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CONTENTS

MANAGEMENT theory

ASYMMETRIES OF THE EU SINGLE MARKET EFFECTS IN THE POLISH ECONOMY

Dariusz Nowak, Penka Shishmanova, Emil Tzanov..... 5

MANAGEMENT practice

CRITICAL FACTORS OF CAREER PERSPECTIVE AND CAREER MANAGEMENT IN HIGHER EDUCATION: A MULTI-CRITERIA SWARA APPROACH

Jurica Bosna, Zoran Mastilo, Adis Puška 25

THE ANTIDISSIPATIVE APPROACH TO OPTIMISING THE COSTS OF HOTEL BUSINESSES

Olena Sushchenko, Margaryta Boiko,
Myroslava Bosovska, Mariia Kulyk 41

LINKING CAREER EXPECTATIONS AND INTERNAL MARKETING: INSIGHTS FROM HIGHLY SKILLED PROFESSIONALS

Violeta Rapuano, Ausrine Greiciute-Soloveje, Rasa Rudaitiene..... 62

FINTECH'S ROLE IN IMPROVING ACCESS TO FINANCE FOR SMALL BUSINESSES IN UZBEKISTAN

Azam Akhmedov, Mariana Petrova,
Izzatulla Levakov, Mukhtorjon Makhmudov..... 88

THE GROWING ROLE OF SOVEREIGN WEALTH FUNDS IN MANAGING FOREIGN EXCHANGE ASSETS

Ivaylo Mihaylov 109

ASYMMETRIES OF THE EU SINGLE MARKET EFFECTS IN THE POLISH ECONOMY

Dariusz Nowak¹,
Penka Shishmanova²,
Emil Tsanov³

Abstract: The European Union Single Market represents one of the most advanced examples of economic integration in the contemporary global economy. The main thing about it is that it functions as a mechanism that systematically reduces transaction costs and increases the accessibility of national markets to economic actors from other Member States. The aim of this study is to present the effects of the asymmetries of the EU single market on the Polish economy through a combination of data and methods. To pursue this objective, we use the industry-level International Trade and Production Database for Estimation (ITPD-E) of the U.S. International Trade Commission, and we rely on the workhorse empirical model of trade – the gravity equation, which we estimate for each of the 170 ITPD-E industries following the recommendations for gravity estimations.

Against this backdrop, the contribution of our paper is to obtain estimates of the asymmetric effects of the Single Market on the exports vs. imports for Poland, looking at important sectors of the Polish economy such as Agriculture and Agricultural Products, Mining and Energy, Manufacturing, Services.

As a final result, it can be stated that integration with the EU Single Market revealed and reinforced Poland's existing comparative advantages in primary production, making the agricultural raw materials sector one of the earliest beneficiaries of trade liberalisation. At the same time, it entrenched an asymmetric pattern of specialisation, in

¹ Poznań University of Economics and Business, Poland, e-mail: Dariusz.Nowak@ue.poznan.pl, ORCID: 0000-0001-7448-6101

² Tsenov Academy of Economics, Bulgaria, e-mail: p.shishmanova@uni-svishtov.bg, ORCID:0000-0002-4806-8050

³ Tsenov Academy of Economics, Bulgaria, e-mail: emiltsanov@gmail.com, ORCID: 0009-0003-0957-1301

which the growth of exports of raw products coexisted with a relatively greater dependence on imports of goods with a higher degree of processing

Keywords: European integration, single market, asymmetric trade effects, Polish economy, sector analysis.

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1. Introduction

Poland's accession to the European Union on 1 May 2004 marked the culmination of one of the most complex negotiation processes in the history of the foreign policy of the Third Republic of Poland (Tkeshelashvili & Reichardt, 2025). The path to membership began with the signing of the European Agreement and the gradual development of an association with the European Communities, while the decisive phase took place during the period of intensive accession negotiations, which involved the adoption of the European Union's legal framework (*acquis communautaire*). This process encompassed almost all areas of state activity and required profound institutional and economic transformations.

