Services trade by enterprise characteristics - STEC

Statistics Explained

Highlights

"Large (250+ employees) enterprises lead the EU services exports and dominate in Finland (74%), Germany (72%) and Slovakia (70%)."

"Approximately half of the EU services trade is driven by 3 dominant economic activities: transportation and storage, information and communication and manufacturing."

" The Irish and Luxembourgish economies are tightly integrated into global markets, with over 80% of their services exports and imports controlled by foreign enterprises."

The Services Trade by Enterprise Characteristics (STEC) statistics offer insights into the types of enterprises involved in international trade in services. They reveal how businesses across various industries provide services and how that align with their primary activities. This article presents the first official data on services trade, broken down by enterprise size, ownership, and economic activity. The analysis is based on data from 27 EU Member States, Norway and Iceland for the reference year 2022.

General overview

This article analyzes services trade by enterprise characteristics (STEC) data for 27 EU Member States, Norway and Iceland for reference year 2022. The trading partner breakdown used in the analysis focuses on Extra-EU countries (i.e., countries outside the EU).

The data reveal distinct differences between countries in how enterprises have responded to globalization. Regarding international trade in services, Luxembourg and Ireland are more open to global markets than other countries. Foreign-owned affiliates dominate in the markets of these two countries, contributing significantly to exported services (85% in Luxembourg and 80% in Ireland). In contrast, domestic service providers hold a stronger position in countries like Denmark, Finland, France, Norway and Iceland, where they account for over 50% of service exports.

STEC data also allow for an analysis of the size of enterprises involved in services trade. For example, small enterprises (those with up to 49 employees) are responsible for 86% of services exports from Malta and only 2% in Greece. The high share in Malta can be attributed to the significant contribution of companies in NACE categories 64 (financial services, excluding insurance and pension funding) and 92 (gambling and betting activities), where providing services require fewer employees. As a general trend, small enterprises are typically domestically controlled, while large enterprises are more likely to be foreign-controlled.

Trade in services by enterprise size

Over half of EU trade (56% exports, 54% imports) is handled by large enterprises (250+ employees). SMEs account for 24% of exports and 23% of imports.

Data on enterprise size class help determine whether trade in services is dominated by small (up to 49 employees), medium (50-249 employees) or large enterprises (250 or more employees). EU services exports largely vary depending on enterprise size and economic activity. In 2022, large enterprises (250+ employees) were the dominant players in EU services exports to non-EU countries, accounting for 56% of EU exports and 54% of imports (Figure 1). Small enterprises (up to 49 employees) contributed 14%, surpassing medium-sized enterprises (50 to 249 employees), which accounted for 10% of exports. A portion of EU trade (20% of exports and 24% of imports) could not be linked to a specific enterprise size class, covering non-linkable trade categories such as Financial Intermediation Services Indirectly Measured (FISIM), travel, and unknown parts.

Services by EU enterprises, partner Extra-EU, 2022
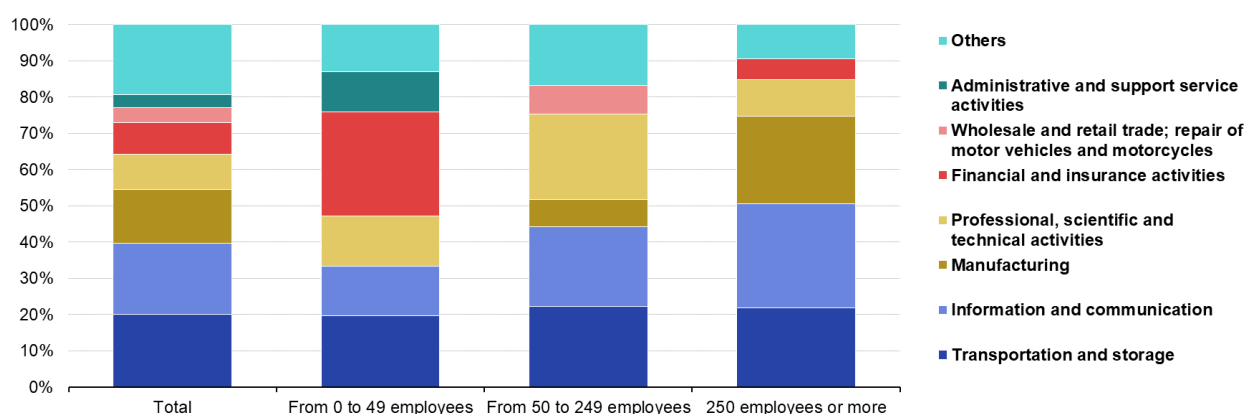(% by enterprise size)
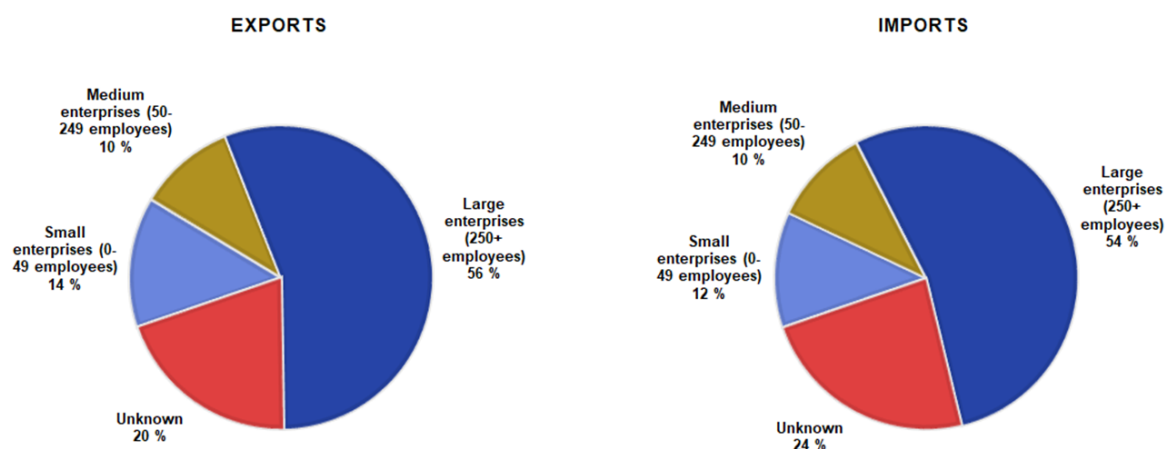
Source: Eurostat (online data code: [ext_stec01])

