

Statistical analysis methods in the management of enterprises' foreign economic activity

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Abstract. The aim of this study was to assess the potential for applying statistical tools to support the management decision-making process in the field of foreign economic activity, using Nokia Corporation as a case study. The methodology was based on time series analysis, comparative statistical analysis, structural analysis, correlation analysis and trend forecasting. It was found that the European Union's imports in trade with countries outside the Union rose from 2,123.3 billion European Currency Units/EUR in 2021 to 2,523.0 billion European Currency Units/EUR in 2025, whilst exports increased from 2,180.9 billion European Currency Units/EUR to 2,643.8 billion European Currency Units/EUR. The largest foreign trade deficit was recorded in 2022 at 431.96 billion European Currency Units/EUR. Germany took the lead with exports of EUR 689.2 billion and a trade surplus of EUR 215.8 billion. The largest surpluses in the product structure were generated by chemical products and related goods (EUR 255.99 billion) and machinery, equipment and transport vehicles (EUR 172.7 billion), whilst the largest deficit was observed in mineral fuels, lubricants and related products (EUR 298.1 billion). In the case of Nokia Corporation, it was established that the largest volumes of net sales were generated in the Europe, Middle East and Africa and Americas regions, whose combined share exceeded 70% of total sales. Net sales peaked at EUR 24.91 billion in 2022, before falling to EUR 19.89 billion in 2025. Correlation analysis revealed a strong link between sales in the Americas region and net sales ($r = 0.870$) and net profit ($r = 0.865$). Forecasting indicated a possible decline in sales in the Europe, Middle East and Africa region to EUR 7.95 billion in 2028. The results of the study, using Nokia Corporation as a case study, confirmed the feasibility of using statistical methods to evaluate foreign economic activity and support management decisions. The practical significance of the study lies in the possibility of using its results to assess the effectiveness of foreign economic activity and to select priority markets

Keywords: dynamics; exports; imports; trade balance; international markets

● INTRODUCTION

The increasing integration of enterprises into international markets is accompanied by a rise in the volume of export and import transactions, the growing complexity of logistics processes, an increase in currency and commercial risks, and the need to respond promptly to changes in the

external environment. Under such conditions, the effectiveness of management decisions depends to the increasing integration of enterprises into international markets is accompanied by growing volumes of export and import operations, increasing complexity of logistics processes,

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higher currency and commercial risks, and the need to respond promptly to changes in the external environment. Under these conditions, the effectiveness of management decisions largely depends on the quality of analytical support and enterprises' ability to assess trends in the development of foreign economic operations in a timely manner.

The insufficient substantiation of management decisions in the field of foreign economic activity, caused by the high dynamism of the international environment, currency fluctuations, changes in logistics routes, and increasing uncertainty in foreign markets, remains a subject of academic research. In particular, V. Bokovets *et al.* (2025) examined analytical and statistical methods for assessing the risks of enterprises' foreign economic activity. The study found that the use of statistical tools, in particular correlation and regression analysis, econometric modelling and time series analysis, helps to improve the accuracy of risk assessment and enhances the information base for management decisions. The authors also justified the advisability of combining analytical and statistical methods within a single system for managing enterprises' foreign economic activities. The specific features of the methodology for analysing foreign economic activity and its information support were investigated by T. Talakh & V. Talakh (2024). As a result, it was established that effective management of foreign economic operations requires the comprehensive use of strategic analysis methods, in particular Strengths, Weaknesses, Opportunities, Threats (SWOT), Social, Technological, Economic, Political (STEP) and Strategic Position and Action Evaluation (SPACE) – the General Electric (GE)/McKinsey analysis and model, as well as a systematic assessment of performance indicators for exports, imports and foreign economic operations as a whole. The authors also emphasised the crucial role of high-quality information provision in formulating well-founded management decisions and enhancing the competitiveness of enterprises in international markets.

The increasing complexity of managing enterprises' foreign economic activities, against a backdrop of intensifying international competition, an unstable external environment and rising demands for the efficiency of export and import operations, necessitates the improvement of analytical support for management decisions. A study conducted by Z. Zhyvko *et al.* (2024) examined the main tasks and methods of analysing an enterprise's foreign economic activity. The stages of analysing foreign economic operations were systematised, and the rationale for using SWOT analysis, trade balance assessment, currency analysis, investment activity analysis and factor analysis of export revenue was substantiated. The authors also identified the main objectives of analysing foreign economic activity, proposed approaches to assessing the fulfilment of export contracts, and explored ways of improving the efficiency of export operations through cost optimisation and control of trade receivables. O.G. Melnyk *et al.* (2021) investigated approaches to assessing the effectiveness of foreign economic activity management based on target indicators. As a result, the main groups of evaluation indicators were systematised, in particular absolute, relative, structural and efficiency indicators, and a sequence of stages for evaluating the effectiveness of foreign economic activity management was proposed. The authors justified the need

to use a comprehensive system of indicators for analysing export and import operations, assessing profitability, the structure of foreign trade and the extent to which an enterprise's target objectives have been achieved.

The uncertainty of the external economic environment, currency fluctuations and the need to minimise risks when conducting international operations necessitate the use of quantitative tools to support management decisions. The use of statistical methods in the risk management process when planning enterprises' foreign economic and logistical activities was investigated by M. Ivanova *et al.* (2024). As a result, the authors demonstrated the validity of using correlation and regression analysis to assess the impact of macroeconomic factors on the exchange rate, developed a model for forecasting exchange rate fluctuations, and proposed an approach to formulating a strategy for hedging currency risks based on statistical calculations. The study also confirmed the possibility of using statistical methods to improve the effectiveness of planning foreign economic activity and to reduce the negative impact of risks on enterprises' performance. V. Kraievskiy & O. Skoryk (2024) examined an enterprise's foreign economic activity through the prism of accounting and analytical support for management. As a result, the authors systematised the accounting and analytical aspects of managing foreign economic activity, identified key criteria for assessing its effectiveness, and developed a model for decomposing foreign economic activity, encompassing organisational, information, accounting and analytical management technologies.

The complexity of establishing an objective information base for managerial decision-making in the field of foreign economic activity is exacerbated by the instability of the international environment, high competition in foreign markets and the need for the timely identification of opportunities to improve the efficiency of export and import operations. The study by O. Podra & N. Petryshyn (2023) examined the theoretical and methodological aspects of analysing enterprises' foreign economic activity. The study summarises approaches to analysing foreign economic activity, justifies a comprehensive methodology for its evaluation, and develops a system of indicators covering the dynamics of exports, as well as the efficiency and structure of foreign economic operations. Furthermore, the significance of mathematical, statistical, factor and specialised methods of analysis for assessing the effectiveness of foreign economic operations and formulating an enterprise's foreign economic strategy was determined. The application of statistical methods of economic analysis in enterprise management was investigated by O.M. Kudyrko & I.F. Lobacheva (2023). The study explores the possibilities of applying statistical methods of horizontal and vertical analysis and describes the use of extrapolation, trend models, dynamic indicators, interval forecasting and the index method for assessing the performance of enterprises. It also analyses the use of time series to identify trends in indicators and to generate forecasts as a tool to support management decisions.