The significant complexity of the negotiations resulted mainly from profound disparities in economic development between Poland and the EU 15-member states. The Polish economy continued to bear strong marks of the post-socialist transformation, and its production structure was largely low in competitiveness, energy-intensive, and oriented towards regional markets rather than competition within the EU single market (Tkeshelashvili & Reichardt, 2025). In particular, traditional industrial sectors were characterised by low levels of innovation and productivity, which justified the need for extensive restructuring as well as the negotiation of transitional periods for the most vulnerable sectors.

Infrastructural backwardness presented a formidable constraint on development. The pre-accession transport network did not meet the requirements of an economy integrated into the European market, while significant deficiencies also affected energy, municipal, and environmental infrastructure (Grzelakowski, 2016). Compliance with EU standards in these areas represented one of the costliest aspects of the accession process, requiring substantial, long-term investment.

During the negotiations, a compromise was reached under which Poland committed itself to the full implementation of the EU *acquis* and to profound economic modernisation, while simultaneously securing transitional

periods as well as access to resources from the cohesion policy and the Common Agricultural Policy. The combination of strict integration requirements with a broad scale of financial support meant that accession to the EU represented both a major challenge and an important development opportunity.

From the perspective of the functioning of the European single market, Poland's integration had a clearly asymmetric character. Empirical studies indicate that the benefits of integration are not distributed evenly across member states or economic sectors, and that trade liberalisation may lead to asymmetric export-import effects (Balcerowicz, 2007; Michałek & Hagemejer, 2024; Siedschlag, 2023; National Board of Trade, 2015; Dura & Pasimeni, 2025; Breinlich et al., 2023). In less developed countries, production and export effects tend to play a relatively greater role, whereas in more advanced economies consumer benefits are more strongly pronounced (Zakaria, 2014).

The EU Single Market and its associated economic integration facilitate firms' access to foreign markets while simultaneously intensifying competition from foreign producers domestically. Furthermore, compliance with EU standards in these areas was one of the most costly elements of the accession process, requiring substantial long-term investment. Consequently, integration within the Single Market generates two types of effects at the same time: production-side effects and consumption-side effects (European Commission, 2025). Their relative strength and importance depend on the structure of the economy, the level of development, competitive advantages, and the degree to which individual sectors are adapted to the conditions of international competition.

Production-side effects are revealed primarily through export growth. The reduction of trade barriers lowers the costs of entering foreign markets, allows firms to achieve economies of scale, and promotes specialisation in line with comparative advantages. For enterprises, this creates opportunities to increase sales volumes, improve productivity, and integrate into international value chains. In relatively less developed countries, such as Poland at the time of its accession, these effects may be particularly significant, as integration offers the potential for the accelerated modernization of production structures and the expansion of sectors that are competitive in terms of costs or quality.

Consumption-side effects, in turn, are primarily associated with an increase in imports. The opening of the domestic market to competition from other member states leads to greater availability of goods, lower prices, and

improvements in the quality and diversity of supply. These benefits are realised mainly in the form of higher consumer welfare; however, they may simultaneously exert competitive pressure on domestic producers, particularly in sectors characterised by lower productivity or limited capacity for technological adjustment (Bloch & McDonald, 2000). In this sense, trade integration may result in structural shifts in which some industries gain while others lose (Bauer et al., 2024).

In the case of Poland, European integration represented not only a process of income convergence, but also a profound transformation of the foreign trade structure and sectoral specialization. From an analytical perspective, this justifies moving away from averaged assessments of integration effects toward an approach that accounts for differences between export and import outcomes. Accordingly, this article focuses on an empirical analysis of these asymmetries in Poland's trade with the European Union at the level of individual economic sectors.

2. Poland in the EU Single Market - Analytical Framework

The main objective of our paper is to obtain estimates of the impact of the single market on exports versus imports, specifically for Poland. To achieve this goal, we utilize the results of our country-and industry-specific research. It includes estimates of the impact of the single market on trade for all EU member states (Fontagne et al., 2025). The research itself is based on the US International Trade Commission's Industry-Level International Trade and Production Database (ITPD-E) (Borchert et al., 2020; Borchert et al., 2022) and an empirical trade model, the gravity equation, which estimates each of the 170 ITPD-E industries, following the recommendations for gravity estimates by Larch et al. (2025).