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Figure 1: Services by EU enterprises, partner Extra-EU, 2022 (% by enterprise size) Source: Eurostat (ext_stec01)

Three key sectors—information & communication, transportation & storage, and manufacturing—drive about half of EU services trade. In 2022, among EU small enterprises, the financial sector was the primary contributor to export flows, accounting for 29%, followed by transportation and storage (19%), information and communication (14%), professional, scientific, and technical activities (14%) and administrative and support service activities (11%). For EU medium-sized enterprises, the majority of exported services trade came from the professional, scientific and technical sector (24%), followed by information and communication, and transport and storage (each contributing 22%), Manufacturing and wholesale sectors each accounted for 8% of EU services exports. EU large enterprises involved in services exports were primarily active in the information and communication sector (contributing 28%) followed by the manufacturing sector (23%), transport and storage (21%), professional, scientific, and technical activities (10%) and financial and insurance activities (6%).

Services exports by EU enterprises and economic activity, partner Extra-EU, 2022
(%)

Note: The category "Others" covers the following economic activities: i) Accommodation and food service activities; real estate activities; public administration, defence; compulsory social security; education; human health and social work activities; other services, ii) Construction, iii)Electricity, gas, steam and air conditioning supply; water supply; sewerage, waste management and remediation activities, iv) Agriculture, forestry and fishing; mining and quarrying and v) Unknown NACE activity

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Figure 2: EU services exports by enterprise size class and top economic activities, partner Extra-EU, 2022 (% by enterprise size and economic activity) Source: Eurostat (ext_stec01)

The exports of large enterprises dominate in Finland (74%), Germany (72%), Slovakia (70%), Denmark (69%), France (68%) and Ireland (67%).

The analysis (Figure 3) reveals that, in 2022, smaller enterprises played a dominant role in smaller countries, contributing the largest share of services exports in Malta (86%), Estonia (59%), Luxembourg (49%) and Cyprus (41%). However, their contribution was much smaller in economies such as Slovakia and Italy (each contributing 3%), as well as in Greece (2%).

In 2022 the services exports in Bulgaria (28%), Slovenia (23%), Latvia and Lithuania (each contributing 22%) and Netherlands (21%) were dominated by middle-sized enterprises.

On the other end in Finland (74%), Germany (72%), Slovakia (70%), Denmark (69%), France (68%) and Ireland (67%) large enterprises (which tend to be foreign controlled) have a dominant role.