In the studies examined, the main focus was on risks, analysis and management of foreign economic activity, whilst the application of statistical methods for assessing efficiency, identifying causal relationships and forecasting

indicators requires further research. The aim of this study was to assess the potential for applying statistical tools to provide information to support the management decision-making process in the field of Nokia Corporation's foreign economic activity. To achieve this aim, the following objectives were identified: to analyse the possibilities of using statistical methods to evaluate enterprises' foreign economic activities; to investigate the geographical structure and performance of foreign economic activities using Nokia Corporation as a case study and applying statistical methods; to assess the possibilities of using statistical analysis and forecasting to support management decisions in the field of foreign economic activities.

● MATERIALS AND METHODS

The study employed a retrospective empirical design and was based on an analysis of official statistical data and corporate financial statements, covering the period 2021-2025. This time period was chosen due to the availability of a complete set of statistical data on the European Union's foreign trade and Nokia Corporation's financial statements, which made it possible to conduct a comprehensive analysis of the dynamics of foreign economic activity, assess changes in its geographical structure, and investigate the relationship between regional sales and the company's financial performance.

The dynamics of the European Union's foreign trade were analysed using the statistical method of time-series analysis for 2021-2025. The study covered annual volumes of EU-27 imports and exports of goods in trade with countries outside the European Union, the trade balance, and import and export growth rates, which made it possible to assess changes in foreign economic activity over the study period. The information base of the study comprised data from International trade in goods – an overview (2025) and Intra and Extra-EU trade by Member State and by product group (2026) on annual volumes of imports and exports of goods between the EU-27 and countries outside the European Union (Extra-EU trade), as well as the trade balance for 2021-2025, expressed in European Currency Unit (ECU)/euro (EUR). The intensity of changes in foreign trade flows was assessed using relative measures of dynamics, in particular chain growth rates of imports and exports. The growth rate was determined as the ratio of the absolute change in an indicator to its value in the previous year, expressed as a percentage.

The role of individual countries in shaping the European Union's foreign trade flows was examined using the comparative statistical analysis method based on data from Intra and Extra-EU trade by Member State and by product group (2026). The analysis included the seven EU Member States with the largest volumes of foreign trade with countries outside the Union in 2025, making it possible to characterise the main participants in the European Union's foreign trade flows. The use of absolute foreign trade indicators made it possible to rank the countries by export and import volumes in 2025 and compare their foreign trade positions. In addition, the trade balance was calculated as the difference between export and import volumes, making it possible to identify countries with a foreign trade surplus or deficit.

The product aspects of the European Union's foreign trade were examined by combining time-series analysis

and comparative statistical analysis. The information base comprised data from International trade of the EU, the euro area and the Member States by SITC product group (2026) on the trade balance, as well as EU-27 export and import volumes in trade with countries outside the European Union by major product groups. The trade balance, exports and imports were analysed using individual Eurostat statistical indicators (Trade balance in million European Currency Unit/Euro (ECU/EUR), Exports in million of ECU/EUR, and Imports in million of ECU/EUR). Due to the specific characteristics of the construction of these indicators, individual figures may differ slightly from one another, which does not affect the overall trends in foreign trade. Time-series analysis was used to assess changes in the trade balance by product group in 2021-2025, making it possible to identify the product groups that generated a surplus or deficit in EU foreign trade. Comparative statistical analysis was applied to compare EU export and import volumes by major product groups in 2024-2025, making it possible to identify differences between individual product groups and assess changes in foreign economic volumes over the study period (International trade in goods, 2026). The geographical characteristics of the European Union's foreign trade were analysed using comparative statistical analysis. The information source was data from Extra-EU trade by partner (2026) on EU-27 export and import volumes in trade with its main foreign trade partners in 2024-2025. The analysis included countries with the largest volumes of foreign trade with the EU in 2025, enabling a comparison of the contribution of the main partners to the formation of foreign trade flows.

For the practical assessment of the potential for applying statistical methods to the management of foreign economic activity at the enterprise level, Nokia Corporation (n.d.) was selected. The company was selected due to its significant international presence and the availability of detailed financial reports in the public domain, containing information on the regional structure of sales and financial performance. This made it possible to examine the specific features of the enterprise's foreign economic activity based on actual statistical data. The information base of the study comprised Nokia's annual financial reports for 2021-2025 (Report for Q4..., 2022; Report for Q4..., 2023; Report for Q4..., 2024). These reports were selected as the company's official source of information because they contain standardised indicators of net sales, financial performance, and their regional distribution, ensuring data comparability over time and enabling the application of statistical analysis methods. In addition, the company's reports for subsequent years, which contain consolidated results for previous periods, were used (Report for Q4..., 2025; Report for Q4..., 2026). Their use made it possible to verify the consistency of the indicators for individual years and ensure the completeness of the study's information base. To examine Nokia's foreign economic activity, the time-series analysis method was used to assess the company's net sales by world region in 2021-2025. Sales were grouped into the Americas, Asia-Pacific (APAC), Europe, Middle East and Africa (EMEA), and Submarine Networks (the submarine telecommunications networks business), in accordance with the structure of the company's corporate reporting. The data were grouped

to assess the geographical structure of the company's foreign economic activity and determine the role of individual regions in generating its revenues. The structural statistical analysis method was applied to determine the share of each region in total net sales. The share of a region was calculated using the following formula (1):

$$S_i = \frac{NS_i}{NS_{total}} \times 100\%, \quad (1)$$

where S_i – the share of the region in total sales, %; NS_i – net sales for the relevant region, million EUR; NS_{total} – the company's total net sales, million EUR. The use of structural analysis made it possible to assess changes in the geographical structure of Nokia's foreign economic activity and to identify the regions that accounted for the largest share of the company's international revenue.

An analysis was also carried out of the trends in Nokia's key financial indicators, specifically Net sales, Operating profit, Net income and Operating margin for the period 2021-2025. Time series analysis was used to assess changes in the company's financial results over time and to identify trends in the development of its international operations. Correlation analysis was used to determine the relationship between regional sales and Nokia's financial results. The calculation was based on Pearson's linear correlation coefficient between sales volumes in the Americas, APAC and EMEA regions and the indicators net sales, operating profit, net income and operating margin. The unit of observation was the calendar year, and the sample comprised five annual observations for 2021-2025.