The distinction between export-side and import-side effects is therefore of key importance for the interpretation of the outcomes of the Single Market. In aggregated analyses, these effects are often considered jointly, which leads to conclusions about "average" benefits of integration. Such an approach may be misleading, particularly from the perspective of an individual country, as a positive net effect at the level of the overall economy can conceal significant asymmetries across sectors as well as between the production and consumption sides of the market (Basco et al., 2021).

In the case of Poland, this issue is of particular relevance. Accession to the European Union involved integrating an economy with a different

production structure and a lower level of development into a highly competitive economic area. The Single Market not only expanded Polish firms' access to foreign markets but also exposed them to direct competition from producers in more advanced economies. The scale and direction of these effects, however, differed depending on the sector, the level of technological advancement, and the adjustment capacity of individual industries.

Therefore, macroeconomic analyses that rely on averaged integration effects at the level of the European Union or the national economy as a whole are insufficient to capture the actual transformation of Poland post-2004. It is critical to determine not merely whether trade increased, but rather which sectors and market sides (export versus import) exhibited the most dominant integration effects.

A sectoral approach makes it possible to capture these differentiated mechanisms. Analysing export-side and import-side effects separately at the industry level allows researchers to identify sectors in which integration supported the expansion of production and improvements in competitiveness, as well as those in which consumption-side effects and import pressure were dominant (European Commission, 2024). In the case of Poland, this is particularly important due to the varying degrees of productivity and technological advancement across industries and their different positions within European value chains.

Adopting such an analytical framework makes it possible to view the Single Market not as a uniform development impulse, but as a process that selectively strengthens some segments of the economy while subjecting others to intense competition (Amiti & Heise, 2021). In this chapter's remainder, this approach is applied to an empirical analysis of sectoral asymmetries in the effects of Poland's integration into the EU market, focusing specifically on the relationship between export and import outcomes at the industry level.

3. Data and Empirical Approach

The empirical analysis presented below is based on sector-level estimates of the impact of Poland's membership in the European Union on its trade with other member states. The data for this analysis are based on over 9,300 country- and industry-specific estimates of the trade impact of the Single Market for all EU members (Fontagne et al., 2025). These are in turn

based on a gravity model by Larch et al. (2025) using the US International Trade Commission's Industry-Level International Trade and Production Database (ITPD-E) (Borchert et al., 2020; Borchert et al., 2022).

Of all the available results from the previous study (Fontagne et al., 2025), only those concerning the various economic sectors of Poland were extracted for this analysis. The adopted approach aims to capture the differentiated effects of economic integration that are not visible in aggregated macroeconomic data, while maintaining a clear and straightforward interpretation of the results.

4. Estimation Results and Analysis

To organise the empirical material and facilitate the interpretation of the findings, the first step involved aggregating detailed industries into broad economic sectors in accordance with the classification used in the ITPD-E database. This allows for a synthetic comparison of the direction and relative strength of integration effects on the export and import sides across key segments of the economy. The aggregated sectoral results are presented in Table 4.1, which serves as the starting point for the subsequent empirical analysis.

Table 4.1

Sectoral estimates of the impact of the EU Single Market on Poland's trade

Sector (ITPD-E)	Export effect (PL to EU)	Import effect (EU to PL)	Dominant direction
Agriculture and agricultural products	3.70	2.15	Eksport
Mining and energy	0.07	-0.75	Eksport
Manufacturing	0.62	0.16	Eksport
Services	-1.75	-0.08	Import

ITPD-E - International Trade and Production Database for Estimation

Source: Author's own calculations derived from sector-level estimates of the impact of EU accession on Poland's exports to the EU and imports from the EU (ITPD-E, 170 industries).

The aggregated sectoral results presented in Table 4.1 indicate that the impact of the EU Single Market on Poland's trade was clearly differentiated across sectors of the economy. In agriculture and manufacturing, export-side effects were dominant, suggesting that integration primarily supported the expansion of production and foreign sales in these areas. A different pattern emerges in the services sector, where

relatively weaker export effects combined with less negative import effects point to the predominance of the consumption channel. In the mining and energy sector, the impact of integration was more limited, reflecting the regulatory and structural specificities of this segment of the economy. These results confirm the validity of a sectoral approach as a starting point for further, more detailed analysis of integration asymmetries.

