

The Journal of the U.S. Bureau of Economic Analysis

Visual Essay

A Profile of U.S. Services Traders, 2006–2022

By Jennifer Bruner and Alexis Grimm | May 31, 2024

In 2022, the United States had a surplus on trade in services of \$231.8 billion, which contrasted with a \$1,183.0 billion deficit on trade in goods. Despite the important role that trade in services plays in the U.S. economy and worldwide, public information regarding the firms that engage in such trade remains limited. The U.S. Bureau of Economic Analysis (BEA) publishes statistics on services trade by enterprise characteristics (STEC) to fill that gap. Periodic analytical articles like this profile of U.S. services traders go beyond the standard presentation of international services statistics to provide greater insights into who trades. This *Visual Essay*, covering 2006–2022 (with a focus on 2022), updates the most recent article in the series from 2019. In addition, four detailed STEC tables with historical detail on these statistics are available in BEA's international services Interactive Data Application. See the box "Data Availability" for more on those statistics.

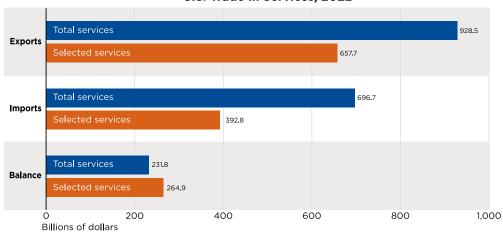
The analysis presented in this *Visual Essay* is focused on a "selected" subset of statistics on international trade in services that is based on data collected by BEA. BEA administers surveys on international transactions in financial services; insurance services; charges for the use of intellectual property; telecommunications, computer, and information services; and other business services. ³ Chart 1 illustrates how selected services are defined for the STEC statistics and their role within total trade in services.

Survey data on selected services have been linked to BEA's extensive data on multinational enterprises (MNEs) collected on its activities of multinational enterprises (AMNE) surveys to learn more about the characteristics of MNEs that trade services, which account for a large proportion of U.S. services traders. The use of data linked between BEA surveys provides a fuller view of the characteristics of MNEs that trade services. Trade in services surveys conducted by BEA collect very little information on services-trading firms besides their primary industry. In contrast, AMNE surveys collect information on many aspects of the company's finances and operations. Because MNEs account for such a large proportion of services trade, the linked data provide considerable insight into the nature of firms that are services traders. The linked data also open the door to further research, including research into the extent that services-providing MNEs serve foreign markets either through international trade transactions or through their affiliates located in the markets that they serve. In addition, the linked data may enable advances in ongoing research on digital trade and the U.S. economy and on patterns in the location of intellectual property asset creation and use by MNEs.

The remainder of this *Visual Essay* is organized into two main sections. The first presents information on all U.S. services traders, including detail by industry and by firm ownership type. The second focuses on the characteristics of services traders that are MNEs, using data from BEA's AMNE surveys, including detail by employment size class and on trade intensity. This article also features four boxes (1) "Data Availability" indicates where additional information from this Visual Essay, and on international services more broadly, can be found on BEA's website, (2) "Updates to the Statistics on Services Trade by Enterprise Characteristics" describes the major updates to the statistics featured in this Visual Essay compared with those in the 2019 article, (3) "Types of Firms That Trade Services" presents key concepts used for describing firms, and (4) "Affiliated Relationships and Trade in Selected Services" highlights the prevalence of trade with affiliated entities for U.S. parents and U.S. affiliates, as defined in standard BEA publications.

Chart 1. Defining Selected Services: In-Scope Services for Statistics on Services Trade by Enterprise Characteristics

U.S. Trade in Services, 2022



Service types included in selected services:

- Construction
- Insurance services
- Financial services
- Charges for the use of intellectual property n.i.e.
- Telecommunications, computer, and information services
- Other business services
- Personal, cultural, and recreational services

n.i.e. Not included elsewhere

Note. The service types not included in selected services are maintenance and repair services n.i.e., transport, travel (for all purposes including education), and government goods and services n.i.e.

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- Selected services cover most international services traded between businesses and accounted for \$657.7 billion (71 percent) of total services exports and \$392.8 billion (56 percent) of total services imports in 2022.
- The balance on U.S. trade in the selected services that are in scope for this article was \$264.9 billion in 2022, more than accounting for the overall surplus on total trade in services (\$231.8 billion).
- The deficit on trade in services that are not included in selected services, and are therefore out of scope for this article, totaled \$33.1 billion in 2022, reflecting a deficit in transport services.

Data Availability

STEC statistics, formerly called "characteristics of firms that trade services," can be accessed through BEA's international services Interactive Data Application. This application covers additional years of data and supplemental detail that are not available in the charts in this article.

With the release of this article, BEA has also introduced new historical statistics for 2006–2008 in the Interactive Data Application as well as statistics for more recent years, expanding the coverage of STEC statistics to 2006–2022. In addition, BEA introduced two new interactive international services tables: table 6.1, which presents statistics on trade in selected services by industry, and table 6.4, which presents statistics on trade in selected services by employment size class and by service type. Tables originally numbered as 6.1–6.2 were renumbered as tables 6.2–6.3 to permit the introduction of the new table 6.1.