The trend forecasting method was applied to assess possible directions for the development of Nokia's international business activities. The forecast values for net sales in the Americas, APAC and EMEA regions for 2026-2028 were determined using a linear trend model of the form (formula (2)):

$$y = a + bt, \quad (2)$$

where y – the forecast net sales volume; t – the sequential number of the year; a – the intercept; b – the trend coefficient. The model parameters were determined using the least squares method based on annual time series for 2021-2025.

In the final stage, a method for generalising and interpreting the results of the statistical analysis was applied to formulate recommendations on the use of the obtained results in the management decision-making process. The limitations of the study include the use of aggregated statistical data from the European Union and indicators from a single company, which restricts the ability to generalise the findings to the entire population of enterprises engaged in foreign economic activity.

● RESULTS

Statistical assessment of trends in the development of the European Union's foreign trade

Foreign economic activity is one of the key factors in the development of European enterprises, as it provides access to international markets, diversifies sources of supply and expands opportunities for international cooperation. Against a backdrop of transformation in the global economy, changes in trade routes, increased geopolitical instability and growing competition in international markets, a statistical assessment of trends in foreign trade development makes it possible to identify changes in foreign trade activity and to evaluate the operating conditions for enterprises in international markets. To assess the operating conditions for enterprises in foreign markets, the dynamics of imports and exports of goods between the European Union and countries outside the EU (Extra-EU trade) for the period 2021-2025 were analysed. Based on annual data, the trade balance was analysed and the growth rates of imports and exports were calculated (Table 1).

Table 1. Dynamics of EU-27 imports and exports with countries outside the EU in 2021-2025, million ECU/EUR

Year	Imports, million ECU/EUR	Exports, million ECU/EUR	Balance, million ECU/EUR	Import growth rate, %	Export growth rate, %
2021	2,123,279.0	2,180,895.8	57,616.8	-	-
2022	3,008,539.2	2,576,575.9	-431,963.3	41.7	18.1
2023	2,523,880.0	2,565,971.6	42,091.6	-16.1	-0.4
2024	2,454,156.8	2,594,323.5	140,166.6	-2.8	1.1
2025	2,523,016.4	2,643,817.0	120,800.6	2.8	1.9

Source: compiled by the authors based on International trade in goods – an overview (2025)

Fluctuations in export, import, and trade balance volumes were observed in the foreign trade of the European Union with countries outside the EU during 2021-2025 (Table 1). In 2022, imports increased by 41.7%, while exports rose by 18.1% compared with the previous year, resulting in a negative trade balance of EUR 431.96 billion. In 2023, the trade balance became positive again, reaching EUR 42.09 billion, owing to a 16.1% reduction in imports, while exports decreased by only 0.4%. In 2024, the trade surplus increased to EUR 140.17 billion as a result of a 2.8% decrease in imports and a 1.1% increase in exports. In 2025, imports increased by 2.8% and exports by 1.9%, while the positive trade balance amounted to EUR 120.80 billion. Overall, during the study period, the volume of EU imports from countries outside the Union increased from EUR 2,123.3 billion

to EUR 2,523.0 billion, while exports increased from EUR 2,180.9 billion to EUR 2,643.8 billion. Following the substantial deficit recorded in 2022, the foreign trade of the European Union was characterised by a sustained positive trade balance in 2023-2025. The findings indicate the sensitivity of EU foreign trade to changes in international economic conditions and confirm the appropriateness of using statistical methods to identify trends and provide information support for management decisions in the field of foreign economic activity. To assess the role of individual countries in shaping the European Union's foreign trade flows, a comparative statistical analysis of the export and import volumes of EU Member States in 2025 was conducted. The results of the analysis of the foreign trade volumes of the leading European Union countries are presented in Table 2.

Table 2. Export, import and foreign trade balance of the leading EU economies in trade with countries outside the EU in 2025, EUR million

Country	Exports	Imports	Balance
Germany	689,162.1	473,364.2	215,797.9
the Netherlands	271,150.4	446,640.4	-175,490.0
Italy	313,014.6	256,767.8	56,246.8
France	280,530.9	260,262.6	20,268.3
Belgium	155,217.5	177,557.5	-22,340.0
Spain	148,642.8	196,736.6	-48,093.8
Poland	92,496.4	119,874.8	-27,378.4

Source: compiled by the authors based on Intra and Extra-EU trade by Member State and by product group (2026)

The results show that the EU's largest economies are focused on foreign trade. Germany continued to lead in terms of export and import volumes, whilst the Netherlands, Italy and France were also among the countries with the highest volumes of foreign trade. The trade balance showed that Germany, Italy and France had a surplus, whilst the Netherlands, Spain, Poland and Belgium had a deficit. The Netherlands had the largest deficit. An analysis of the commodity structure of foreign trade was the next

stage in the statistical assessment of foreign economic activity, as this characterises the specialisation of the economy and the specific features of a country's or an integration group's participation in the international division of labour. To identify the commodity groups that accounted for the largest share of the European Union's foreign trade flows in 2021-2025, the structure of the trade balance by major commodity groups with countries outside the EU was analysed (Table 3).

Table 3. Foreign trade balance of the EU with countries outside the EU by major product groups in 2021-2025, EUR million

Product group	2021	2022	2023	2024	2025
Total goods	57,616.8	-431,963.3	42,091.6	140,166.6	120,800.6
Food, beverages and tobacco	58,629.4	55,416.7	59,829.9	52,471.9	39,605.4
Raw materials	-35,732.6	-48,864.3	-29,148.1	-27,808.1	-28,951.5
Mineral fuels, lubricants and related products	-285,938.1	-650,364.7	-403,330.2	-338,591.3	-298,094.0
Chemicals and related products	185,308.1	188,798.6	199,525.9	238,488.3	255,992.9
Other manufactured goods	-28,285.7	-93,583.3	-12,038.0	-16,784.5	-41,748.1
Machinery, equipment and transport equipment	166,907.2	126,692.1	209,566.9	211,931.5	172,725.3
Goods and transactions not classified elsewhere	-3,271.4	-10,058.4	17,685.3	20,458.9	21,270.6

Source: compiled by the authors based on International trade in goods (2026), International trade of the EU, the euro area and the Member States by SITC product group (2026)

As shown in Table 3, the EU trade balance differed substantially across product groups in 2021-2025. The largest surplus throughout the entire study period was generated by chemicals and related products, for which the balance increased from EUR 185.31 billion in 2021 to EUR 255.99 billion in 2025. A positive balance was also maintained for machinery, equipment and transport equipment, although its magnitude varied over the study period. Food, beverages and tobacco also recorded a surplus, which gradually declined. The largest negative balance was observed for mineral fuels, lubricants and related products. Following the maximum deficit recorded in 2022, its magnitude gradually decreased; however, it remained substantial in 2025. A negative balance was also maintained for raw materials and other manufactured goods, although the scale of these

deficits was considerably smaller. The findings indicate that the main sources of the European Union's foreign trade surplus were chemicals and related products, as well as machinery, equipment and transport equipment. The largest deficit was associated with imports of mineral fuels, lubricants and related products. From 2023 onwards, the EU trade balance remained positive: the surplus increased in 2024 and declined slightly in 2025 but remained higher than in 2023. This indicates that the European Union maintained a positive trade balance following the deficit recorded in 2022. To assess the product structure of the European Union's foreign trade, a comparative statistical analysis of export and import volumes by major product groups in 2024-2025 was conducted. The results of the analysis are presented in Table 4.