The analysis is based on sectoral data covering a broad range of economic activities, from agriculture and manufacturing to services. Each observation refers to a specific industry and describes the directional impact of European integration on trade, which is analysed separately for Poland's exports to the European Union and for its imports from the EU. This approach makes it possible to examine not only the magnitude of the Single Market's impact but also its structure and the asymmetry between the production and consumption sides of the economy.

Table 4.2

Industry distribution by the sign of export and import effects in Poland

Type of effect in the industry	Number of industries	Share (%)
Exports (+), Imports (+)	95	55.9
Exports (+), Imports (–)	44	25.9
Exports (–), Imports (+)	9	5.3
Exports (–), Imports (–)	22	12.9
Total	170	100.0

Source: Author's calculations based on sector-level estimates of EU membership's impact on Poland's exports to, and imports from, the EU (ITPD-E, 170 industries).

Table 4.2 shows that, in more than half of the industries, Poland's integration into the EU Single Market was associated with increased trade on both the export and import sides, indicating a broad incorporation of these sectors into intra-EU trade flows. At the same time, a significant share of industries experienced positive export effects combined with negative import effects, suggesting selective benefits that accrued primarily to producers. The relatively small proportion of industries exhibiting negative export effects alongside positive import effects indicates that cases of strong, one-way import competition were limited in Poland.

In practical terms, this means that two values are available for each sector: an estimate of the export effect and an estimate of the import effect. Positive values indicate increased trade attributable to Single Market integration, whereas negative values point to a relative weakening of trade flows. However, what is crucial is not only the sign of the estimate itself, but

also the relationship between the export and import effects within the same sector.

If, in a given industry, the export effect clearly outweighs the import effect, this can be interpreted as a relative predominance of producer-side benefits. In such cases, integration supports the expansion of production, growth in foreign sales, and an improvement in the competitive position of domestic firms. The opposite situation, where the import effect dominates, indicates that the main benefits of integration materialize on the consumption side, accompanied by increased competitive pressure on domestic producers. In many sectors, a mixed pattern is also observed, in which integration simultaneously increases both exports and imports, albeit with differing intensities.

Table 4.3

Structure of industries by the dominant channel of integration effects

Dominant effect	Criterion	Number of industries	Share (%)
Export effects	Export larger Import	116	68.2
Import effects	Import larger Export	54	31.8
Total		170	100.0

Source: Author's own calculations based on sector-level estimates of the impact of EU membership on Poland's exports to the EU and imports from the EU.

Table 4.3 demonstrates that, in a clear majority of industries, Poland's integration into the EU Single Market had a stronger impact on exports than on imports. This indicates that, at the industry level, the Single Market primarily functioned for the Polish economy as a mechanism supporting the expansion of production and foreign sales, even though significant import pressure was present in a number of sectors.

This approach allows for an ordered interpretation of the results, which is essential for the subsequent sectoral analysis. Rather than focusing on individual numerical values, the emphasis is placed on identifying three distinct patterns: industries with dominant export-side effects, industries with prevailing import-side effects, and sectors where integration led to relatively balanced trade growth in both directions. These exact patterns serve as the starting point for interpreting the structural effects of the Single Market on the Polish economy.

Empirical results are presented in the form of sectoral tables that report estimates of export and import effects across individual industries. This format facilitates direct comparisons between sectors and allows for the identification of areas in which integration asymmetries are particularly

pronounced. The data are used in both aggregate assessment and detailed analyses of selected sectoral groups.

Although the analysis focuses primarily on Poland, the results are interpreted against a broader European background. Aggregated information for other EU member states serves as a reference point, helping to place the Polish case within a wider integration pattern, without constituting a separate object of analysis.

The applied approach carries certain inherent limitations; namely, the estimates reflect associations between EU membership and sectoral trade rather than full causal mechanisms, nor do they isolate the impacts of individual policy instruments. Nevertheless, the analysis establishes a coherent and empirically grounded overview of the sectoral effects of Poland's integration into the EU Single Market, providing a necessary baseline for subsequent empirical inquiry.

