countries in Poland's total services exports hovered in the years 2004–2019 around 85% and increased to 88.6% in 2020, whereas shares of Poland's services imports from the OECD countries in Poland's total services imports were higher and in 2004 ranged around 89.3% and came close to 87.6% in 2020. Meanwhile, shares of Poland's services exports to the Commonwealth of Independent States (CIS) and Turkmenistan, Ukraine and Georgia (extdCIS) in Poland's total services exports varied between 11.2% of Poland's total services exports in 2004 (the highest level) and 5.8% in 2020 (the lowest level). Considerable exports were witnessed in trade with Russia, resulting from a relatively high value of transport services. Shares of Poland's services imports to the extdCIS in Poland's total services imports varied between 4.1% in 2004 and 2.8% in 2020 (the lowest in 2016 at 2.4% and the highest in 2008 at 5.4%).

Turning to the analysis of Poland's trade with individual partners, the highest exchange was recorded in trade in services with Germany (Figure 1). However, shares

of Poland's services exports to Germany in Poland's total services exports decreased in the years 2004–2020 from almost 40% in 2004 to 23.6% in 2020. In the case of exports to the UK, such shares stood around 6% in 2004 and 8.5% in 2020, while for France they ranged around 2.6% in 2004 and 3.9% in 2020. Shares of Poland's services exports to the USA in Poland's total services exports decreased from 7.4% in 2004 to 7.2% in 2020. Poland reported a fairly large rise in the proportion of services exports to Switzerland (2.4% in 2004 and 8.3% in 2020); such substantial changes resulted especially from an increase in exports of transport services (from 1% to 1.4%), telecommunication, computer and information services (TCI) (from 0.05% to 1.5%) and other business services (OBS) (from 0.6% to 3.1%). Shares of Poland's services exports to the Netherlands in Poland's total services exports ranged between 3.7% in 2004 and 7.1% in 2020 and in the case of Ukraine they reached 4.4% in 2004 and 2020. Shares of Poland's services exports to Russia decreased from approximately 4.5% in 2004 to 0.5% in 2020.

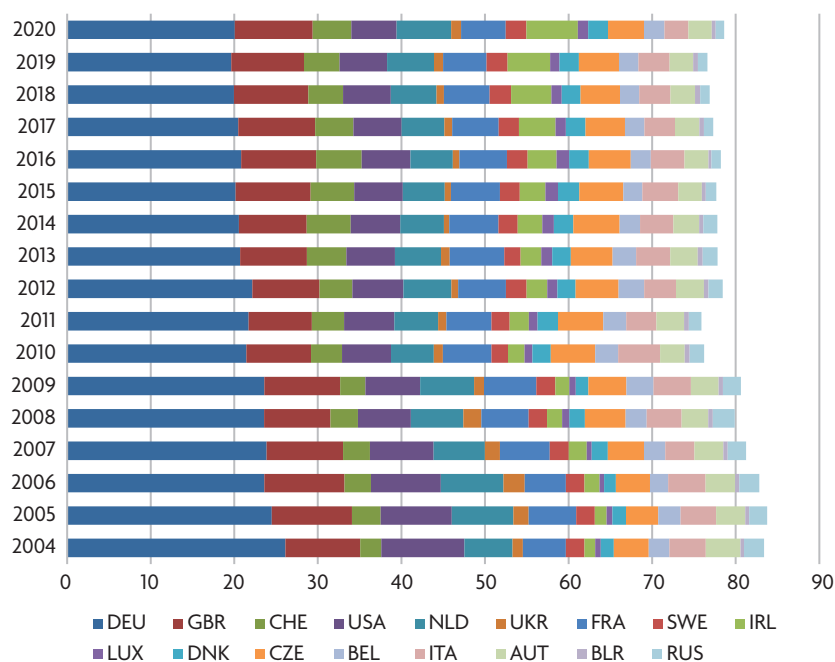
Figure 1. Share of selected countries in Poland's total exports of services, 2004–2020 (%)



Source: Author's own compilation based on OECD [2022a], OECD [2022b].

As regards imports, shares of Poland's services imports from Germany in Poland's total services imports decreased from 26.1% in 2004 to 20.1% in 2020 (Figure 2). Shares of Poland's services imports from the UK in Poland's total services imports decreased from 8.9% in 2004 to 7.6% in 2011 and then increased to 9.3% in 2020. For France, such shares stood around 5% and for the USA they decreased from almost 10% in 2004 to about 5.4% in 2020. Shares of Poland's services imports from Switzerland in Poland's total services imports increased from 2.5% in 2004 to 4.6% in 2020 and were not so large as in exports. Shares of Poland's services imports from the Netherlands in Poland's total services imports grew from 2.5% in 2004 to 4.6% in 2020 and were not so large as in exports. Shares of Poland's services imports from the Netherlands in Poland's total services imports grew from 2.5% in 2004 to 4.6% in 2020 and were not so large as in exports. Shares of Poland's services imports from the Netherlands in Poland's total services imports grew from 2.5% in 2004 to 4.6% in 2020 and were not so large as in exports. Shares of Poland's services imports from the Netherlands in Poland's total services imports grew from 2.5% in 2004 to 4.6% in 2020 and were not so large as in exports.

Figure 2. Share of selected countries in Poland's total imports of services, 2004–2020 (%)



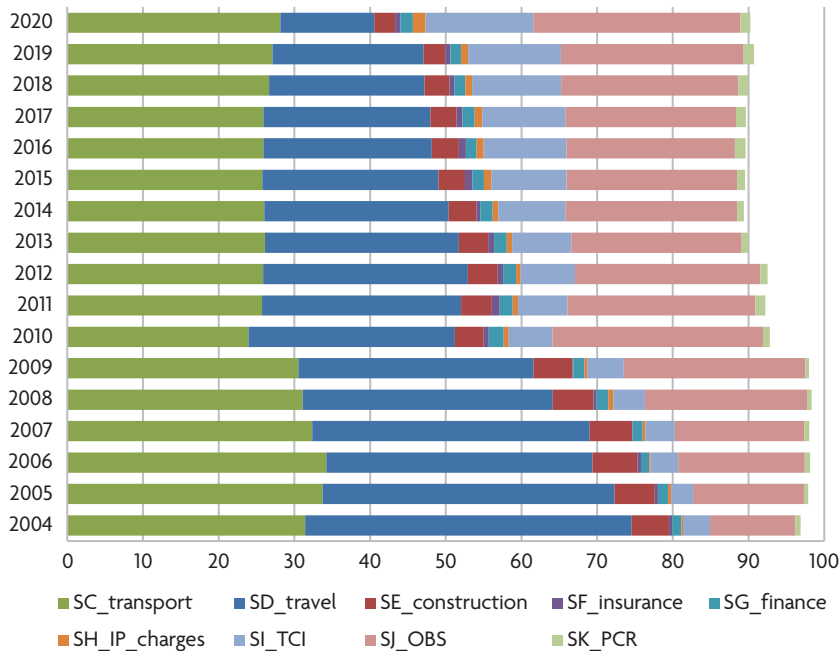
Source: Author's own compilation based on OECD [2022a], OECD [2022b].

An analysis of the geographical structure and intensity of Poland's international trade in services has revealed that Poland witnessed the highest exchanges with developed economies, especially with members of the EEA facing the lowest trade barriers [OECD, 2020]. Geographical proximity seems not to be that important (see e.g. trade with extdCIS countries being Poland's neighbours). What appear to be

key factors are low average trade barriers between trading countries (see e.g. trade with the EU or EFTA members) and the economic size of the trading partner. This aligns with the theory of international trade, according to which the size of exchange between trading partners and trade barriers seem to be among key determinants of international trade.

When it comes to the sectoral structure, in 2004 the greatest shares in Poland's services exports were recorded for travel services (43.2%), transport services (31.4%) and OBS (11.3%). In 2020, the highest shares were reported for transport services (28.2%), OBS (27.4%), TCI (14.2%) and travel services (12.4%). However, in 2020, the results were significantly influenced by the COVID-19 restrictions, especially on travel services. The biggest increase was recorded for OBS (over 15 p.p. difference) and TCI (from 3.6% in 2004 to 14.2% in 2020) and the biggest decrease was witnessed in travel services (over 23 p.p. difference between 2004 and 2019 and over 30 p.p. between 2004 and 2020) (Figure 3).

Figure 3. Share of service sectors in Poland's total exports of services, 2004–2020 (%)



Source: Author's own compilation based on OECD [2022a], OECD [2022b].

Table 1. Sector codes

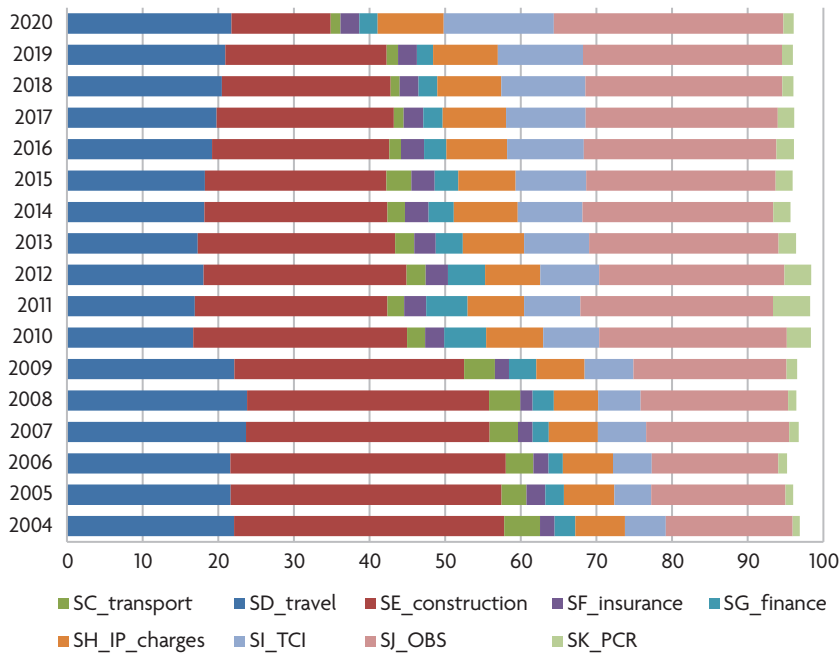
Sector code	Service industry
SC_transport	206_SC1 – sea transport
	210_SC2 – air transport
	214_SC3 – other modes of transport
	246_SC4 – postal and courier services
SD_travel	237_SDA – business travel
	240_SDB – personal travel
SE_construction	250_SE1 – construction abroad
	251_SE2 – construction in the reporting economy
SF_insurance	254_SF4&SF11 – life insurance and pension services
	255_SF12 – freight insurance
	256_SF13 – other direct insurance
	257_SF2 – reinsurance
	258_SF3 – auxiliary insurance
SG_Finance	260_SG1 – explicitly charged and other financial services
SI_TCI	263_SI2 – computer services
	264_SI3 – information services
	247_SI1 – telecommunication services
SH_IP_charges	266_SH – charges for the use of intellectual property
SJ_OBS	271_SJ34 – other trade-related services
	272_SJ33 – operational leasing services
	274_SJ21 – legal, accounting, auditing, bookkeeping, tax consulting, business and management consulting and public relations services
	278_SJ22 – advertising, market research and public opinion polling services
	279_SJ1 – research and development services
	280_SJ31 – architectural, engineering, scientific and other technical services
	281_SJ32 – waste treatment and de-pollution, agricultural and mining services
	284_SJ35 – other business services n.i.e
SK_PCR	288_SK1 – audiovisual and related services
	289_SK2 – other personal, cultural and recreational services

Source: Author's own compilation based on OECD [2022a], OECD [2022b].

In 2004, the greatest shares in Poland's services imports were recorded for travel services (35.7%), transport services (22.1%) and OBS (16.8%); in 2020, the greatest shares were observed for OBS (30.4%), transport services (21.7%), TCI services (14.6%) and travel services (13.1%). As mentioned, in 2020 the results were significantly influenced by COVID-19 restrictions. The biggest increase was

achieved in OBS (13.6 p.p. difference) and TCI (difference of 9.2 p.p.) and the greatest decrease was reported for travel services (14.4 p.p. difference between 2004 and 2019 and 22.6 p.p. between 2004 and 2020) (Figure 4).

Figure 4. Share of service sectors in Poland's total imports of services, 2004–2020 (%)

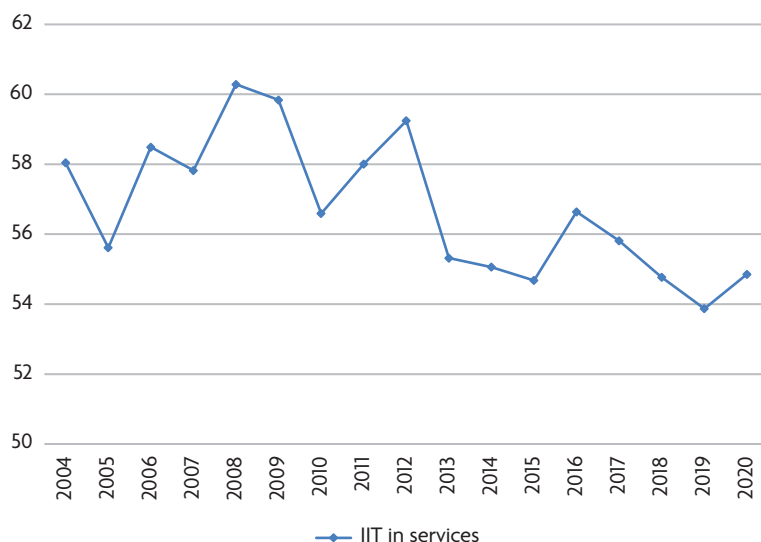


Note: Definition of sectors as in Table 1.

Source: Author's own compilation based on OECD [2022a], OECD [2022b].

Dynamics of Poland's intra-industry trade in services

Over the 2004–2020 period under study, the IIT index in Poland's total trade in services diminished. In 2004, IIT represented 58% of total trade in services (Figure 5), which probably resulted from its relatively fast growth in the previous period (pre-EU accession) and its relatively high levels in previous years. The highest rate was reported in 2008 (60.3%), and starting from that year, the significance of two-way trade in services was diminishing, as reflected in a decline to a 53.9% share in 2019, to then slightly increase to 54.9% in 2020. Interestingly, the growth of this indicator was also observed during the 2007–2009 global financial crisis, the euro-zone sovereign debt crisis of 2009–2012 and the COVID-19 crisis.

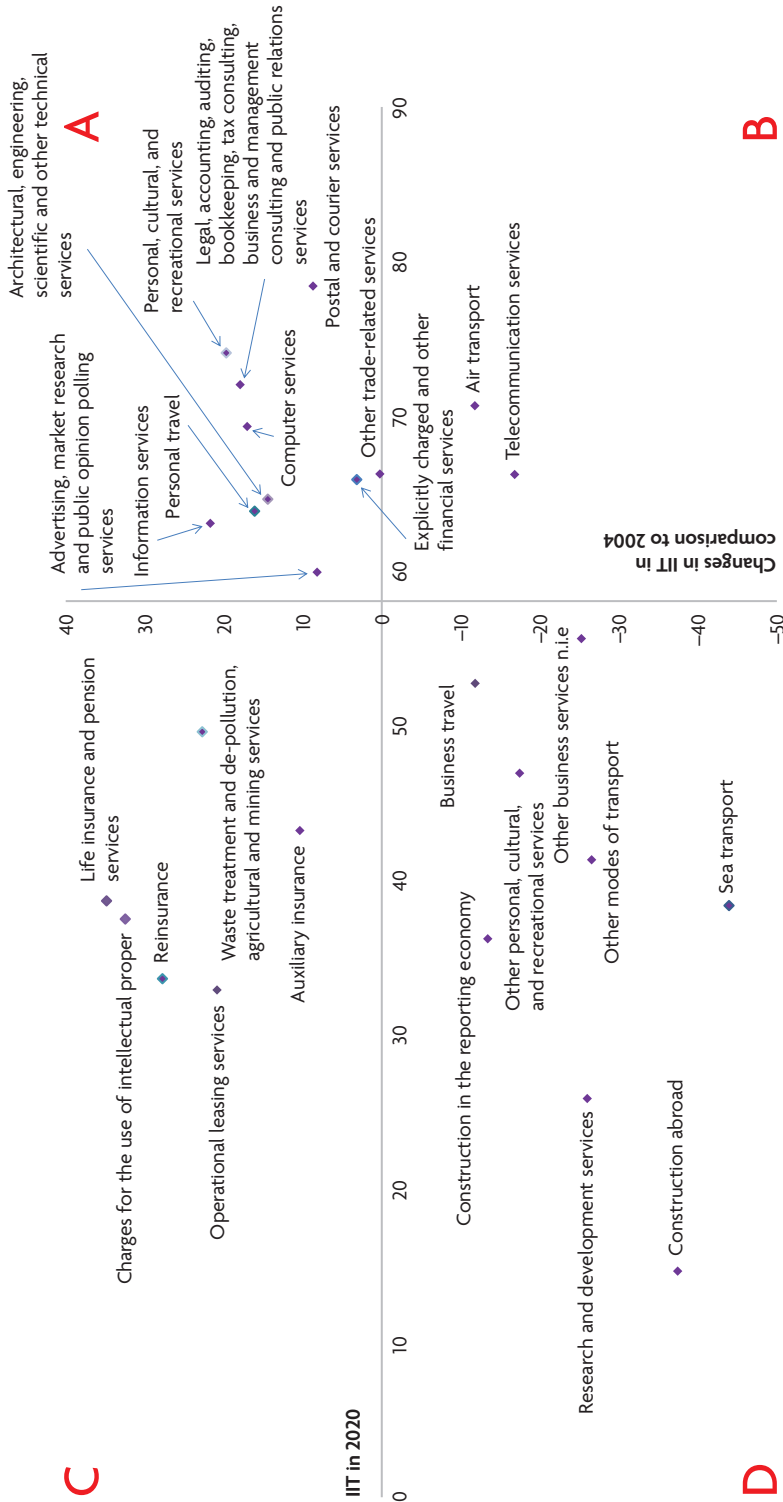
Figure 5. The IIT index in Poland's total trade in services, 2004–2020 (%)

Source: Author's own compilation based on OECD [2022a], OECD [2022b].

The above apparently suggests that the EU/EEA membership did not help Poland to increase its overall share of IIT in services. Thus, it is also important to know the level of IIT in particular service industries.

As regards particular service industries, the analysis has revealed that high level of IIT in 2004 (above the average overall IIT level as presented in Figure 5 with reference to 2004, i.e. 58%) and its increase in 2020 were recorded for postal and courier services, explicitly charged and other financial services, and other trade-related services (Figure 6 and Table 2). A high level of IIT in 2004 and its decrease in 2020 were reported for sea transport, air transport, other modes of transport, business travel, telecommunication services, other business services n.i.e., and other personal, cultural and recreational services. In turn, a low level of IIT in 2004 and its increase in 2020 were observed in personal travel, life insurance and pension services, reinsurance, auxiliary insurance, computer services, information services, operational leasing services, legal, accounting, auditing, bookkeeping, tax consulting, business and management consulting and public relations services, advertising, market research and public opinion polling, architectural, engineering and other technical services, waste treatment and de-pollution, agricultural and mining services, and audiovisual and related services. A low level of IIT in 2004, which further decreased in 2020, was observed in construction abroad, construction in the reporting economy, and research and development services.

Figure 6. The IIT index in Poland's total trade in services in 2020 and its changes in comparison to 2020 (a sectoral approach)



Note: The horizontal axis shows the IIT values in 2020, while the vertical axis presents changes in the values of IIT in comparison to 2020. The combination of these two values allows dividing the graph's area into four fields: A – IIT > 58% in 2020 and its improvement in comparison to 2020; B – IIT > 58% in 2020 and its deterioration in comparison to 2020; C – IIT < 58% in 2020 and its improvement in comparison to 2020; D – IIT < 58% in 2020 and its deterioration in comparison to 2020.

Source: Author's own compilation based on the OECD [2022a], OECD [2022b].

Compared to 2004, in 2020 Poland recorded higher values of IIT indices in services with respect to most of the service industries (Table 2). This conclusion concerns, inter alia, computer, information, consulting, advertising, engineering and audiovisual services. However, the answer to the research question, turned out to be negative for services relating to sea, air and other modes of transport, business travel, construction, telecommunication, research and development, and other personal services. **The analysis has revealed a clear difference in the intensity of IIT in selected service industries. The IIT index is especially high in most of the high-tech KIS (HT-KIS) and market KIS (and most of creative services) and low in most of the non-KIS and financial-KIS.** The above may suggest that factors influencing IIT are associated, among other things, with a technological gap between trading countries, human capital and with trade restrictions concerning a given type of services (this applies in particular to financial-KIS).

Table 2. Changes of Poland's IIT in services between 2004 and 2020

Sector	Service-industry	2004 (in %)	2020 (in %)	Change (in p.p.)	KIS /non-KIS	CS
Transport	206_SC1 – sea transport	82.3	38.3	-44.0	market-KIS	–
	210_SC2 – air transport	82.4	70.6	-11.8	market-KIS	–
	214_SC3 – other modes of transport	67.8	41.3	-26.6	non-KIS	–
	246_SC4 – postal and courier services	69.7	78.4	8.7	non-KIS	–
Travel	237_SDA – business travel	64.5	52.7	-11.8	non-KIS	–
	240_SDB – personal travel	47.7	63.8	16.1	non-KIS	–
Construction	250_SE1 – construction abroad	52.1	14.6	-37.5	non-KIS	–
	251_SE2 – construction in the reporting economy	49.6	36.1	-13.4	non-KIS	–
Insurance	254_SF4&SF11 – life insurance and pension services	3.8	38.6	34.8	financial-KIS	–
	255_SF12 – freight insurance	*	0.1	–	financial-KIS	–
	256_SF13 – other direct insurance	*	3.4	–	financial-KIS	–
	257_SF2 – reinsurance	5.8	33.6	27.7	financial-KIS	–
	258_SF3 – auxiliary insurance	32.8	43.1	10.3	financial-KIS	–
Financial	260_SG1 – explicitly charged and other financial services	62.7	65.9	3.2	financial-KIS	–
TCI	263_SI2 – computer services	52.3	69.3	17.0	HT-KIS	CS
	264_SI3 – information services	41.3	63.0	21.7	HT-KIS	CS
	247_SII – telecommunication services	83.0	66.2	-16.8	HT-KIS	–
IP charges	266_SH – charges for the use of intellectual property	5.0	37.4	32.4	HT-KIS	CS

Sector	Service-industry	2004 (in %)	2020 (in %)	Change (in p.p.)	KIS /non-KIS	CS
OBS	271_SJ34 – other trade-related services	66.0	66.2	0.2	market-KIS	–
	272_SJ33 – operational leasing services	12.0	32.8	20.8	market-KIS	–
	274_SJ21 – legal, accounting, auditing, bookkeeping, tax consulting, business and management consulting and public relations services	54.1	72.0	17.9	market-KIS	–
	278_SJ22 – advertising, market research and public opinion polling services	51.7	59.9	8.1	market-KIS	CS
	279_SJ1 – research and development services	51.8	25.8	–26.0	HT-KIS	CS
	280_SJ31 – architectural, engineering, scientific and other technical services	50.2	64.6	14.4	market-KIS	CS
	281_SJ32 – waste treatment and de – pollution, agricultural and mining services	26.8	49.5	22.7	market-KIS	–
	284_SJ35 – other business services n.i.e	80.9	55.6	–25.3	market – KIS	–
PCR	288_SK1 – audiovisual and related services	54.4	74.1	19.7	HT-KIS	CS
	289_SK2 – other personal, cultural and recreational services	64.3	46.9	–17.5	other-KIS	CS

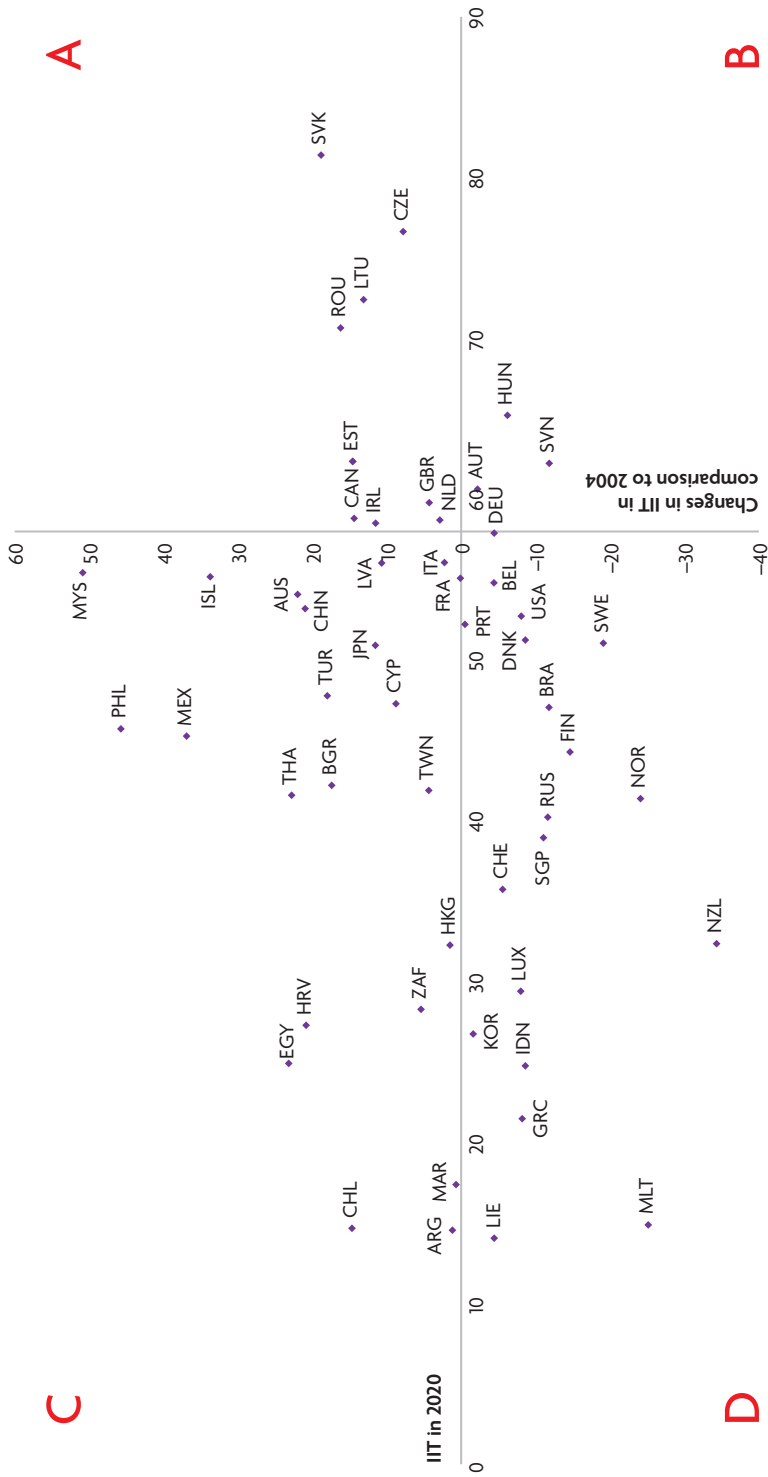
* Invalid IIT index.