Table 4. Volumes of EU exports and imports with countries outside the EU by major product groups in 2024-2025, million ECU/EUR

Product group	Exports 2024	Exports 2025	Imports 2024	Imports 2025
Total goods	2,594,396.6	2,644,414.2	2,454,143.0	2,522,606.2
Food, beverages and tobacco	209,770.9	214,665.3	157,293.6	175,024.2
Raw materials	68,530.5	69,033.6	96,338.8	97,874.0
Mineral fuels, lubricants and related products	131,498.0	116,664.3	470,068.2	414,732.8
Chemicals and related products	562,419.0	603,953.8	323,976.6	347,706.8
Other manufactured goods	558,256.0	555,176.1	575,027.5	596,806.5

Table 4, Continued

Product group	Exports 2024	Exports 2025	Imports 2024	Imports 2025
Machinery, equipment and transport equipment	1,016,924.3	1,027,603.3	804,899.6	854,415.7
Goods and transactions not classified elsewhere	46,997.9	57,317.9	26,538.8	36,046.3

Note: the Table has been compiled using the figures for “Exports in millions of ECU/EUR” and “Imports in millions of ECU/EUR”; these figures may differ from the trade balance figures given in Table 3; minor discrepancies between the total figures and the sum of the product groups are due to the rounding of the source data

Source: compiled by the authors based on International trade of the EU, the euro area and the Member States by SITC product group (2026), International trade in goods (2026)

The data in Table 4 indicate that the largest volumes of the European Union’s foreign trade were generated by machinery, equipment and transport equipment. Chemical products ranked second in terms of foreign trade volume. In 2025, compared with the previous year, the volume of its exports and imports increased. By contrast, mineral fuels, lubricants and related products saw a decline in both exports and imports. An increase in foreign trade

flows was also recorded for food, beverages and tobacco. Overall, the European Union’s foreign trade structure was dominated by machinery, equipment and transport vehicles, as well as chemical products. To assess the geographical characteristics of the European Union’s foreign trade, a comparative statistical analysis of export and import volumes with its main trading partners in 2024-2025 was carried out (Table 5).

Table 5. EU export and import volumes with key trading partners in 2024-2025, in millions of EUR

Trading partner	Exports 2024	Exports 2025	Imports 2024	Imports 2025
United States	535,628.1	554,612.2	337,996.8	356,231.3
United Kingdom	343,709.8	345,348.7	164,078.6	158,729.5
China (excluding Hong Kong)	213,504.3	199,431.9	525,726.0	559,989.7
Switzerland	193,418.4	219,424.1	134,897.6	143,166.7
Turkey	113,195.4	114,174.2	98,054.6	103,328.0
Japan	67,423.4	65,750.2	64,202.2	63,327.6
Norway	62,927.1	64,004.1	96,824.7	95,685.2
South Korea	55,860.3	54,533.2	68,608.6	69,733.1
Mexico	53,174.2	52,932.1	29,221.8	33,950.8
India	48,827.7	48,883.0	71,481.1	69,477.2
Brazil	43,808.2	42,744.4	46,089.7	44,344.3

Source: compiled by the authors based on Extra-EU trade by partner (2026)

The data in Table 5 indicate that the United States remained the European Union’s largest trading partner in terms of export volumes, while China was the main source of imports of goods into the EU. The United Kingdom and Switzerland also accounted for substantial volumes of foreign trade. A positive trade balance was observed in trade with the United States, the United Kingdom, Switzerland, Turkey and Mexico, whereas China, Norway, South Korea and India recorded imports exceeding exports. Overall, the results of the analysis indicate that EU foreign trade flows are concentrated around a limited number of key partners.

The findings can be used by enterprises when formulating their foreign economic strategy. Analysis of the geographical structure of trade makes it possible to assess the capacity of individual markets, identify countries with the highest levels of demand, and select priority directions for exports or diversification of foreign trade activities. Assessment of the product structure makes it possible to identify product groups with the highest export potential or the greatest import dependence, which can be used when planning exports and imports, developing the product portfolio, seeking alternative suppliers, and assessing the risks of supply chain disruptions. Analysis of the trade balance and the dynamics of foreign trade provides an information base for assessing the risks of entering new markets, forecasting changes in international market conditions, and making management

decisions regarding the development of enterprises’ foreign economic activity.

The statistical analysis established that the European Union’s foreign economic activity in 2021-2025 was characterised by unstable dynamics in foreign trade flows and changes in the trade balance in trade with countries outside the EU. Germany, Italy, France and the Netherlands played the largest role in shaping foreign trade, while the main external partners of the EU remained the United States, the United Kingdom, China and Switzerland. Analysis of the product structure showed that chemicals and related products, as well as machinery, equipment and transport equipment, held leading positions in exports and in generating a positive trade balance, whereas the largest deficit was associated with imports of mineral fuels and energy resources. The findings indicate that the European Union has maintained its specialisation in high-value-added products while remaining dependent on external supplies of certain types of raw materials and energy resources.

A statistical analysis of Nokia Corporation’s foreign economic activity

Nokia Corporation (n.d.) is one of the world’s leading manufacturers of telecommunications equipment, software and digital networking solutions. The company operates in approximately 130 countries worldwide and provides telecommunications infrastructure for telecoms operators,

corporate clients and government agencies. The significant scale of its international presence means that Nokia's performance is highly dependent on the state of external markets and the regional structure of its sales.

The company's foreign economic activity is carried out through the sale of products and services in the markets of Europe, North and Latin America, the Asia-Pacific region, the Middle East and Africa. In Nokia's financial

statements, the results of its international operations are reflected through net sales figures by major world regions, which makes it possible to assess the geographical structure of the company's foreign economic activity. To assess the geographical structure of Nokia's international operations, the trends in the company's net sales by major world regions for 2021-2025 were analysed. The results of the analysis are presented in Table 6.