The analysis presented in the previous subsections demonstrated that the effects of Poland's integration into the EU Single Market had a clearly asymmetric character, with export-side effects dominating at the industry level. However, the mere identification of this asymmetry does not allow for a full assessment of its structural significance. Crucial is the question of which economic sectors generated the dominant export effects, and which sectors exhibited a more import-oriented or mixed integration.

For this purpose, the subsequent analysis is conducted at the level of economic sectors, distinguished in accordance with the ITPD-E classification. It covers four main areas of economic activity: agriculture and agricultural products, mining and energy, manufacturing, and services. This level of aggregation makes it possible to capture differences in the responses of individual segments of the economy to the mechanisms of the Single Market, arising from variations in trade intensity, cost structures, the degree of regulation, and the ability to exploit economies of scale.

These sectors perform different functions within the economy and differ in their susceptibility to integration impulses. Agriculture and manufacturing are characterised by relatively high trade intensity in goods and direct exposure to price and quality competition in the EU market. In their case, the reduction of trade barriers and access to a large, integrated market may translate directly into export growth and an expansion of production scale. By contrast, the services sector, encompassing both traditional and modern forms of activity, is subject to regulatory constraints and institutional barriers to a greater extent, which may modify the way in which the Single Market affects trade flows.

The mining and energy sector occupies a distinct position. Due to high regulation, energy security concerns, and the unique characteristics of commodity markets, this sector responds to trade integration differently than industries fully exposed to intra-EU competitive mechanisms. Consequently, one can expect the asymmetry between export and import effects to vary across sectors in both magnitude and nature.

The transition to a sectoral analysis therefore enables us to address whether the dominance of export-side effects at the overall macroeconomic level resulted from a broad, uniform impact of integration, or rather from a strong concentration of benefits in selected economic segments. In other words, this analysis allows us to assess whether the Single Market operated in Poland as a universal mechanism or as a selective one - strengthening specific sectors while simultaneously increasing competitive pressure in others.

The remainder of this subsection details the asymmetric integration effects across the main sectors of the economy. Based exclusively on sector-level estimates of export and import effects for Poland, this analysis aims to identify structural patterns that shaped how individual sectors responded to the EU Single Market.

Agriculture and agricultural products

In the agriculture and agricultural products sector, integration with the EU Single Market was primarily associated with the dominance of export-side effects, as confirmed by the structure of the empirical results. In the analysed sample, 13 out of 20 product categories exhibited a predominance of Poland's exports to the EU, while only 5 categories were characterised by a predominance of imports, and 2 displayed a broadly balanced pattern. This indicates that the reduction of trade barriers and full integration into the EU market for sales supported the expansion of foreign sales by Polish agri-food producers to a greater extent than the growth of imports from other member states.

Export dominance was particularly evident in basic crop products and selected segments of animal production. This group included wheat, maize, and other cereals, as well as soybeans and other oilseed crops, which benefited from relatively low production costs and large economies of scale. Strong export performance was also observed for live pigs and eggs, indicating the competitiveness of the Polish livestock sector within the EU market. In these industries, integration enabled the effective exploitation of cost advantages and improved access to markets with high demand.

By contrast, import dominance occurred mainly in segments that are more sensitive to quality-related, climatic, or structural factors. This applied,

among others, to fresh fruit and live cattle, where Poland relied to a greater extent on imports from EU countries with more favourable natural conditions or more specialised production structures. A similar pattern was observed for spices and other unclassified agricultural products, where trade often has a complementary character and cost advantages do not play a decisive role.

An important category also consisted of products with a broadly balanced effect, such as pulses and forestry products, where the scale of exports and imports was comparable. In these cases, integration with the EU Single Market led primarily to an intensification of two-way trade rather than to a clear shift in the trade balance in one direction. This phenomenon can be interpreted as the result of a high degree of substitutability and similar production conditions across member states.

The pro-export character of integration in the agricultural sector can be linked to several structural factors. First, at the time of accession to the European Union, Poland possessed significant cost advantages resulting from relatively low labour costs and the large availability of agricultural land. Second, the harmonisation of sanitary and quality standards, although initially costly, enabled full participation in intra-EU trade on equal terms in the longer run, thereby increasing the credibility of Polish producers in foreign markets.