Detailed descriptions of additional updates to existing tables and of the new tables are as follows:

- **Table 6.1, U.S. Trade in Selected Services, by Industry** (*new in 2024*) features trade in selected services by major industry and—within the 4 major industry categories accounting for the largest shares of services exports and imports—by 18 subindustries.
- Table 6.2, U.S. Trade in Selected Services, by Service Type and by Major Industry (updated in 2024; these statistics were previously largely featured in numbered table 6.1) features expanded detail and an updated format to reflect updates to the trade in services major categories introduced during BEA's 2020 annual update of the International Economic Accounts. Compared with the table originally numbered 6.1, the columns and rows have been transposed, and the balance on total selected services by industry has been added.
- Table 6.3, U.S. Trade in Selected Services, by Service Type and by Firm Ownership Type (updated in 2024; these statistics were previously largely featured in numbered table 6.2) features trade in selected services by the new firm ownership-type classifications introduced in this article and the updated services categories introduced in the 2020 annual update. Compared with the table originally numbered 6.2, the balance on total selected services by firm ownership type has been added, and exports and imports of information and communications technology (ICT) and of potentially ICT-enabled services have been dropped.¹
- Table 6.4, MNEs' U.S. Trade in Selected Services, by Service Type and by Employment Size Class (new in 2024) features trade in selected services cross-classified by 6 employment size classes and 11 service types.

^{1.} ICT services refers to services that facilitate information processing and communication, and potentially ICT-enabled services is an aggregate measure of services that can predominantly be delivered remotely over ICT networks. In 2022, 95 percent of selected services exports and 94 percent of imports were classified as potentially ICT enabled. BEA dropped these statistics from the presentation of trade in selected services by service type and by firm ownership type because the overlap of ICT and potentially ICT-enabled services with certain major service type categories introduced into BEA's standard presentation during the 2020 annual update would have required BEA to suppress a substantial portion of the ICT and potentially ICT-enabled statistics to avoid the disclosure of data of individual companies. For a listing of the categories of services from BEA's published statistics that are classified as ICT and potentially ICT enabled, see the box "Updating Potentially ICT-Enabled Services for the 2020 Annual Update" in Shari A. Allen, Alexis N. Grimm, Christopher Paul Steiner, and Rudy Telles Jr., "U.S. International Services: Trade in Services in 2019 and Services Supplied Through Affiliates in 2018," Survey of Current Business 100 (October 2020).

Updates to the Statistics on Services Trade by Enterprise Characteristics

This article incorporates several updates and expansions to the statistics presented in 2019. These improvements are described in more detail in the FAQ "What information does the Bureau of Economic Analysis publish on services trade by enterprise characteristics?" on BEA's website. A summary of the updates are as follows:

- Extended time series, adding new historical statistics for 2006–2008 as well as statistics for more recent years. Statistics on services trade by enterprise characteristics now cover 2006–2022.
- Improved link between trade in services data and direct investment data due to the incorporation of expanded firm identification information, enhanced information on U.S. parent-to-U.S. affiliate links, and refinement to linking methods.
- Improved existing and developed new methods for allocating nonsurvey-based trade to companies or otherwise assigning characteristics of the U.S. exporter or importer.
- Introduced a new firm ownership-type classification (see the box "Types of Firms That Trade Services").
- Expanded industry detail within the top four major industries.
- Expanded employment size class detail for trade in selected services by MNEs.

All U.S. Services Traders, 2022

Imports Exports Finance and insurance 131.2 Manufacturing 102.7 Information 62.9 Professional, scientific, and technical services Other industries 31.5 Wholesale trade 28.6 Retail trade 7.3 Balance Deficit Surplus Real estate and rental and leasing 4.7 12.1 Mining 3.6 4.5

Chart 2. U.S. Trade in Selected Services by Major Industry, 2022

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200

150

• In 2022, finance and insurance firms were the largest traders of selected services, with total trade (exports plus imports) totaling \$324.3 billion, followed by firms in manufacturing at \$258.7 billion. Firms in these two major industries accounted for more than half of all trade in selected services.⁷

50

50

Billions of dollars

100

150

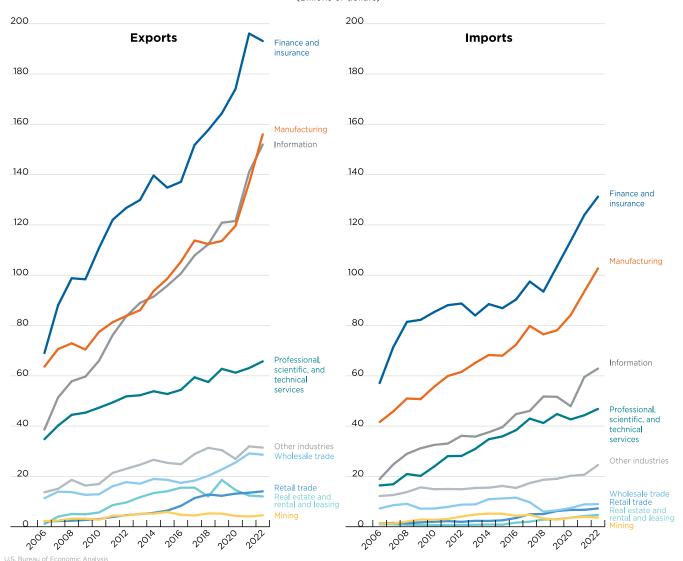
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100

- Services traders in every major industry were net exporters of selected services in 2022. The largest surplus (\$89.1 billion) was for firms in information, which accounted for over one-third of the total surplus on selected services.
- For BEA's most up-to-date and detailed statistics on trade in selected services by industry, see international services interactive table 6.1.