Services exports by enterprise size class and country, partner Extra-EU, 2022
(%)
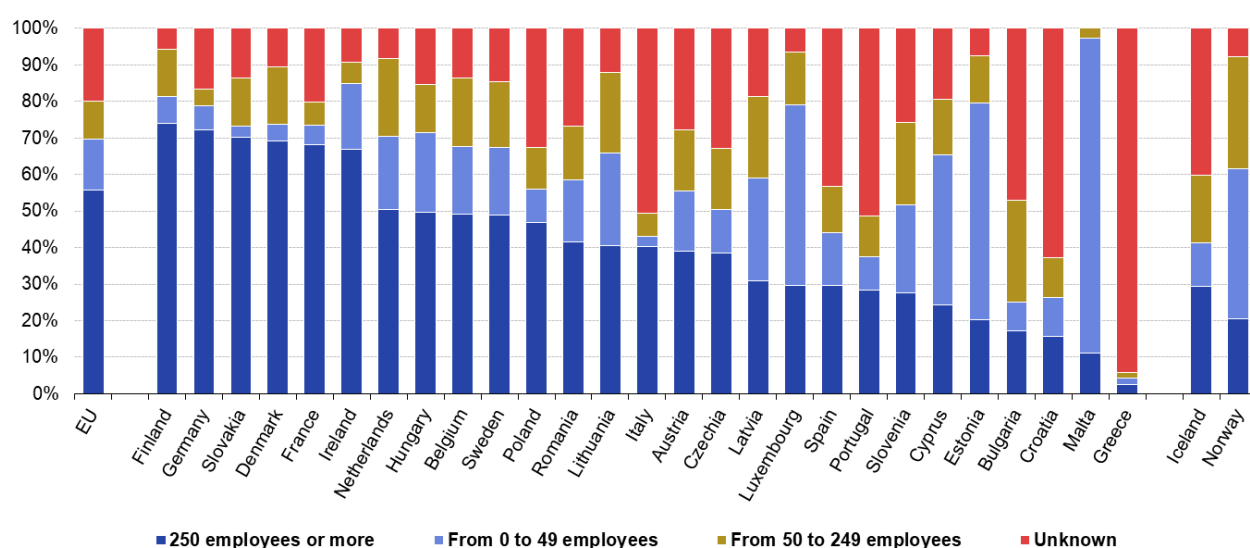
Figure 3: Services exports by enterprise size class and country, partner Extra-EU, 2022 (%) Source: Eurostat (ext_stec01)

The pattern of service imports closely mirrors that of exports (Figure 4). In 2022, large enterprises accounted for at least half of services imports in Ireland (75%), Denmark (65%), Sweden (60%), France (58%), Belgium (57%) and Germany (56%). Meanwhile, smaller enterprises were responsible for the largest share of imports in Malta (98%), Estonia (54%) and Cyprus (34%). The middle-sized enterprises were dominant in Luxembourg (38%), Slovenia (27%), Austria (23%) and Bulgaria (21%).