Source: Author's own compilation based on OECD [2022a], OECD [2022b].

As regards the geographical perspective, IIT indices are especially high for trade with V4 countries, Lithuania, Austria, the UK, Spain, Slovenia, Germany, Romania, Ireland, Estonia, Netherlands, Canada and India (Figure 7). This short list of countries may suggest that factors influencing IIT are not just the common membership of the EU/EEA (low level of barriers and deep integration) but also the sizes of economies of trading countries and differences therein, average level of trade barriers, geographical distance, technological gap, endowments in human capital and differences therein, English proficiency, FDI, low transactions costs, etc.

As regards trade barriers and differences in IIT indices for particular EU member states, it is worth to note that despite the EU efforts in creating an integrated single market and a common commercial policy, there are substantial differences across the EU member states over policies in services trade between EU members (intra-EU) and towards *the rest of the world* (extra-EU). However, in the long run, such differences will decrease and services trade policies should converge among EU member states (not only with regard to trade towards *the rest of the world* but also intra-EU trade).

Figure 7. The IIT index in Poland's total trade in services in 2020 and its changes in comparison to 2004 (a geographical approach)



Note: The horizontal axis shows the IIT values in 2020, while the vertical axis presents changes in the values of IIT in comparison to 2004. The combination of these two values allows dividing the graph's area into four fields: A – IIT > 58% in 2020 and its improvement in comparison to 2004; B – IIT > 58% in 2020 and its deterioration in comparison to 2004; C – IIT < 58% in 2020 and its improvement in comparison to 2004; D – IIT < 58% in 2020 and its deterioration in comparison to 2004.

Expansions of country name abbreviations can be found in the Section 'Abbreviations' of Majerczyk-Graczykowska [2025].

Source: Author's own compilation based on OECD [2022a], OECD [2022b].

However, to answer the research question of whether membership in the EEA has contributed to the increase in the intensity of Poland's IIT in services, it is necessary to carry out an analysis of an econometric model, with determinants including the EEA membership.

Estimation of the impact of membership in the EEA on the intensity of Poland's intra-industry trade in services

Factors influencing the intensity of IIT in services identified based on the literature review show that the size of economies of the trading partner countries and distance between them play a key role in analysing IIT. Nevertheless, one may not ignore and exclude other factors that impact the intensity of IIT in services in the econometric model. Thus, in order to identify directions of impact and scale of determinants of changes in Poland's IIT in services, an extended version of the gravity model was used with additional determinants reflecting the relative distance variables, as omitting them could produce unreliable results. The gravity model had the form, as described in detail by Majerczyk-Graczykowska [2025, p. 138, Equation 3.7], i.e.:

$$IIT_{ijt} = \exp[\ln\alpha_0 + \beta_1 \ln Y_{it} + \beta_2 \ln Y_{jt} + \gamma \ln Z_{ij} + \alpha_1 \ln X_{ijt} + \alpha_2 X_{ijt} + \delta D_{ij} + \nu_t + \mu_{ij}] \varepsilon_{ijt}$$

where IIT_{ijt} is a share of IIT in services between Poland and its partners in Poland's total trade in services, Y_i and Y_j are explanatory variables in a logarithmic form reflecting GDPs of country i (Poland) and country j , D_{ij} denotes binary time-invariant variables, Z_{ij} denotes non-binary time-invariant variables and X_{ijt} denotes time-varying variables (in a logarithmic and non-logarithmic forms). The analysis was carried out for 781 observations in the PPML regression with 11 predictor variables in the model and the intercept ($_cons$) (IIT between Poland and its 53 trading partners in the period 2004–2020). The geographical distance was a clustering variable.

Trade liberalisation variable related with the EEA membership (the time-varying variable EEA_{ijt} , being a zero-one variable) turned out to be statistically significant at the level of 1% (results of the Poisson pseudo-maximum-likelihood log-linear regression model in STATA: 0.273; $p < 0.01$; robust standard error: 0.083) in Poland's IIT in services. The parameter of the predictor variable EEA_{ijt} turned out to have a positive sign. **The results show that mutual trade between Poland and other members of the EEA positively influenced the intensity of Poland's IIT in services between Poland and country j .** This is consistent with expectations.

Table 3. Results obtained in the model

Determinant	Variable	Expected influence	Results obtained in the model
Size of the economies of trading countries	$\ln GDP_{it}$	+	statistically insignificant
	$\ln GDP_{jt}$	+	+
Difference in the size of the economies of trading countries	$\ln \text{diff} GDP_{ijt}$	–	+
Geographical distance	border_{ij}	+	+
	$\ln \text{dist}_{ij}$ (clustering variable)	–	statistically insignificant
Technological distance	$\ln \text{diff} Patents_{ijt}$	–	–
Trade liberalisation	EEA_{ijt}	+	+
	$\text{other} PTA_{ijt}$	+	–
Economic freedom	EFW_{jt}	+	+
Difference in human capital	$\text{diff} HC \text{mean}_{ijt}$	–	–
Factor endowments in human capital	HDI_{ijt}	+	–

Source: Author's own work.

The above results not only from adjustments that Poland made when becoming a member of the EU/EEA, but also from Poland's presence in the single market, ensuring free movement of people, goods, services and capital within the EU as freely as within a single EU member state. Special attention should be paid to the transposition of Directive 2006/123/EC and other sectoral directives into national law.

Results on mutual trade between the EEA members are consistent with the theory according to which participation in preferential trade groupings has positive effects on IIT [cf. e.g. Sichei 2005; Kimura, Lee 2006; Ambroziak, 2013; Kawecka-Wyrzykowska et al., 2017; see also Czarny, 2002]. Kimura and Lee [2006] found that being a member of the same regional trade arrangement has a significant impact on both trade in services and in goods (despite the fact that many of these arrangements fail to include services explicitly, they facilitate trade in services at least as much as in goods). Trade in goods and in services is positively affected by economic freedom, but the effect is stronger for services (this implies that trade in services will grow faster than trade in goods, and services will play a more important role in the global economy).

Despite the fact that the IIT index in Poland's total trade in services diminished over the 2004–2020 period under analysis, the results of the gravity model confirms that EEA membership contributed to the increase in the intensity of Poland's IIT in services. However, additional analyses should be conducted for specific service

industries to assess the impact of EEA membership on these industries. Significant changes have occurred in the structure of Poland's IIT in services. IIT has declined significantly in some industries, while it has increased significantly in others.

Conclusions

To sum up, the IIT index for Poland's total trade in services was lower in 2020 than in 2004 (58% in 2004 compared to 54.9% in 2020). This was associated with changes in the structure of Poland's exports and imports in selected service industries. The study showed favourable changes in knowledge-intensive services, including creative services, i.e. in industries which are seen as the engines of the future economic growth of the country and innovation catalysts.

Although overall IIT has declined, econometric analysis shows a positive impact of EEA membership on the overall IIT level. The study yields the following answer to the research question: membership in the EEA has contributed to the increase in the intensity of Poland's IIT in services. This result is consistent with the theoretical assumptions reflected in the hypothesis and suggests that factors behind Poland's success in IIT in knowledge-intensive services and creative services are associated, inter alia, with membership in the EU/EEA, which has contributed to the intensification of IIT in selected service industries (it is more profitable to offer these services within one industry rather than in an inter-industry arrangement).

There is a need for further research on IIT in services and trade positions of the remaining EU member states and developed economies, taking into account geographical and sectoral perspectives, as well as on determinants influencing IIT in particular service industries. Such research may also compare empirical results using different methods applied to measure IIT and trade position and employing different econometric techniques.

REFERENCES

- Ambroziak, A.A. (2023). Integration of the European Single Market Thirty Years After Its Creation, *Studia Europejskie – Studies In European Affairs*, 27(3), pp. 63–85. DOI: 10.33067/SE.3.2023.4.
- Ambroziak, Ł. (2013). *Wpływ bezpośrednich inwestycji zagranicznych na handel wewnątrzgałęziowy państw Grupy Wyszehradzkiej*. Warsaw: Instytut Badań Rynku, Konsumpcji i Koniunktury.

- Czarny, E. (2002). *Teoria i praktyka handlu wewnątrzgaleziowego*. Warsaw: SGH Publishing House.
- Directive 2006/123/EC of the European Parliament and of the Council of 12 December 2006 on services in the internal market, OJ L 376, 27.12.2006.
- Eurostat (2025). *Glossary: European Economic Area (EEA)*, [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:European_Economic_Area_\(EEA\)](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:European_Economic_Area_(EEA)) (accessed: 17.12.2025).
- Grubel, H.G., Lloyd, P.J. (1975). *Intra-Industry Trade: The Theory and Measurement of International Trade in Differentiated Products*. London: Macmillan.
- Heckscher, E. (1919). The Effect of Foreign Trade on the Distribution of Income, *Ekonomisk Tidskrift*, 21, pp. 1–32.
- Kierzkowski, H. (1989). Intra-Industry Trade in Transportation Services. In: *Intra-Industry Trade: Theory, Evidence and Extensions* (pp. 92–120), P.K.M. Tharakan, J. Kol (Eds). London: Macmillan.
- Kawecka-Wyrzykowska, E., Ambroziak, Ł., Molendowski, E., Polan, W. (2017). *Intra-Industry Trade of the New EU Member States. Theory and Empirical Evidence*. Warsaw: PWN.
- Kimura, F., Lee, H.H. (2006). The Gravity Equation in International Trade in Services. *Review of World Economics / Weltwirtschaftliches Archiv*, 142(1), pp. 92–121. DOI: 10.1007/s10290-006-0058-8.
- Majerczyk-Graczykowska, B. (2023). The Evolution of Poland's Intra-Industry Trade in Transport Services in 2004–2020, *International Business and Global Economy*, 42, pp. 23–36. DOI: 10.26881/ibage.2023.42.02.
- Majerczyk-Graczykowska, B. (2025). *Determinants of Poland's Intra-Industry Trade in Services in 2004–2020* [Doctoral thesis]. Warsaw: SGH Warsaw School of Economics, <https://sgh.bip.gov.pl/fobjects/download/2007465/rozprawa-doktorska-mgr-barbary-m-majerczyk-graczykowskiej-pdf.html> (accessed: 15.12.2025).
- OECD (2020). Services Trade Restrictiveness Index: Policy Trends up to 2020, <https://issuu.com/oecd.publishing/docs/oecd-stri-policy-trends-up-to-2020> (accessed: 17.11.2023).
- OECD (2022a). *Extended Balance of Payments Services Classification 2002 (EBOPS 2002)*, <https://stats.oecd.org> (accessed: 07.04.2022).
- OECD (2022b). *Extended Balance of Payments Services Classification 2010 (EBOPS 2010)*, <https://stats.oecd.org> (accessed: 07.04.2022).
- Ohlin, B. (1933). *Interregional and International Trade*. Cambridge MA: Harvard University Press.
- Our World in Data (2024). *Trade in Services as Share of GDP*, https://ourworldindata.org/grapher/service-exports-and-imports-gdp?country=OWID_EU27~POL~OWID_WRL~USA~JPN~CHN~GBR (accessed: 10.10.2024).
- Ricardo, D. (1817). *Principles of Political Economy and Taxation*. London: John Murray.
- Sichei, M.M. (2005). *South Africa-US Intra-Industry Trade in Services*, <https://repository.up.ac.za/bitstream/handle/2263/28201/Complete.pdf> (accessed: 06.11.2017).
- Sichei, M.M., Harmse, C., Kanfer, F. (2007). Determinants of South Africa-US Intra-Industry Trade in Services: A Wild Bootstrap Dynamic Panel Data Analysis, *South African Journal of Economics*, 75(3), pp. 521–539.

**Scholarly Tribute to
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EU ENERGY POLICY AT THE START OF THE THIRD DECADE OF THE 21ST CENTURY: CHANGE OR CONTINUITY?

Introduction

The governance of energy and the use of primary energy carriers have attracted particular attention since the outset of European economic integration. The need for cooperation was reflected in the creation, in the 1950s, of the European Coal and Steel Community (ECSC), the European Atomic Energy Community (EURATOM) and the European Economic Community (EEC). The establishment of these three Communities marked the beginning of European economic integration and, in line with the theory of economic integration, developed at both market and political levels. Initially, cooperation concerned the widely used resource of coal and the peaceful use of a new source of energy, namely nuclear energy. In subsequent years, it extended to more easily transported energy carriers such as crude oil and natural gas, and later to renewable energy sources (RES).

Despite the recognised need to strengthen cooperation between member states within an enlarging European Union, and despite numerous initiatives, it was not until the Treaty of Lisbon, which entered into force in 2009, that provisions setting out the common objectives of EU energy policy were developed and incorporated into primary law. These provisions were included in Title XXI 'Energy'. Pursuant to Article 194(1) of the Treaty on the Functioning of the European Union (TFEU):

In the context of the establishment and functioning of the internal market and with regard for the need to preserve and improve the environment, Union policy on energy shall aim, in a spirit of solidarity between Member States, to: ensure the functioning of the energy market; ensure security of energy supply in the Union; promote energy efficiency and energy saving and the development of new and renewable forms of energy; and promote the interconnection of energy networks.

At the same time, Article 194(2) of the Treaty states that under the Treaty provisions the measures shall be established necessary to achieve the above objectives, which shall not affect a member state's right to determine the conditions for exploiting its energy resources, its choice between different energy sources and the general structure of its energy supply, without prejudice to Article 192(2) (c). This implies that cooperation with member states should be based on solidarity and that, when making their own energy choices, member states should take account of the arrangements and decisions developed and adopted at Union level, including those concerning the need to preserve and improve the quality of the natural environment. It should also be emphasised that the Treaty provisions on energy policy are consistent with environmental policy as set out in Article 191 TFEU. The provisions of that Article emphasise the rational utilisation of natural resources and the promotion, by European institutions, of international measures to protect the natural environment and the climate.

Over the period of cooperation in the field of energy, as part of ongoing processes of horizontal and vertical integration, a shift in the hierarchy of objectives in EU energy policy can be observed – a paradigm change. Whereas in the 1970s and the first half of the 1980s the priority was to guarantee the security of fuel and primary energy supplies to the EU, since the 1990s key activities have focused on energy market liberalisation [Wojtkowska-Łodej, 2020]. From the first decade of the 21st century, what has become a new determinant of energy policy is counteracting climate change, while maintaining the objective of continued energy market liberalisation, albeit with growing concerns about security of supply.

The primacy of objectives related to the mitigation of global warming and reducing greenhouse gas emissions, which has been evident in EU energy policy in recent decades, reflects trends in the global economy associated with the ongoing energy transition, regarded as a key factor in achieving carbon neutrality. At the same time, it is argued that structural changes in the global economy aimed at achieving net zero greenhouse gas emissions will require profound changes to existing global production and consumption models. Important factors shaping this process include an understanding of the actions undertaken as part of the energy transition and social

acceptance (green consumption). This also applies to economic issues (including those related to industrial policy, the costs of financing energy investments, energy markets, energy prices, CO₂ emission prices, carbon assets and taxes), political issues (including security and international relations), climate change measures and new energy technologies (including new, clean, low-carbon generation technologies, technologies for saving energy and increasing energy efficiency, and digital energy transition technologies)¹ [Wojtkowska-Łodej, Jakubów, 2022].

EU energy policy in the first decades of the 21st century

At the dawn of the new millennium, within its energy and climate policy, the European Union actively engaged in new pro-environmental initiatives at the global level and supported international agreements aimed at counteracting climate change [Wojtkowska-Łodej, 2024, 2025a]. This was consistent both with Treaty provisions and with the energy and climate policy pursued within the Union.

Since the first decade of the 21st century, on the basis of a common platform for cooperation developed within EU energy policy, using a broad range of instruments and operating across diversified competences (exclusive, shared, coordinating, supporting or complementary),² the EU introduced a number of long-term energy strategies and implementing regulations designed to contribute to the achievement of EU energy policy objectives.

Among the key documents underpinning these actions is the long-term strategy of the European Green Deal (EGD), adopted in 2019, which concerns the transformation of the European economy and the economies of member states into a net zero-emission economy by 2050 [European Commission, 2019]. The framework for implementing the European Green Deal comprises dozens of adopted regulations covering the areas of activity included within it.³ Particular attention should be paid to the regulations relating to energy management contained in the 'Fit for 55' package published on 14 July 2021. Its objectives are consistent with the European

¹ The energy transition entails profound structural changes in the economy, associated with decarbonisation and the reduction of greenhouse gas emissions, in particular carbon dioxide (CO₂). It is closely linked to the increasing deployment of renewable energy sources (RES) and other clean energy sources, as well as to the use of digital technologies across the value chain within the energy management system. Social aspects are also important in this process, including the recognition of consumer needs and the involvement of local communities in initiatives for affordable and clean energy.

² See Articles 3, 4, 5, 6 TFEU

³ For a broader discussion of the adopted regulations and those currently under negotiation, see Wojtkowska-Łodej [2024, pp. 34–41]; Wojtkowska-Łodej [2025b].

Climate Law [Regulation (EU) 2021/1119] and it includes comprehensive changes to the emissions trading system (the so-called EU ETS2), a proposal to introduce an adjustment mechanism in the form of a border tax – the Carbon Border Adjustment Mechanism (CBAM), a regulation on a common reduction effort for member states setting greenhouse gas emission reduction targets (Effort Sharing Regulation, ESR), and amendments to directives on renewable energy sources (RES), energy efficiency and energy taxation [Kawecka-Wyrzykowska, 2022, pp. 11–38].

The adoption of regulations related to the implementation of the provisions and targets of the EGD coincided with unprecedented disruptions in the global and European economy associated with the COVID-19 pandemic, a supply shock linked to the post-pandemic economic recovery, further deepened by the energy crisis and the war in Ukraine.

The initial response of EU institutions to these crisis developments focused on helping member states to achieve a balanced recovery and stimulate economic growth. Under the Recovery and Resilience Facility, member States could count on financial support under their respective national recovery plans (NRPs).

Further challenges arose in connection with the crisis triggered by the war in Ukraine, the economic sanctions imposed by Western countries, and the phasing out of energy imports from Russia. Given the EU's high dependence on hydrocarbon imports from Russia, the situation was critical with regard to the short-term supply of crude oil, gas and coal to member states, especially in Central and Eastern Europe (CEE) [Mróz, Niedziółka, Wiśniewski, Witkowski, Wojtkowska-Łodej, 2023, pp. 219–241; Wojtkowska-Łodej, 2021].

In this crisis situation, the EU adopted an action plan [European Commission, 2022], aimed at rapidly reducing dependence on Russian fossil fuels. At the same time, accelerating the energy transition was recognised as an important direction for creating a more resilient energy system in Europe and for building a genuine Energy Union.⁴

The REPowerEU strategy envisages intensive action to reduce energy consumption and transform industrial processes so that gas, oil and coal can be replaced by renewable electricity and hydrogen from non-fossil sources. The measures adopted, together with action taken by the member states, made it possible to address the problems that had arisen within a short period of time.

⁴ In 2025, an analysis and assessment of the extent to which the desired changes in the geographical diversification of supplies of crude oil, natural gas, hard coal and uranium had been achieved confirmed the need to further increase the EU's independence from Russian energy, and identified the actions required in this regard in the so-called Roadmap [European Commission, 2025].

The energy crisis of 2021, compounded by geopolitical developments and the war in Ukraine, spread for the first time to all fossil fuels and, as a consequence, to electricity prices. These were new phenomena and were strongly felt by member states whose economies depended on energy supplies from Russia.

What kind of energy policy for the EU?

Recent years have provided a practical test of the EU's existing energy and climate policy. In view of the phenomena observed and the responses undertaken by member states and EU institutions, there is a need, under these new conditions, for a new approach to regulating energy governance within the European Union.

First, in light of the security crises experienced, there is a need to move beyond the prevailing approach that treats energy security solely as security of supply. It seems reasonable to consider it in a broader context of interdependencies between existing energy policy objectives, for example measures aimed at increasing the role and reliability of RES, building resilience to threats, and ensuring access to clean, locally sourced energy.

The crises have also demonstrated the need to take greater account of member states' national resource conditions and to allow more flexibility in how they meet Union obligations, as well as the need for cooperation between countries in line with principles long enshrined in the TEU and the TFEU, such as solidarity and fairness.

In this context, questions arise around the remaining objectives of EU energy policy and the interests of individual states, including whether energy and climate policy brings member states closer together or divides them. From the perspective of member states in the CEE region, while environmental objectives and climate action are important for their development and well-being, in the short term they pose a significant challenge, not only financially but also socially. For the effective long-term implementation of energy and climate policy objectives, it seems important to increase flexibility in delivering common goals and, in accordance with the principles of solidarity and fairness referred to above, to support desirable projects and further develop cooperation.

In my view, the slowdown in Europe's energy transition observed during the period of crisis and geopolitical uncertainty does not indicate a departure from the strategy of sustainable, low-carbon development set out in the EGD. Several uncertainties persist, including those related to the implementation of the EGD, ensuring energy security, reducing climate-related risks, innovation, global competition, international

cooperation and others. However, the energy transition, together with the introduction of a new economic model based on clean energy technologies and secure and affordable energy supported by new energy technologies, provides a pathway to reducing risk and uncertainty, strengthening energy security and fostering growth. Technological progress is a key factor in the process of profound structural change towards a low-carbon European economy.

The near-term energy future of the global economy and the EU region

The EU's energy policy to date has been reviewed in light of the challenges faced by member states. As in the 1960s, energy is, and will continue to be, an important factor in the process of economic integration in Europe. It will shape the further development and competitiveness of the EU economy and its member states, drawing, alongside existing sources, on renewable as well as new clean and low-carbon energy sources. Climate-friendly energy transition processes, supported by modern energy technology solutions, will be central to the governance of energy use in the EU and will influence cooperation between member states.

In view of current experience, internal challenges related to integration processes and external uncertainties, a key element will be to define the desired model of integration in energy and climate policy and of cooperation between member states. Observations from various regions of the global economy indicate that countries are pursuing their own energy transition pathways and are guided by their own priorities in determining them [WEC, 2024; Wojtkowska-Łodej, 2025a]. At the same time, similar uncertainties can be observed in different regions of the world, over issues such as energy prices and adaptation to climate change, alongside shared priorities such as energy infrastructure, energy storage and capital costs, etc.

For the EU as a subject of international law, new challenges are also emerging in the field of international energy cooperation.

REFERENCES

European Commission (2019). Communication from the Commission – *The European Green Deal*, COM(2019) 640 final, 11.12.2019.