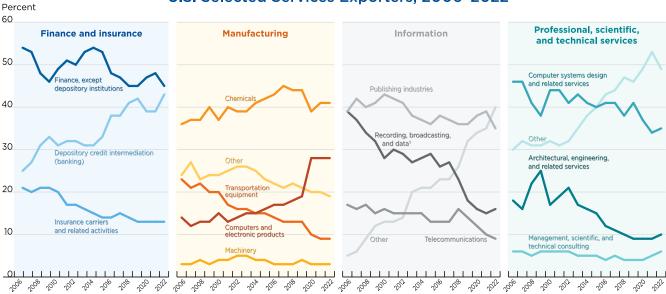
Chart 3. U.S. Trade in Selected Services by Major Industry, 2006–2022





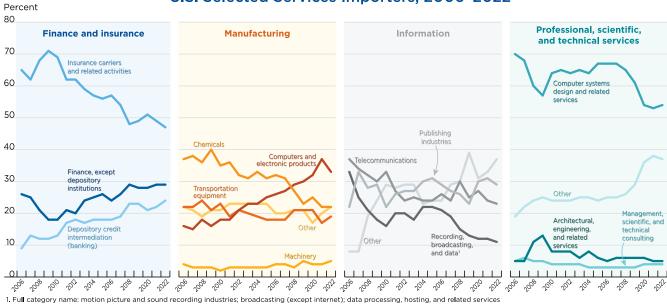
- Finance and insurance firms have been the largest exporters and largest importers of selected services since 2006. In 2022, their exports totaled \$193.1 billion, accounting for 29 percent of selected services exports, the same as their share in 2006. Imports totaled \$131.2 billion in 2022, accounting for 33 percent of selected services imports; their share decreased somewhat over the period, from 36 percent in 2006, as imports by firms in other industries grew more rapidly.
- The second-largest exporters of selected services in 2022 were manufacturing firms, with exports of \$156.1 billion. Manufacturing edged past information to become the second-largest exporting industry in 2022; information firms were the second-largest exporters in 2019–2021.
- Since 2006, information firms dramatically increased selected services exports, nearly quadrupling their level and growing their share of selected services exports by 7 percentage points to reach 23 percent by 2022.
- Manufacturing firms, which imported \$102.7 billion of selected services in 2022, have been the second-largest importers since 2006, accounting for approximately one-quarter of total selected services imports over most of the period 2006–2022.
- Information firms have been the third-largest importers by industry sector since 2006 and grew their share of selected services imports from 12 percent to 16 percent.
- For BEA's most up-to-date and detailed statistics on trade in selected services by industry, see international services interactive table 6.1 and table 6.2.

Chart 4. Composition of Top Four Major Industries for U.S. Selected Services Exporters, 2006–2022



- 1. Full category name: motion picture and sound recording industries; broadcasting (except internet); data processing, hosting, and related services
 - Underlying the patterns in exports by major industry, there have been some shifts in the relative importance of detailed industries over the period 2006–2022.
 - Within finance and insurance, the share of exports by firms in banking grew 18 percentage points, and the share of exports by firms in finance (except banking) dropped 9 percentage points from 2006 to 2022.
 - Within manufacturing, the share of exports by firms in computers and electronic products nearly doubled, and the share by firms in transportation equipment fell by more than half from 2006 to 2022.
 - Within information, the share of exports by firms in "other information services" increased from 5 to 40 percent between 2006 and 2022, reflecting the rise of operators of web search portals and publishers of content exclusive to the internet.
 - Within professional, scientific, and technical services, the share of exports by firms in other professional, scientific, and technical services increased 19 percentage points from 2006 to 2022, led by increases for firms in legal services, while the share attributable to computer systems design and related services decreased 12 percentage points.





- Underlying the patterns in imports by major industry, there have been some shifts in the relative importance of detailed industries over the period 2006–2022.
 - Within finance and insurance, the share of imports by firms in banking grew by 15 percentage points, and the share of imports by firms in insurance fell by 18 percentage points from 2006 to 2022.
 - Within manufacturing, the share of imports by firms in computers and electronic products increased 16 percentage points, while the share attributable to chemicals decreased 15 percentage points.
 - Within information, the share of imports by firms in "other information services" increased 29 percentage points, while the share attributable to motion picture and sound recording industries; broadcasting (except internet); and data processing, hosting, and related services decreased 22 percentage points.
 - Within professional, scientific, and technical services, firms in computer systems design and related services
 have been the largest importers since 2006, but their share fell by 16 percentage points. In contrast, the
 share for firms in other professional, scientific, and technical services increased 18 percentage points, led by
 firms in accounting, tax preparation, bookkeeping, and payroll services.

Chart 6. U.S. Exports of Selected Services by Service Type and by Industry, 2022

(Billions of dollars)

_	All service types	Insurance and financial services	Charges for the use of IP n.i.e.	Telecommunications computer, and information services	development	Professional and management consulting services	A ll other services
All industries	657.7	190.4	127.4	66.2	57.8	143.6	72.4
Finance and insurance	193.1	173.7			(*)	13.1	0,0
Manufacturing	156.1	(D)	51.3	7.0	37.2	45.9	(D)
Professional, scientific, and technical services	65.8	(3)	12.3	7.6	8.0	31.0	13.7
Information	152.0	(D)	39.4	38.8	8.9	37.9	(D)
A ll other industries	90.8	(D)	22.3	10.2		15.6	(D)
(*) Transactions between zero (D) Suppressed to avoid the discription in the lectual property n.i.e. Not included elsewhere		ndividua l companies	Note. The gray sh	ading is not indicative of	the value of the cell.	\$0	\$maxim

• While some industries predominantly exported a particular service type, firms in other industries exported a variety of service types.