Services imports by enterprise size class and country, partner Extra-EU, 2022
(%)
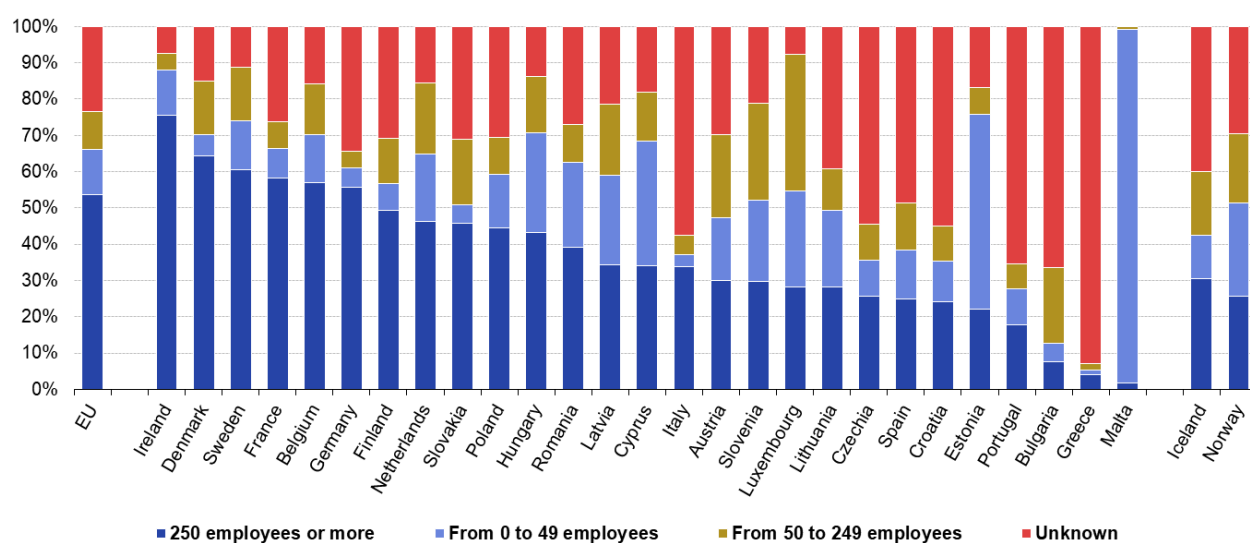
Figure 4: Services imports by enterprise size class and country, partner Extra-EU, 2022 (%) Source: Eurostat (ext_stec01)
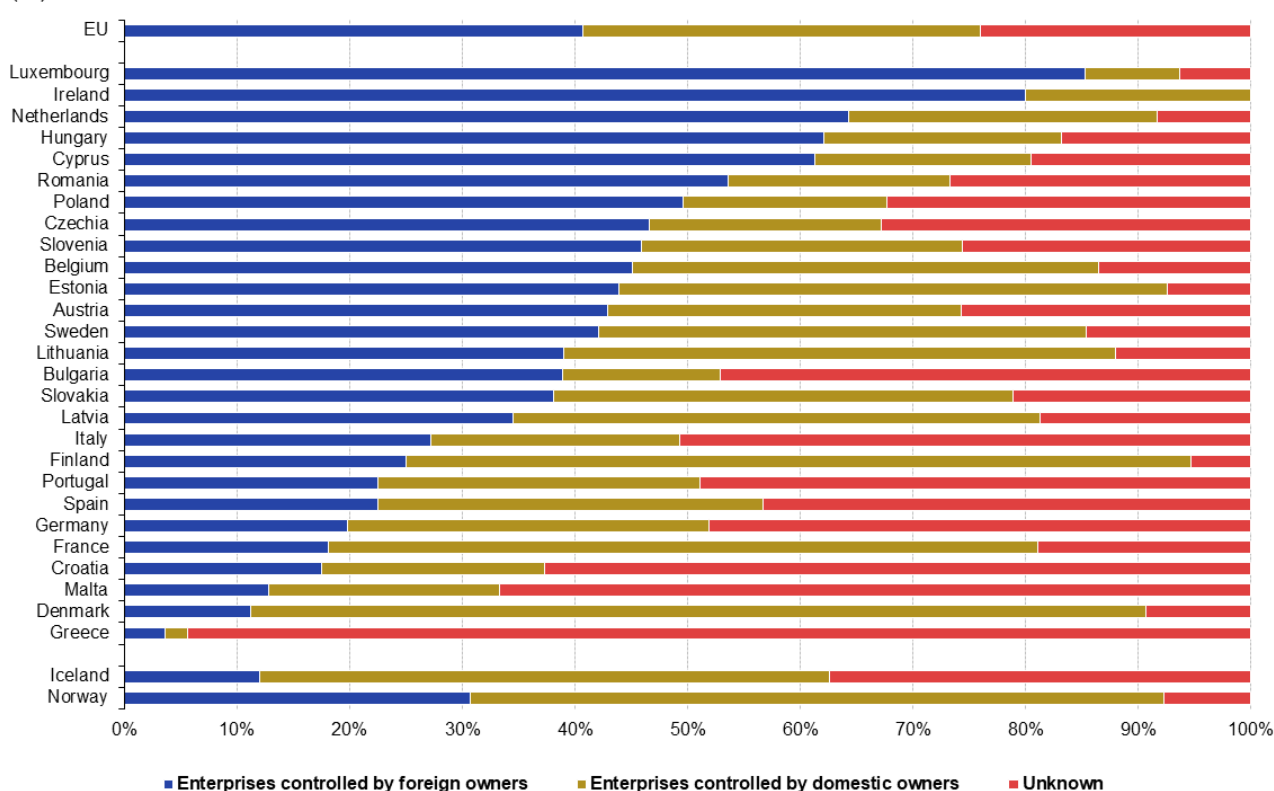
Trade in services by enterprise ownership

EU services trade is largely carried out by foreign-controlled businesses.

The ownership type indicates whether an enterprise is domestically or foreign-controlled. A high proportion of foreign-controlled services traders suggests that the economy is deeply integrated into international markets and global value chains. This is often reflected in foreign affiliates holding a dominant position in services trade.

The EU aggregate for this indicator should be interpreted with caution, as many "foreign controlling enterprises" are actually located in other EU countries. This arises from the definition of "domestic" enterprises, which is based on the perspective of the reporting country. An enterprise is considered foreign-controlled if it is outside the reporting country, potentially including other EU countries.

The analyses shows that the Irish and Luxembourgish economies are deeply integrated into international markets and global value chains, having the highest share of foreign-controlled enterprises. Foreign-controlled enterprises play a dominant role in Ireland, contributing 80% of services exports and 85% of imports, and in Luxembourg, where they account for 85% of exports and 81% of imports. Foreign-controlled enterprises are also responsible for most services exports from the Netherlands (64%), Hungary (62%) and Cyprus (61%). In contrast, domestically controlled enterprises represent more than half of ser-
vices exports from Denmark (almost 80%), Finland (70%), France (63%), Norway (62%) and Iceland (51), (Figure 5).

Services exports by enterprise ownership and country, partner Extra-EU, 2022
(%)

Figure 5: Services exports by enterprise ownership and country, partner Extra-EU, 2022 (% by type of control) Source: Eurostat (ext_stec03)

The relative contributions of domestically and foreign-controlled enterprises also vary in relation to services imports (Figure 6). The domestically controlled enterprises are responsible for just 3% of the services imports in Greece and 8% in Bulgaria. The highest proportion of services imports by domestically- controlled enterprises is in Denmark (73%), followed by France (57%) and Finland (52%). In Ireland 85% and in Luxembourg 81% of the imports are due to the activities of the foreign-controlled enterprises.