- European Commission (2022). Communication from the Commission to the European Parliament, the European Council, the European Economic and Social Committee and the Committee of the Regions – *REPowerEU: Joint European Action for more affordable, secure and sustainable energy*, COM/2022/108 final, 8.3.2022.
- European Commission (2025). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. *Roadmap towards ending Russian energy imports*, COM(2025) 440 final/2, 6.5.2025.
- Kawecka-Wyrzykowska, E. (2022). Proposal for the EU Carbon Border Adjustment Mechanism as an Instrument of the European Green Deal: Possible Implications for Poland. In: *European Union Report 2022* (pp. 11–38), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.
- Mróz, M., Niedziółka, D., Wiśniewski, T., Witkowski, B., Wojtkowska-Łodej, G. (2023). Energy Security of Central and Eastern European Countries in the Face of the Process of Decarbonisation and Transformation of Energy Markets. In: *Report of the SGH Warsaw School of Economics and the Economic Forum 2023* (pp. 205–223), A. Chłóń-Domińczak, R. Sobiecki, M. Strojny, B. Majewski (Eds.). Warsaw: SGH Publishing House.
- Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law'), OJ L 243, 9.7.2021.
- WEC (2024). *World Energy Issues Monitor 2024*, <https://www.worldenergy.org/publications/entry/world-energy-issues-monitor-2024> (accessed: 27.03.2025).
- Wojtkowska-Łodej, G. (2021). EU Energy and Climate Policies: Challenges and Opportunities for Poland, *International Journal of Energy Economics and Policy*, 11(4) pp. 433–442. DOI: 10.32479/ijee.11452.
- Wojtkowska-Łodej, G. (2002). *Polityka energetyczna Polski w aspekcie integracji z Unią Europejską*. Warsaw: SGH Publishing House.
- Wojtkowska-Łodej, G., Jakubów, E. (2022). The Role of Clean Generation Technologies in the Energy Transformation in Poland, *Energies*, 15(13), pp. 1–18. DOI: 10.3390/en15134863.
- Wojtkowska-Łodej G. (2024). Zrównoważone gospodarowanie energią i zmiany klimatu w świetle aktualnych unijnych regulacji i współczesnych wyzwań. In: *Współczesne problemy międzynarodowej polityki gospodarczej. Wyzwania zrównoważonego rozwoju* (pp. 31–45), G. Wojtkowska-Łodej (Ed.). Warsaw: SGH Publishing House.
- Wojtkowska-Łodej, G. (2025a). Zewnętrzna polityka energetyczna unii Europejskiej w zmieniających się uwarunkowaniach światowych a zrównoważony rozwój. In: *Wyzwania międzynarodowej polityki gospodarczej. Dylematy integracji europejskiej* (pp. 49–58), G. Wojtkowska-Łodej (Ed.). Warsaw: SGH Publishing House.
- Wojtkowska-Łodej, G. (2025b). Bezpieczeństwo energetyczne w czasach niepewności geopolitycznej i społeczno-gospodarczej: przypadek państw unijnych regionu Europy Środkowo-Wschodniej, *Zeszyty Naukowe Akademii Górnośląskiej*, 33(9), pp. 324–332. DOI: 10.53259/2025.09.29.

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RETHINKING INNOVATION DISPARITIES IN THE EUROPEAN UNION: POLICY CHALLENGES FOR ENHANCING SUSTAINABLE COMPETITIVENESS

Innovation is widely recognised as a key driver of economic growth and international competitiveness, both of which are essential for enhancing welfare and societal well-being. Within the European Union (EU), however, innovation capacity is characterised by substantial heterogeneity across countries [European Commission, 2025a] and regions [European Commission, 2025b]. These persistent differences have given rise to what is commonly described as the innovation divide, posing a significant challenge to the EU's objectives of economic, social and territorial cohesion that are necessary to achieve sustainable competitiveness.

The innovation divide has been extensively analysed over the past two decades in global, national and regional contexts. Empirical studies at the country level point to enduring disparities in innovation performance and capabilities [e.g. Kong, Zhou, Liu, Xue, 2017; Kowalski, 2021], while regional analyses highlight pronounced spatial concentration of innovation activities [Weresa, Kowalski, Rybacki, 2022].

This paper seeks to explore the innovation divide across the European Union and discuss policy approaches aimed at addressing persistent disparities in order to enhance the sustainable competitiveness of the EU as a whole.

The literature consistently identifies structural factors as the primary drivers of innovation disparities. These include differences in industrial structures, human capital endowments, institutional quality and the effectiveness of innovation systems

[Cincera, Veugelers, 2013; Kowalski, 2021]. From the perspective of competitiveness theory, regional differences in factor conditions, demand characteristics and competitive environments constitute the basis for sustainable competitive advantages [Porter, 2008; Aiginger, Vogel, 2015]. Consequently, innovation specialisation and differentiation may foster resilience and adaptability to technological change and economic shocks rather than weaken overall cohesion. Therefore, full convergence in innovation performance appears neither realistic nor economically justified.

These considerations suggest that discussions of innovation disparities should move beyond a narrow focus on reducing gaps in innovation performance indicators. Instead, greater attention should be paid to reducing disparities in access to the benefits of innovation [Richardson et al., 2024]. This shift in perspective is particularly important in light of the changing nature of innovation. Innovation processes have increasingly shifted towards intangible assets, data and service-based activities that complement manufacturing [OECD, 2019]. While intangible components of innovation, such as data or digital knowledge, can, in principle, be used simultaneously across multiple locations, their effective exploitation depends on access to advanced skills, digital infrastructure and institutional capacity. The development of the Digital Single Market creates new opportunities for innovation diffusion across the EU, but it may also exacerbate asymmetries between countries and regions if access to digital resources and capabilities remains uneven [Kawecka-Wyrzykowska, 2023].

Empirical evidence from the European Innovation Scoreboard (EIS) and the Regional Innovation Scoreboard (RIS) illustrates the complexity of these dynamics. At the country level, the innovation divide across EU member states narrowed between 2018 and 2025, as reflected in a declining coefficient of variation. However, convergence was uneven across groups of countries. While convergence occurred at the EU level, divergence was observed within the group of Emerging Innovators, driven by faster progress in countries such as Croatia, Poland and Slovakia, and relatively slower improvements in Bulgaria, Latvia and Romania. Disparities among Innovation Leaders have also widened as Denmark and Sweden have strengthened their leading positions compared with other countries in this group [European Commission, 2025a]. At the regional level, pronounced disparities persist. The 2025 RIS reveals a highly uneven spatial distribution of innovation performance. All top 50 most innovative regions are located in Northern and Western Europe, while the lowest-performing regions are concentrated in Central, Eastern and Southern Europe. However, a limited number of regions in these less innovative areas perform above the EU average, including Praha, País Vasco, Navarra, Madrid, Catalonia, Comunitat Valenciana and Grande Lisboa [European Commission, 2025b].

Despite these disparities, evidence of σ -convergence at the regional level has been identified. A study covering 240 NUTS 2 regions between 2014 and 2021 shows a decline in the dispersion of the Regional Innovation Index, indicating a gradual catching up by less innovative regions [Weresa et al., 2022]. However, decomposition of the Regional Innovation Index reveals particularly high dispersion in areas such as business process innovation, employment in innovative SMEs, participation in lifelong learning and collaboration among innovative SMEs. These findings point to the need for policy measures that promote open innovation, interregional cooperation and stronger support for SMEs.

Finally, recent external shocks may also affect innovation disparities. Due to the war in Ukraine, regions along the EU's eastern borders in Poland, Slovakia, Hungary and Romania, have experienced disproportionate pressures from refugee inflows, despite often being classified as less innovative or transition regions. This situation increases the risk of such areas becoming 'left-behind places', thereby reinforcing the need for place-sensitive policies that mobilise local potential and ensure a more equitable distribution of innovation benefits [Rodríguez-Pose, 2018]. In this context, policies promoting equal access to education, investment in human capital and continuous skills upgrading remain central to mitigating the innovation divide.

Conclusions and policy implications

Addressing the innovation divide in the European Union requires coordinated and sustained efforts across multiple levels of governance and policy domains. While differences in innovation capacity across countries and regions are partly inevitable and, to some extent, economically justified, persistent structural exclusion of less-developed regions from innovation processes undermines both territorial cohesion and long-term competitiveness. Consequently, innovation disparities should not be assessed solely in terms of differences in performance indicators but also in relation to unequal access to innovation processes and their economic and social returns [Richardson et al., 2024].

From a policy perspective, the importance of stronger alignment between cohesion policy and the renewed EU industrial policy should be considered. The emerging industrial policy paradigm emphasises innovation, digitalisation and green transformation as key drivers of structural change, while recognising the necessity of public intervention to address market and coordination failures [Kawecka-Wyrzykowska, 2020]. However, without explicit territorial considerations, industrial

policy instruments risk reinforcing existing spatial concentrations of innovation and economic activity. Ensuring that strategic support for innovation contributes simultaneously to sustainable competitiveness and cohesion therefore requires a more place-sensitive policy design.

In this context, fostering an inclusive approach to sharing innovation benefits should become a central objective of EU policy. Inclusiveness should be understood not as uniform innovation performance but as the capacity to participate in innovation-driven growth and to benefit from innovation generated elsewhere. This implies targeted investments in human capital, continuous skills upgrading and institutional capacity-building, particularly in lagging regions. It also calls for policies that promote interregional cooperation and open innovation [Weresa et al., 2022].

Finally, recent external shocks, including the geopolitical and humanitarian consequences of Russia's invasion of Ukraine, have further highlighted the vulnerability of less developed and border regions within the EU. These developments reinforce the need for place-based and forward-looking policies that mobilise underutilised resources and support adaptive capacity in regions. By prioritising inclusive innovation, improving access to the benefits of innovation, and strengthening knowledge diffusion within a coordinated cohesion and industrial policy framework, the EU can unlock the full innovative potential of its regions and enhance its resilience and prosperity, thus enhancing sustainable competitiveness in the long run.

Acknowledgement

This research study was conducted in the framework of project BPI/PST/2024/1/00129/U/00001 financed by Polish National Agency for Academic Exchange under the Strategic Partnerships programme.

REFERENCES

- Aiginger, K., Vogel, J. (2015). Competitiveness: From a Misleading Concept to a Strategy Supporting Beyond GDP Goals, *Competitiveness Review*, 25(5), pp. 497–523. DOI: 10.1108/CR-06-2015-0052.
- Cincera, M., Veugelers, R. (2013). Young Leading Innovators and the EU's R&D Intensity Gap, *Economics of Innovation and New Technology*, 22(2), pp. 177–198. DOI: 10.1080/10438599.2012.731166.

- European Commission (2025a). *European Innovation Scoreboard 2025*. Luxembourg: Publications Office of the European Union. DOI: 10.2777/3239776.
- European Commission (2025b). *Regional Innovation Scoreboard 2025*. Luxembourg: Publications Office of the European Union. DOI: 10.2777/2313906.
- Kawecka-Wyrzykowska, E. (2020). A New Industrial Policy in the EU: In Search for a New Paradigm of Public Intervention. In: *New Challenges for the European Union's Industrial Policy: Climate Change, Servitisation, Digitalisation* (pp. 11–35), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.
- Kawecka-Wyrzykowska, E. (2023). Implementation of the Digital Single Market in the EU. A Missed Opportunity to Finance the Development of Digitalisation in Poland from Recovery and Resilience Facility? In: *Polska w obliczu szans i zagrożeń w globalnej gospodarce / Poland in the Face of Opportunities and Threats in the Global Economy* (pp. 57–77), E. Przeździecka., M. Cygler (Eds.). Warsaw: SGH Publishing House.
- Kong, D., Zhou, Y., Liu, Y., Xue, L. (2017). Using the Data Mining Method to Assess the Innovation Gap: A Case of Industrial Robotics in a Catching-up Country, *Technological Forecasting and Social Change*, 119(4), pp. 80–97. DOI: 10.1016/j.techfore.2017.02.035.
- Kowalski, A.M. (2021). Dynamics and Factors of Innovation Gap Between the European Union and China, *Journal of the Knowledge Economy*, 12(1), pp. 1–16. DOI: 10.1007/s13132-020-00699-1.
- OECD (2019). *Digital Innovation: Seizing Policy Opportunities*. Paris: OECD Publishing. DOI: 10.1787/a298dc87-en.
- Porter, M.E. (2008). *On Competition*. Boston: Harvard Business School Press.
- Rodríguez-Pose, A. (2018). The Revenge of the Places That Don't Matter (and What to Do About It), *Cambridge Journal of Regions, Economy and Society*, 11(1), pp. 189–209. DOI: 10.1093/cjres/rsx024.
- Richardson, K., Renda, A., Balland, P-A., Castaño Marin, M., Muntean, B., Weresa, M., Dunlop, K., Potočník, D., Christophilopoulos, E., Walz, R., Grabbe, H., Alkemade, F., Świeboda, P., Huchet, J.-F., Simonsson, J. (2024). *Combining Regional Strengths to Narrow the EU Innovation Divide*. Luxembourg: Publications Office of the European Union. DOI: 10.2777/87992.
- Weresa, M.A., Kowalski, A.M., Rybacki, J.P. (2022). Towards Convergence in National and Regional Innovation Performance: The Case of Selected EU Countries. In: *The Dynamics of the Innovation Divide Between China and Europe National and Regional Dimensions* (pp. 71–111), A.M. Kowalski (Ed.). New York: Routledge.

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REGULATORY AND INSTITUTIONAL BARRIERS TO THE DEVELOPMENT OF THE EQUITY CROWDFUNDING MARKET IN POLAND

The Capital Markets Union (CMU) was launched by the European Commission in 2015 to deepen financial integration in the European Union (EU) and to reduce the economy's excessive reliance on bank financing [European Commission, 2015].¹ Within this framework, a key objective was to improve access to finance for small and medium-sized enterprises (SMEs), which face structural barriers stemming from bank dominance and limited access to capital markets [Beck, Demirgüç-Kunt, 2006]. Alternative forms of finance, including crowdfunding, were therefore recognised as instruments for diversifying funding sources and supporting innovative ventures [Mochkabadi, Volkmann, 2020]. The EU regulation on European crowdfunding service providers for business (ECSP) reflects this approach by establishing a harmonised framework for cross-border crowdfunding and formally embedding equity crowdfunding in the CMU architecture [Regulation (EU) 2020/1503].

Investment crowdfunding (equity crowdfunding, ECF) involves raising capital for business projects from a broad pool of investors via online platforms in exchange for equity or similar securities and has emerged as a complementary source of finance for SMEs and start-ups facing high entry barriers to traditional capital markets [Mochkabadi, Volkmann, 2020].

¹ For a more detailed discussion of the economic dimension of European integration, see Kawecka-Wyrzykowska and Michałowska-Gorywoda [2016].

In Poland, the equity crowdfunding market, formally present since 2012, long remained small and fragmented, with low awareness and few platforms. A dynamic expansion began around 2019, with 2020–2021 marking a boom: 16 platforms, 85 issuers – mainly from the gaming, hemp and IT sectors – and a substantial increase in capital raised [Rink, 2024]. This surge was driven by Covid-19 and very low interest rates, which redirected retail investors towards higher-risk, higher-yield assets. In 2022, however, Russia's invasion of Ukraine reversed this trend as risk aversion increased; the number of active platforms fell to 11 and issuers to 47, with total funding below PLN 24.5 million [Rink, 2024]. In 2023, only 17 campaigns were conducted on seven platforms, signalling a pronounced downturn of the market.

The ECSP Regulation, applicable across the EU from November 2021, introduced harmonised authorisation and passporting rules, higher offering thresholds (up to EUR 5 million in 12 months without a full prospectus) and strengthened investor protection through the KIIS, suitability tests and reflection periods. In member states where the ECSP Regulation was implemented in a market-supportive way, the number of platforms and the funding volume rose markedly; by 2023 at least 98 platforms in 17 countries reported data and total crowdfunding volumes exceeded EUR 1 billion, with countries such as France, the Netherlands and Lithuania emerging as leaders [ESMA, 2025; Shneor, Zhang, Wardrop, Ziegler, 2023].

In Poland, by contrast, the national implementing act on crowdfunding for business ventures and assistance to borrowers was adopted only in July 2022 and entered into force at the end of that month, well after the EU regime became applicable [Act of 7 July 2022]. Combining crowdfunding rules with borrower support measures subordinated ECF to short-term political and stability objectives rather than to a long-term capital market strategy, while the fast-track legislative process limited expert debate and favoured a more restrictive supervisory stance [Shneor et al., 2023].

Moreover, the transitional period under the ECSP Regulation was extended until November 2023 to give national authorities more time to complete authorisations. While formally justified by the need to avoid market disruption, this extension in practice prolonged regulatory uncertainty and encouraged platforms to delay licence applications [Shneor et al., 2023]. When the transitional period ended, platforms without authorisation or an incoming passport had to suspend or cease operations, disrupting ongoing campaigns and reducing the pipeline of new offerings. The record-breaking campaign of Kombinat Konopny S.A. on the Crowdway platform in 2023, raising PLN 4.5 million within hours, was one of the last major offerings before the new regime fully applied, illustrating the gap between market potential and an increasingly restrictive environment [Trzebiński, 2023].

Although the ECSP Regulation sets a three-month deadline for decisions on complete applications, evidence from other licensing procedures suggests that the Polish Financial Supervision Authority (KNF) operates with far longer timelines. Authorisation processes for regulated entities often take up to two years, whereas in many EU countries, including Estonia and Lithuania, typical durations range from several to twelve months [EBA, 2022; FinTech Poland, 2021]. These discrepancies are difficult to explain solely by application quality and point to structural delays related to resource constraints, complex internal procedures and conservative interpretation of rules [FinTech Poland, 2021]. As a result, barriers to entry arise not only from substantive requirements but also from the organisational features of the supervisory authority.

Compliance costs further exacerbate these obstacles. Aligning operations with the requirements of the ECSP Regulation has required platforms to implement internal control and risk-management systems and build formal compliance functions, often relying on costly external legal and advisory services [Shneor et al., 2023]. In the absence of suitable insurance products, prudential safeguards largely had to be met with own funds, while firms also faced authorisation fees and legal costs, with no public grants or subsidies available to offset them [FinTech Poland, 2021]. Industry reports and stakeholder interviews indicate that, in many cases, the cumulative cost of legal advice, IT upgrades and organisational changes represented a significant fixed outlay, particularly burdensome for smaller platforms, and acted as a deterrent to market entry or further development [Shneor et al., 2023; FinTech Poland, 2021]. Between 2023 and 2025, only two entities in Poland obtained ECSP licences: Emiteo and GPW Private Market SA² and the latter subsequently relinquished its licence citing high fixed compliance costs, weak issuer and investor activity and persistent regulatory uncertainty, including protracted interactions with KNF [Uryniuk, 2024; Rejestr.io, 2025].

Supervision that was intended to enhance trust and balance investor protection with innovation has thus acquired a de facto obstructive character, constraining the potential of the equity crowdfunding market in Poland through a combination of delayed and fragmented implementation of Regulation 2020/1503, lengthy and unpredictable licensing procedures and high compliance costs.

² The company obtained authorisation to provide investment crowdfunding services on 27 October 2023, but at the request of its sole shareholder (GPW S.A.) it withdrew from this activity in December 2024, and the authorisation was revoked by the KNF.

REFERENCES:

- Act of 7 July 2022 on crowdfunding for business ventures and assistance to borrowers, Journal of Laws 2022, item 1488.
- Beck, T., Demirgüç-Kunt, A. (2006). Small and Medium-Size Enterprises: Access to Finance as a Growth Constraint, *Journal of Banking & Finance*, 30(11), pp. 2931–2943.
- EBA (2022). *Guidelines on the Authorisation of Credit Institutions*, <https://www.eba.europa.eu/activities/single-rulebook/regulatory-activities/market-access/guidelines-authorisation-credit-institutions> (accessed: 10.12.2025).
- ESMA (2025). Market Report on Crowdfunding in the EU 2024, <https://www.esma.europa.eu/document/market-report-crowdfunding-eu-2024> (accessed: 10.12.2025).
- European Commission (2015). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – *Action Plan on building a Capital Markets Union*, COM (2015) 468 final, 30.9.2015.
- FinTech Poland (2021). *FinTech in Poland – Barriers and Opportunities for Development*, *FinTech_w_Polsce_bariery_i_szanse_rozwoju.pdf* (accessed: 02.12.2025).
- Kawecka-Wyrzykowska, E., Michałowska-Gorywoda, K. (2016). *Integracja europejska w okresie przemian. Aspekty ekonomiczne*. Warsaw: PWE.
- Mochkabadi, K., Volkmann, C.K. (2020). Equity Crowdfunding: A Systematic Review of the Literature, *Small Business Economics*, 54(1), pp. 75–118.
- Regulation (EU) 2020/1503 of the European Parliament and of the Council of 7 October 2020 on European crowdfunding service providers for business, and amending Regulation (EU) 2017/1129 and Directive (EU) 2019/1937, OJ L 347, 20.10.2020.
- Rejestr.io. (2025). *GPW PRIVATE MARKET – KRS 0000923452*, <https://rejestr.io/krs/923452/gpw-private-market> (accessed: 10.12.2025).
- Rink, S. (2024). *Crowdfunding. Diagnoza potrzeb i uwarunkowań pod kątem projektowania instrumentu wsparcia*, <https://www.parp.gov.pl/storage/publications/pdf/Raport-CROWDFUNDING.pdf> (accessed: 01.12.2025).
- Shneor, R., Zhang, B.Z., Wardrop, R., Ziegler, T. (2023). *The Global Alternative Finance Market Benchmarking Report*, <https://www.jbs.cam.ac.uk/wp-content/uploads/2020/08/2020-04-22-ccaf-global-alternative-finance-market-benchmarking-report.pdf> (accessed: 01.12.2025).
- Trzebiński, A.A. (2023). *Crowdfunding udziałowy 3.0. 2023*, https://zpf.pl/pliki/raporty/raport-crowdfunding-udzialowy_2023.pdf (accessed: 10.12.2025).
- Uryniuk, J. (2024). *Giełda wycofuje się z crowdfundingu. Prawdopodobnie będzie szukać inwestora dla spółki GPW Private Market*, <https://www.cashless.pl/15814-gpw-private-market-crowdfunding-wycofanie> (accessed: 10.12.2025).

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FROM SUSTAINABLE DEVELOPMENT TO RESILIENCE: NEW MECHANISMS OF EUROPEAN INTEGRATION

European integration has historically been closely linked to risk management through the institutionalisation of economic interdependence and common rules. From the early stages of post-war cooperation, integration was conceived as a means of stabilising political and economic relations by embedding national economies in shared institutional frameworks. Over the past decade, however, the European Union has entered a phase of permanent uncertainty, in which crises are no longer episodic disturbances but constitute the normal context of integration. The COVID-19 pandemic, Russia's aggression against Ukraine, the energy and raw materials crisis, growing geopolitical fragmentation, and accelerating climate and digital transitions have exposed the fragility of integration assumptions based on stability, efficiency and predictable global value chains.

Contemporary European studies increasingly emphasise that crises are not merely disruptions of integration but reveal the EU's nature as a political order and test its adaptive capacity [Schimmelfennig, 2024]. Crises simultaneously expose institutional weaknesses and create pressures for reform, forcing the EU to redefine the scope and instruments of collective action. The concept of *failing forward* illustrates that the EU has often responded to crises through incomplete but integration-enhancing reforms, which expanded its capacity to act while at the same time generating new tensions over solidarity, responsibility and distribution of costs [Jones, Daniel Kelemen, Meunier, 2021]. Under these conditions, a gradual but profound shift in the logic of integration can be observed: from market-driven liberalisation and

efficiency-oriented governance towards integration through joint risk management and coordinated transformation.

At the same time, crises intensify the debate on the costs and distributional consequences of integration, which has direct implications for the durability of the European project. In this context, it is worth recalling the perspective of Professor Elżbieta Kawecka-Wyrzykowska, who succinctly emphasises the ambivalence of integration processes: ‘Does integration bring only benefits? Of course not’ [Kawecka-Wyrzykowska, 2022]. This observation is particularly relevant in an era of permanent uncertainty, as the growing importance of security and resilience may both strengthen the solidarity dimension of integration (e.g. through joint financing instruments and reforms) and intensify distributional conflicts between states, sectors and social groups.

This shift is reflected in the growing prominence of resilience as an organising principle of EU policies. According to the *2020 Strategic Foresight Report* [European Commission, 2020], resilience refers not only to the ability to withstand shocks but also to the capacity to adapt and transform in a sustainable, fair and democratic manner. In this sense, resilience extends beyond crisis response and becomes a forward-looking framework for policy coordination. It embodies a new language of integration that legitimises deeper cooperation at EU level in areas traditionally dominated by national competences, such as industrial policy, security of supply, energy systems and technological sovereignty.

Within this emerging framework, sustainable development has evolved from a long-term normative objective into a central integrative policy framework. Rather than functioning as a separate policy field, it increasingly acts as a cross-cutting principle shaping regulatory design and strategic priorities. As noted by Borrás and Radaelli [2011] and Jordan and Lenschow [2010], the mainstreaming of sustainability objectives across sectoral policies fosters integration through regulatory and institutional mechanisms, even in the absence of treaty change. Shared long-term goals – such as climate neutrality, resource efficiency and social cohesion – operate as an ‘integrative anchor’ that helps maintain coherence and direction of the European project in times of crisis and political contestation [Schimmelfennig, 2024; Zeitlin, Vanhercke, 2018].

At the intersection of these processes lies the circular economy, which has become one of the core operational dimensions of sustainable development in the EU. The literature highlights that the circular economy is not merely an environmental concept but a driver of structural economic transformation closely linked to the functioning of the internal market [Ghisellini, Ripa, Ulgiati, 2018; Korhonen, Honkasalo,

Seppala, 2018]. Requirements concerning eco-design, durability, reparability and recyclability directly affect competitive conditions and the free movement of goods, thereby embedding circular principles in the core mechanisms of market integration.

From an integration perspective, the circular economy can be interpreted as a mechanism of functional integration in the neofunctionalist sense [Barcz, Kawecka-Wyrzykowska, Michałowska-Gorywoda, 2007; Haas, 2004]. Empirical research identifies five main channels of circular economy impact: competitiveness, supply chains, innovation, digitalisation, and small and medium-sized enterprises. All five of them, when reinterpreted, function as channels of integration. Firms adopting circular practices contribute to regulatory convergence, create new cross-border interdependencies in supply chains, and generate technological and regulatory spillovers across member states [Kristoffersen, Mikalef, Blomsma, Li, 2021; Pelkmans, 2006; Sharma, Govindan, Lai, Chen, Kumar, 2021]. In this way, enterprises act not merely as beneficiaries of integration but as active carriers of integration, while circular practices trigger market-based and regulatory spillovers without the need for formal treaty revisions.