- In 2022, firms in finance and insurance accounted for \$173.7 billion (over 90 percent) of the exports of insurance and financial services. Insurance and financial services, which are presented as two separate categories in BEA's standard presentation of trade in services, are presented as a combined category here and elsewhere in this article.⁸
- o Firms in manufacturing were the largest exporters of charges for the use of intellectual property n.i.e. (not included elsewhere), accounting for \$51.3 billion (or 40 percent) of exports in this category. They were also the largest exporters of professional and management consulting services (\$45.9 billion, or 32 percent) and research and development services (\$37.2 billion, or 64 percent).
- Firms in every major industry exported professional and management consulting services. With no industry
 accounting for more than 32 percent of exports, these exports were generally less concentrated than some
 other service types.
- For BEA's most up-to-date and detailed statistics on trade in selected services by major industry and by service type, see international services interactive table 6.2.

Chart 7. U.S. Imports of Selected Services by Service Type and by Industry, 2022

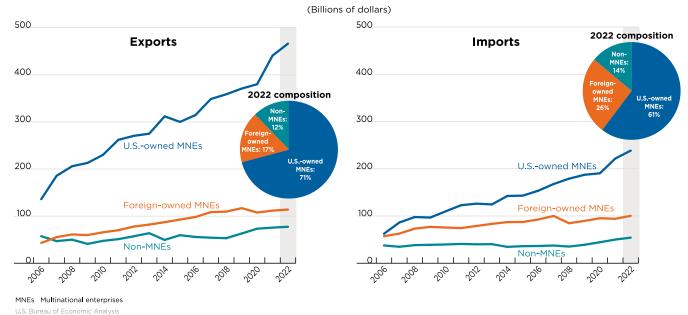
(Billions of dollars)

	All service types	Insurance and financial services	Charges for the use of IP n.i.e.	Telecommunications computer, and information services	development	Professional and management consulting services	A ll other services
Ali industries	392.8	117.2	53.2	53.6	33.6	66.9	68.1
Finance and insurance	131.2	99.4	1.3	12.1	(D)	16.4	(D)
Manufacturing	102.7	2.9	27.1	(D)	21.5	18.3	(D)
Professional, scientific, and technical services	46.9	(*)	8.0	15.3	5.0	15.5	17.5
Information	62.9	1.6	13.0	15.5		9.6	2.4
All other industries	49.1	12.9	3.9	(D)	(D)	7.2	(D)
(*) Transactions between zero (D) Suppressed to avoid the dis P Intellectual property n.i.e. Not included elsewhere		dividual companies	Note. The gray sh	ading is not indicative of t	the value of the cell.	\$0	\$maxim

• While firms in some industries predominantly imported one or few specific service types, other industries imported a variety of service types.

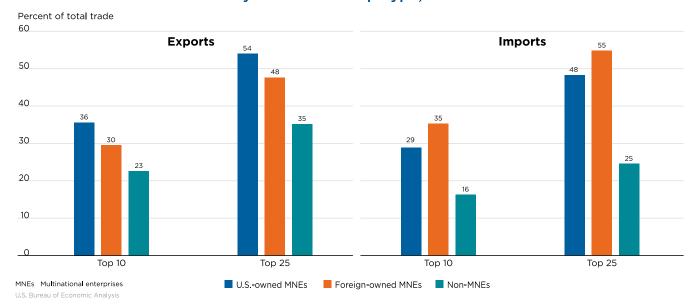
- In 2022, firms in finance and insurance were the largest importers of insurance and financial services, accounting for \$99.4 billion (or 85 percent) of imports in this service category.
- o Firms in manufacturing were the largest importers of charges for the use of intellectual property n.i.e., accounting for \$27.1 billion (or 51 percent) of imports. Firms in manufacturing also accounted for \$21.5 billion (or 64 percent) of research and development services imports.
- Imports of professional and management consulting services were generally less concentrated in any particular industry compared to other service types. Manufacturing firms were the largest importers (\$18.3 billion) of these services.

Chart 8. U.S. Trade in Selected Services by Firm Ownership Type, 2006–2022



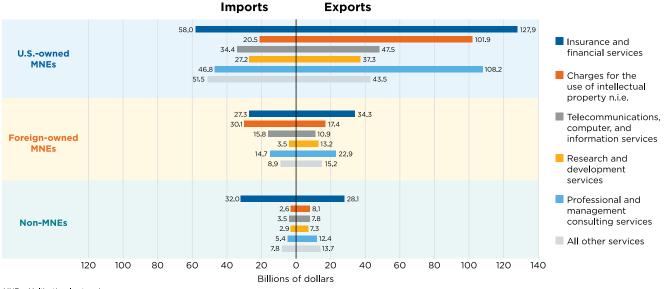
- MNEs, especially U.S.-owned MNEs, have accounted for an outsized role in selected services trade for many years.
 - Together, U.S.-owned and foreign-owned MNEs exported \$580.3 billion and imported \$338.6 billion of selected services in 2022. Growth in MNEs' trade in selected services consistently outpaced that of non-MNEs in 2006–2022. As such, MNEs' shares of both selected services exports and imports have grown over time.
- The combined share of trade in selected services attributable to MNEs reached 88 percent of U.S. exports and 86 percent of imports of selected services in 2022.
 - In 2022, the share of exports of selected services attributed to U.S.-owned MNEs was 71 percent, and the share attributed to foreign-owned MNEs was 17 percent. The share for non-MNEs was 12 percent.
 - The share of imports of selected services attributed to U.S.-owned MNEs reached 61 percent in 2022. The share of imports attributed to foreign-owned MNEs was 26 percent, and the share attributed to non-MNEs was 14 percent.
- Of the three firm ownership types highlighted in this article, U.S.-owned MNEs have historically contributed most to the surplus on trade in selected services. In 2022, the \$264.9 billion surplus on trade in selected services was mostly attributable to a \$227.9 billion surplus for U.S.-owned MNEs. Surpluses for both foreign-owned MNEs and non-MNEs contributed less to the overall surplus on selected services trade.
- Foreign-owned MNEs shifted from being net importers to net exporters in 2014, following deficits on trade in selected services since 2006.
- For BEA's most up-to-date and detailed statistics on trade in selected services by firm ownership type, see international services interactive table 6.3.