Services imports by enterprise ownership and country, partner Extra-EU, 2022
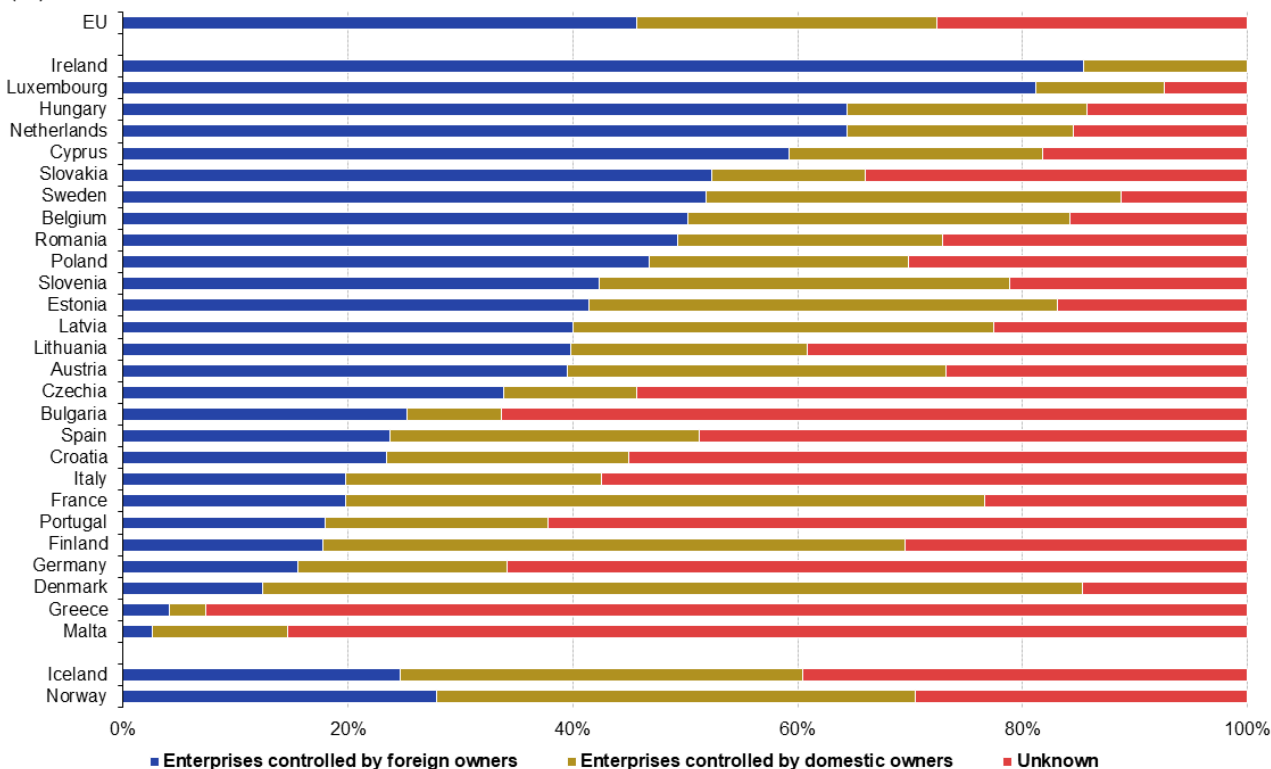(%)

Source: Eurostat (online data code: ext_stec03)

Figure 6: Services imports by enterprise ownership and country, partner Extra-EU, 2022 (% by type of control) Source: Eurostat (ext_stec03)
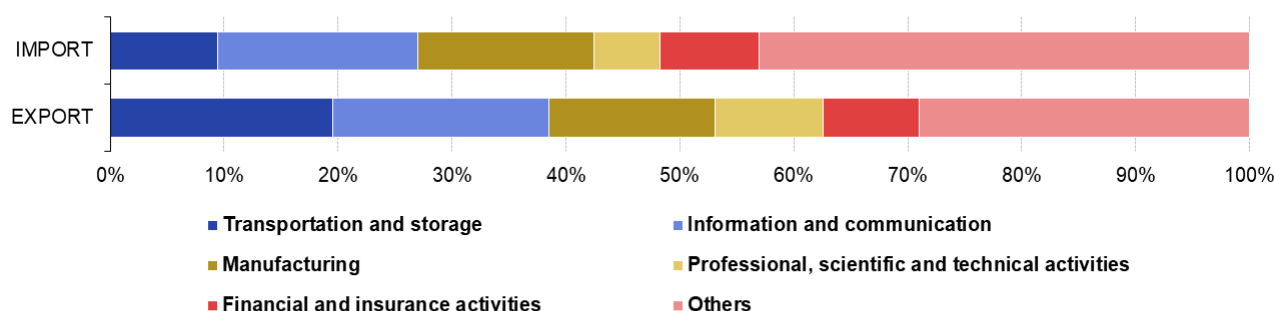
Trade in services by enterprises' economic activity

About half of total EU export flows come from traders whose primary activity falls in these 3 key economic activities: transportation and storage (20%), information and communication (19%) and manufacturing (15%).