Table 6. Nokia's net sales by region worldwide, 2021-2025, in millions of EUR

Region	2021	2022	2023	2024	2025
Americas	8,506	9,611	6,779	6,276	6,985
APAC	5,146	5,519	6,436	4,549	4,639
EMEA	8,550	8,631	7,923	8,395	8,265
Submarine Networks	-	1,150	1,120	-	-
Total	22,202	24,911	22,258	19,220	19,889

Source: compiled by the authors based on Report for Q4 and full year 2021 (2022), Report for Q4 and full year 2022 (2023), Report for Q4 and full year 2023 (2024), Report for Q4 and full year 2024 (2025), Report for Q4 and full year 2025 (2026)

The data in Table 6 indicate that, throughout 2021-2025, the largest volumes of Nokia's net sales were generated in the EMEA and Americas regions. In 2021-2022, the Americas region held the leading position, with sales reaching EUR 9.61 billion in 2022; however, in subsequent years, this figure declined to EUR 6.9 billion in 2025. The EMEA region remained the company's most stable area of operations, generating between EUR 7.92 billion and EUR 8.63 billion in net sales over the study period. At the same time, the APAC region experienced greater fluctuations in its indicators: after increasing to EUR 6.44 billion in 2023, sales declined to

EUR 4.55 billion in 2024 and remained at a similar level in 2025. Sales of the Submarine Networks segment exceeded EUR 1 billion per year in 2022-2023, indicating its significant contribution to the company's overall sales volume. Overall, the findings confirm a high degree of diversification of Nokia's foreign economic activity and the significant role of the European, American, and Asia-Pacific markets in generating the company's revenues. To assess changes in the geographical structure of Nokia's foreign economic activity, the share of each region in the company's total net sales was calculated for 2021-2025 using Formula 1 (Table 7).

Table 7. Breakdown of Nokia's net sales by region, %

Region	2021	2022	2023	2024	2025
Americas	38.3	38.6	30.5	32.7	35.1
APAC	23.2	22.2	28.9	23.7	23.3
EMEA	38.5	34.6	35.6	43.7	41.6
Submarine Networks	-	4.6	5.0	-	-
Total	100.0	100.0	100.0	100.0	100.0

Source: compiled by the authors based on Report for Q4 and full year 2021 (2022), Report for Q4 and full year 2022 (2023), Report for Q4 and full year 2023 (2024), Report for Q4 and full year 2024 (2025), Report for Q4 and full year 2025 (2026)

The data in Table 7 indicate that, throughout 2021-2025, the EMEA and Americas regions dominated the structure of Nokia's net sales. The share of the Americas region was 38.3% in 2021 and reached a maximum of 38.6% in 2022, after which it declined to 30.5% in 2023 and increased to 35.1% in 2025. The share of the EMEA region fluctuated between 34.6% and 43.7%, with the highest value recorded in 2024. The APAC region accounted for between 22.2% and 28.9% of the company's total sales, with its largest share recorded in 2023. The share of the Submarine

Networks segment in 2022-2023 was approximately 5% of total sales. Overall, the findings indicate that Nokia's foreign economic activity was predominantly oriented towards the European and American markets, while maintaining a significant presence in the Asia-Pacific region. To assess the performance of Nokia's foreign economic activity, the dynamics of the company's key financial indicators in 2021-2025 were analysed. The analysis included net sales, Operating profit, Net income, and Operating margin. The results are presented in Table 8.

Table 8. Trends in Nokia's key financial indicators for 2021-2025

Year	Net sales, million EUR	Operating profit, million EUR	Net income, million EUR	Operating margin, %
2021	22,202	2,158	1,645	9.7
2022	24,911	2,318	4,259	9.3
2023	22,258	1,688	679	7.6
2024	19,220	1,999	1,284	10.4
2025	19,889	885	660	4.4

Source: compiled by the authors based on Report for Q4 and full year 2021 (2022), Report for Q4 and full year 2022 (2023), Report for Q4 and full year 2023 (2024), Report for Q4 and full year 2024 (2025), Report for Q4 and full year 2025 (2026)

The data in Table 8 indicate that Nokia's financial results were characterised by unstable dynamics throughout 2021-2025. The highest level of net sales was recorded in 2022, at EUR 24.91 billion, after which the indicator gradually declined to EUR 19.89 billion in 2025. Operating profit increased from EUR 2.16 billion in 2021 to EUR 2.32 billion in 2022; however, in subsequent years, it declined, reaching EUR 0.89 billion in 2025. A similar trend was observed for Net

income, which, after reaching a maximum of EUR 4.26 billion in 2022, declined to EUR 0.66 billion in 2025. Operating margin fluctuated between 4.4% and 10.4%, indicating changes in the efficiency of the company's operating activities amid transformations in the market environment. To determine the nature of the relationship between the regional structure of sales and Nokia's performance, a correlation analysis was conducted (Table 9).

Table 9. Results of the correlation analysis between Nokia's regional sales and financial indicators

Indicator	Net sales	Operating profit	Net income	Operating margin
Americas	0.870	0.559	0.865	0.261
APAC	0.625	0.223	0.089	0.028
EMEA	0.321	0.557	0.732	0.481

Source: compiled by the authors based on Report for Q4 and full year 2021 (2022), Report for Q4 and full year 2022 (2023), Report for Q4 and full year 2023 (2024), Report for Q4 and full year 2024 (2025), Report for Q4 and full year 2025 (2026)

The data in Table 9 indicate varying strengths of the relationship between regional sales and Nokia's financial performance. The highest correlation coefficients were recorded between sales in the Americas region and Net sales ($r = 0.870$) and Net income ($r = 0.865$), indicating a strong positive relationship. A noTable positive relationship was also observed for the EMEA region with Net income ($r = 0.732$) and Operating profit ($r = 0.557$). Sales in the APAC region demonstrated a moderate relationship with the company's Net sales ($r = 0.625$), whereas their relationship

with the other financial indicators was weak. Among the performance indicators, the highest coefficient was observed between Operating margin and sales in the EMEA region ($r = 0.481$). The findings indicate that the strongest statistical relationship with Nokia's financial performance was observed for sales in the Americas and EMEA markets. To assess possible directions for the development of Nokia's foreign economic activity, net sales volumes by major world regions were forecast for 2026-2028. The forecast results are presented in Table 10, based on Formula 2.