Chart 9. Share of U.S. Trade in Selected Services Accounted for by the Top Firms by Firm Ownership Type, 2022



- MNEs tend to have a higher concentration of trade among the top traders than non-MNEs.
 - For exports, the concentration in 2022 was highest among U.S.-owned MNEs, with the top 10 firms
 accounting for more than one-third of exports of selected services by U.S.-owned MNEs and the top 25 firms
 accounting for more than half.
 - For imports, however, the concentration was highest among foreign-owned MNEs, with the top 10 firms accounting for 35 percent of selected services imports by foreign-owned MNEs and the top 25 firms accounting for 55 percent.
- Non-MNEs had the least concentrated trade, especially for imports. The top 10 firms accounted for just 16 percent of imports, and the top 25 accounted for 25 percent.

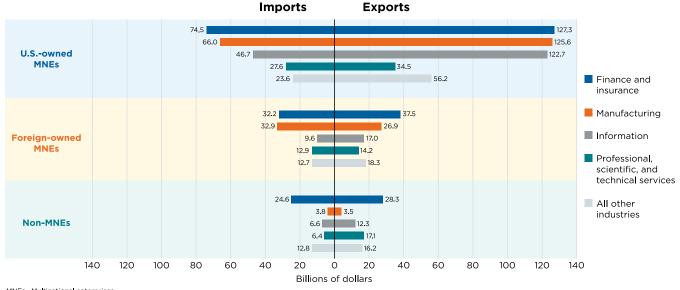
Chart 10. U.S. Trade in Selected Services by Firm Ownership Type and Service Type, 2022



MNEs Multinational enterprises

- Patterns in trade by service type varied across firm ownership types in 2022.
 - U.S.-owned MNEs exported \$127.9 billion of insurance and financial services (primarily financial services), which represented 27 percent of their selected services exports. The next largest categories of exports among U.S.-owned MNEs were professional and management consulting services (\$108.2 billion, or 23 percent of their exports) and charges for the use of intellectual property n.i.e. (\$101.9 billion, or 22 percent of their exports). U.S.-owned MNEs' largest category of imports was insurance and financial services, which were \$58.0 billion (24 percent of their selected services imports).
 - Like U.S.-owned MNEs, the largest exports for foreign-owned MNEs were insurance and financial services (primarily financial services), at \$34.3 billion (30 percent of their selected services exports), followed by professional and management consulting services, at \$22.9 billion (20 percent of their exports). The largest category of imports was charges for the use of intellectual property n.i.e., which were \$30.1 billion (30 percent of their selected services imports).
 - Among non-MNEs, insurance and financial services (especially financial services) dominated trade in selected services, accounting for exports of \$28.1 billion (36 percent of their exports) and imports of \$32.0 billion (59 percent of their imports).

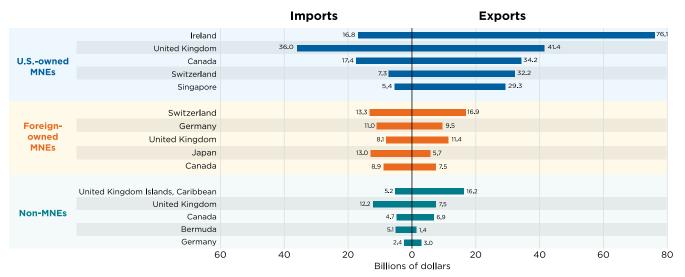
Chart 11. U.S. Trade in Selected Services by Firm Ownership Type and Industry, 2022



MNEs Multinational enterprises
U.S. Bureau of Economic Analysis

- Patterns in trade in services by industry exhibit both similarities and differences across firm ownership types. All firm ownership types were net exporters in every major industry except foreign-owned MNEs and non-MNEs in manufacturing, which were net importers.
 - Among U.S.-owned MNEs, the largest exporting industry in 2022 was finance and insurance (\$127.3 billion), followed closely by manufacturing (\$125.6 billion) and information (\$122.7 billion). Together, firms in these three industries accounted for 81 percent of U.S.-owned MNEs' exports of selected services. For imports, the top industries were also finance and insurance (\$74.5 billion), manufacturing (\$66.0 billion), and information (\$46.7 billion), which together accounted for 79 percent of imports.
 - Among foreign-owned MNEs, the largest exports and imports were attributable to firms in finance and insurance (\$37.5 billion for exports and \$32.2 billion for imports) and in manufacturing (\$26.9 billion for exports and \$32.9 billion for imports). Together, firms in these industries accounted for 57 percent of foreign-owned MNEs' exports and 65 percent of imports.
 - Among non-MNEs, trade in services was more concentrated in the top industry. Firms in finance and insurance accounted for \$28.3 billion (37 percent) of non-MNE exports and \$24.6 billion (45 percent) of non-MNE imports.