The durability of resilience-based integration depends, however, on its socio-institutional dimension. The literature consistently shows that insufficient social acceptance of transformation costs undermines support for European integration and fuels political backlash [Hooghe, Marks, 2009]. The concept of just transition therefore plays a crucial legitimising role, addressing the distributional effects of climate, energy and digital transitions, and linking economic transformation with social protection [International Labour Organisation, 2023]. Regions, local governments and social partners emerge as key actors of bottom-up integration, translating EU objectives into concrete practices and embedding them in local institutional contexts [Bachtler, Berkowitz, Hardy, Muravska, 2017; Marks, Hooghe, Blank, 1996]. Through participation, institutional learning and cooperation networks, they contribute to strengthening the social foundations of European integration [Sabel, Zeitlin, 2008].

Building on these insights, the article proposes a model of resilient European integration, which reinterprets a development framework as an integration model. The model consists of four interrelated dimensions: resource, energy, digital and socio-institutional. Together, these dimensions frame the EU as a system of risk management and an architecture of resilience, rather than merely a market or regulatory order [Elmqvist et al., 2019; Folke, Biggs, Norström, Reyers, Rockström, 2016]. Integration is thus understood as the joint construction of adaptive capacities under conditions of permanent uncertainty, combining economic coordination with social legitimacy.

In conclusion, resilience should not be treated as an add-on to European integration but as its contemporary core. Under conditions of systemic risk and overlapping crises, the effectiveness and durability of the European project depend less on efficiency or formal expansion of competences, and more on the EU's capacity to coordinate transformation, manage uncertainty, and maintain social cohesion and legitimacy.

REFERENCES

- Bachtler, J., Berkowitz, P., Hardy, S., Muravska, T. (Eds.) (2017). *EU Cohesion Policy: Reassessing Performance and Direction*. London: Routledge.
- Barcz, J., Kawecka-Wyrzykowska, E., Michałowska-Gorywoda, K. (2007). *Integracja europejska*. Warsaw: Wolters Kluwer.
- Borrás, S., Radaelli, C.M. (2011). The Politics of Governance Architectures: Creation, Change and Effects of the EU Lisbon Strategy, *Journal of European Public Policy*, 18(4), pp. 463–484. DOI: 10.1080/13501763.2011.560069.
- Elmqvist, T., Andersson, E., Frantzeskaki, N., McPhearson, T., Olsson, P., Gaffney, O., Takeuchi, K., Folke, C. (2019). Sustainability and Resilience for Transformation in the Urban Century, *Nature Sustainability*, 2, pp. 267–273. DOI: 10.1038/s41893-019-0250-1.
- European Commission (2020). *2020 Strategic Foresight Report. Charting the Course Towards a More Resilient Europe*, https://commission.europa.eu/strategy-and-policy/strategic-foresight/2020-strategic-foresight-report_en (accessed: 15.12.2025).
- Folke, C., Biggs, R., Norström, A.V., Reyers, B., Rockström, J. (2016). Social-Ecological Resilience and Biosphere-Based Sustainability Science, *Ecology and Society*, 21(3), article 41. DOI: 10.5751/ES-08748-210341.
- Ghisellini, P., Ripa, M., Ulgiati, S. (2018). Exploring Environmental and Economic Costs and Benefits of a Circular Economy Approach to the Construction and Demolition Sector. A Literature Review, *Journal of Cleaner Production*, 178, pp. 618–643. DOI: 10.1016/j.jclepro.2017.11.207.
- Haas, E.B. (2004). *The Uniting of Europe: Political, Social, and Economic Forces, 1950–1957*. Notre Dame, IN: University of Notre Dame Press.
- Hooghe, L., Marks, G. (2009). A Postfunctionalist Theory of European Integration: From Permissive Consensus to Constraining Dissensus, *British Journal of Political Science*, 39(1), pp. 1–23. DOI: 10.1017/S0007123408000409.
- International Labour Organisation (2023). *World Employment and Social Outlook: Trends 2023*. Geneva: International Labour Office. DOI: 10.54394/SNCP1637.
- Jones, E., Daniel Kelemen, R., Meunier, S. (2021). Failing Forward? Crises and Patterns of European Integration, *Journal of European Public Policy*, 28(10), pp. 1519–1536. DOI: 10.1080/13501763.2021.1954068.

- Jordan, A., Lenschow, A. (2010). Environmental Policy Integration: A State of the Art Review, *Environmental Policy and Governance*, 20, pp. 147–158. DOI: 10.1002/eet.539.
- Kawecka-Wyrzykowska, E. (2022). *O znaczeniu integracji europejskiej*. Ciechanów: Irydion Stowarzyszenie Wychowanków i Wychowawców I Liceum Ogólnokształcącego im. Zygmunta Krasińskiego w Ciechanowie.
- Korhonen, J., Honkasalo, A., Seppala, J. (2018). Circular Economy: The Concept and Its Limitations, *Ecological Economics*, 143, pp. 37–46. DOI: 10.1016/j.ecolecon.2017.06.041.
- Kristoffersen, E., Mikalef, P., Blomsma, F., Li, J. (2021). The Effects of Business Analytics Capability on Circular Economy Implementation, Resource Orchestration Capability, and Firm Performance, *International Journal of Production Economics*, 239, 108205. DOI: 10.1016/j.ijpe.2021.108205.
- Marks, G., Hooghe, L., Blank, K. (1996). European Integration from the 1980s: State-Centric v. Multi-Level Governance, *Journal of Common Market Studies*, 34(3), pp. 341–378.
- Pelkmans, J. (2006). *European Integration: Methods and Economic Analysis*. Toronto: Pearson Education.
- Sabel, C.F., Zeitlin, J. (2008). Learning from Difference: The New Architecture of Experimentalist Governance in the European Union, *European Law Journal*, 14(3), pp. 271–327. DOI: 10.1111/j.1468-0386.2008.00415.x.
- Schimmelfennig, F. (2024). Crisis and Polity Formation in the European Union, *Journal of European Public Policy*, 31(10), pp. 3396–3420. DOI: 10.1080/13501763.2024.2313107.
- Sharma, N.K., Govindan, K., Lai, K.K., Chen, W.K., Kumar, V. (2021). The Transition from Linear Economy to Circular Economy for Sustainability Among SMEs: A Study on Prospects, Impediments, and Prerequisites, *Business Strategy and the Environment*, 30(4), pp. 1803–1822. DOI: 10.1002/bse.2717.
- Zeitlin, J., Vanhercke, B. (2018). Socializing the European Semester: EU Social and Economic Policy Co-ordination in Crisis and Beyond, *Journal of European Public Policy*, 25(2), pp. 149–174. DOI: 10.1080/13501763.2017.1363269.

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UKRAINIAN REFUGEES IN THE POLISH LABOUR MARKET: A SOCIO-ECONOMIC PERSPECTIVE

According to official data, Poland's journey from an emigration to immigration country has been unprecedentedly fast. As mentioned in Chapter 6 of the Report, since WWII, thousands of Poles have sought to emigrate to the West, and this aspiration has influenced the outlook of successive generations. Remaining within the Soviet sphere of influence and functioning in the socialist economic system, the country did not have much to offer to its most talented and entrepreneurial citizens. During that time, the state authorities restricted emigration using different measures, and the emigration restrictions policy lasted until the systemic change of 1989 [Stola, 2001]. Those who managed to emigrate from Poland during that period (many of whom chose the illegal path, based on, e.g., US tourist visas) were aware that they opted for permanent migration rather than a temporary stay in the destination country. After the systemic transition to a market economy, as the emigration barriers disappeared, the main obstacle in the migration process was in the immigration policies of the developed countries.

After 1989, it also became apparent that the characteristics of the emigration changed, with a shift towards temporary migration, often with the intention to generate some savings in foreign currencies and invest them in Poland, benefiting from favourable exchange rates [Schwabe, 2024]. The three countries that were the main migration targets for Poles at that time were Germany, the US and Italy [Grabowska-Lusińska, Okólski, 2008]. However, the principal emigration wave occurred after Poland entered the EU, with the UK as the main destination for Polish

labour migrants. The rationale behind this migration was the size and condition of the British economy along with the fact that it was one of three countries which decided not to apply transitional arrangements [Schwabe, 2023], and thus it enabled free access to its labour market for citizens of all the countries acceding the EU in 2004. Emigration to the UK at that time was tempting to many, as the Polish economy was going through a turbulent period of market reforms, which resulted in high unemployment (around 20%) and relatively low wages. The post-accession emigration wave was considered the highest in Poland's history after WWII. It is estimated that only during the first years after accession (2004–2007), over 700,000 Poles decided to take the opportunity and emigrate to the UK, and about 200,000 to Ireland [Schwabe, 2023].

Despite all the negative consequences of losing talent, it is a fact that the outflow of labour from Poland after 2004 improved the condition of the Polish labour market in the short term. This, along with the EU structural funds, access to the EU internal market and reforms that had been conducted since the 1990s spurred an unprecedented growth of the Polish economy, which in 2025 became one of the most affluent countries globally in terms of the overall GDP value [World Bank, 2025]. However, this high-paced growth brought with it natural interest from migrants from less affluent countries. The main immigrant groups in Poland were Ukrainians, followed by Belarusians. Immigration to Poland significantly accelerated after 2014, when Russia annexed Crimea and Ukrainians began to flee the country. In 2016, Poland, for the first time in its post-war history, recorded a net migration surplus, which has since become a new standard. The immigration rate was steadily growing, and skyrocketed in 2022, when the unjustified Russian full-scale aggression against Ukraine forced millions of people out of their country. After the invasion, Poland hosted nearly 1.4 million Ukrainian refugees [UNHCR, 2022].

What is exceptional in Poland's migration journey is the fact that the highest immigration wave took place only 18 years after Poland experienced the highest outflow of people from its territory – and after decades of being perceived as an emigration country. Even though the Polish economy went through this increased supply of labour almost seamlessly, the mass immigration revealed numerous systemic and mental barriers, which operated as roadblocks to successful integration of foreign workers. First of all, when the Russian invasion began, it became apparent that the Polish state had no procedures in place to accommodate the refugee inflow, especially in such high volumes. The fact that it was possible to handle the challenge can be attributed mainly to non-governmental actors, i.e. Polish society, of which nearly 80% declared providing refugees with some form of support in the first

weeks after their arrival in Poland [Baszczak, Kielczewska, Kukołowicz, Wincewicz, Zyzik, 2022], NGOs, which provided structures and know-how, and municipalities that stood up to the challenge and provided temporary accommodation for those who had no other option.

Although the initial months after the invasion could be considered successful in terms of refugee reception, especially given the nature and scale of the migration wave, with each passing year of the war it was becoming increasingly clear that the refugees were not just a temporary challenge to Poland's economy and society. Yet, the research revealed that with each year of prolonged war, the share of the Ukrainian population intending to remain in Poland was increasing, while simultaneously the popular support in Poland for hosting the refugees was diminishing [Szczepanik, 2023]. This can be attributed to the global economic slowdown and the resulting concerns of Polish workers about the prospect of losing their jobs to Ukrainian refugees. Another narrative was that the benefits that the Polish state offered to Ukrainians covered by the Act on assistance to Ukrainian citizens in connection with armed conflict in the territory of that state [Act of 12 March 2022], especially free education and healthcare, were something that the Polish budget could not afford.

The anti-Ukrainian sentiment, cleverly fuelled by Russian propaganda, gradually changed the proportion of Ukrainian refugees between Poland and Germany. While at the beginning of the war there were over 1.4 million Ukrainian refugees in Poland and about 900 thousand in Germany, at the end of 2024 these proportions reversed, as many Ukrainians migrated to Germany in search of more generous social transfers and opportunities in terms of certified state-funded vocational training. Such divergence between member states' welfare arrangements and labour-market institutions illustrates broader asymmetries within European economic integration, which can indirectly affect the direction and scale of labour mobility [Kawecka-Wyrzykowska, 2009]. Those who remained in Poland pointed to numerous challenges with regard to their integration in the Polish labour market, including discriminatory practices. Even though Poland, at the end of 2024, was the EU country with the highest share of Ukrainian refugees participating in the labour market (approximately two-thirds of working-age population), it was also true that nearly half of them declared working below their skills [Leven, Schwabe, 2025]. The main factors behind this mismatch were inadequate proficiency in Polish (or English) and an insufficient offer of free language courses, as well as difficulties in diploma (and skills) recognition by Polish employers. Since European traditional immigration countries did invest in those areas, and due to the fact that migration is driven primarily by connections within

migrant networks, one can expect that Poland will continue to lose Ukrainian talent to the benefit of other economies.

Hence, the clear benefits that Poland can offer, i.e. geographical proximity to Ukraine, as well as a similar mentality and a sound economy with a low unemployment rate, might not be enough to keep Ukrainians from moving abroad. Since Ukrainian refugees generated 2.7% of Poland's GDP in 2024 [Deloitte, 2025], they can be considered a real asset to the Polish economy. In this context, it seems that the Polish government's role should be to create conditions conducive to retaining this labour pool in Poland, while educating the Polish society about its value. This is essential because Poland's transition from a homogenous emigration country to an immigration destination has occurred only recently, leaving society with little experience in how to deal with immigrant groups, cultural diversity and sustained labour inflows.

REFERENCES

- Act of 12 March 2022 on assistance to Ukrainian citizens in connection with armed conflict in the territory of that state, Journal of Laws 2022, item 583.
- Baszczak, Ł., Kielczewska, A., Kukołowicz, P., Wincewicz, A., Zyzik, R. (2022). *How Polish Society Has Been Helping Refugees from Ukraine*. Warsaw: Polish Economic Institute.
- Deloitte (2025). *Raport: Analiza wpływu uchodźców z Ukrainy na gospodarkę Polski*, <https://www.deloitte.com/pl/pl/services/consulting/research/raport-analiza-wplywu-uchodzcow-z-Ukrainy-na-gospodarke-Polski.html> (accessed: 17.11.2025).
- Kawecka-Wyrzykowska, E. (2009). *Polityki gospodarcze Unii Europejskiej*. Warsaw: SGH Publishing House.
- Grabowska-Lusińska, I., Okólski, M. (2008). Migracja z Polski po 1 maja 2004 r.: jej intensywność i kierunki geograficzne oraz alokacja migrantów na rynkach pracy krajów Unii Europejskiej, *CMR Working Papers*, 33(91).
- Schwabe, M. (2023). *Czynniki migracji zarobkowych w świetle emigracji Polaków do Wielkiej Brytanii po akcesji Polski do UE*. Warsaw: Wolters Kluwer.
- Schwabe, M. (2024). From Emigration to Immigration – How European Union Membership Changed Migration-Related Challenges in Poland. In: *Poland in the European Union: 20 Years of Membership: Experiences and Foresights. Report 2024* (pp. 143–161), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.
- Schwabe, M., Leven, B. (2025). Ukrainian Refugees: An Opportunity for Germany and Poland, *The Polish Review*, 70(4), pp. 63–79.

- Stola, D. (2001). Międzynarodowa mobilność zarobkowa w PRL. In: *Ludzie na huśtawce. Migracje między peryferiami Polski i Zachodu* (pp. 62–100), E. Jaźwińska-Motyłska, M. Okólski (Eds.). Warsaw: Scholar.
- Szczepanik, M. (2023). *Spada akceptacja Polaków dla uchodźców z Ukrainy*, <https://www.gazetaprawna.pl/wiadomosci/kraj/artykuly/8662371,akceptacja-polakow-dla-uchodzcow-ukraina-badanie.html> (accessed: 10.10.2023).
- UNHCR (2022). *Ukraine Situation Flash Update #28*, <https://data.unhcr.org/en/documents/download/95314> (accessed: 15.09.2022).
- World Bank (2025). *GDP Ranking*, <https://datacatalog.worldbank.org/search/dataset/0038130/gdp-ranking> (accessed: 21.11.2025).

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WHEN EUROPEAN INTEGRATION STOPS UNITING: WHY MORE CAN MEAN LESS

Introduction

Poland acceded to the European Union in 2004 as the narratives legitimising integration were already shifting away from the single market. As EU action expanded into value-driven regulatory domains, the market-based mythology that had depoliticised conflict through technocratic rules and relatively transparent trade-offs weakened, opening space for normatively driven integration under conditions of limited democratic oversight and asymmetric costs. This article argues that European integration remains most effective and legitimate where it reinforces the single market and collective responses to clearly defined economic challenges, as extending integration beyond this logic tends to erode consensus and turn ‘more’ integration into ‘less’ political cohesion.

The single market myth as the stable core of integration

The long-term stability of European integration rested on a political myth understood as a structuring cognitive and normative narrative that stabilised authority and endowed integration with meaning [Della Sala, 2010]. Within this framework, the single market combined a clear functional objective with a coherent institutional architecture and a powerful legitimising narrative.

As Jones [2010] shows, the economic mythology of integration transformed distributive conflicts into expectations of growth and convergence, enabling technocratic management and sustaining political support as long as the narrative remained empirically credible. Competition policy constituted the institutional backbone of this myth, ensuring predictability and relative symmetry in rule application, thereby reinforcing the depoliticising character of market integration [Akman, Kassim, 2010].

Crucially, the durability of the single market myth stemmed from its limited scope. As Smismans [2010] observes, it did not require deep political identification or a shared collective identity. Grounded in functional coherence and broadly consistent economic experience, it provided a stable core of integration until expansion beyond market logic began to erode its legitimising capacity.

From market legitimacy to normative expansion: The eurozone crisis as a turning point

This equilibrium eroded during the eurozone crisis, which constituted not only an economic shock but also a crisis of political legitimacy rooted in the way the Economic and Monetary Union had been justified [Schmidt, 2020]. A rules-based economic narrative masked the political nature of monetary integration. When the crisis exposed the insufficiency of this framework, EU actors reinforced and reinterpreted existing rules to preserve system functionality.

While this strategy improved policy output, it undermined transparency, accountability and input legitimacy. From a Lakatosian perspective, the crisis marked the empirical breakdown of the efficiency myth underpinning integration. Rather than abandoning this hard core, EU actors insulated it through successive narrative adjustments, allowing integration to advance rhetorically even as market-based legitimacy eroded and integration was redirected towards new legitimising narratives centred on normative purpose rather than economic performance.

Normative expansion and politicisation

In recent years, the market-based mythology of European integration has increasingly been replaced by narratives centred on fundamental rights, the rule of law, security and climate transition. As McNamara and Musgrave [2020] argue, this

shift reflects a move towards legitimacy grounded in norms and identity, increasing politicisation.

Smismans [2010] shows that fundamental rights were incorporated through a political myth relying more on symbolism than clearly delimited competences and accountability. Macrae [2010] identifies a similar gap between ambition and institutional capacity in gender equality policy. As a result, the expansion of EU competences has not been matched by a commensurate development of shared political identity or democratic practices, producing indifference or resistance rather than durable consensus. Anti-European narratives thus emerge because of this process of politicisation, rather than as its primary cause.

Climate policy and asymmetrical outcomes

An analogous mechanism can be observed in EU climate policy. For an extended period, the ‘myth of green Europe’ legitimised regulatory expansion. However, under conditions of rising costs and increasing implementation conflicts, its stabilising capacity has visibly weakened.

Analyses of the Fit for 55 package, including the Land Use, Land-Use Change and Forestry Regulation [Regulation (EU) 2018/841], point to increasing fragmentation of instruments and the absence of a coherent centre of political responsibility [Sasso et al., 2025]. OECD computable general equilibrium analyses indicate that the implementation of Fit for 55 is associated with a reduction in EU GDP per capita of approximately 1% by 2030 and around 2.1% by 2035 relative to the baseline scenario [Chateau, Miho, Borowiecki, 2023]. Thus, before its midterm review, Fit for 55 resembles the implementation failures of earlier EU multiannual strategies, where ambitious objectives were undermined by unresolved trade-offs [Szczech-Pietkiewicz, Radło, 2022].

The Carbon Border Adjustment Mechanism only partially compensates for these losses. Moreover, as Kawecka-Wyrzykowska [2022] demonstrates, its effects are sectorally and geographically differentiated. As a result, asymmetric costs and associated political tensions persist.

Conclusions

European integration has proven most durable where coherence existed between EU competences, executive capacity and an economically intelligible form of legitimacy anchored in the single market. This durability was further reinforced by cohesion policy, which mitigated adjustment costs and sustained political consent without undermining market-based legitimacy. Extending integration beyond this logic towards norm-driven policies has weakened this coherence, intensified legitimacy tensions and increased political contestation.

In the absence of robust democratic legitimation and accountability, a growing reliance on normative authority risks marginalising economic efficiency as a meaningful evaluative criterion, as policy choices shift from contestable trade-offs to normative imperatives. The Fit for 55 package illustrates how such normative ambition can outpace both institutional capacity and economic calculation. Taken together, this suggests that European integration would benefit from a strategic refocusing on the single market and related areas where the EU retains clear functional advantages and a proven capacity to generate durable consensus.

REFERENCES

- Akman, P., Kassim, H. (2010). Myths and Myth-Making in the European Union: The Institutionalization and Interpretation of EU Competition Policy, *Journal of Common Market Studies*, 48(1), pp. 111–132. DOI: 10.1111/j.1468-5965.2009.02044.x.
- Chateau, J., Miho, A., Borowiecki, M. (2023). Economic Effects of the EU's 'Fit for 55' Climate Mitigation Policies: A Computable General Equilibrium Analysis, *OECD Economics Department Working Papers*, 1775. DOI: 10.1787/fla8cfa2-en.
- Della Sala, V. (2010). Political Myth, Mythology and the European Union. *Journal of Common Market Studies*, 48(1), pp. 1–19. DOI: 10.1111/j.1468-5965.2009.02039.x.
- Jones, E. (2010). The Economic Mythology of European Integration, *Journal of Common Market Studies*, 48(1), pp. 89–109. DOI: 10.1111/j.1468-5965.2009.02043.x.
- Kawecka-Wyrzykowska, E. (2022). Proposal for the EU Carbon Border Adjustment Mechanism as an Instrument of the European Green Deal: Possible Implications for Poland. In: *European Union Report 2022* (pp. 11–38), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.
- Macrae, H. (2010). The EU as a Gender Equal Polity: Myths and Realities, *Journal of Common Market Studies*, 48(1), pp. 155–174. DOI: 10.1111/j.1468-5965.2009.02046.x.
- McNamara, K.R., Musgrave, P. (2020). Democracy and Collective Identity in the EU and the USA, *Journal of Common Market Studies*, 58(1), pp. 172–188. DOI: 10.1111/jcms.12978.

Regulation (EU) 2018/841 of the European Parliament and of the Council of 30 May 2018 on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry in the 2030 climate and energy framework, and amending Regulation (EU) No 525/2013 and Decision No 529/2013/EU, OJ L 156, 19.6.2018.

Sasso, C., Savaresi, A., Vesa, S. (2025). Piecing Together the Jigsaw: Forests in the EU's Fit for 55 Package, *Review of European, Comparative & International Environmental Law*, 34(1), pp. 23–34. DOI: 10.1111/reel.12594.

Schmidt, V.A. (2020). *Europe's Crisis of Legitimacy: Governing by Rules and Ruling by Numbers in the Eurozone*. Oxford: Oxford University Press.

Smismans, S. (2010). The European Union's Fundamental Rights Myth, *JCMS: Journal of Common Market Studies*, 48(1), pp. 45–66. DOI: 10.1111/j.1468-5965.2009.02041.x.

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REAL CONVERGENCE IN INCOME LEVELS BETWEEN CENTRAL AND EASTERN EUROPE AND WESTERN EUROPE

The aim of this chapter is to present the historical paths of economic growth of the 11 Central and Eastern European (CEE) countries that joined the European Union in 2004, 2007, and 2013, i.e. Poland, Bulgaria, Croatia, Czechia, Estonia, Lithuania, Latvia, Romania, Slovakia, Slovenia and Hungary (EU-11). The research covers the income convergence analysis of these countries toward the 14 Western European countries that are EU members (EU-14).

The results presented here are the latest findings of the author's research on the phenomenon of real convergence. This research has been conducted at the Department of Economics II of the Collegium of World Economy, SGH Warsaw School of Economics for over 20 years. One of the objectives of the analyses is to show the benefits of EU enlargement for economic growth of Poland and other CEE countries. The results of the research have been widely published in monographs and scientific articles [e.g. Matkowski, Próchniak, Rapacki, 2016; Rapacki, Próchniak, 2019]; and are also regularly presented in the cyclical reports from the series *Poland Competitiveness Report* published by the World Economy Research Institute at the SGH Warsaw School of Economics [e.g. Próchniak, 2025], as well as in the SGH Reports prepared for the Economic Forum in Karpacz (formerly: Krynica-Zdrój) [see e.g. Maszczyk, Próchniak, Rapacki, 2025] for the latest edition of the study that includes the projections of closing the income gap between Central-Eastern and Western Europe).

Presented below are the latest results concerning the verification of β and σ convergence. The β convergence occurs when less developed countries (with lower GDP per capita) show faster economic growth than more developed ones. In turn, σ convergence means that income disparities between countries decrease over time.

To verify the absolute β convergence, the following regression equation was estimated:

$$\frac{1}{T} \ln \frac{y_T}{y_0} = \alpha_0 + \alpha_1 \ln y_0 + \varepsilon_t, \quad (1)$$

where y_T and y_0 are per capita income in the final and initial years, and ε_t is a random factor. The dependent variable is therefore the average annual real GDP per capita growth rate at purchasing power parity (PPP) between periods T and 0, while the explanatory variable is the natural logarithm of GDP per capita in the initial period. If the parameter α_1 is negative and statistically significant, β convergence exists.