Despite noticeable internal differentiation, from a sectoral perspective, agriculture and agricultural products belong to those areas of the economy in which the EU Single Market affected Poland primarily as a supply-side strengthening mechanism. The increase in imports, while present in selected segments, did not lead to a lasting weakening of domestic producers' positions, and competitive pressure was largely offset by expanding foreign sales opportunities. As a result, this sector constitutes one of the clearest examples of the pro-export character of European integration in the Polish economy. A summary is presented in Table 4.4.

Table 4.4

Asymmetry of integration effects in the agriculture and agricultural products sector

Category of dominance	number of industries	Share (%)
Export dominance from Poland to the EU	13	65
Import dominance from EU to Poland	5	25
Balanced effect	2	10
Total	20	100

Source: Author's own calculations based on sector-level estimates of the impact of EU membership on Poland's exports to the EU and imports from the EU.

Manufacturing (key sector)

Manufacturing constitutes the most extensive and diversified segment in sectoral analysis, reflecting its intermediary role between raw-material extraction and final consumption. It encompasses a wide range of activities—from agri-food processing and the chemical and materials industries to the production of machinery, equipment, and transport. This broad scope highlights the central role of manufacturing in a modern economy, as well as its strong linkages with both the domestic market and international value chains. Consequently, the manufacturing sector is highly sensitive to integration processes and uniquely positioned to leverage the benefits of the EU Single Market.

The empirical results clearly indicate that the strongest concentration of export-side asymmetries occurred precisely in manufacturing. Among the analysed industries, a clear majority exhibited higher values of the export effect than of the import effect, confirming that European integration in this sector operated primarily as a mechanism supporting the expansion of production and foreign sales, rather than merely as a source of competitive pressure from imports.

Particularly clear examples of the pro-export impact of integration are visible in the agri-food industry, which constitutes an important component of the manufacturing sector. Very strong export effects were observed, among others, in the case of processed vegetables, raw and refined sugar, cocoa products, and malt beverages, where the differences between export and import effects were substantial. In these industries, integration enabled the exploitation of both cost advantages and increasing production specialisation, which translated into a sustained expansion in EU markets.

An equally strong export predominance was observed in the chemical and plastics industries, including the production of pharmaceuticals, pesticides, paints and varnishes, as well as plastic products. These industries are characterised by a high degree of product standardisation and significant production scale, which facilitates the utilisation of Single Market benefits such as the harmonisation of technical regulations and simplified access to foreign markets.

Another important area of concentration of export effects was the metal and machinery industries. A clear export predominance was observed, among others, in basic iron and steel, fabricated metal products, machine tools, machinery for metallurgy and mining, as well as optical instruments and measuring equipment. In these cases, integration facilitated the inclusion of

Polish firms in European supply chains, often in the role of specialised producers of components or semi-finished goods.

At the same time, within the manufacturing sector there were also industries characterised by more balanced effects or by locally intensified import pressure. This applied, among others, to parts of the clothing industry, selected construction materials (such as cement and ceramic products), and certain segments of transport equipment manufacturing, where competition from producers in other EU member states was relatively stronger. In these cases, integration tended to lead to an intensification of two-way trade rather than to a clear dominance of exports.

The dominance of export-side effects in manufacturing had a deeply structural character. It resulted from the combination of initial cost advantages with processes of technological modernisation, quality improvement, and production reorganisation following accession to the European Union. The reduction of non-tariff barriers and the integration of intermediate markets enabled firms to gradually move up global value chains, thereby strengthening the durability of export effects.

Despite internal heterogeneity, from a sectoral perspective, manufacturing remains the most pronounced example of the pro-export impact of the EU Single Market on the Polish economy. It is in this sector that integration translated most strongly into a lasting reallocation of production and an improvement in the competitive position of domestic firms in the EU market, making manufacturing the key carrier of integration effects across the economy as a whole. A summary is presented in Table 4.5.