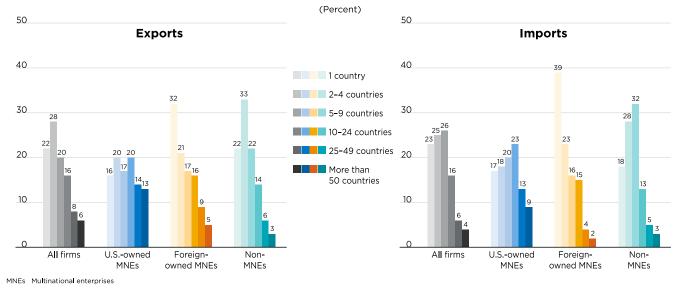
Chart 12. U.S. Trade in Selected Services With the Top Five Partner Countries by Firm Ownership Type, 2022



MNEs Multinational enterprises
U.S. Bureau of Economic Analysis

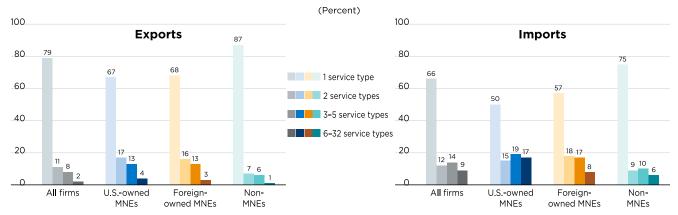
- The partner country composition of trade in selected services varies by firm ownership type and by direction of trade. The set of top five partner countries, by volume of total trade (that is, exports plus imports), differs for each of the firm ownership types, with just two countries—Canada and the United Kingdom—appearing in the top five for all three firm ownership types.
 - Among U.S.-owned MNEs, the largest export market for selected services was Ireland, while the greatest source of imports was the United Kingdom. Together, the top five partner countries accounted for \$213.1 billion (46 percent) of U.S.-owned MNE exports and \$82.9 billion (35 percent) of imports.
 - For foreign-owned MNEs, Switzerland was both the top destination for selected services exports and the top source of selected services imports. Foreign-owned MNEs had a higher concentration of imports (\$54.3 billion, or 54 percent) from the top five countries than exports (\$51.0 billion, or 45 percent).
 - Among non-MNEs, the United Kingdom Islands, Caribbean was the top destination for selected services
 exports, while the United Kingdom was the top source of imports. The top five partner countries accounted
 for a large proportion of exports (\$34.9 billion, or 45 percent) and an even larger proportion of imports
 (\$29.7 billion, or 55 percent).

Chart 13. Share of U.S. Trade in Selected Services by Firm Ownership Type and by the Firms' Number of Partner Countries, 2022



- The number of partner countries tends to vary by firm ownership type. U.S.-owned MNEs tended to trade with a larger number of countries than either foreign-owned MNEs or non-MNEs.
 - In 2022, 46 percent of U.S.-owned MNEs exported selected services to 10 or more countries, and 13 percent exported to more than 50 countries. In comparison, only 31 percent of foreign-owned MNEs and 23 percent of non-MNEs exported to 10 or more countries.
 - U.S.-owned MNEs also tended to import from a larger number of countries, with 45 percent importing selected services from 10 or more countries, compared with 22 percent for foreign-owned MNEs and 21 percent for non-MNEs.
- Foreign-owned MNEs tended to trade with just one country to a greater extent than either U.S.-owned MNEs or non-MNEs. Among foreign-owned MNEs, 32 percent exported to just one country, and 39 percent imported from just one country. The greater tendency of foreign-owned MNEs to trade with just one country reflects the importance of affiliated trade, especially with a foreign parent or UBO, for these firms.¹⁰

Chart 14. Share of U.S. Trade in Selected Services by Firm Ownership Type and by the Firms' Number of Service Types Traded, 2022

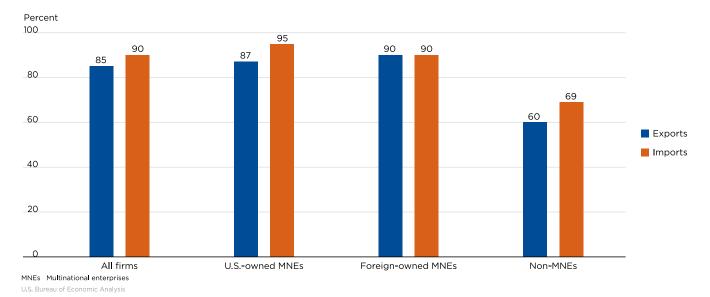


MNEs Multinational enterprises

Note. The 32 service types that are considered for the counts of service types in this chart correspond to the following service types from various levels of international services table 2.1: construction; insurance services; financial services; charges for the use of intellectual property n.i.e.; telecommunications services; computer services; information services; provision of customized and noncustomized research and development services also of proprietary rights arising from research and development; other research and development services; accounting, auditing, bookkeeping, and tax consulting services; business and management consulting and public relations services; acvertising services; are research and public opinion polling services; trade exhibition and sales convention services; architectural services; engineering services; scientific and other technical services; waste treatment and depollution services; services incidental to agriculture, forestry, and fishing; services incidental to mining and oil and gas extraction; operating leasing services; trade-related services; other business services in.i.e.; audiovisual production services; and heritage and recreational services; bearing services; bearing services; and heritage and recreational services. The set of 32 service types used for these counts was selected in part so that the types represent unique activities and balance stub-level detail and transaction shares.