To verify the existence of σ convergence, a trend line is estimated for the variation in income levels between countries:

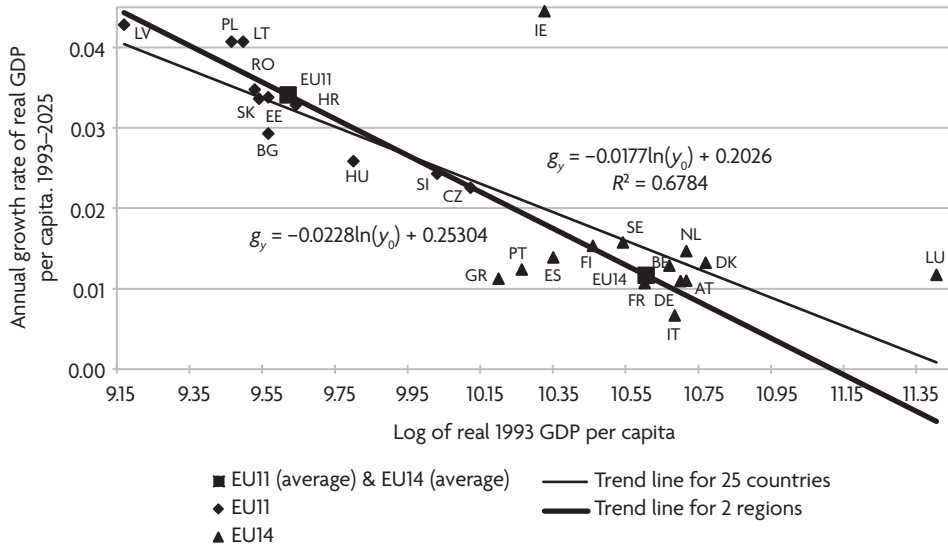
$$sd(\ln y_t) = \alpha_0 + \alpha_1 t + \varepsilon_t, \quad (2)$$

where sd denotes standard deviation and t denotes time. The explained variable is the standard deviation of natural logarithms of GDP per capita levels between countries, while the explanatory variable is time. If parameter α_1 is negative and statistically significant, σ convergence exists.

This chapter presents the results of the latest study covering the 1993–2025 period.¹ All calculations were also performed for three subperiods: 1993–2004, 2004–2015, and 2015–2025, which informs an analysis of the time stability of the convergence process (for the sake of conciseness, they will not be dealt with in detail here). The first of the specified subperiods covers the period from the end of the transformation recession in many EU-11 countries, including Poland, to the moment of the largest EU enlargement to Central and Eastern Europe. The next subperiod covers the first decade of EU membership of (most) EU-11 countries. The last subperiod covers the second decade of EU membership.

¹ The full results of the analysis will be presented in the 2026 edition of the Competitiveness Report published by the World Economy Research Institute, SGH Warsaw School of Economics.

Figure 1. The relationship between GDP per capita growth rate in 1993–2025 and GDP per capita at the beginning of the period



Source: Author's own calculations.

Convergence is analysed both within the entire group of 25 EU countries and between the two regions comprising the EU-11 and EU-14. The aggregated data for the two areas, EU-11 and EU-14, are weighted averages with variable weights reflecting the population of a given country belonging to a specific group in a given year.

The results confirm the existence of clear income convergence between the EU-11 and EU-14 countries throughout the 1993–2025 period (Figure 1). Convergence occurred both among the 25 countries in the sample and between the two areas of EU-11 and EU-14. Countries with lower income levels in 1993 showed, on average, faster economic growth between 1993 and 2025 than countries that were initially more developed. As the less developed countries in 1993 were those of Central and Eastern Europe, these results confirm the clear convergence of the EU-11 countries towards the average income level of Western Europe.

Upon analysis of individual subperiods, it turns out that the speed of convergence varied greatly. For the 25 EU countries in 1993–2004, i.e. before the EU enlargement, β convergence was confirmed by the model, but the R -squared coefficient was only 34%. The convergence observed during that period was partly caused by the fact that the integration anchor triggered by EU membership began to take effect much earlier, i.e. even before the official date of the EU accession. The pace of convergence accelerated between 2004 and 2015, which was undoubtedly due to

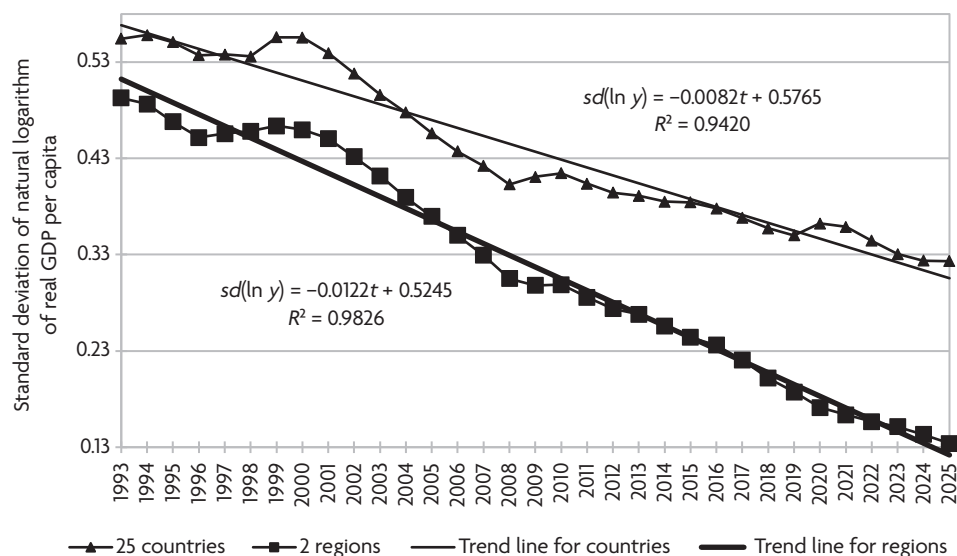
the EU enlargement. The clear convergence trend observed in the first decade of EU membership weakened in the following decade. This was largely driven by the crises related to the COVID-19 pandemic and the war in Ukraine.

There were numerous sources of convergence. Most of them were related to the European integration. The most important one was grounded in institutional and market reforms recommended by the EU. As a result, the role of international trade for CEE countries, including Poland, significantly increased (see, for instance, the study by Kawecka-Wyrzykowska, Ambroziak and Kulpiński [2022] for trade relations between EU and Ukraine). Major sources of the catching-up process also included the EU policy and the EU funds aimed at decreasing income differences between less and more developed European regions. The transfer of technology from Western Europe played a crucial role as well.

The σ convergence of CEE countries towards Western Europe is measured by changes in the standard deviation of natural logarithms of GDP per capita between the 25 EU countries, as well as between the two areas of the EU-11 and EU-14. The results are presented in Figure 2.

According to the results, between 1993 and 2025 there was σ convergence both among the 25 EU countries and between the EU-11 and EU-14 areas. The most visible and systematic reduction in income differences occurred in the second half of the analysed period, i.e. after 2000, which was undoubtedly related to the EU enlargement.

Figure 2. Standard deviation of GDP per capita in 1993–2025



Source: Author's own calculations.

In summation, the convergence process is not automatic. Despite the strong downward trend in income differences between Central-Eastern and Western Europe in recent years, there is no guarantee that this situation will continue in the future (as evidenced by the temporary instability of our results and increasingly frequent references in the literature to the possibility of divergent trends emerging in Europe). Much will depend, among others, on further developments in Ukraine and relations with Russia, as well as on the energy transition. The latter will be a very costly process for Poland, as Professor Kawecka-Wyrzykowska aptly observes [for details, see Kawecka-Wyrzykowska, 2025].

REFERENCES

- Kawecka-Wyrzykowska, E., Ambroziak, A.A., Kulpiński, M. (2022). Handlowe relacje Unii Europejskiej, w tym Polski, z Ukrainą. In: *Inwazja Rosji na Ukrainę. Wybrane konsekwencje ekonomiczne i prawne* (pp. 17–58), M. Błaszczuk-Zawiła (Ed.). Warsaw: SGH Publishing House.
- Kawecka-Wyrzykowska, E. (2025). Can Poland Afford the Energy Transition? In: *Poland in the European Union. Report 2025* (pp. 63–85), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.
- Maszczyk, P., Próchniak, M., Rapacki, R. (2025). Development Outlook for Central and Eastern Europe in 2025–2035 – Institutional Changes and Economic Growth in a Patchwork Model of Capitalism. In: *Report of the SGH Warsaw School of Economics and the Economic Forum 2025* (pp. 15–53), A. Chłoń-Domińczak, D. Niedziółka, M. Strojny, B. Majewski, M. Ekner (Eds.). Warsaw: SGH Publishing House.
- Matkowski, Z., Próchniak, M., Rapacki, R. (2016). Real Income Convergence between Central Eastern and Western Europe: Past, Present, and Prospects, *Ekonomista*, 6, pp. 853–892.
- Próchniak, M. (2025). Income Convergence: Poland in the European Union – The Pentagon of Competitiveness. In: *Poland: Competitiveness Report 2025. Reconfiguring Global Value Chains and Shaping Competitive Advantages* (pp. 77–97), A.M. Kowalski, M.A. Weresa (Eds.). Warsaw: SGH Publishing House.
- Rapacki, R., Próchniak, M. (2019). EU Membership and Economic Growth: Empirical Evidence for the CEE Countries, *European Journal of Comparative Economics*, 16(1), pp. 3–40. DOI: 10.25428/1824-2979/201901-3-40.

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THE EU'S MULTIANNUAL FINANCIAL FRAMEWORK FOR 2028–2034

The EU budget

In 2025, the European Commission began preparatory work for the adoption of the new long-term budget of the European Union for the 2028–2034 period. This budget, referred to as the Multiannual Financial Framework (MFF), covers a period of seven years. On its basis, annual budgets are adopted [Oręziak, 2020]. The MFF for 2021–2027 is currently in place, and the total expenditure during this period is EUR 1.2 trillion (around EUR 160–180 billion per year), which represents about 1% of the gross national income of the EU as a whole. In addition, there is a special fund of over EUR 800 billion (in current prices) under the EU's temporary financial instrument, NextGenerationEU, launched in 2021, to support member states in recovering from the economic and social impact of the COVID-19 pandemic. To raise funds for this instrument, the European Commission borrows money from the capital markets on behalf of the EU. These loans are to be repaid between 2028 and 2058 from the EU budget.

In 2025, for the first time in the history of EU budgeting, the European Commission organised a public consultation in the form of the European Citizens' Panel to obtain citizens' opinions and recommendations on the EU budget for 2028–2034 [Oręziak, 2025a].

The history of negotiations of successive multi-annual budgets shows that they constituted a difficult compromise between the interests of net beneficiaries and net payers (including Germany, France and the Netherlands). Poland has been the

largest net beneficiary to date, receiving over EUR 167 billion from 1 May 2004 to the end of September 2025 [Ministry of Finance, 2025]. However, it should be emphasised that the positive net balance achieved by Poland is only a small part of the benefits of EU membership. As Kawecka-Wyrzykowska [2023] notes, access by Polish businesses to the EU's single internal market is crucial.

The European Commission is obligated to protect the EU budget from unjustified expenditure, particularly in the case of member states violating the rule of law. The need for such protection stems, among other things, from the experiences of Hungary since 2010 and Poland between 2015 and 2023. As a result of the devastation of the rule of law during that period, Poland had to pay a fine of over PLN 2.5 billion, decided by the CJEU. Both countries have also had their access to EU funds restricted, including the Cohesion Fund [Oręziak, 2025b].

MFF for 2028–2034 – the Commission's proposal

In July 2025, the European Commission presented the draft MFF for 2028–2034. To support the Union's priorities in this period whilst meeting its repayment obligations under NextGenerationEU, the Commission proposed for the MFF 2028–2034 a total spending ceiling of EUR 1.8 trillion (in 2025 constant prices) equal to 1.26% of EU GNI [European Commission, 2025a].

The president of the European Commission, Ursula von der Leyen, pointed out that it is the largest budget proposed to date. The current budget, with its 52 programmes, presents too much complexity for businesses and local governments that rely on EU funding. Therefore, the Commission proposed National and Regional Partnership Plans (NRPPs). This is *the first pillar* of the new budget. It combines funding for cohesion, agriculture, rural development, fisheries, social affairs, migration and others into a single, coherent plan. This will allow each country and region to design reforms and investments as a whole. *The second pillar* of the new budget is the Competitiveness Fund. It is a powerful tool for investing in strategic technologies needed by the economy of the future. Therefore, it is closely linked to Horizon Europe, the size of which would be doubled. *The third pillar* is Global Europe. Funding for this purpose would increase by 75% compared to the current MFF. This will strengthen EU cooperation with third countries through new agreements, including those aimed at increasing energy security for member states and improving access to raw materials. Financial support for Ukraine is also crucial here [European Commission, 2025b].

During the plenary debate held on 12 November 2025 in the European Parliament on the MFF 2028–2034, it was pointed out, among other things, that the implementation of the Commission's proposal to maintain the 'one national plan per Member State' model could result in excessive concentration of power at the national level and limit the supervisory role of the European Parliament. It was also noted that the Commission's proposed spending ceiling of 1.26% of EU GNI would force cuts to flagship programmes, especially given the upcoming debt repayment of the NextGenerationEU fund. Parliament called for stronger guarantees for agricultural and cohesion policies, which it feared would be weakened under the Commission's plan [European Parliament, 2025]. To address, even partially, the concerns expressed by the European Parliament, the European Commission will need to revise its proposal.

Referring to this criticism from the European Parliament, Buti [2025] pointed out that rather than protecting outdated programmes, it should push for a larger EU budget and safeguards to match strategic goals. Hansum [2025] argues that the Commission's proposal for NRPPs could offer a fresh start for the EU's cohesion policy after 2028.

As in the past, member states are divided over the EU budget's funding sources and spending priorities. The 'frugal' states advocate for no increase in overall EU spending, while the 'friends of cohesion' want more funds for agriculture and development. It is important that all states agree that defence and competitiveness are key priorities [Engström, 2025].

Conclusions

The debate on the MFF is not just about numbers and budget lines. It is about the future of Europe. Among the main challenges are strengthening the EU industry, developing renewable energy to protect energy sovereignty, reducing regional disparities and ensuring the EU's protection from digital threats. It is also about combining environmental protection with creating conditions for economic development and ensuring the EU's independence in the field of defence. The scope of EU budget funding depends primarily on the funds available. Revenue ultimately determines the scale of EU budget spending. Therefore, it is crucial that these expenditures reflect the EU's priorities and the challenges it faces as closely as possible.

REFERENCES

- Buti, M. (2025). *The European Parliament Gets It Wrong on the European Commission's 2028–2034 Budget*, <https://www.bruegel.org/first-glance/european-parliament-gets-it-wrong-european-commissions-2028-2034-budget> (accessed: 16.11.2025).
- European Commission (2025a). Proposal for a Council Regulation laying down the multiannual financial framework for the years 2028 to 2034, COM(2025) 571 final, 16.7.2025.
- European Commission (2025b). *Speech by President von der Leyen at the European Parliament plenary debate on the new 2028–2034 Multiannual Financial Framework: architecture and governance*, https://ec.europa.eu/commission/presscorner/detail/da/speech_25_2673 (accessed: 16.11.2025).
- Engström, M. (2025). *It's Not Easy Being Green: Breaking Europe's Climate Spending Deadlock*, <https://ecfr.eu/publication/its-not-easy-being-green-breaking-europes-climate-spending-deadlock/> (accessed: 10.11.2025).
- European Parliament (2025). The New 2028–2034 Multiannual Financial Framework: Architecture and Governance (Debate), https://www.europarl.europa.eu/doceo/document/CRE-10-2025-11-12-ITM-016_EN.html (accessed: 15.11.2025).
- Hansum, R. (2025). *Breaking the Traps – Smarter Regional Allocation of EU Cohesion Spending 2028–2034*, https://www.delorscentre.eu/fileadmin/2_Research/1_About_our_research/2_Research_centres/6_Jacques_Delors_Centre/Publications/20251024_Cohesion_policy_Hansum.pdf (accessed: 16.11.2025).
- Kawecka-Wyrzykowska, E. (2023). Poland's Settlements with the European Union Budget from May 2004 till the End of 2022, and Funds Available from 2021 to 2027. In: *Poland in the European Union. Report 2023* (pp. 123–141), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.
- Ministry of Finance (2025). *Transfery finansowe Polska – budżet UE*, <https://www.gov.pl/web/finanse/transfery-polska-ue-unia-europejska> (accessed: 21.11.2025).
- Oręziak, L. (2020). *Finanse Unii Europejskiej i strefy euro*. Warsaw: SGH Publishing House.
- Oręziak, L. (2025a). Europejski Panel Obywatelski – publiczne konsultacje w sprawie budżetu UE na lata 2028–2034, *Gazeta SGH*, 388, <https://gazeta.sgh.waw.pl/meritum/europejski-panel-obywatelski-publiczne-konsultacje-w-sprawie-budzetu-ue-na-lata-2028-2034> (accessed: 17.11.2025).
- Oręziak, L. (2025b). The Protection of the EU's Financial Interests Against Violations of the Rule of Law in the Member States, *International Journal of Management and Economics*, 61(2), pp. 135–145. DOI: 10.2478/ijme-2024-0030.1

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THE PRINCIPLE OF CONDITIONALITY OF PAYMENTS FROM THE GENERAL BUDGET OF THE EUROPEAN UNION: AN ASSESSMENT IN THE CONTEXT OF THE PROPOSAL FOR THE 2028–2034 MULTIANNUAL FINANCIAL FRAMEWORK

As a legal principle, conditionality of payments from the EU general budget appeared for the first time in the provisions of the Maastricht Treaty. At that time, it referred to mechanisms of the Multilateral Surveillance Procedure (MSP) for member states' economic policies pursued within the framework of the so-called Broad Economic Policy Guidelines (BESGs) under Article 121 TFEU. At present, the principle of conditionality has a broader application in EU financial law. In particular, it is a key arrangement meant to safeguard EU funds against misappropriation or misuse whenever member states themselves experience backsliding of the rule of law. The application of the rules of conditionality for payments from the EU general budget can also be perceived as an expression of EU budget autonomy. Such an autonomy is considered a desirable feature of a properly functioning EU budget [Kawecka-Wyrzykowska, 2014a, 2014b].

The Multiannual Financial Framework (MFF) proposal for 2028–2034 provides for a total amount of commitments of around EUR 2 trillion, i.e. 1.26% of the GNI of all EU countries. The total allocation for Poland is estimated at over EUR 123 billion.

It should be remembered that the MFF is one large 'package' within which the European Commission sets budget lines for specific, massive public policy objectives

(in the areas of cohesion, agriculture, migration, strengthening defence resilience, etc.). From this package, member states receive:

- a) cohesion funds, which are allocated according to an algorithm that takes into account the level of development of regions, unemployment, population size, etc.;
- b) payments under the EU's Common Agricultural Policy (CAP);
- c) payments from pan-European programmes (e.g. Horizon, Erasmus, Digital Europe), where funds are not 'allocated' in advance but are effectively obtained through competitions/projects;
- d) funds from new instruments (e.g. Catalyst Europe fund, defence funds, Social Climate Fund) – also on terms common to all countries.

It is also worth noting that the EU budgetary allocation for Poland ('the national envelope') refers only to the part of the funds that can be calculated on the basis of formulas (cohesion, agriculture, climate funds) and not the entire EU budget for 2028–2034. It can be estimated that Poland may receive approximately (less than) 7% of the proposed EU budget for 2028–2034 from the entire EU budget, on the assumption that the allocation under the National-Regional Partnership Plans, NRPPs) is the main stream of funds envisaged for Poland. The 'national envelopes' do not encompass, in particular, the European Competitiveness Fund and horizontal and sectoral programmes such as Horizon Europe 2028–2034, the European Digital Transformation Plan/Digital Europe or its successor, support instruments for critical infrastructure, and credit/loan mechanisms.

In fact, the requirement of meeting the rule of law standards is not new with respect to activities performed under the NRPP as the European Commission is obliged to apply the provisions of Regulation (EU, Euratom) 2020/2092 of the European Parliament and of the Council of 16 December 2020 on a general regime of conditionality for the protection of the Union budget. The main function of this act is to protect the financial resources at the disposal of the European Commission (as the administrator of the EU general budget) from misappropriation or embezzlement – all possible in dysfunctional legal systems where politically favoured elite may escape the reliable application of law by public authorities and courts. Nevertheless, a new feature of the proposed provisions is that in the event the principles of the rule of law and the EU Charter of Fundamental Rights are found to be violated in a given country, payments from the EU general budget may be suspended or withheld, while the member state concerned would still be obliged to pay equivalent funds to beneficiaries from its own budgetary resources. This situation will imply considerable difficulties in adjusting the national budget structure to possible suspensions or withholdings of payments from the EU budget (especially where large amounts are involved).

With regard to conditionality based on programming milestones, it should be noted that it is logically linked to designing the EU budget expenditure framework so that payments from the budget would be more closely linked to the functions of the EU budget, and thus to the objectives pursued at national level (under the relevant NRPP), which EU budget funding would serve to achieve. Milestones may therefore now relate not only to the objectives set for the impact of public policies but also to the procedures for implementing those policies.

This situation could, in itself, be interpreted as strengthening the position of the European Commission vis-à-vis the member states, but not as increasing its discretion. The Commission's decisions in this regard must be based on what the member states have agreed in their NRPPs; these arrangements will be the benchmarks to which the European Commission will have to refer; its decisions in this regard will be subject to judicial review by the CJEU. Whether the European Commission will obtain greater discretion in authorising member states to spend funds from the EU budget depends on the outcome of the NRPP negotiations, and more specifically on what milestones are set within this framework.

REFERENCES

- Kawecka-Wyrzykowska, E. (2014a). Propozycje nowych źródeł finansowania unijnego budżetu w latach 2014–2020, *Unia Europejska*, 5(216), pp. 7–18.
- Kawecka-Wyrzykowska, E. (2014b). Propozycja zmian systemu finansowania budżetu UE. Wnioski dla Polski, *Ekonomia, Rynek, Gospodarka, Społeczeństwo*, 29, pp. 61–85.
- Regulation (EU, Euratom) 2020/2092 of the European Parliament and of the Council of 16 December 2020 on a general regime of conditionality for the protection of the Union budget, OJ L 143/1, 22.12.2020.

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THE CULTURAL DIVERSITY IN THE EUROPEAN UNION: A COMPETITIVE ADVANTAGE OR A BARRIER TO INTERNATIONAL BUSINESS?

Introduction

Contemporary research indicates that organisational culture is a key source of competitive advantage in the global economy. According to the resource-based view (RBV), sustainable competitive advantage arises not from access to material resources but from the effective use of unique, difficult-to-imitate assets embedded in organisational structures [Barney, 1991]. Organisational culture meets the VRIN (an acronym for Valuable, Rare, Imperfectly imitable, Non-substitutable [Barney, 1991] criteria, as values, norms, and practices form the foundation of competitive advantage. In international business, firms operate within diverse cultural systems, which influences adaptability, leadership styles and decision-making.

The PwC [2021] Global Culture Survey, which covers 42 countries, including some EU members, shows that companies with strong and authentic cultures achieve higher adaptability, innovation and financial performance, with 81% of highly adaptable firms identifying culture as a strategic resource. However, cultural diversity may also become a barrier when organisational culture is incoherent or inauthentic, as revealed by DEI data. PwC findings indicate discrepancies indeed exist between leadership and employee perceptions of inclusiveness.

The European Union can be seen as a coherent international organisation whose members share common values and goals [Barcz, Kawecka-Wyrzykowska, Michałowska-Gorywoda, 2015]. However, the mere fact of membership in this integration grouping does not automatically result in the loss of cultural identity, as shown by the results of the GLOBE project of 2004 [GLOBE, n.d.], where EU members were assigned to different cultural clusters.

This chapter hypothesises that cultural diversity in the European Union, reflected in differences in power distance and uncertainty avoidance, can function both as a competitive advantage and a barrier to international business, depending on how effectively organisations manage and integrate these differences into their strategies.

Methodology

To capture cultural differences among EU countries, this study uses data from the GLOBE project, which covered 62 countries, including 16 EU members. Among the nine cultural dimensions identified by GLOBE, the following two were selected: uncertainty avoidance (UA) and power distance (PD), as they best reflect differences in organisational structures and decision-making. In addition, the analysis focuses exclusively on GLOBE respondents' assessments of current cultural practices ('as they are').

Average PD and UA values for the 16 EU countries were calculated and used as reference points to determine national deviations. These deviations were then mapped on a two-dimensional matrix, positioning countries within four quadrants and forming four cultural groups: relational-adaptive (negative UA, positive PD), hierarchical-procedural (both UA and PD are positive), egalitarian-flexible (both UA and PD are negative) and procedural-cooperative (positive UA, negative PD). From a resource-based view perspective, these groups represent distinct strategic resources that influence international competitive advantage.

The results

Table 1 shows the values of individual deviations from the EU average, and the results of the mapping of EU countries are shown in Figure 1.

As Figure 1 shows, Poland, Hungary, Greece, Slovenia, Italy, Portugal and Spain belonged to block A. These relational and adaptive cultures display a higher

propensity for risk in decision-making and a greater distance to power than the EU average. From a resource-based view (RBV) perspective, organisations from these countries possess strategic resources such as flexible processes, independent employees and strong intra-organisational relationships, enabling rapid response to change, innovation and effective adaptation. Consequently, they cooperate more easily with partners from low power-distance and low-procedurality cultures. However, cooperation with highly hierarchical and formalised organisations is more challenging, as it requires greater adaptability.