Table 10. Forecast of Nokia's net sales by region for 2026-2028, in millions of EUR

Year	Americas	APAC	EMEA
2026	5,718.3	4,662.6	8,111.0
2027	5,080.6	4,464.2	8,030.4
2028	4,442.9	4,265.8	7,949.8

Source: compiled by the authors based on Report for Q4 and full year 2021 (2022), Report for Q4 and full year 2022 (2023), Report for Q4 and full year 2023 (2024), Report for Q4 and full year 2024 (2025), Report for Q4 and full year 2025 (2026)

The forecast results presented in Table 10 indicate differing prospects for the development of Nokia's regional foreign economic activity. For the Americas region, a gradual decline in net sales is forecast, from EUR 5.72 billion in 2026 to EUR 4.44 billion in 2028. A decline in sales is also expected in the APAC region, from EUR 4.66 billion in 2026 to EUR 4.27 billion in 2028. For the EMEA region, the model forecasts a slight decrease in sales from EUR 8.11 billion in 2026 to EUR 7.95 billion in 2028; however, this region will maintain the company's highest net sales volumes. Overall, the forecast results indicate that the EMEA region will retain its leading role in the geographical structure of Nokia's sales, despite the projected decline in sales volumes across all regions under study.

Thus, Nokia's foreign economic activity in 2021-2025 was characterised by a high degree of geographical diversification and an orientation towards three key regional markets – Americas, EMEA and APAC. The Americas and EMEA regions made the largest contributions to the company's revenues, with their combined share exceeding 70% of total net sales throughout the study period. Analysis of the sales structure showed a gradual increase in the importance of the EMEA region, whose share reached 43.7% in 2024, whereas the role of the Americas region declined somewhat after reaching a peak in 2022. The APAC region remained one of the company's areas of international activity, but was

characterised by greater instability in sales volumes. The forecast calculations indicate a possible decline in net sales across all regions under study in 2026-2028; at the same time, the EMEA region is expected to retain its leading position in generating the company's revenues.

Using the results of statistical analysis to support management decisions

The results of the statistical analysis confirm the feasibility of using quantitative methods to support management decisions in the field of enterprises' foreign economic activity. The application of trend analysis, structural analysis, correlation analysis and forecasting enable to obtain information on trends in the development of international operations, assess factors related to the company's performance, and formulate well-founded directions for further development in foreign markets. The results obtained can be used as an information basis for the strategic and operational management of enterprises' foreign economic activities. An analysis of the European Union's foreign trade revealed that, in 2021-2025, foreign economic activity was characterised by volatile trends in trade flows, shifts in the balance between exports and imports, and dependence on specific product groups and trading partners. Machinery, equipment, transport vehicles and chemical products made the largest contribution to positive foreign trade results,

whilst the largest deficit was associated with imports of energy resources. These results indicate the need for continuous monitoring of the commodity structure of foreign economic operations and for taking into account changes in the international economic environment when making management decisions regarding the development of enterprises' export activities. A statistical analysis of the geographical structure of the European Union's foreign trade also revealed a high concentration of trade flows centred on a limited circle of trading partners, among which the United States, the United Kingdom, China and Switzerland are of the greatest significance. This highlights the need to take into account the risks associated with dependence on individual foreign markets, as well as the importance of diversifying international economic relations. For enterprises, such information can be used when selecting priority sales markets, assessing the prospects for entering new markets and formulating a foreign economic strategy.

The practical application of statistical methods was demonstrated using the example of Nokia Corporation, whose operations are characterised by geographical diversification and a presence in the world's major markets for telecommunications equipment and digital technologies. An analysis of the structure of net sales showed that the bulk of the company's revenue is generated in the EMEA and Americas regions, which together accounted for over 70% of total sales during the period under review. The results obtained make it possible to identify the most significant areas of the company's foreign economic activity and to assess the extent to which its performance depends on individual regional markets. For the management of foreign economic activity, such information can be used when allocating resources between regions, planning marketing activities, developing partnerships and setting priorities for international expansion.

The results of the correlation analysis showed that the strongest statistical link with Nokia's financial results was observed for sales in the Americas and EMEA regions. The highest correlation coefficients were recorded between sales in the Americas region and the company's Net sales and Net income. A noticeable positive correlation was also established for the EMEA region with regard to operating profit and net profit. The results obtained indicate that changes in sales volumes in these regions were accompanied by changes in the company's key financial results. From a management perspective, this allows regional sales figures to be used as indicators for monitoring the performance of foreign economic activity and to be taken into account when making decisions regarding the expansion or adjustment of the company's international presence.

Within the statistical framework for managing foreign economic activity, forecasting is used to assess possible future changes in indicators. The forecast of Nokia's regional sales for 2026-2028 revealed a potential strengthening of the EMEA region's role in generating the company's revenue and more subdued sales growth in the Americas and APAC regions. The resulting forecasts enable the early identification of potential changes in the structure of the company's international operations and the development of alternative scenarios for the growth of its foreign economic operations. The use of forecasting models makes it possible to adjust strategic plans in a timely manner,

optimise the allocation of resources between regions and prepare for possible changes in market conditions.

Thus, the results of this study confirm that statistical methods can be used not only to describe the current state of enterprises' foreign economic activities, but also to form an information base for management decisions. Dynamic analysis enables the identification of trends in the development of international operations; structural analysis allows for the assessment of the geographical and commodity characteristics of foreign trade; correlation analysis helps to identify interrelationships between performance indicators; and forecasting makes it possible to assess the prospects for the future development of foreign economic operations. The comprehensive use of these methods enhances the soundness of management decisions, promotes a more efficient use of the enterprise's resources and ensures that foreign economic activities are adapted to changes in the international economic environment.

• DISCUSSION

The conditions governing international trade are characterised by the growing influence of global economic transformations, trade conflicts, regional integration, digitalisation and structural changes in the world economy. The concentration of foreign trade flows around the leading economies of the European Union, identified in this study, is partly consistent with the findings of K. Siddiqui (2024). The author also identified China's dominant role in shaping the trade and economic ties of the Association of Southeast Asian Nations (ASEAN) countries, which confirmed the trend towards the concentration of international trade around the largest economic centres. At the same time, the results differ in terms of the nature of the development of trade relations. Whilst this study recorded an EU trade deficit in 2022 and a surplus in 2023-2025, K. Siddiqui noted an expansion in trade between China and the ASEAN countries and a strengthening of their trade dependence on the Chinese economy. This points to differences in the structure of foreign economic relations and the mechanisms governing trade flows in various regions of the world. The findings also partially corroborate the conclusions of X. Han & E. Laing (2025) regarding the importance of quantitative analysis in supporting managerial decisions in international operations. Both studies showed that rising uncertainty necessitated the use of analytical tools for risk assessment and decision-making. At the same time, X. Han & E. Laing found that enterprises with more developed risk management systems made more active use of mechanisms to hedge against currency fluctuations. In contrast, the results of this study indicate the high sensitivity of the EU's foreign trade to changes in the international economic environment and the need to monitor trends in exports, imports and the trade balance. Thus, both studies confirm the importance of analytical support, although they focus on different aspects of international business.