The economic activity of a trading enterprise reflects its main area of operation. Enterprises in certain sectors, such as manufacturing, primarily export goods, while others, particularly those within NACE Sections H-N, are more focused on services. The EU trade flows come from traders whose primary activity falls within one of the following 3 key sectors: transportation and storage (20% of exports and 9% of imports), information and communication (19% of exports and 18% of imports) and manufacturing (15% for both exports and imports), (Figure 7).

Services flows for leading economic activities, partner Extra-EU, 2022
(%)

Note: The category "Others" covers the following economic activities: i) Accommodation and food service activities; real estate activities; public administration, defence; compulsory social security; education; human health and social work activities; other services, ii) Construction, iii)Electricity, gas, steam and air conditioning supply; water supply; sewerage, waste management and remediation activities, iv) Wholesale and retail trade; repair of motor vehicles and motorcycles, v) Administrative and support service activities, vi) Agriculture, forestry and fishing; mining and quarrying and vii) Unknown NACE activity

Source: Eurostat (online data code: [ext_stec02])

Figure 7: EU services flows for leading economic activities, partner Extra-EU, 2022 (% by economic activity) Source: Eurostat (ext_stec02)

The 5 leading economic activities (transportation and storage, information and communication, manufacturing, professional, scientific and technical activities, and financial and insurance activities) account for 71% of total EU export trade flows and 57% of the imports.

Services exports for leading economic activities,

partner Extra-EU, 2022
(% of total services)

Note: The category "Others" covers the following economic activities: i) Accommodation and food service activities; real estate activities; public administration, defence; compulsory social security; education; human health and social work activities; other services, ii) Construction, iii)Electricity, gas, steam and air conditioning supply; water supply; sewerage, waste management and remediation activities, iv) Wholesale and retail trade; repair of motor vehicles and motorcycles, v) Administrative and support service activities, vi) Agriculture, forestry and fishing; mining and quarrying and vii) Unknown NACE activity

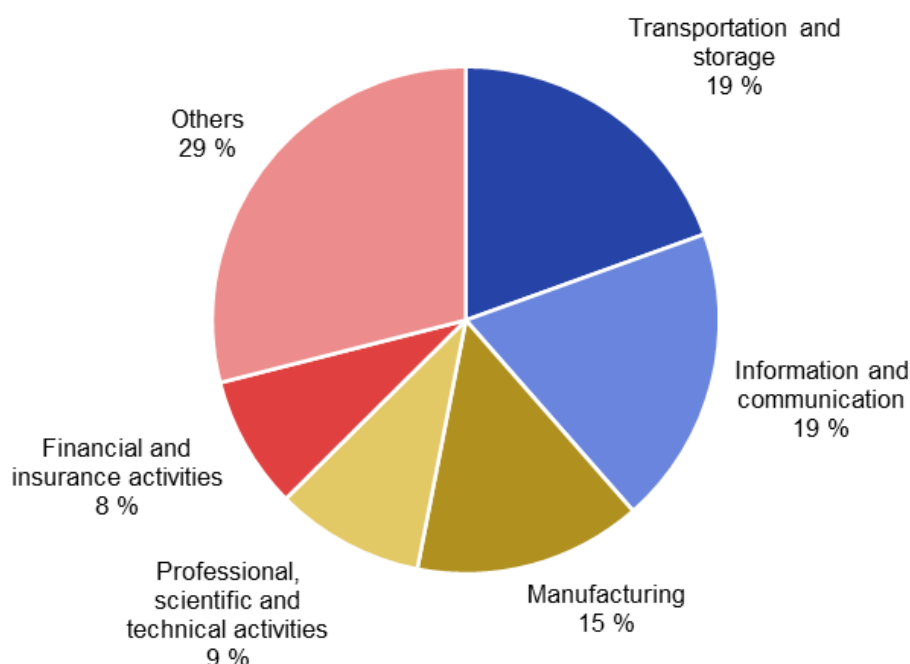*Source:* Eurostat (online data code: [ext_stec02])

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Figure 8: EU services exports for leading economic activities, partner Extra-EU, 2022 (% by economic activity) Source: Eurostat (ext_stec02)

The economic activities of the traders varies significantly across EU countries.