- While the majority of services traders in all firm ownership-type categories exported just one type of service (79 percent of all firms), MNEs tended to export a larger number of service types than non-MNEs.
 - Among non-MNE exporters, 87 percent exported just one type of service, compared with approximately twothirds of MNEs exporting just one service type. Only 6 percent of non-MNEs exported three or more service types, compared with 17 percent of U.S.-owned MNEs and 16 percent of foreign-owned MNEs.
- Firms in all ownership-type categories tended to import a larger number of service types than they exported; only 66 percent of all firms imported just one service type.
 - Non-MNE importers tended to import just one type of service to a greater extent than MNEs, with 75 percent
 of non-MNEs importing just one type of service. By comparison, only 50 percent of U.S.-owned MNEs and 57
 percent of foreign-owned MNEs imported only one type of service. More than a third of U.S.-owned MNEs and
 one-quarter of foreign-owned MNEs imported three or more types of services; only 16 percent of non-MNEs
 imported three or more types of services.

Chart 15. Share of U.S. Trade in Selected Services Accounted for by Two-Way Traders by Firm Ownership Type, 2022

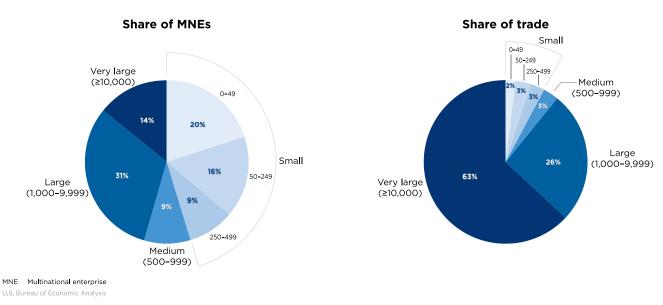


- Most trade in selected services was attributable to two-way traders, which are those firms that both export and import. In 2022, 85 percent of total selected services exports and 90 percent of imports were attributable to twoway traders.
 - Among MNEs that export services, two-way traders accounted for 87 percent of U.S.-owned MNEs' exports and 90 percent of foreign-owned MNEs' exports in 2022. Among non-MNEs, the prevalence of two-way traders in exporting was less pronounced, at 60 percent.
 - Two-way traders also dominated MNEs' selected services imports. U.S.-owned MNEs that also exported
 accounted for 95 percent of imports, while two-way traders accounted for 90 percent of foreign-owned
 MNEs' imports. Among non-MNEs, 69 percent of imports were attributable to firms that also exported.

MNEs That Trade Services, 2021

The section above highlighted some results by firm ownership type, illustrating the major role that MNEs, especially U.S.-owned MNEs, play in U.S. international services trade. This section presents additional insight into this important subset of selected services traders using linked data from BEA's AMNE surveys. Because the AMNE data on operations lag the services data by 1 year, the focal year in this section is 2021 rather than 2022.¹¹

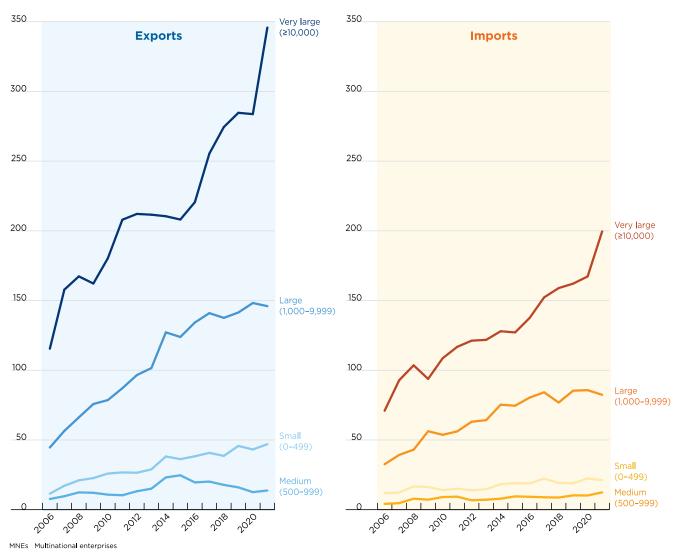
Chart 16. Employment Size Class Composition of MNE Traders and Their Total Trade, 2021



- Although MNEs that trade services are broadly distributed across employment size classes, the shares of trade attributable to firms by size class are much less evenly distributed.
 - In 2021, very large MNEs (those with U.S. employment greater than 10,000) accounted for, by far, the largest share of selected services total trade (63 percent) but only a small share of the number of MNEs that trade services (14 percent).
 - o In contrast to very large MNEs, small (those with U.S. employment of 0–499) and medium MNEs (those with U.S. employment of 500–999) accounted for a large share of MNE traders (55 percent) but a small proportion of the value of total trade in selected services (11 percent).