Table 4.5

Asymmetry of integration effects in the manufacturing sector

Category of dominance	number of industries	Share (%)
Export dominance from Poland to the EU	63	68.5
Import dominance from EU to Poland	20	21.7
Balanced effect	9	9.8
Total	92	100

Source: Author's own calculations based on sector-level estimates of the impact of EU membership on Poland's exports to the EU and imports from the EU.

Mining and energy

In the mining and energy sector, the effects of integration with the EU Single Market were relatively weaker and significantly less clear-cut than in other areas of the economy. Unlike agriculture and manufacturing, where pronounced export-side effects dominated, this sector exhibited an almost

symmetrical distribution of export and import advantages. Among the ten analysed product categories, four showed export predominance, four import predominance, and two a broadly balanced effect. This confirms the limited role of market integration in shaping the structure of trade flows in this segment.

On the export side, advantages were observed primarily in traditional segments of the sector, such as hard coal and lignite mining, coke products, as well as gas production and distribution. In these areas, however, the positive export effects were largely historical and structural in nature, linked to the existing resource base and domestic infrastructure, rather than directly to the mechanisms of the Single Market. European integration did not constitute the main factor stimulating trade expansion here, but rather served as a background for the continuation of already established trade patterns.

By contrast, import predominance was observed in segments that are crucial from the perspective of a modern energy economy, such as crude oil and natural gas extraction, petroleum refining, electricity generation, and nuclear fuel processing. In these cases, import dominance resulted primarily from limited domestic resource endowments, the high capital intensity of investments, and strong linkages to international energy markets. Integration with the European Union therefore tended to support the diversification of supply sources rather than the development of competitive export capacity.

The category of a broadly balanced effect, encompassing iron ore mining as well as other mining and quarrying activities, highlights areas where integration primarily led to a moderate intensification of two-way trade without a clear shift in the trade balance. These products are characterized by a low degree of processing and a strong dependence on local geological conditions, which limits their susceptibility to classical mechanisms of intra-EU competition.

The weaker response of the mining and energy sector to European integration largely stems from its institutional and regulatory specificity. Because energy and electricity markets are characterised by heavy regulation, significant state intervention, and strong ties to national security and supply policy, Single Market measures - such as reducing trade barriers and regulatory harmonisation - translate only to a limited extent into changes in the scale and direction of trade flows.

From a sectoral perspective, mining and energy represent an area of the economy where the EU Single Market exerted an indirect and selective influence, rather than generating strong export- or import-driven impulses. Although trade asymmetries were present, they were weak and

unsystematic. This implies that the sector played a stabilising, rather than a dynamically adjusting, role in the process of European integration. A summary is presented in Table 4.6.

Table 4.6

Asymmetry of integration effects in the mining and energy sector

Category of dominance	number of industries	Share (%)
Export dominance from Poland to the EU	4	40
Import dominance from EU to Poland	4	40
Balanced effect	2	20
Total	10	100

Source: Author's own calculations based on sector-level estimates of the impact of EU membership on Poland's exports to the EU and imports from the EU.

Services

The services sector presents a different picture than the production sectors; however, its key characteristic is not the dominance of imports, but rather a relatively high degree of balance between export and import effects. Empirical results indicate that among the 23 analysed service categories, 11 exhibited an export predominance (47.8%), 9 showed an import predominance (39.1%), and 3 were characterised by a broadly balanced effect (13.1%). This suggests that the EU Single Market intensified trade in services in both directions, and that its impact in this sector took the form of two-sided market integration rather than a clearly pro-export expansion, which is more typical of manufacturing.

On the export side, advantages were observed in both traditional segments and areas with higher value added. The most prominent examples include travel-related services, insurance and pension services, as well as charges for the use of intellectual property. In these cases, stronger export performance is linked to the growing international presence of Polish entities (e.g., in servicing tourism flows) and the internalization of intangible value (such as licenses and copyrights). This mechanism is particularly sensitive to the harmonization of rules within the internal market. Additionally, export predominance was observed in certain production-related services, such as manufacturing services on physical inputs owned by others, and maintenance and repair services. This trend aligns with Poland's role as an operational base for firms operating within European production networks.