The findings of this study are partly consistent with the conclusions of B. Xu (2024) regarding the significant influence of the external environment on international economic relations. Both studies identified a concentration of trade flows around leading economic partners and confirmed the role of international trade in economic development. At the same time, B. Xu concluded that there is

a high level of economic interdependence between China and Japan, whereas the results of this study point more to the unevenness of the foreign trade positions of individual EU countries and the existence of differences in their trade balances. This indicates different forms of economic integration and interrelationships in the regions under study. The findings of Y. Chen (2025) regarding the high sensitivity of international trade to external economic shocks are also partially confirmed by this study. An analysis of EU foreign trade showed that changes in the international environment were accompanied by fluctuations in exports, imports and the trade balance. At the same time, Y. Chen found that the trade war between the US and China led to a reduction in China's foreign trade activity and a redistribution of trade flows. In contrast, the results of this study point more strongly to the influence of energy factors and the commodity structure of trade on the formation of the EU's external trade deficit. Thus, both studies confirm the dependence of international trade on external factors, although the sources of such changes proved to be different. The findings of Y. Yang *et al.* (2026) show a certain similarity to the results of this study. The authors established that the development of enterprises' international activities depended on institutional conditions, access to resources, and their ability to adapt to changes in the external environment. Similarly, the findings of this study confirm the high dependence of foreign trade on external economic conditions. At the same time, Y. Yang *et al.* demonstrated the positive impact of specific support mechanisms for cross-border e-commerce on the international expansion of enterprises, whilst the results of this study indicate the presence of structural imbalances in EU foreign trade and varying performance across individual product groups and participating countries.

The results of T. Zhao *et al.* (2024) are also partially consistent with the findings obtained in this study. The authors concluded that successful international activities of enterprises depended on a combination of internal advantages and external operating conditions. A similar approach can be seen in the study by A. Pavlenchuk & N. Tsizdyn (2025), who demonstrated that the effective management of the foreign economic activities of tourism enterprises in the Lviv region is a key factor in shaping their competitiveness. This study also found that the results of foreign economic activity were determined not only by the size of individual countries' economies, but also by the structure of foreign trade flows and the characteristics of the international environment. At the same time, T. Zhao *et al.* linked success in foreign markets primarily to the level of innovation, digitalisation and productivity of enterprises, whereas the findings of this study reflect, to a greater extent, the macroeconomic patterns of foreign trade development. A comparison with the findings of M.I. Al-Karkhi (2024) reveals a commonality in identifying the uneven distribution of economic activity. The author found that individual sectors of the Scottish economy differed significantly in terms of economic growth rates and their contribution to gross value added. Similarly, this study revealed significant differences between product groups and European Union countries in terms of export volumes, imports and trade balances, indicating an uneven distribution of foreign trade activity. At the same time, whilst M.I. Al-Karkhi analysed intra-regional

differences in economic development, the results of this study characterise cross-country and commodity imbalances in the European Union's foreign trade. The findings of M. Gumenna-Derii (2025) partly coincide with the results obtained here. The author emphasised the importance of information provision and analytical tools for improving the efficiency of enterprises within the European economic area. Similarly, the results of this study confirm the value of using statistical analysis to assess foreign trade trends and support management decisions. At the same time, M. Gumenna-Derii focused primarily on digitalisation, automation and accounting processes, whereas the findings of this study demonstrate the decisive role of the commodity and geographical structure of foreign trade in shaping the European Union's foreign economic performance. The conclusions of K. Kiyota (2026) complement the findings of this study regarding the role of international trade in ensuring economic development. In line with the findings presented here, the author emphasised the high sensitivity of foreign trade processes to changes in the global environment, trade conflicts and the transformation of world markets. At the same time, whilst the results of this study revealed changes in the dynamics of the EU's exports, imports and trade balance, K. Kiyota demonstrated that a country's long-term competitive advantages are shaped not only by trade, but also by the interaction of foreign trade flows with foreign direct investment, productivity and employment. Thus, both studies confirm the importance of international trade for economic development, although they examine this impact at different levels. The issue of external challenges to international trade is further explored in the work of G. Felbermayr *et al.* (2024). Like the findings of the present study, their conclusions confirmed the dependence of the EU's foreign trade on the international economic environment and the trade policies of key partners. At the same time, whilst this study identified actual changes in exports, imports and the trade balance, G. Felbermayr *et al.* focused on the potential consequences of trade wars, protectionism and the fragmentation of the global economy. Thus, both studies highlight the vulnerability of European trade to external shocks but examine it from different temporal perspectives – through established trends and possible future scenarios. In contrast to macroeconomic studies, H. Zhaldak & V. Antonov (2025) analysed foreign economic activity at the enterprise level. However, the findings of H. Zhaldak & V. Antonov also confirm the importance of analytical support for improving the efficiency of international operations. Whilst in this study statistical analysis revealed patterns in the development of EU foreign trade, H. Zhaldak & V. Antonov demonstrated that a similar approach helped to optimise an enterprise's import activities by improving its work with suppliers and logistics processes. This demonstrates the universality of analytical tools, regardless of the level of research. The findings of L. Jiaying *et al.* (2025) broaden the understanding of the economic consequences of international integration. The present study demonstrated the impact of foreign trade processes on the economic performance of EU countries, whereas L. Jiaying *et al.* established a relationship between foreign direct investment, economic growth, and the quality of governance in China. Common to both studies is the confirmation that international economic interaction

remains one of the key factors in the development of national economies, although the specific mechanisms of this influence proved to be different. The findings of T. Casas-Klett *et al.* (2026) also reflect the impact of global changes on international economic activity. The authors showed that the activities of foreign companies in China depended to a considerable extent on the competitive environment, investment climate, and regulatory conditions.

A similar dependence can also be observed in the findings of the present study, where changes in the international environment affected the foreign trade activity of EU countries. However, while T. Casas-Klett *et al.* (2026) focused on the behaviour of enterprises, the findings of the present study reflect changes at the level of the foreign trade system. The issue of risks associated with international activities was addressed from a different perspective by S. Alamad (2025). His findings confirmed that instability in the external environment increased the need for foreign exchange risk management tools. In the present study, a similar relationship is reflected in the instability of foreign trade indicators and the need for their continuous monitoring. At the same time, while S. Alamad focused on mechanisms for mitigating foreign exchange risks, the findings of the present study make it possible to assess the consequences of external changes for EU trade flows. The importance of international trade for economic development is also confirmed by the findings of T. Kroeger *et al.* (2025). The authors showed that international trade remained one of the factors contributing to productivity and economic growth in Germany, alongside digitalisation, demographic changes, and decarbonisation. In turn, the findings of the present study demonstrate that foreign trade activity shapes the structural characteristics of the EU economy.