Figure 9 shows the proportions of services exports attributable to enterprises in different activities, as defined by their main economic activity. In 2022 transportation and storage were the leading economic activity in Denmark (73%), Greece (65%), Lithuania (48%), Slovakia (38%), France (29%), Latvia (28%), Germany (26%), Portugal (24%), Slovenia (23%) and Belgium (21%).

While information and communication were the principal economic activity in Ireland (58%), Estonia (44%), Cyprus (39%), Romania (37%), Sweden (34%), Bulgaria (32%), Czechia (30%), Hungary (23%), Poland (19%), Spain (13%) and Croatia (11%).
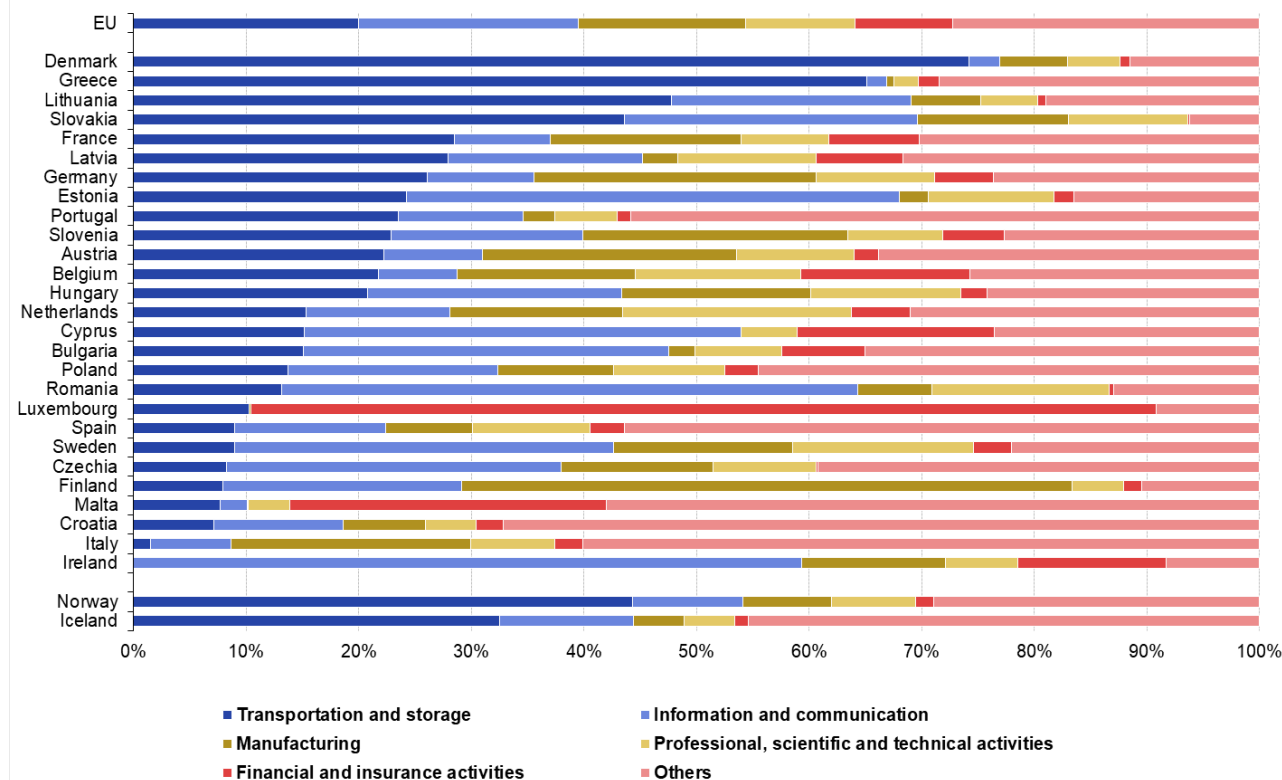
For Finland (54%), Slovenia and Austria (each contributing 23%) and Italy (21%) the biggest contributor for export flows was manufacturing.

The leading economic activities for the exports for the Netherlands were professional, scientific and technical

activities (20%), for Luxembourg were financial and insurance activities (55%) and for Malta were accommodation and food service activities; real estate activities; public administration, defense and other (49%).

The least contributing sectors for majority of the countries were: i) agriculture, forestry and fishing; mining and quarrying, ii) electricity, gas, steam and air conditioning supply; water supply; sewerage, waste management and remediation activities and iii) construction.