Table 1. Individual deviations of EU countries from the calculated EU average ($PD^{UE} = 5.02$ and $UA^{UE} = 4.48$)

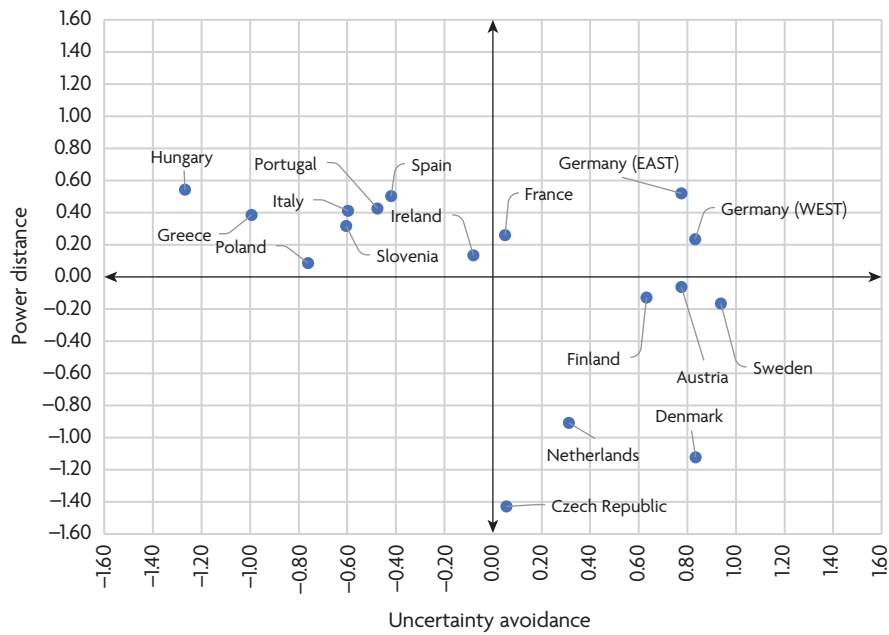
Country Name	Uncertainty Avoidance	Power Distance
Ireland	-0.08	+0.13
Hungary	-1.27	+0.54
Poland	-0.76	+0.08
Greece	-0.99	+0.39
Slovenia	-0.60	+0.32
Austria	+0.78	-0.06
Netherlands	+0.31	-0.91
Germany (EAST)	+0.78	+0.52
Germany (WEST)	+0.83	+0.24
Italy	-0.60	+0.41
Portugal	-0.48	+0.42
Spain	-0.42	+0.50
France	+0.05	+0.26
Finland	+0.63	-0.13
Sweden	+0.94	-0.17
Denmark	+0.83	-1.12
Czech Republic	+0.05	-1.43

Source: Author's own compilation based on GLOBE [n.d.].

Much smaller than block A is quadrant B, consisting only of Germany (both parts) and France, characterised by higher power distance and greater uncertainty avoidance than the EU average. Organisations from these countries rely on well-structured systems, formalised procedures and clear role divisions, ensuring stability, predictability and operational consistency. These assets are difficult to imitate and, from an RBV perspective, support sustained competitive advantage. However, cooperation with partners from lower power-distance and less formalised cultures requires

greater flexibility and conscious management of cultural differences, as divergent approaches to decision-making and formalities may lead to misunderstandings and conflicts in international projects.

Figure 1. Mapped positions of countries in terms of deviations from the EU average



Source: Author's own compilation based on Table 2.

The remaining six EU members (Austria, the Netherlands, Finland, Sweden, Denmark and the Czech Republic) represent procedural-cooperative cultures, characterised by higher uncertainty avoidance and lower power distance than the EU average. Organisations in these countries operate within established procedures while maintaining flat hierarchies and a strong focus on cooperation. Their advantages include procedural clarity, competent employees able to function effectively in formalised systems, and trust-based relationship networks that are difficult to imitate and thus constitute a competitive advantage. Firms from this group can effectively integrate employee knowledge and creativity, strengthening their international competitiveness. In international business, they cooperate most easily with partners from countries with similar procedurality and low or moderate power distance, such as those in quadrant C (egalitarian-flexible cultures). Cooperation with block A countries is more challenging due to differences in procedural priorities and authority, which may lead to misunderstandings and project delays.

In the sample of 16 EU member states examined, countries belonging to quadrant C (egalitarian-flexible cultures) were not identified, which means that in each country at least one dimension of culture (UA or PD) was stronger than the EU average.

Conclusions

To sum up, the study confirms that EU countries differ significantly in organisational culture, as reflected in deviations from the EU average in power distance and uncertainty avoidance. These differences can serve both as a competitive advantage and a barrier in international business, depending largely on how effectively organisations manage them and adapt internal processes to a multicultural environment.

The analysis also shows that firms from low power-distance and highly procedural cultures benefit from flat hierarchies, coordination and innovation, while organisations from more hierarchical and less procedural contexts rely on flexibility, independent employees and strong internal relationships. Cooperation is easier between culturally similar partners, while difficulties may arise when differences in the management style and formalisation of processes are significant. For example, in business projects involving organisations from Spain (block A) and Denmark (block D), communication tensions may often arise resulting from differences in the level of formalisation of decisions and the distance to power.

From the resource-based view perspective, cultural diversity represents a strategic resource that, when consciously managed, can be transformed into a sustainable competitive advantage. The research hypothesis is therefore confirmed.

REFERENCES

- Barcz, J., Kawecka-Wyrzykowska, E., Michałowska-Gorywoda, K. (2015). *Integracja europejska w okresie przemian. Aspekty ekonomiczne*. Warsaw: PWE.
- Barney, J. (1991). Firm Resources and Sustained Competitive Advantage, *Journal of Management*, 17(1), pp. 99–120.
- GLOBE (n.d.). *Results*, https://globeproject.com/study_2004_2007%3Fpage_id=data.html#data (accessed: 26.12.2025).
- PwC (2021). *Global Culture Survey 2021: The Link Between Culture and Competitive Advantage*, <https://www.pwc.com/gx/en/issues/upskilling/global-culture-survey-2020/pwc-global-culture-survey-2021.pdf> (accessed: 27.04.2026).

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SELECTED ECONOMIC EFFECTS OF BREXIT ON THE UNITED KINGDOM

Introduction

Brexit, that is, the withdrawal of the United Kingdom from the European Union, formalised by the EU–UK Trade and Cooperation Agreement (TCA) signed on 24 December 2020 and in force since 1 January 2021, has had far-reaching consequences for the UK economy. The formal end of the transition period meant leaving the EU single market and the customs union, which translated into tangible and measurable economic costs, visible, *inter alia*, in the areas of trade, productivity and investment. Supporters of leaving the EU argued that the costs associated with reduced cooperation with the EU would be temporary and would be offset by greater regulatory autonomy and new trade agreements with third countries. However, analyses conducted after the end of the transition period point to the persistent and multi-channel nature of the negative economic effects of Brexit.

Official macroeconomic forecasts prepared by the UK Office for Budget Responsibility (OBR), developed since 2016 and regularly updated on the basis of empirical data, identify several key mechanisms through which Brexit affects the economy. These include lower investment, a decline in trade (especially exports), weaker integration into global value chains, constraints on factor mobility, and higher administrative and regulatory costs borne by firms. According to the OBR, in the long run trade relations based on the TCA are expected to lead to a reduction in trade volumes of around 15%, a decline in productivity of approximately 4%, and a reduction in the level of GDP of about 4% compared to a counterfactual scenario in which the United Kingdom remained in the EU [OBR, 2025].

Trade in goods

The key institutional change following Brexit is the operation of a new EU–UK trade regime based on the TCA, which eliminates tariffs on goods subject to compliance with rules of origin, while at the same time introducing non-tariff barriers such as customs documentation checks, technical and sanitary certifications and additional logistical procedures. Compared to the pre-Brexit situation, when the United Kingdom participated in the single market, these changes imply a significant increase in transaction costs [Kawecka-Wyrzykowska, Ambroziak, 2021].

Trade data confirm a slowdown in goods trade. Between 2019 and 2022, the value of UK goods trade increased by only around 10%, whereas trade among EU member states and between the EU and third countries grew by more than 30% over the same period.

Empirical studies show that in the first years after Brexit UK exports to the EU declined markedly and in a persistent manner, while the fall in imports was smaller and largely temporary [Du, Satoglu, Shepotylo, 2023]. Millard, Nicolae and Nower [2024] indicate that the key channel of the negative economic impact of Brexit was the decline in exports, resulting from a reduced number of firms serving the EU market and weakened competition in the domestic market.

The end of the transition period and the introduction of new regulatory requirements particularly affected small and medium-sized enterprises. According to surveys conducted by the UK Office for National Statistics (ONS), in early 2024 around half of exporting firms and nearly two-thirds of importing firms reported higher costs and operational difficulties directly linked to the new rules governing trade with the EU [OBR, 2024, p. 39]

Trade in services

Although UK trade in services recovered relatively quickly after the COVID-19 pandemic and by the end of 2023 exceeded its 2019 level by around 12% [OBR, 2024, p. 39], this does not imply an absence of negative Brexit-related effects in this area. Sectoral analyses by the LSE's Centre for Economic Performance show that in services most sensitive to regulatory barriers, exports to the EU fell by 15.8% compared to other destinations for services trade, and the loss of market share in the EU was not offset by expansion in non-European markets [Arnold, Bhalotia,

Dhingra, 2025]. This confirms the limited ability of the UK economy to substitute its relationship with the EU single market with alternative trade partners.

New trade agreements

A key element of the Brexit narrative was the claim that reduced cooperation with the EU would be compensated by new trade agreements with third countries, enabling the implementation of the ‘Global Britain’ vision [Cabinet Office, 2021]. The United Kingdom currently has 40 free trade agreements in force covering more than 70 countries and is negotiating additional agreements [Department for Business and Trade, 2025]. In practice, however, the trade agreements concluded after Brexit have not generated a significant growth impulse for UK trade, and their effects have proven marginal and spread over time.

For example, the rolled-over trade agreement with Japan is expected to increase UK GDP by only around 0.1% over a 15-year horizon. Similarly, the new agreement with Australia is estimated to raise GDP by approximately 0.1% over the same period, which does not compensate for the losses resulting from reduced access to the EU single market [Department for Business and Trade, 2022]. The limited impact of new trade agreements largely reflects the fact that many of them simply replicate agreements that the United Kingdom had already benefited from as an EU member state. Moreover, new trade agreements have not been able to neutralise the costs arising from increased barriers in EU–UK relations following the entry into force of the TCA [Kužnar, Menkes, 2023]. These findings confirm that it was the loss of access to the EU market for UK firms – rather than the absence of new trade agreements per se – that constituted the main source of the early economic costs of Brexit.

Disruptions to foreign direct investment inflows

Another important channel through which Brexit has affected the UK economy is foreign direct investment (FDI). Empirical studies consistently point to a negative impact. Milas, Panagiotidis and Papapanagiotou [2024] show that economic and geopolitical uncertainty following the referendum and the entry into force of the TCA significantly weakened FDI inflows, generating losses estimated at around 0.5% of GDP. Broader analyses covering the period 2013–2023 confirm that post-

Brexit FDI inflows have been significantly lower than in the counterfactual scenario [Simionescu, Horobet, Dalu, 2025].

The decline in FDI affects not only the level of capital accumulation, but also financing conditions, technology transfer and long-term productivity growth. From the perspective of multinational enterprises, Brexit has increased regulatory uncertainty and coordination costs, making investment decisions more difficult, particularly in services sectors [Du, Shepotylo, Yuan, 2025].

Productivity and GDP

GDP remains the key indicator of the long-term economic effects of Brexit. Millard et al. [2024] show that the increase in trade barriers following the TCA has led to a significant decline in productivity and output. Their model suggests that after leaving the single market, UK GDP falls immediately by around 7.5%, and in the long run stabilises at a level approximately 4–5% lower than in the scenario of continued EU membership. The decline in productivity is estimated at around 4.5%, translating into downward pressure on real wages and labour market conditions.

Recent studies further indicate that the economic impact of Brexit is larger than initially estimated in the immediate post-referendum period. Bloom, Bunn, Mizen, Smietanka and Thwaites (2025) estimate that by 2025 Brexit may have reduced UK GDP by 6–8% compared to a counterfactual scenario in which the country remained in the EU.

Conclusions

By implementing the political outcome of the 2016 referendum, Brexit has translated into persistent economic costs for the UK economy. While some analyses pointed to limited negative effects in the short run, more detailed economic research based on micro- and macro-level data demonstrates that the loss of benefits associated with participation in the single market and the customs union has reduced the UK's growth rate, lowered investment and increased trade costs. Consequently, despite the ability to pursue an independent trade policy, the economic effects of Brexit indicate that, in the medium and long term, the costs of this process outweigh the anticipated benefits of regained regulatory autonomy.

REFERENCES

- Arnold, D., Bhalotia, S., Dhingra, S. (2025). *Deglobalisation in Disguise? Brexit Barriers and Trade in Services*, <https://cep.lse.ac.uk/pubs/download/dp2110.pdf> (accessed: 15.11.2025).
- Bloom, N., Bunn, P., Mizen, P., Smietanka, P., Thwaites, G. (2025). *The Economic Impact of Brexit*, https://www.nber.org/system/files/working_papers/w34459/w34459.pdf (accessed: 15.11.2025).
- Cabinet Office (2021). *Global Britain in a Competitive Age: The Integrated Review of Security, Defence, Development and Foreign Policy*, <https://www.gov.uk/government/publications/global-britain-in-a-competitive-age-the-integrated-review-of-security-defence-development-and-foreign-policy> (accessed: 15.11.2025).
- Department for Business and Trade (2022). *UK – Australia FTA: Impact Assessment*, <https://www.gov.uk/government/publications/uk-australia-fta-impact-assessment> (accessed: 15.11.2025).
- Department for Business and Trade (2025). *The UK's Trade Agreements*, <https://www.gov.uk/government/collections/the-uks-trade-agreements> (accessed: 15.11.2025).
- Du, J., Satoglu, E.B., Shepotylo, O. (2023). How Did Brexit Affect UK Trade? *Contemporary Social Science*, 18(2), pp. 266–283. DOI: 10.1080/21582041.2023.2192043.
- Du, J., Shepotylo, O., Yuan, X. (2025). How Did the Brexit Uncertainty Impact Services Exports of UK Firms? *Journal of International Business Policy*, 8(1), pp. 80–104. DOI: 10.1057/s42214-024-00202-6.
- Kawecka-Wyrzykowska, E., Ambroziak, Ł. (2021). Brexit: Wybrane implikacje ekonomiczne dla Polski, *Gospodarka Narodowa*, 308(4), pp. 55–82. DOI: 10.33119/GN/143261.
- Kuźnar, A., Menkes, J. (2023). Can the United Kingdom Change Its Geographic Location? In: *Polska w obliczu szans i zagrożeń w globalnej gospodarce* (pp. 275–304), E. Przeździecka, M. Cygler (Eds). Warsaw: SGH Publishing House. DOI: 10.33119/978-83-8030-604-2_346.
- Milas, C., Panagiotidis, T., Papapanagiotou, G. (2024). UK Foreign Direct Investment in Uncertain Economic Times, *Journal of International Money and Finance*, 147, article 103132, pp. 1–20. DOI: 10.1016/j.jimonfin.2024.103132.
- Millard, S., Nicolae, A., Nower, M. (2024). Understanding the Effects of Brexit on UK Productivity, *National Institute Economic Review*, 268, pp. 46–62. DOI: 10.1017/nie.2024.27.
- OBR (2024). Economic and Fiscal Outlook – March 2024, <https://obr.uk/efo/economic-and-fiscal-outlook-march-2024/> (accessed: 15.11.2025).
- OBR (2025). *Brexit Analysis*, <https://obr.uk/forecasts-in-depth/the-economy-forecast/brexit-analysis/> (accessed: 15.11.2025).
- Simionescu, M., Horobet, A., Dalu (Ionescu), M.A. (2025). Navigating Uncertainty: The Effects of Brexit on Foreign Direct Investment in the United Kingdom, *Journal of Applied Economics*, 28(1), article 2484960. DOI: 10.1080/15140326.2025.2484960.

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VAT FRAUD AND THE PROTECTION OF THE EU'S FINANCIAL INTERESTS

One of the topics of the impressive academic oeuvre of Professor Elżbieta Kawecka-Wyrzykowska is the issue of financing the European budget. Among the studies authored by the Professor dedicated to this research area are those focusing on problems closely aligned with my own research perspective, namely the Value Added Tax (VAT). Consequently, the choice of the subject matter for this text was, in a sense, natural.

VAT is a levy of considerable significance for European integration (see Article 113 of the Treaty on the Functioning of the European Union, hereinafter 'TFEU') and is crucial from the perspective of EU budgetary revenues [Kawecka-Wyrzykowska, 2008]. It constitutes one of the fundamental own resources of the EU budget [see Article 2(1)(b) of Council Decision (EU, Euratom) 2020/2053]. A certain paradox regarding VAT is that, despite its fiscal importance, it is a tax remarkably susceptible to fraud. According to the *VAT Gap in the EU – 2024 Report* [European Commission, 2024], in 2022 the compliance gap in revenues from this tax – i.e. the loss incurred by member states – amounted to approximately EUR 89 billion. The VAT gap is a measure of the difference between the theoretical revenues (estimated using the most popular top-down method on the basis of macroeconomic aggregate values) and the actual VAT proceeds.

Methods for estimating the VAT gap, including the one mentioned above, are not immune to criticism. A particular objection to the abovementioned approach is that it fails to account for institutional factors affecting tax collectability, such as the level of the standard tax rate and the number of preferential rates. Meanwhile,

in countries with a higher standard VAT rate and an increased number of preferential rates, a larger tax gap is generally observed. A high number of preferential rates not only complicates the correct settlement of tax but also encourages the ‘creative’ classification of products or services under a specific category in order to apply a more beneficial tax rate. Furthermore, factors conducive to the occurrence and widening of the tax gap include the low efficiency of state authorities and a high degree of complexity in tax regulations. The applicable principle of taxation in the country of destination (consumption), as well as the construction of the tax based on the cooperation of tax administrations, are also significant factors [Baran, 2018]. It turns out, therefore, that the selection of the economic analytical tool influences the estimated size of the gap. In the case of the dominant ‘top-down’ methodology, also included in the cited report – which is based on macroeconomic data – the fundamental problem stems from the estimated nature of the statistical data serving as the basis for calculation. This method appears to overestimate the size of the tax gap. Conversely, the ‘bottom-up’ method, based on microeconomic data (e.g. records of tax proceedings), may not be representative of all taxpayers. The application of statistical methods (e.g. results of randomly conducted audits initiated without risk analysis) is insufficient to ensure the objectivity of the estimates. Consequently, assessing the size of the gap is very difficult [Beldzikowski, 2018].

Notwithstanding the uncertainties over the accuracy of VAT gap measurement, particularly concerning the share of undesirable tax practices involved – and specifically carousel fraud (Missing Trader Intra-Community fraud) – there is no doubt that such phenomena are highly detrimental, having a significant impact on the level of budgetary revenues under this heading. Combating VAT fraud and abuse constitutes, therefore, as the Court of Justice has repeatedly indicated, an objective recognised and encouraged by the VAT Directive [see e.g. *Halifax and Others*, 2006, paragraph 71]. In simplified terms, two levels of counteracting pathologies in the VAT system can be identified. The first, legislative, involves introducing changes to ‘seal’ the tax structure, of which there have been a whole series in recent years, both at the level of the VAT Directive and national acts [for a discussion, see e.g. Brzeziński, Lasiński-Sulecki, Morawski, 2018]. The second level considered here is of a juridical nature, related to the practice of applying VAT regulations, involving primarily the activity of European tax administrations, national courts, and finally the General Court and the Court of Justice of the EU. In particular, the case-law of the Court of Justice has emphasised the importance of the common system of value added tax through the lens of the EU’s financial interests. The normative basis for rulings in this regard was essentially Article 325 TFEU.

By way of example, in *Åklagaren v Hans Åkerberg Fransson* [2013], the Court held that it had jurisdiction to answer a request for a preliminary ruling concerning the application of criminal law on tax evasion by a member state (Sweden) in the context of their compatibility with the principle of *ne bis in idem* set out in Article 50 of the CFR [Charter of Fundamental Rights of the European Union, 2000]. The case concerned the simultaneous application of administrative sanctions regarding VAT (i.e., in essence, an administrative financial penalty called a tax surcharge) and criminal charges for false information provided by the taxpayer regarding VAT. The Court stated that the measures imposed by state authorities constitutes the implementation of Articles 2, 250(1) and 273 of the VAT Directive (particularly regarding the implementation of measures to prevent tax evasion) and Article 325 TFEU (the obligation to counter fraud and any other illegal activities affecting the financial interests of the Union), and thus an act of implementing Union law within the meaning of Article 51(1) of the Charter of Fundamental Rights. At the same time, it was noted that in light of primary EU law, the principle of *ne bis in idem* does not preclude a member state from imposing successively, for the same acts of failure to comply with declaration obligations in the field of VAT, a tax penalty and a criminal penalty, provided that the first penalty is not criminal in nature. The Court emphasised that national courts remain free to apply national standards of protection of fundamental rights, as long as the level of protection provided for by the Charter, as interpreted by the Court, and the primacy, unity and effectiveness of EU law are not thereby compromised (see paragraphs 29 et seq.).

In turn, in *Ivo Taricco and Others* [2015], the Court reasoned that if the application of national provisions in the field of limitation periods were to result, in a significant number of cases, in serious fraud escaping punishment because the offences would become time-barred before the criminal penalty provided for by law could be imposed by a final judicial decision, it must be found that – since the measures provided for by national law to combat fraud or other illegal activities constitute a threat to the financial interests of the Union – they cannot be considered effective and dissuasive. This, in turn, is incompatible with Article 325(1) TFEU, Article 2(1), and with Directive 2006/112 in conjunction with Article 4(3) TFEU (the principle of sincere cooperation) (see paragraph 47 et seq.). Subsequently, however, in connection with doubts raised by the Italian Constitutional Court, the CJEU corrected (mitigated) its position in this regard in the judgment known as *Taricco II* [2017].

The ruling stated that Article 325(1) and (2) TFEU must be interpreted as requiring the national court, in criminal proceedings concerning offences relating to value added tax, to disapply national provisions on limitation periods falling within

the scope of substantive national law which prevent the imposition of effective and dissuasive criminal penalties in a significant number of cases of serious fraud affecting the financial interests of the European Union, or which provide for shorter limitation periods for cases of serious fraud affecting those interests than for those affecting the financial interests of the member state concerned, unless that disapplication entails a breach of the principle that offences and penalties must be defined by law because of an uncertainty as to the applicable law or because there was the retroactive application of legislation imposing conditions of criminal liability stricter than those in force at the time the offence was committed. As noted, it is for the national court to ascertain whether the finding that the national provisions (of the Criminal Code) prevent the imposition of effective and dissuasive criminal penalties in a significant number of cases of serious fraud affecting the financial interests of the Union leads to a situation of uncertainty in the Italian legal order as to the determination of the applicable limitation regime, which would be in breach of the principle that the applicable law must be precise. If that is indeed the case, the national court is not obliged to disapply the provisions of the Criminal Code at issue (see in particular paragraphs 58–62).

It follows from the foregoing that the nexus between the common system of value added tax and the principle of protecting the EU's financial interests is multifaceted and is not limited to a unidirectional relationship, i.e. obliging member states to take actions minimising the risk of depletion in VAT revenues by combating fraud and other illegal activities affecting the EU's financial interests. The deep structure of the issue in question consists of arrangements regarding the division of competences between the EU and member states, made through the dialogue of national courts (in particular constitutional courts) and the Court of Justice. Although a common standard for the 'control' of CJEU judgments has not yet been developed, there seems to be a common belief that the Court does not possess a monopoly on delineating the jurisdictional boundaries of EU bodies and member states [for more details, see Wyrozumska, 2020]. Protecting the EU's financial interests in the context of the VAT gap therefore represents the latest iteration of a familiar problem with a long history, tracing its roots back to the famous *Solange* ruling of the German Federal Constitutional Court. Consequently, the relationship between EU law and national jurisdictions remains an open question and a persistent challenge for European integration, continuing to drive the dialogue between national courts and the CJEU, also in the field of VAT.

REFERENCES

- Åklagaren v Hans Åkerberg Fransson* (2013). Judgment of 26 February 2013 in Case C-617/10 *Åklagaren v Hans Åkerberg Fransson*, ECLI:EU:C2013:105.
- Baran, B. (2018). Domykanie luki podatkowej jako odpowiedź na potrzeby budżetowe w UE, *Zeszyty Naukowe Uniwersytetu Ekonomicznego w Katowicach*, 347, pp. 34–43.
- Beldzikowski, M. (2018). Uszczelnianie systemu VAT – próba oceny skuteczności podjętego wysiłku legislacyjnego i organizacyjnego, *Kwartalnik Prawa Podatkowego*, 3, pp. 111–148. DOI: 10.18778/1509-877X.2018.03.06.
- Brzeziński, B., Lasiński-Sulecki, K., Morawski, W. (2018). *Poprawa efektywności systemu podatkowego. Nowe narzędzia prawne w VAT i akcyzie*. Warsaw: Wolters Kluwer Polska.
- Charter of Fundamental Rights of the European Union (2000). Charter of Fundamental Rights of the European Union, OJ C 364/1, 18.12.2000.
- Council Decision (EU, Euratom) 2020/2053 of 14 December 2020 on the system of own resources of the European Union and repealing Decision 2014/335/EU, Euratom, OJ L 424/1, 15.12.2020.
- European Commission (2024). *VAT Gap in the EU – 2024 Report*, <https://op.europa.eu/en/publication-detail/-/publication/298d43e2-bd28-11ef-91ed-01aa75ed71a1/language-en> (accessed: 06.12.2025).
- Halifax and Others* (2006). Judgment of 21 February 2006 in Case C-255/02 *Halifax plc. Leeds Permanent Development Services Ltd, County Wide Property Investments Ltd. v Commissioner and Customs & Excise*, ECLI:EU:C:2006:121.
- Ivo Taricco and Others* (2015). Judgment of 8 September 2015 in Case C-105/14 *Ivo Taricco and Others*, ECLI:EU:C:2015:555.
- Kawecka-Wyrzykowska, E. (2008). VAT jako nowe źródło dochodu budżetu Unii Europejskiej. In: *Budżet dla Unii Europejskiej po 2013 roku. Implikacje dla Polski*, E. Kawecka-Wyrzykowska (Ed.). Warsaw: SGH Warsaw School of Economics.
- Tarico II (2017). Judgment of the Court (Grand Chamber) of 5 December 2017 in criminal proceedings against M.A.S., M.B., Case C-42/17, ECLI:EU:C:2017:936.
- Wyrozumska, A. (2020). Wyrok FTK z 5.05.2020 r. w świetle podobnych orzeczeń sądów innych państw członkowskich Unii Europejskiej. *Państwo i Prawo* (9), pp. 47–69.