At the same time, the services sector also included segments characterized by import predominance, particularly in areas where scale,

brand recognition, and international distribution networks play a significant role. This group included, among others, other business services, trade-related services, as well as transport and construction. In these areas, integration facilitated an increased presence of foreign entities in the domestic market, which can be interpreted as the result of liberalization and the easing of conditions for cross-border service provision and establishment under the freedom of establishment. From the perspective of the domestic economy, this does not necessarily imply an unequivocally negative balance; rather, it is often part of a broader process of specialization in which service imports complement domestic capabilities in terms of skills or capital.

An important finding is also the concentration of broadly balanced effects in modern and social services, namely financial services, telecommunications, computer and information services (ICT), as well as health services. In these cases, the absence of a clear predominance on either side indicates a strong embedding in Single Market mechanisms, combined with constraints on expansion arising from regulation, standards, and the requirement of local presence. Integration increases competition and service availability in these areas while supporting the development of domestic providers through standardisation and access to a larger market.

From a sectoral perspective, the EU Single Market operates in services primarily by deepening market integration and boosting two-way trade, rather than skewing toward exports or imports. This contrasts with manufacturing, which is characterized by strong, structural export effects. In contrast, the integration of services drives increased competition, the diffusion of standards, and the internationalisation of both demand and supply. This contrast confirms the selective nature of European integration: its impact is strongest in sectors highly responsive to economies of scale and standardisation, such as manufacturing, whereas in services, it fosters a balanced intensification of exchange. A summary is presented in Table 4.7.

Table 4.7
Asymmetry of integration effects in the services sector

Category of dominance	number of industries	Share (%)
Export dominance from Poland to the EU	11	47.8
Import dominance from EU to Poland	9	39.1
Balanced effect	3	13.1
Total	23	100

Source: Author's own calculations based on sector-level estimates of the impact of EU membership on Poland's exports to the EU and imports from the EU.

5. Conclusion

The sectoral analysis demonstrates that while the export-side effects of EU Single Market integration dominated the Polish economy as a whole, their sectoral distribution was highly uneven. Furthermore, the asymmetry between export and import effects varied significantly based on economic activity profiles, the degree of processing, regulatory intensity, and sector-specific susceptibility to intra-EU competition.

The strongest and most persistent export effects were concentrated in production-oriented sectors—particularly manufacturing—which played a key role in absorbing integration impulses. In this sector, the EU Single Market operated primarily as a mechanism for expanding production, increasing foreign sales, and permanently integrating Polish firms into European value chains. This pro-export effect of integration was broad and systemic, encompassing numerous industries with varying levels of technological advancement. Agriculture and agricultural products also benefited from integration, although the scale of these effects was smaller and their internal distribution more heterogeneous than in manufacturing.

A distinct character of integration emerged in the services sector, proving to be the most balanced among all analysed areas of the economy. The absence of a clear dominance of either export or import effects indicates that the EU Single Market affected this sector primarily by intensifying two-way trade, increasing competition, and internationalizing both supply and demand. In some service segments, integration supported the export expansion of domestic firms; in others, it increased the presence of foreign services in the domestic market, which generated consumer benefits. Therefore, the outcome was not a one-sided asymmetry, but rather a deepening of market integration of a horizontal nature.

The mining and energy sector responded to European integration in the most limited manner. Its regulatory specificity, the significant role of the state, its links to energy security policy, and its limited susceptibility to classical Single Market trade mechanisms reflected in a relatively weak and symmetrical structure of export and import effects. As a result, integration in this area was indirect and selective, and its importance for structural change was smaller than in other sectors.

The collected results confirm that the EU Single Market did not affect the Polish economy as a uniform development impulse, but rather as a selective mechanism. It strengthened sectors highly responsive to economies of scale, standardisation, and the integration of value chains,

while simultaneously increasing competition and adjustment pressure in other areas. The asymmetry between export and import effects was structural and long-term, constituting an important element of changes in Poland's trade structure and economic specialisation following EU accession.

The sectoral conclusions formulated in this way provide a direct starting point for further analysis; in particular, the examination of asymmetries in the effects of integration in bilateral settings. Analysing trade relations between Poland and selected EU member states makes it possible to deepen the interpretation of sectoral results and better understand how integration mechanisms translate into specific trade patterns within the EU Single Market.

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