Services exports by economic activity of the enterprise, partner Extra-EU, 2022
(%)

Note: The category "Others" covers the following economic activities: i) Accommodation and food service activities; real estate activities; public administration, defence; compulsory social security; education; human health and social work activities; other services, ii) Construction, iii)Electricity, gas, steam and air conditioning supply; water supply; sewerage, waste management and remediation activities, iv) Wholesale and retail trade; repair of motor vehicles and motorcycles, v) Administrative and support service activities, vi) Agriculture, forestry and fishing; mining and quarrying and vii) Unknown NACE activity
Source: Eurostat (online data code: [ext_stec03])

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Figure 9: Services exports by country and economic activity of the enterprise, partner Extra-EU, 2022 (%) Source: Eurostat (ext_stec02)

Source data for tables and graphs

- STEC tables and graphs

Data sources

Since July 2022, Eurostat has begun disseminating the available voluntary STEC data. The published data includes the following breakdowns:

- Services trade by enterprise characteristics (STEC) by NACE Rev.2 activities and enterprise size class:

(ext_stec01) ;

- Services trade by enterprise characteristics (STEC) by NACE Rev.2 activities and EBOPS 2010 items:

(ext_stec02) ;

- Services trade by enterprise characteristics (STEC) by NACE Rev.2 activities and type of ownership:

(ext_stec03) .

In October 2024, the first official STEC data under the European Business Statistics Regulation (EU) 2019/2152 were published, covering EU aggregates for the reference year 2022. In February 2025, data for the EU Member States, Norway and Iceland for the reference year 2022, along with some historical data, were disseminated.

The development of STEC statistics marks a significant advancement in integrating services trade data into business statistics. These statistics establish a connection between the volume of trade in services and the characteristics of the enterprises involved. They provide insights into specific enterprise characteristics, such as size, economic activity, and ownership. STEC data are generated by combining statistical business register information with data on international trade in services at the enterprise level. This integration allows for the linkage of each enterprise's export and import values to its corresponding characteristics, as recorded in the business register.

The resulting dataset offers a breakdown of the trader population by enterprise size (small, medium, and large), ownership type (domestic or foreign-controlled), and primary economic activity by NACE Rev 2.0 codes. By linking different datasets, STEC adds value to the data without increasing the respondent burden on enterprises and with minimal costs for data compilers.

Context

International trade in services has increasingly become a key driver of economic globalization. Many services, including health, education, and business services, have become tradable thanks to digitalization. Additionally, new services have emerged in international markets through information and communication technologies (ICT), digital platforms, and digitalization, which have led to the creation of new markets and expanded digital trade.

The growing importance of international trade in services, due to digitalization and the development of new services, has increased demand for STEC data, which complement the big picture provided by traditional trade statistics. While international trade in services statistics provide a view of services flows between countries, broken down by service type, they do not reveal details about the enterprises engaged in that trade.

STEC statistics offer valuable insights into traders operating in the international services market. They help answer key questions such as: "Who are the traders?" and "What are the characteristics of the trading enterprises?". These statistics offer additional insights into trade by profiling enterprises based on attributes like number of employees, ownership type, and economic activity. Profiling traders is essential to understanding the micro-level incentives and consequences of services trade.

STEC data also contribute to the broader statistical framework on measuring economic globalization and Global Value Chains (GVCs), enabling more informed and targeted trade policies. By identifying the ownership status (foreign or domestic) of enterprises engaged in trade, STEC data shed light on the role of multinational enterprises in driving globalization and explicitly address the link between trade and investment. Furthermore, the data enhance the allocation of services exports and imports by the industry type of the trading enterprise. This information is useful for the development of the EU's inter-country supply, use, and input-output tables, as part of the (FIGARO project).

Together, STEC and trade in goods by enterprise characteristics (TEC) statistics provide a comprehensive picture of the enterprises active in international markets.

The importance of STEC statistics has been officially recognized and integrated as a regular reporting requirement for EU countries under the European Business Statistics Regulation (EU) 2019/2152 , making STEC statistics official for the first time. The first reference year for STEC data reporting under this regulation is 2022. The methodology for compiling STEC statistics is outlined in the Eurostat-OECD Compilers Guide for Statistics on Services Trade by Enterprise Characteristics .

The first official STEC dataset worldwide was published as follows:

- On 1 October 2024: Data for EU aggregates only, covering the reference year 2022.

- On 28 February 2025: A complete dataset for EU Member States, Norway and Iceland for the reference year 2022, along with some back data submitted by a few countries (see Table 1).

All EU Member States reported 100% of the legally required mandatory data points as per the European Business Statistics Regulation (EU) 2019/2152, while 18 countries also reported voluntary data items.

STEC mandatory cells per data set

	STEC01	STEC02	STEC03	TOTAL
mandatory cells	390	1092	312	1794

Source: Eurostat

Table 2: STEC mandatory cells per data set Source: Eurostat

Explore further

Other articles

- International trade in services

- International trade in goods by enterprise characteristic

Thematic section

- International trade in services

Publications

- Compilers Guide for statistics on Services Trade by Enterprise Characteristics (STEC)

External links

- Manual of the Statistics on International Trade in Services 2010 (MSITS 2010)

- Compilers Guide for the Manual of the Statistics on International Trade in Services