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THE ROLE OF EUROPEAN INTEGRATION IN THE EU'S SUSTAINABLE COMPETITIVENESS

Introduction

The contemporary global economy operates under conditions of escalating environmental, social and economic challenges, including climate change, the energy crisis, inflationary pressures and widening social inequalities. These phenomena increasingly affect the development potential of individual countries and their competitive positions in the global economy. In this context, European integration is an important mechanism supporting the member states of the European Union in transforming their development models towards sustainable competitiveness.

A particularly significant role in this process is played by EU development strategies, including the European Green Deal and the Fit for 55 package, which comprehensively combine the objectives of economic growth with environmental protection and the strengthening of social cohesion [European Commission, 2019, 2023]. These strategies define the long-term development trajectory of the European Union, integrating the actions of member states around common climate, energy and development goals. This chapter aims to provide a synthetic analysis of the role of European integration in shaping the sustainable competitiveness of EU member states.

European integration and sustainable competitiveness

The concept of sustainable competitiveness extends the traditional understanding of competitiveness, which primarily equated it with productivity, the pace of economic growth and the capacity to improve society's material welfare. In the new approach, equal importance is attached to the economic, social and environmental dimensions, which directly reflects the concept of sustainable development [Balkytė, Tvaronavičienė, 2010; Cheba, Bąk, Szopik-Depczyńska, 2020]. This implies a departure from a narrow conception of competitiveness in favour of an approach that accounts for long-term developmental conditions.

Sustainable competitiveness thus denotes an economy's ability to achieve lasting improvements in productivity and social welfare while rationally using natural resources and limiting negative environmental impacts [Aiginger, Barenthaler-Sieber, Vogel, 2013; World Economic Forum, 2014]. Understood in this way, competitiveness is dynamic and long-term, and its attainment requires coherent political, institutional and economic actions [Falkowski, 2023].

European integration supports the implementation of this concept by creating common institutional, legal and financial frameworks that enable the coordination of public policies among member states. The single market, regulatory harmonisation and access to EU financial instruments strengthen countries' capacity to pursue sustainable development objectives. For many years, the European Union has remained a global leader in sustainable competitiveness, as evidenced by international rankings [SolAbility, 2023; Cambridge Institute for Sustainability Leadership, 2024].

At the same time, the level of competitiveness construed along these lines varies widely across the EU. The Scandinavian countries achieve the highest values, whereas the lowest are recorded, among others, in Bulgaria, Romania, Greece, Hungary and Poland [Falkowski, 2025]. This differentiation results from varying levels of socioeconomic development, economic structures, resource availability and approaches to implementing EU development strategies. These disparities pose a key challenge to the further deepening of European integration.

What an analysis of the pillars of sustainable competitiveness identify as a key strength of the EU is governance efficiency, understood as the capacity to establish stable and predictable institutional frameworks conducive to long-term growth [European Commission, 2023]. At the same time, the most significant weaknesses concern natural capital and resource efficiency, which are among the key challenges for the further development of the EU [SolAbility, 2023].

The European Green Deal as an instrument for strengthening competitiveness

The European Green Deal is a central element of the EU development strategy, aimed at achieving climate neutrality by 2050 [European Commission, 2019]. This strategy assumes a comprehensive green and digital transformation, encompassing, *inter alia*, the energy transition, the development of a circular economy and support for technological innovation. These actions are intended to improve environmental quality, increase resource-use efficiency and enhance the resilience of member state economies to external shocks [European Commission, 2019; Cambridge Institute for Sustainability Leadership, 2020].

The energy transition plays a crucial role in building sustainable competitiveness, as it entails a gradual shift away from fossil fuels toward renewable and low-emission energy sources [Kawecka-Wyrzykowska, 2022]. This process, although it requires significant investment and structural changes, supports long-term competitiveness by reducing environmental costs, fostering the development of new economic sectors and increasing innovation [European Commission, 2019]. The green transformation is complemented by the digital transformation, which supports productivity growth, innovation and social inclusion [European Commission, 2023].

Analyses indicate a clear positive relationship between the extent of implementation of the European Green Deal's assumptions and the level of sustainable competitiveness among EU member states. The highest levels of sustainable competitiveness characterise countries that are most advanced in implementing this strategy, whereas states with a low degree of Green Deal implementation remain among the outsiders [SolAbility, 2023; Cambridge Institute for Sustainability Leadership, 2024].

Conclusions

European integration plays a key role in enhancing the sustainable competitiveness of EU member states by enabling the coordination of actions to integrate economic, social and environmental objectives. The European Union remains a global leader in this field; however, what remains a significant challenge is the pronounced variation in the level of sustainable competitiveness among member states. The European Green Deal is the primary instrument for strengthening this competitiveness, although the

effectiveness of its implementation depends on the determination and capacity of individual countries to implement it [European Commission, 2019, 2023].

Maintaining and improving the EU's position amid increasing international competition requires the continued, consistent implementation of adopted strategies and the further deepening of European integration in the area of development policies.

REFERENCES

- Aiginger, K., Barenthaler-Sieber, S., Vogel, J. (2013). *Competitiveness Under New Perspectives*, https://www.econstor.eu/bitstream/10419/125699/1/WWWforEurope_WPS_no044_MS46.pdf (accessed: 16.12.2025).
- Balkytė A., Tvaronavičienė, M. (2010). Perception of Competitiveness in the Context of Sustainable Development: Facets of 'Sustainable Competitiveness', *Journal of Business Economics and Management*, 11(2), pp. 341–365. DOI: 10.3846/jbem.2010.17.
- Cambridge Institute for Sustainability Leadership (2024). *2024 Competitive Sustainability Index*. Cambridge: Cambridge Institute for Sustainability Leadership.
- Cambridge Institute for Sustainability Leadership (2020). *Developing the EU's 'Competitive Sustainability' for a Resilient Recovery and Dynamic Growth*. Cambridge: Cambridge Institute for Sustainability Leadership.
- Cheba, K., Bąk, I., Szopik-Depczyńska, K. (2020). Sustainable Competitiveness as a New Economic Category: Definition and Measurement Assessment, *Technological and Economic Development of Economy*, 26(6), pp. 1399–1421. DOI: 10.3846/tede.2020.13528.
- European Commission (2023). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – *Long-Term Competitiveness of the EU: Looking Beyond 2030*, COM/2023/168 final, 16.3.2023.
- European Commission (2019). Communication from the Commission – *The European Green Deal*, COM/2019/640 final 11.12.2019.
- Falkowski, K. (2025). Konkurencyjność zrównoważona Unii Europejskiej, *Współczesna gospodarka*, 19 (1/S), pp. 91–104. DOI: 10.26881/wg.2025.1/S.07.
- Falkowski, K. (2023). Sustainable Competitiveness of the Visegrad Group Countries, *Optimum. Economic Studies*, 1(111), pp. 3–20, DOI: 10.15290/oes.2023.01.111.01.
- Kawecka-Wyrzykowska, E. (2022). Proposal for the EU Carbon Border Adjustment Mechanism as an Instrument of the European Green Deal: Possible Implications for Poland. In: *Poland in the European Union. Report 2022* (pp. 11–37), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.

SolAbility (2023). *The Global Sustainable Competitiveness Index 2023*, <https://solability.com/pdfs/The%20Global%20Sustainable%20Competitiveness%20Index%20Report%202023.pdf> (accessed: 18.12.2025).

World Economic Forum (2014). Assessing Progress toward Sustainable Competitiveness. In: *The Global Competitiveness Report 2014–2015* (pp. 53–83), K. Schwab (Ed.). Geneva: World Economic Forum.

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REASONS FOR THE EU FTAs: THE EU–MERCOSUR AGREEMENT IN THE SPOTLIGHT

Free trade agreements (FTAs) are an important tool to reinforce EU's economic and geopolitical interests, as well as eliminate security-related risks. They also serve as a means to promote European values and standards and are a key component of the EU trade policy [WTO, 2023, p. 36]. The EU is a world leader in terms of number (more than 40), and coverage (more than 70 economies) of FTAs in place (Figure 1).

In December 2024, the EU concluded its negotiations for a Partnership Agreement with Mercosur (Argentina, Brazil, Paraguay, Uruguay) – the EMPA. The agreement remains controversial, with some EU member states, civil society organisations and farmers opposing it. The aim of this chapter is to present main motivations behind the EMPA and discuss its potential benefits. It starts with a short overview of motives for the EU FTAs, followed by a more detailed analysis of the EMPA and conclusions. The chapter is based mainly on literature review.

Motives for the EU FTAs

Initially, the EEC (later the EU) signed its FTAs mainly with close neighbours (apart from Mexico and Chile), looking for economic benefits (Table 1). When its economic and political environment and objectives changed, new reasons for FTAs emerged [Kawecka-Wyrzykowska, 2020, p. 16].

Figure 1. EU trade agreements 2025

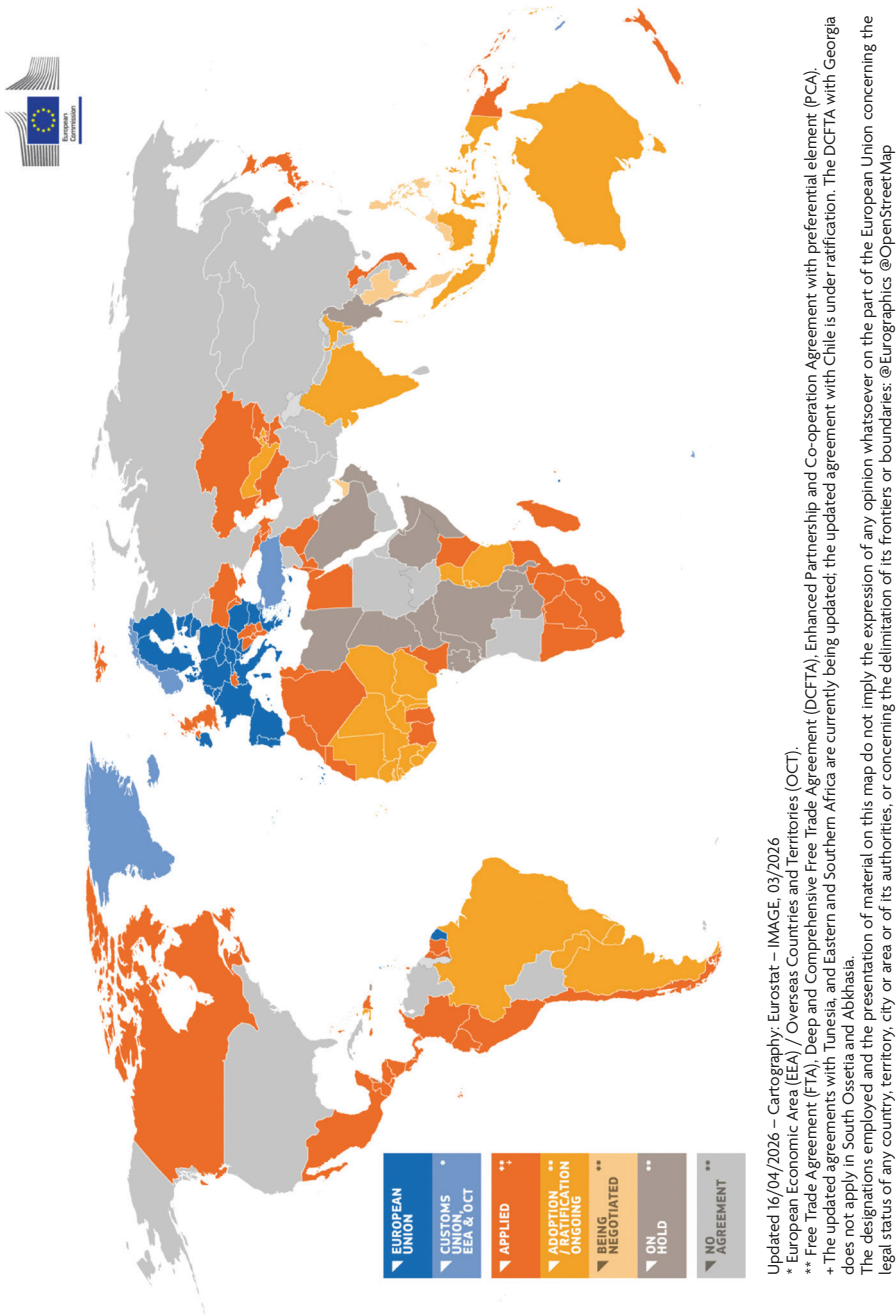


Table 1. Different motives for the EU free trade agreements – examples

Predominant motivation	Potential benefits	Partners
Economic	Better market access (reduced prices, increased competitiveness of goods, economies of scale, increased trade volume)	EFTA countries
	Better external environment for companies, increased international competitiveness of GVC-produced goods (elimination of national regulatory barriers for trade in intermediate products, technology-intensive products, services trade etc.; export of EU's regulatory approach	Korea, India, Canada, ASEAN
Geopolitical	Equal opportunities in competing in markets	Mexico, Korea, Singapore, Japan, Canada
	Economic connection with like-minded partners	Korea, Singapore, Japan, Canada
Political and strategic	Increased political stability and security around EU borders	Georgia, Moldova, Ukraine, Western Balkans, developing and emerging countries

Source: Author's own compilation based on Kawecka-Wyrzykowska [2020, pp. 11–16], Belka and Kapa [2024, p. 97–98].

In particular, as a result of stagnation in multilateral trade liberalisation (WTO Doha Round) and changes in production methods (development of global value chains, GVCs), they evolved into comprehensive FTAs with commitments deepening the existing WTO provisions (WTO-plus: faster elimination of tariffs and non-tariff barriers) or extending them to new areas (WTO-extra: competition, IPR, movement of capital, investment, social matters) [Kawecka-Wyrzykowska, 2020, pp. 12–13]. As a result, ‘deep’ (‘new generation’) trade agreements, in addition to liberalisation of trade in goods, include ‘almost systematically’ (since 2010) provisions on liberalisation of trade in services and investment, and regulatory issues (competition, e-commerce, government procurement, protection of IPR and GIs, sustainable development and closer cooperation) [WTO, 2023, p. 36]. The other reason for the EU FTAs was a desire to catch up with the US and other countries that had already signed FTAs with selected countries (Korea and Mexico).

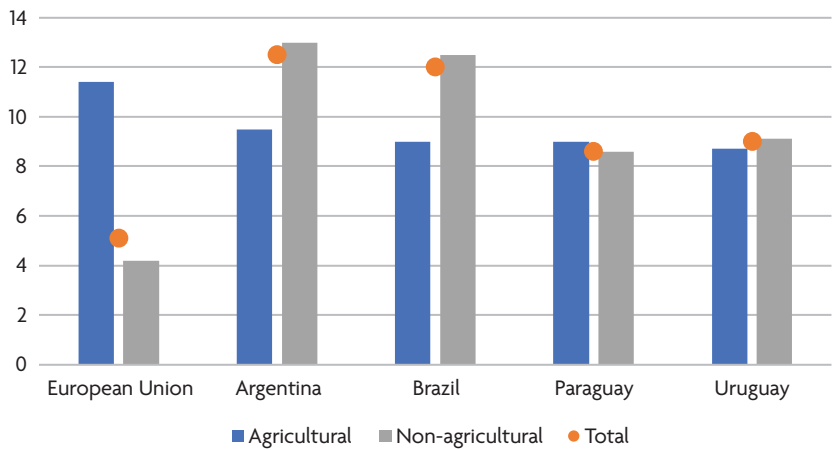
On the other hand, FTAs with neighbouring and nearby countries (Western Balkans, Georgia, Moldova and Ukraine) were clearly motivated by political and strategic factors. Promotion of economic development, economic and systemic reforms as well as EU regulatory mechanisms were aimed at political stabilisation of these countries and increasing the EU security level. Agreements with developing and emerging countries were driven by similar rationales but with a focus on different issues (migration, illegal drugs, labour and human rights, political dialogue, etc.).

Reasons and benefits for the EU–Mercosur FTA.

Some remarks

There are several reasons for the EMPA. When it comes to economic benefits, it is expected to boost trade and investment [European Commission, 2025c, p. 1]. European companies are to benefit from a first-mover advantage, resulting from liberalisation of tariffs and non-tariff barriers. The average rate of the Most-Favoured Nation (MFN) applied tariffs range from 9% to 12.5% (5.1% in the EU). In all countries, the total level of tariff protection of agriculture is lower than in the EU and in most of them (apart from Paraguay) it is also lower than that of industry (Figure 2). Tariff reduction for industrial goods (including cars, machinery and pharmaceuticals) seems to be the most important part of tariff liberalisation within the EMPA. According to estimates, European companies could save over EUR 4 billion worth of duties/year [European Commission, 2025c].

Figure 2. MFN applied tariffs (simple average) in the EU and Mercosur countries, 2024 (%)



Source: WTO [2025].

The Mercosur market is also relatively protected by burdensome procedures, technical regulations and standards which differ from international ones. Regulatory cooperation and simpler customs procedures, combined with better access to public tenders should also bring benefits. It is estimated the agreement can increase the EU's annual exports by up to 39% (EUR 49 billion).

In general, commercial benefits will be insignificant [CAN, 2025] and distributed unevenly. While increased exports and profits are predicted for selected industries, agriculture is expected to suffer losses, despite increased export opportunities (due to tariff reduction, protection for 344 geographical indications (GIs), more friendly procedures) and limited access to the EU market for sensitive products (beef, poultry or sugar) and safeguards. This threat has sparked large-scale protests by farmers throughout the EU and opposition from several EU countries (France, Poland, Italy). The safeguards adopted are perceived as vague; they are only temporary and do not solve structural issues [CAN, 2025].

Sales of Mercosur food products (meeting lower standards) in the EU market is also a cause for concern, although the EU's rigorous food standards and the 'precautionary principle' will not be modified [European Commission, 2025c, p. 2].

European investors and service providers are expected to take advantage of better access to the Mercosur market. The EMPA provides for the right of establishment, non-discriminatory industrial investment, including the development of local industries to process critical raw materials, and better protection of intellectual property rights. One closely related motive (economic, but also political and security-related) is the creation/reconfiguration of European GVCs, securing sources for critical inputs and raw materials as well as possible diversification of energy sources. Those opportunities are important because of competitiveness of European GVCs, growing geopolitical instability and twin transformation (green and digital) [European Commission, 2025d].

It is suggested that the EMPA could help fight climate change, including deforestation and biodiversity loss [European Commission, 2025c, p. 1], but the implementation of relevant regulations in Mercosur is challenging and raise concerns. Possible negative consequences for climate (caused by increased production of beef and soya for export to the EU) are the most controversial issues under the agreement. Forest policy of Mercosur countries strongly differs from that of the EU (it supports the development of agribusiness) and can be harmful for EU's ambitions for global climate action. It can also weaken European green legislation [Eckes, Krajewski, 2025]. Concerns about deforestation are not unfounded. Some research indicates that deforestation increased significantly over the three years after the enactment of FTAs [Abman, Lundberg, 2020].

As far as non-economic motives are concerned, it is worth mentioning the 'export' of EU values and standards (related to human, animal and plant health and food safety, sustainable development, CSR) and increasing its role in creating international standards (an element of competition with the US and China). It is

a signal to the world against growing protectionism. The EMPA is also concluded to strengthen political and economic ties with like-minded partners and to secure the EU's presence in the Mercosur region [European Commission, 2025c, p. 1].

Conclusions

Motives underlying the EU FTAs have changed over the years and vary depending on the specific trading partner. FTAs originally had a strong commercial dimension, but as of 2006, they have shifted in focus to the external environment for EU companies and increased international competitiveness of GVC-produced goods (FTAs with key partners). Geopolitical and security motives also gained importance. Commercial interests matter to a lesser extent and are related to selected sectors.

As might be expected, the motivations behind the EMPA are not strictly commercial. Benefits from increased exports from the EU are expected only in selected industrial sectors. For agriculture, it can bring serious losses, especially in the medium and long term. It appears that in this case, economic motives combined with political and security-related ones matter the most: securing sources for critical inputs and raw materials for European GVCs, possible diversification of energy sources, 'export' of EU values and standards, strengthening of political and economic ties with like-minded partners, and securing the EU's presence in the Mercosur region. However, the implementation of relevant regulations in Mercosur is still challenging and raises concerns.

REFERENCES

- Abman, R., Lundberg, C. (2020). Does Free Trade Increase Deforestation? The Effects of Regional Trade Agreements, *Journal of the Association of Environmental and Resource Economists*, 7(1), pp. 35–72. DOI: 10.1086/705787.
- Belka, M., Kapa, M. (2024). EU Free Trade Agreements: Outlook and the Way Forward. In: *Progressive Yearbook 2024* (pp. 93–100), L. Andor, A. Skrzypek, H. Giusto (Eds.). Brussels: Foundation for European Progressive Studies.
- CAN (2025). *European Commission Sidelines Member States by Splitting Controversial EU-Mercosur Deal*, <https://caneurope.org/european-commission-splitting-eu-mercotur-deal/> (accessed: 28.12.2025).

- European Commission (2025a). *Overview of Ongoing Trade and Investment Negotiation – FTA Negotiations*, <https://circabc.europa.eu/rest/download/10ca1b54-d672-430b-aed4-8b25b4b9c2ee> (accessed: 28.12.2025).
- European Commission (2025b). *Commission Proposes Mercosur and Mexico Agreements for Adoption*, https://luxembourg.representation.ec.europa.eu/actualites-et-evenements/actualites/commission-proposes-mercotur-and-mexico-agreements-adoption-2025-09-03_en (accessed: 20.12.2025).
- European Commission (2025c). *Factsheet EU-Mercosur on Key Facts About the Agreement*, https://ec.europa.eu/commission/presscorner/detail/en/fs_24_6269 (accessed: 15.01.2026).
- European Commission (2025d). *Questions and Answers on the EU-Mercosur Partnership Agreement*, https://ec.europa.eu/commission/presscorner/api/files/document/print/en/qanda_24_6245/QANDA_24_6245_EN.pdf (accessed: 20.12.2025).
- Eckes, Ch., Krajewski, P. (2025). *How Sustainable is the EU-Mercosur Agreement?* https://caneurope.org/content/uploads/2025/04/Legal_analysis_sustainability_EU-Mercosur_Agreement.pdf (accessed: 27.12.2025).
- Kawecka-Wyrzykowska, E. (2020). Importance and Motives of Preferential Trade Agreements in the EU's External Trade, *Economic and Business Review*, 6(20) (3), pp. 3–22. DOI: 10.18559/eb.2020.3.1.
- Sharma, S. (2020). *Climate, Land Use Change and the EU-Mercosur Agreement: Accelerating Tipping Points*, <https://eu.boell.org/en/2020/12/07/climate-land-use-change-and-eu-mercotur-agreement-accelerating-tipping-points> (accessed: 29.12.2025).
- WTO (2023). *Trade Policy Review – Report by the Secretariat. European Union – Revision*, WT/TPR/S/442/Rev.1, https://edb.wto.org/index.php/search?type=tp&__no_redirect=PANTHEON_STRIPPED&search_api_fulltext=&field_ics_hs_code=&page=837&order=field_tpr_type&sort=desc (accessed: 22.12.2025).
- WTO (2025). *World Tariff Profiles*, https://www.wto.org/english/res_e/publications_e/world_tariff_profiles25_e.htm (accessed: 21.12.2025).

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STRATEGIC AGILITY OF POLISH SMEs IN THE EU'S TURBULENT MARKET CONDITIONS

The essence of the strategic agility concept

The term *strategic agility* first appeared in the work by Roth [1996], yet one of the most influential and frequently cited definitions was proposed by Weber and Tarba [2014]. According to these authors, strategic agility (SA) constitutes a managerial capability enabling continuous and rapid sensing of, and response to, environmental change through the deliberate undertaking of strategic actions and the consistent adjustment of an organisation's configuration to effectively capitalise on emerging circumstances. This definition highlights the extent to which organisational leadership is expected to exhibit adaptability, creativity and the capacity to anticipate unexpected shocks occurring both within and beyond the business environment in which a given entity operates.

Moreover, within this conceptual framework, a key competence of the managerial team is the ability to respond proactively, swiftly and effectively to disruptions and threats in order to transform them into opportunities for growth [Tilman, Jacoby, 2019; Denning, 2018; Alqahtani, Usay, 2023].