Y. Chen & N. Qiao (2025) reached conclusions similar in substance. The authors showed that external economic links, investment and structural features of the economy influenced Japan's economic growth. Similarly, the results of this study attest to the significant influence of foreign trade on economic processes in the EU. At the same time, whilst Y. Chen & N. Qiao explained economic development through a combination of internal and external factors, this study focuses specifically on foreign trade trends. The role of international integration in the development of economic entities is also confirmed in the study by F.M. Muneeb *et al.* (2025), whose authors demonstrated its importance for small and medium-sized enterprises in developing countries. The authors found that attracting foreign investment and early internationalisation contributed to the expansion of business opportunities. Although the present study focused not on enterprises but on the EU's foreign trade, both works confirm that effective participation in international economic processes creates the conditions for economic development and improved business performance.

A comparison of the findings of the present study with those of other scholarly works revealed common trends in the development of international trade and foreign economic activity. Most studies confirmed the dependence of foreign trade processes on changes in the international economic environment, the concentration of trade flows around leading economic centres, and the appropriateness of using analytical methods to support management decisions. At the same time, the findings obtained made it

possible to identify specific characteristics of the European Union's foreign trade, including the uneven distribution of trade flows across countries, structural imbalances, and changes in the trade balance. This confirmed the potential for the effective application of statistical methods to assess foreign economic processes and establish an information base for the management of foreign economic activity.

● CONCLUSIONS

The study identified opportunities for using statistical methods to support management decisions in the field of enterprises' foreign economic activity. An analysis of the European Union's foreign trade showed that, between 2021 and 2025, the dynamics of foreign trade flows were characterised by fluctuations in the volumes of imports, exports and the trade balance.

EU imports increased from EUR 2,123.3 billion in 2021 to EUR 2,523.0 billion in 2025, while exports increased from EUR 2,180.9 billion to EUR 2,643.8 billion. The largest foreign trade deficit was recorded in 2022, amounting to EUR 431.96 billion. In 2023-2025, EU foreign trade was characterised by a positive trade balance of EUR 42.09 billion, EUR 140.17 billion, and EUR 120.80 billion, respectively. It was established that Germany had the largest volumes of foreign economic activity among EU Member States, with exports reaching EUR 689.2 billion in 2025 and a positive trade balance of EUR 215.8 billion. Analysis of the product structure showed that chemicals and related products, as well as machinery, equipment and transport equipment, made the largest positive contributions to the trade balance, with surpluses of EUR 255.99 billion and EUR 172.7 billion, respectively, in 2025. At the same time, the largest deficit was associated with mineral fuels and energy resources, for which the negative balance reached EUR 298.1 billion. The practical application of statistical methods was demonstrated using Nokia Corporation as an example.

It was established that the largest volumes of the company's net sales were generated in the Americas and EMEA regions, whose combined share exceeded 70% of total sales. The maximum level of net sales was recorded in 2022, at EUR 24.91 billion, after which it declined to EUR 19.89 billion in 2025. Correlation analysis showed the strongest statistical relationship between sales in the Americas region and Net sales ($r=0.870$) and Net income ($r=0.865$), whereas for the EMEA region, a positive relationship was identified with Net income ($r=0.732$) and Operating profit ($r=0.557$). The forecast results for 2026-2028 indicated a possible decline in sales in the EMEA region to EUR 7.95 billion in 2028, as well as decreases in the forecast values for the Americas and APAC regions.

The findings confirmed that time-series analysis, structural analysis, correlation analysis, and forecasting can be used to assess the performance of foreign economic activity, identify relationships between indicators, and establish an information base for management decision-making. The application of these methods makes it possible to identify trends in the development of foreign economic operations in a timely manner, assess possible changes in the market environment, and substantiate directions for the further development of enterprises in international markets. Future research should focus on expanding the sample of enterprises, using regression modelling, and applying multivariate

statistical methods to assess the impact of economic factors on the performance of foreign economic activity.

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● CONFLICT OF INTEREST

None.

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Методи статистичного аналізу в управлінні зовнішньоекономічною діяльністю підприємств

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Анотація. Метою даного дослідження було оцінювання можливостей застосування статистичного інструментарію для інформаційного забезпечення процесу прийняття управлінських рішень у сфері зовнішньоекономічної діяльності на прикладі Nokia Corporation. Методологія ґрунтувалася на аналізі динамічних рядів, порівняльному статистичному аналізі, структурному аналізі, кореляційному аналізі та трендовому прогнозуванні. Встановлено, що обсяг імпорту Європейського Союзу у торгівлі з країнами поза межами Союзу зріс з 2,123,3 млрд European Currency Unit/Euro у 2021 р. до 2,523,0 млрд European Currency Unit/Euro у 2025 р., тоді як експорт збільшився з 2,180,9 млрд European Currency Unit/Euro до 2,643,8 млрд European Currency Unit/Euro. Найбільший дефіцит зовнішньої торгівлі було зафіксовано у 2022 р. на рівні 431,96 млрд European Currency Unit/Euro. Провідні позиції займала Німеччина з експортом 689,2 млрд євро та позитивним сальдо 215,8 млрд євро. Найбільший профіцит у товарній структурі формували хімічна продукція та пов'язані товари (255,99 млрд євро) і машини, обладнання та транспортні засоби (172,7 млрд євро), тоді як найбільший дефіцит спостерігався за мінеральним паливом, мастильними матеріалами та спорідненою продукцією (298,1 млрд євро). На прикладі Nokia Corporation встановлено, що найбільші обсяги чистих продажів формувалися у регіонах Europe, Middle East and Africa та Americas, сукупна частка яких перевищувала 70 % реалізації. Максимальний обсяг чистих продажів становив 24,91 млрд євро у 2022 р., а у 2025 р. скоротився до 19,89 млрд євро. Кореляційний аналіз виявив сильний зв'язок між продажами у регіоні Americas та чистими продажами ($r=0,870$) і чистим прибутком ($r=0,865$). Прогнозування показало можливе скорочення продажів у регіоні Europe, Middle East and Africa до 7,95 млрд євро у 2028 р. Результати дослідження на прикладі Nokia Corporation підтвердили можливість використання статистичних методів для оцінювання зовнішньоекономічної діяльності та підтримки управлінських рішень. Практичне значення дослідження полягає у можливості використання його результатів для оцінювання ефективності зовнішньоекономічної діяльності та вибору пріоритетних ринків

Ключові слова: динаміка; експорт; імпорт; торгівельне сальдо; міжнародні ринки