In subsequent years, the concept of SA was further elaborated by Doz and Kosonen [2008a, 2008b, 2010]. These authors proposed a formula [Doz, Kosonen, 2008b, p. 111] expressing the construct as:

$$\text{Strategic Agility} = \text{Environmental Sensitivity} \times \text{Leadership Unity} \times \text{Resource Fluidity}$$

After 2012, changes in the concept evolved mainly toward an emphasis on work performance, scaling practices and the characteristics of leaders who manage organisational agility.

In the context of research on SMEs, it can be emphasised that the way work is organised in an agile SME – based on flexibility, speed, the adaptability of processes and employees, and on practices such as commitment to self-development, continuous teamwork, constant testing and process adjustment – is particularly useful for companies operating in dynamic markets and turbulent environments. Examples of such enterprises include startups, small technology firms, as well as organisations in the creative and marketing industries, where innovation and an immediate response to changing trends are essential for achieving success.

SMEs in the Polish economy and the role of support programmes

This year marks the 21st anniversary of Poland's accession to the European Union, alongside nine other states (Cyprus, the Czech Republic, Estonia, Lithuania, Latvia, Malta, Slovakia, Slovenia and Hungary). EU membership has had a substantial impact on entrepreneurial activity: it enabled domestic enterprises to capitalise on the opportunities offered by the single market and various support instruments, while subjecting them to intensified competitive pressures and the regulatory standards characteristic of more advanced Western European economies. To highlight the importance of SMEs in the Polish economy, it should be noted that they generate nearly every second PLN of GDP (45.3%). Since Poland acceded to the European Union, employment in the enterprise sector has expanded, increasing from approximately 8.2 million in 2004 to nearly 10.3 million in 2022. The average number of employees within enterprises has also risen, from 5.7 million to 7.1 million. Between 2004 and 2022, the financial situation of such firms improved considerably. The total revenues of non-financial enterprises increased nominally by a factor of 3.6 (reaching PLN 7.9 trillion), production by a factor of 3.4 (to PLN 5.8 trillion), and value added by a factor of 3.3 (to PLN 1.9 trillion). Micro-enterprises recorded the highest profitability (8.0%), followed by medium-sized (6.3%) and small firms (6.0%) [PARP, 2024].

At the same time, numerous programmes and initiatives available in Poland for SMEs have played a significant role in this growth. Currently, this support is primarily targeted at startups and innovative companies (particularly in the areas of R&D, technology and digitalisation) – through Horizon Europe, incubation programmes and venture capital funds [NCBR, 2024].

Strategic agility of Polish SMSs in the turbulent environment (COVID-19 case)

The European Union market may be subject to significant turbulence in the near future due to rising geopolitical tensions, destabilisation in the eastern neighbourhood and rivalry between global superpowers. Threats related to migratory pressure, the growth of Euroscepticism and the weakening of trust in EU institutions also remain highly relevant (to name only the most important ones). This situation will also have a significant impact on the functioning of Polish SMEs within the EU market in the near future. A potential reference point for EU policy design during periods of market turbulence may be the lessons learnt from the performance and adaptability of SMEs during the COVID-19 pandemic.

In an empirical study [Sikora, Baranowska-Prokop, 2025], the relationship between strategic agility and market performance among Polish and Finnish SMEs was examined, along with an evaluation of the effects of COVID-19-related restrictions on their market outcomes. The results are based on a survey conducted among owners and managers of companies in the Polish and Finnish SME sectors during the COVID-19-related restrictions. The data were collected using CAWI and CATI techniques, both administered based on a previously distributed questionnaire. The first research hypothesis, which proposes a positive relationship between strategic agility (SA) and firm performance, is based on prior work, including Roberts and Grover [2012] and others. It also takes into account the findings of earlier original research based on a sample of Polish SMEs from the 'pre-COVID-19' period [Sikora, Baranowska-Prokop, 2021], which found a positive relationship between SA and firm performance.

Quite surprisingly, the analysis of the results and correlations obtained in the presented study did not confirm this hypothesis in the Finnish sample, while in the Polish sample only very weak (though statistically significant) positive correlations were identified. At the same time, it should be noted that when other firm characteristics (size, export involvement, industry and service sectors) were included in the calculations, the results of the linear regression analyses did not confirm this hypothesis for Polish SMEs either.

The second hypothesis advanced in this study posits that market disruptions related to the COVID-19 pandemic had a negative impact on firm performance, and this hypothesis was fully confirmed.

Conclusions

The presented findings might have some implications for shaping EU economic policy during market turbulence [Kawecka-Wyrzykowska, 2020]. The results of the study, which demonstrated the existence of statistically insignificant relationships between strategic agility and firm performance metrics during the COVID-19 pandemic for both Polish and Finnish SMEs, may be explained by a series of protective measures and substantial financial support provided by the governments of both countries to mitigate the pandemic's effects [Ambroziak, 2025]. In this context, strategic agility in SMEs was manifested more in the effective acquisition and utilisation of these funds during the crisis than in traditional expressions of strategic agility, such as establishing durable and flexible customer relationships, implementing modern, flat organisational structures, ensuring rapid information flow, prioritising human resource management and adopting advanced technologies while emphasizing education and training. Consequently, taking into account these observed phenomena and research outcomes, the formulation of EU aid policies and the conditions for accessing support funds should be approached with great caution. It is recommended to simplify procedures, make use of training and introduce instruments that promote the long-term transformation of structures, as well as ensure efficient monitoring of results, particularly in the context of SME management in turbulent environments.

REFERENCES

- Alqahtani, N., Uslay, C. (2023). Marketing/Entrepreneurship Interface Research Priorities (2023–2026), *Journal of Research in Marketing and Entrepreneurship*, 24(2), pp. 405–419. DOI: 10.1108/JRME-11-2021-0151.
- Ambroziak, A.A. (2023). State Aid Policy in Poland in the Context of the European Union in the Crisis Period 2020–2023. In: *Poland in the European Union. Report 2025* (pp. 35–61), AA. Ambroziak (Ed.). Warsaw: SGH Publishing House.
- Doz, Y.L., Kosonen, M. (2008a). *Fast Strategy: How Strategic Agility Will Help You Stay Ahead of the Game*. Philadelphia: Wharton School Publishing.
- Doz, Y.L., Kosonen, M. (2008b). The Dynamics of Strategic Agility: Nokia's Rollercoaster Experience, *California Management Review*, 50(3), pp. 95–118. DOI: 10.2307/41166447.
- Doz, Y.L., Kosonen, M. (2010). Embedding Strategic Agility: A Leadership Agenda for Accelerating Business Model Renewal, *Long Range Planning*, 43(2–3), pp. 370–382. DOI: 10.1016/j.lrp.2009.07.006.

- NCBR (2024). *Plan działalności NCBR na 2024 rok*, <https://www.gov.pl/attachment/11907262-3ae1-4a72-bc29-8e8763e86a11> (accessed: 22.04.2026).
- Kawecka-Wyrzykowska, E. (2020). Assessment of the European Commission's Proposals for Financing the EU Budget in 2021–2027, *International Journal of Management and Economics*, 56(3), pp. 193–208. DOI: 10.2478/ijme-2020-0018.
- PARP (2024). *Raport o stanie sektora małych i średnich przedsiębiorstw w Polsce 2024*, <https://www.parp.gov.pl/component/publications/publication/raport-o-stanie-sektora-malych-i-srednich-przedsiębiorstw-w-polsce-2024> (accessed: 22.04.2026).
- Roberts, N., Grover, V. (2012). Investigating Firm's Customer Agility and Firm Performance: The Importance of Aligning Sense and Respond Capabilities, *Journal of Business Research*, 65(5), pp. 579–585. DOI: 10.1016/j.jbusres.2011.02.009.
- Roth, A.V. (1996). Achieving Strategic Agility Through Economies of Knowledge, *Planning Review*, 24(2), pp. 30–36. DOI: 10.1108/eb054550.
- Sikora, T., Baranowska-Prokop, E. (2021). The Role of Strategic Agility and Economic Environment Friendliness-Hostility in Explaining the Success of Polish SMEs. In: *Advances in Longitudinal Data Methods in Applied Economic Research* (pp. 267–284), W.N. Tsounis, A. Vlachvei (Eds.). Cham: Springer Nature.
- Sikora, T., Baranowska-Prokop, E. (2025). The Impact of Strategic Agility on the Performance of Polish and Finnish SMEs During the COVID-19 Pandemic: A Comparative Study, *Journal of International Studies*, 18(2), pp. 177–187. DOI: 10.14254/2071-8330.2025/18-2/10.
- Tilman, L.M., Jacoby, G.C. (2019). *Agility: How to Navigate the Unknown and Seize Opportunity in a World of Disruption*. Arlington, VA: Missionday.
- Wales, W.J., Plarida, V., Patel, P.C. (2013). Too Much of a Good Thing? Absorptive Capacity, Firm Performance, and the Moderating Role of Entrepreneurial Orientation, *Strategic Management Journal*, 34(5), pp. 622–633. DOI: 10.2307/23471062.
- Weber, Y., Tarba, S.Y. (2014). Strategic Agility: A State-of-the-Art Introduction to the Special Section on Strategic Agility, *California Management Review*, 56(3), pp. 5–12. DOI: 10.1525/cmr.2013.56.3.5.

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NEW EU INDUSTRIAL POLICY IN TIMES OF CHANGE. RECOMMENDATIONS FOR POLAND

Introduction

Industrial policy is often perceived as market intervention that can distort competition by subsidising selected companies or industries. For this reason, the Treaty on the Functioning of the EU (TFEU) provides a general ban on state aid that could adversely affect trade between member states. This is because the creation of the European single market in 1993 eliminated traditional trade barriers, including not only customs duties and quantitative restrictions but also physical controls at the EU's internal borders as well as technical and fiscal barriers. Consequently, state aid became the last instrument of government intervention in the market to improve competitiveness and protect domestic companies against competitors from abroad [Ambroziak, 2017].

On the one hand, under the TFEU, the European Commission has exclusive competence to authorise state aid, upholding the principles of competition in the European single market. This approach was maintained until the recent pandemic and energy crises, when the Commission significantly relaxed the rules on the admissibility of state aid, allowing greater support for domestic entrepreneurs in countries with more abundant budgetary resources [Ambroziak, 2025a]. On the other hand, it was not until 1992 that soft provisions concerning industry and improvement of its competitiveness at the EU level were introduced into the Treaty establishing the European Community [Kawecka-Wyrzykowska, 2020].

In light of the current changes related to the need to ensure the competitiveness of the EU industry in the context of the twin digital and energy transition, the challenges associated with disrupted supply chains due to the pandemic and the war in Ukraine [Ambroziak, 2025a; Stefaniak et al., 2025], the aim of this chapter is to identify changes in the approach of the European Commission to industrial policy, including legal and financial interventions in the market as part of the new EU industrial policy.

The concept of the (new) EU industrial policy

The approach taken to date by the EU and its institutions, as well as almost all EU member states, has been based on the concept of no active industrial policy at a sectoral level, with the acceptance of horizontal measures. However, we are currently seeing a shift away from the EU's reactive, strictly pro-competitive, open and horizontal industrial policy, towards a proactive approach that considers climate issues, is partly protectionist and focuses on achieving specific objectives in individual industries [Ambroziak, 2025b].

First and foremost, the new industrial policy should be proactive, i.e. ahead of non-EU partners. This is exemplified by the NextGenerationEU fund, which supports economies affected by the pandemic. Secondly, the intervention now aims to address broadly understood pro-development and pro-social aspects related to climate challenges. Furthermore, while maintaining the open nature of EU relations with the world, this policy must protect against unfair competition from non-EU countries and identify key/strategic areas requiring intervention, not just individual sectors. These changes, especially the last one, are related to the risk of state failure [Ambroziak, 2025b].

Coordination as a key instrument of the (new) EU industrial policy

As Kawecka-Wyrzykowska already observed as early as 2020, 'A broad set of measures and areas addressed in EU documents under the umbrella of industrial policy and their implementation, [have] required strong coordination, both at the EU level..., at the Member States' level as well as between both levels' [Kawecka-Wyrzykowska, 2020, p. 21]. Nowadays, one could argue that coordination, or cooperation to achieve shared objectives, underpins the EU's new industrial policy.

The European Commission uses this instrument to identify key sectors and areas of intervention, as well as measures taken by EU member states in the field of industry. These activities result in cooperation platforms between member states, businesses and experts within the framework of the Industrial Forum, as well as sectoral alliances and advisory groups, as set out in new sectoral legal acts (ECA, NZIA, CRM and CMA). Although they are formally only forums for discussion and the exchange of views, lacking a treaty basis, they are, in reality, creating a new model of institutional cooperation within the EU. This model is gradually shifting the burden of decision-making towards the joint management of selected sectors.

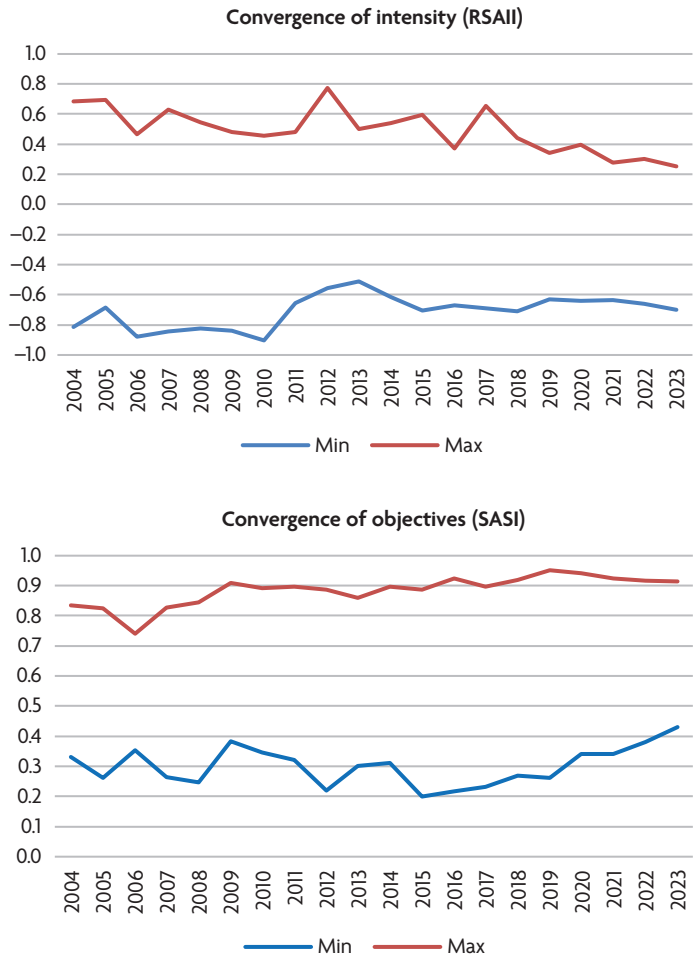
Financing the (new) EU industrial policy

An analysis of data from 2004 to 2023 indicates a relatively high degree of divergence in the intensity (RSAII) and similarity (SASI) in the structure of Industrial State Aid granted by EU member states [for explanation of both indexes, see Ambroziak, 2021]. While there has been a gradual convergence of state aid in EU member states, this is insufficient for joint action to reach common goals concerning twin transition and against what is often unfair competition from outside the EU (Figure 1).

Unfortunately, as a rule, financing new initiatives under the new EU's industrial policy has not changed; the majority of funds constitute state aid granted by EU member states, regardless of their source (both European and domestic). Therefore, the new policy marks a shift away from an individual approach, even though most of the funds are still of this nature, towards a coordinated group approach. At the same time, it is difficult to consider the current approach as strictly sectoral (in the sense of the 1970s); perhaps 'mission-oriented' or 'targeted' would be better terms.

Despite the proposals set out in the Letta [2024] and Draghi [2024] reports, public aid remains the primary source of support, albeit with a slightly different, multilateral dimension. A recently renewed concept is that of Important Projects of Common European Interest (IPCEIs). One of the criteria for launching these projects is participation by at least four EU member states alongside companies, which is intended to limit the risk of a negative impact on competition in the Single European Market. While this solution could strengthen synergies between the countries and entities involved, it is still based on national financing and could increase the disparity in participation. This could lead to further cohesion gaps within the EU, particularly for countries that are forced to implement costly decarbonisation measures [Kawecka-Wyrzykowska, 2025].

Figure 1. Convergence in the intensity and structure of Industrial State Aid in the EU member states in 2000 and 2023



Note: Min and Max represent the minimum and maximum values, respectively, as recorded by EU member states.
Source: Author's own compilation based on European Commission [2025].

Conclusions (for Poland)

The development of new solutions in the field of industrial policy, in terms of both building coordinated actions and managing financial resources, poses a significant challenge for Poland. Firstly, national industrial policy objectives should be identified within the broader framework of economic policy. Secondly, cooperation between economic entities and public administration must be encouraged, despite the current

reluctance due to concerns about corruption. Thirdly, securing funding for pan-European projects (e.g. IPCEI) would probably require curbing Poland's current fragmented approach to supporting entrepreneurs.

REFERENCES

- Ambroziak, A.A. (2021). Poland Towards a New Approach to State Aid Policy After Accession to the European Union. In: *Poland in the European Union. Report 2021* (pp. 37–56), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.
- Ambroziak, A.A. (2025a). State Aid Policy in Poland in the Context of the European Union in the Crisis Period 2020–2023. In: *Poland in the European Union. Report 2025* (pp. 35–61), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.
- Ambroziak, A.A. (2025b). *The New EU Industrial Policy: A Paradigm Shift in Need of Coordination and Funding*. Stockholm: Swedish Institute for European Policy Studies.
- Draghi, M. (2024). *The Future of European Competitiveness: A Competitiveness Strategy for Europe*, https://commission.europa.eu/topics/competitiveness/draghi-report_en (accessed: 06.12.2025).
- European Commission (2025). *State Aid Scorebord* (https://competition-policy.ec.europa.eu/state-aid/scoreboard/scoreboard-state-aid-data_en) (accessed: 06.12.2025).
- Kawecka-Wyrzykowska, E. (2020). A New Industrial Policy in the EU: In Search for a New Paradigm of Public Intervention. In: *New Challenges for the European Union's Industrial Policy: Climate Change, Servitisation, Digitalisation* (pp. 11–36), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.
- Kawecka-Wyrzykowska, E. (2025). Can Poland Afford the Energy Transition? In: *Poland in the European Union. Report 2025* (pp. 63–85), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.
- Letta, E. (2024). *Much More Than a Market: Speed, Security, Solidarity – Empowering the Single Market to Deliver a Sustainable Future and Prosperity for All*, <https://www.consilium.europa.eu/media/ny3j24sm/much-more-than-a-market-report-by-enrico-letta.pdf> (accessed: 06.12.2025).
- Stefaniak, J., Daugeliene, R., Ambroziak, A.A. (2025). Autonomy (or Dependence) of the EU Economy on Critical Services in the Context of the New EU Industrial Policy and Economic Security, *Public Policy and Administration*, 24(3), pp. 234–246. DOI: 10.5755/j01.ppaa.24.3.42097.

BETWEEN NUMBERS AND INSTITUTIONS: PROFESSOR ELŻBIETA KAWECKA-WYRZYKOWSKA AND THE ECONOMICS OF EUROPEAN RESPONSIBILITY

The scholarly contribution of Professor Elżbieta Kawecka-Wyrzykowska occupies a singular and enduring place in Polish economic reflection on European integration. It is distinguished by a sustained and methodologically disciplined effort to understand how the European Union functions as a system of fiscal rules, legal commitments and developmental priorities, and how this system reshapes the economic trajectory of its member states, all without resorting to abstract theorising detached from policy realities or short-term commentary driven by political cycles. Her works consistently demonstrate that European integration is not a single political act that can be evaluated once and for all but a long-term process unfolding through institutions, budgets and obligations extending over decades.

A defining characteristic of Professor Elżbieta Kawecka-Wyrzykowska's scholarly work is its exceptional respect for empirical discipline and conceptual restraint. The Professor has invariably resisted the temptation to frame EU membership in binary terms of benefits versus costs or winners versus losers. Instead, she reconstructs the underlying mechanisms through which European resources are raised, allocated and constrained, revealing the often-overlooked architecture of contributions, rebates, co-financing rules, own resources and conditionality. In her analyses, European funds are never treated as abstract transfers detached from domestic realities; they are embedded in legal frameworks, administrative capacities and political responsibility.

This approach restores to public debate a crucial but frequently neglected dimension: the practical obligations – budgetary, regulatory and administrative – that accompany EU integration [Kawecka-Wyrzykowska, 2023b].

Equally important is the Professor's insistence on a long-term analytical horizon. Poland's relationship with the European budget is never portrayed as static, self-evident or guaranteed but as a sequence of evolving stages marked by access hurdles, income convergence, institutional learning and emerging constraints. This temporal perspective allows Professor Elżbieta Kawecka-Wyrzykowska to show that the same policy instruments – cohesion funding, agricultural support, recovery mechanisms or climate-related transfers – can assume very different meanings depending on a country's development status and its ability to absorb, govern and strategically deploy resources. What appears as a powerful engine of convergence in one phase may later require reform, recalibration or replacement. Such an approach discourages complacency and underscores the fundamentally dynamic nature of European integration [Kawecka-Wyrzykowska, 2023a].

Another recurring and particularly influential theme in the works of Professor Kawecka-Wyrzykowska is the inseparability of economic outcomes from legal and institutional order. She consistently demonstrates that access to European resources depends not only on formal eligibility or negotiated allocations but also on sustained compliance with common rules and shared legal standards. Financial flows are embedded in a legal system, and when this system is weakened or contested, the economic consequences materialise with notable precision. This insight has been especially important in the Polish context, where discussions of sovereignty have often been conducted in isolation from their fiscal and budgetary implications. By linking institutional credibility with quantifiable financial effects, her work advances a more mature understanding of sovereignty as responsibility rather than privilege [Kawecka-Wyrzykowska, 2022].

In recent years, this analytical framework has been applied to one of the most demanding challenges confronting both Poland and the European Union: the energy transition. Here again, Professor Elżbieta Kawecka-Wyrzykowska avoids both alarmist rhetoric and complacent postponement. She neither underestimates the scale and cost of transformation nor accepts the notion that delaying action constitutes a rational economic strategy. Instead, she reframes the debate by demonstrating that the true choice lies between a managed transition, supported by European instruments and coordinated public policy, and an unplanned adjustment driven by rising costs, regulatory pressure, loss of competitiveness and deteriorating energy security. In this perspective, climate policy ceases to be an external constraint and

becomes a test of strategic governance and long-term economic rationality [Kawecka-Wyrzykowska, 2022, 2025].

A further strength of Professor Elżbieta Kawecka-Wyrzykowska's contribution builds on her ability to bridge academic analysis and policy relevance without sacrificing scholarly rigour. Her work is firmly rooted in official data, legal acts and budgetary documents, yet it never reduces economic inquiry to technical reporting. Instead, she consistently interprets figures and institutional arrangements in light of broader development strategies, distributional consequences and long-term incentives. This capacity to connect technical detail with structural interpretation has made her analyses particularly valuable not only to researchers, but also to public institutions, advisory bodies and successive generations of students seeking to understand the real mechanics of European integration beyond declarative politics [Kawecka-Wyrzykowska, 2021, 2023a].

What ultimately unites these analytical strands is a coherent vision of the European Union as a community of shared risks and shared commitments. Professor Elżbieta Kawecka-Wyrzykowska's scholarly quest rejects the reduction of membership to simple accounting balances, yet it never abandons accounting discipline. Numbers matter – but only when interpreted within institutional frameworks, legal rules and collective objectives [Kawecka-Wyrzykowska, 2021]. This balanced stance explains the enduring relevance of her scholarship across audiences: economists value its methodological rigour, policymakers appreciate its realism, and students benefit from its clarity, restraint and intellectual honesty.

Beyond their substantive contribution, her works also reflect an intellectual ethos that has become increasingly rare. There is no pursuit of easy conclusions, no rhetorical excess and no instrumentalisation of scholarship for short-term polemics. Instead, there is patience, precision and a profound respect for complexity. In a field often polarised between technocratic simplification and ideological confrontation, Professor Kawecka-Wyrzykowska has consistently shown that serious engagement with European integration requires both analytical discipline and normative responsibility.

Taken together, her works constitute more than an interpretation of Poland's position within the European Union. They are an invitation to think about integration as a continuous exercise in accountability – financial, institutional and political. At a time when the European project is facing unprecedented internal and external pressures, such a perspective is not only academically valuable but also intellectually and civically indispensable.

REFERENCES

- Kawecka-Wyrzykowska, E. (2021). Changes in the System of Own Resources of the EU Budget After 2021: Implications for Poland. In: *Poland in the European Union. Report 2021* (pp. 73–90), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.
- Kawecka-Wyrzykowska, E. (2022). Financing Energy Transition in Poland: Possible Contribution of EU Funds, *European Integration Studies*, 16, pp. 65–77. DOI: 10.5755/j01.eis.0.16.31152.
- Kawecka-Wyrzykowska, E. (2023a). *Europejskie programy wsparcia finansowego dla Polski w okresie przedakcesyjnym oraz przepływy finansowe między Polską a unijnym budżetem po akcesji do Unii Europejskiej*. Warsaw: Instytut Debaty Eksperckiej i Analiz.
- Kawecka-Wyrzykowska, E. (2023b). *Financial Flows Between Poland and the EU in 2004–2023 and Prospects for their Changes*, <https://gazeta.sgh.waw.pl/en/people-events/financial-flows-between-poland-and-eu-2004-2023-and-prospects-their-changes> (accessed: 25.09.2025).
- Kawecka-Wyrzykowska, E. (2025). Can Poland Afford the Energy Transition? In: *Poland in the European Union. Report 2025* (pp. 63–85), A.A. Ambroziak (Ed.). Warsaw: SGH Publishing House.



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