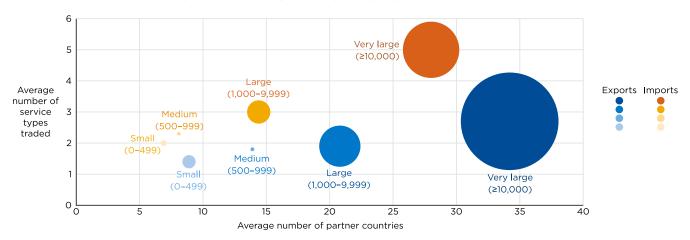
Chart 17. MNEs' U.S. Trade in Selected Services by Employment Size Class, 2006-2021





- Exports of selected services by very large MNEs have been, by far, the largest for many years and steeply increased in 2021, reaching \$345.8 billion (63 percent of MNEs' total selected services exports) in 2021. Selected services exports by large MNEs were the second largest over the period, totaling \$146.0 billion in 2021 (26 percent of MNE total).
- Services exports by small MNEs were \$47.0 billion in 2021. The share of exports attributable to small MNEs grew from 6 percent in 2006 to 9 percent in 2021, whereas the share for medium MNEs fell from 4 percent to 2 percent.
- Very large MNEs' imports have grown strongly for many years, reaching \$199.6 billion in 2021. Very large MNEs increased their share of imports from 59 percent to 63 percent, while the share of imports attributable to small MNEs fell 3 percentage points from 10 percent in 2006 to 7 percent in 2021.

Chart 18. Average Number of Selected Service Types Traded, Average Number of Partner Countries, and Volume of Trade for MNEs' U.S. Exports and Imports by Employment Size Class, 2021

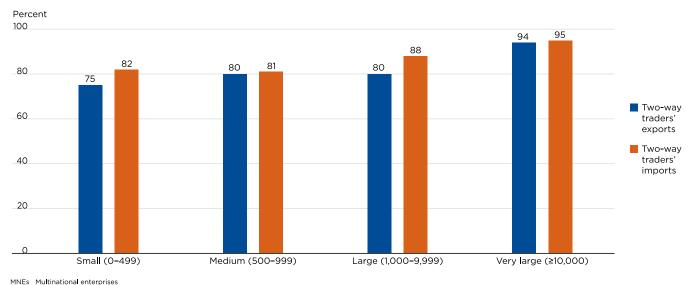


MNEs Multinational enterprises

Note. The employment size class is denoted by the label on each bubble. The size of the bubble indicates the value of total exports or imports of services by all MNEs in that employment size class. See the note on chart 14 for a list of the service types considered for the counts of service types.

- In 2021, average number of partner countries and average number of service types traded tended to increase with firm size for both exports and imports.
 - Small MNEs tended to trade with fewer countries on average, and they traded fewer service types compared
 with other size classes. Very large MNEs traded more service types, on average, with more countries, on
 average, than MNEs of any other size class.
- For any given size class, MNEs tended to import a larger number of selected service types than they exported, but they tended to export to a larger number of countries than they imported from. For example, large MNEs (employment of 1,000–9,999) imported an average of 3.0 types of services from an average of 14.4 countries and exported an average of 1.9 service types to an average of 20.8 countries.

Chart 19. Share of MNEs' U.S. Trade in Selected Services Accounted for by Two-Way Traders by Employment Size Class, 2021



- As noted previously, trade in selected services tends to be dominated by firms classified as two-way traders, which both export and import services. ¹² The prevalence of two-way traders in MNEs' total trade increased with firm size in 2021.
 - Among very large MNEs, most trade (94 percent of exports and 95 percent of imports) was attributable to two-way traders.
 - Among small MNEs, the majority of trade was also attributable to two-way traders. However, the
 predominance of two-way traders was less pronounced, with 75 percent of exports and 82 percent of
 imports of small MNEs attributable to two-way traders.

Chart 20. MNEs' U.S. Exports of Selected Services by Service Type and Employment Size Class, 2021

(Billions of dollars)

		All service types	Insurance and financial services	Charges for the use of IP n.i.e.	Telecommunications, computer, and information services	deve l opment	Professional and management consulting services	A ll other services
	All size classes	552.5	163.2	120.4	52.0	42.6	123.2	51.2
	Sma ll (0-499)	47.0	30.6		3.1			
۲	ledium (500-999)	13.8	6.7	0.9	1.3	0,3	2.1	2.0
La	rge (1,000 - 9,999)	146.0	44.2	28.8	15.3	12.0	31.3	14.4
Ve	ry large (≥10,000)	345.8	81.7	87.3	32.3	28.3	87.7	28.6
Es M	tellectual property ultinational enterprises			Note. The gray sha	ading is not indicative of t	he value of the cell.	\$0	\$max

MNEs Multinational enterprises n.i.e. Not included elsewhere U.S. Bureau of Economic Analysis

- Very large MNEs were the largest exporters of each service type shown. Very large MNEs' largest exports were professional and management consulting (\$87.7 billion) and charges for the use of intellectual property (\$87.3 billion). Their share of service exports in each service type ranged from 50 percent (insurance and financial services) to 72 percent (charges for the use of intellectual property n.i.e.).
- Large MNEs were the second-largest exporters by size class for each type of service shown. They accounted for between 24 percent (charges for the use of intellectual property n.i.e.) and 29 percent (telecommunications, computer, and information services) of exports for each type of service.
- Small MNEs typically accounted for only a small share of selected services in each service type, 12 percent or less
 of exports for every service type except insurance and financial services. For insurance and financial services, small
 MNEs accounted for \$30.6 billion, or 19 percent, of total exports.
- Medium firms were the smallest exporters of nearly every service type.
- For BEA's most up-to-date and detailed statistics on MNES' trade in selected services by employment size class and service type, see international services interactive table 6.4.

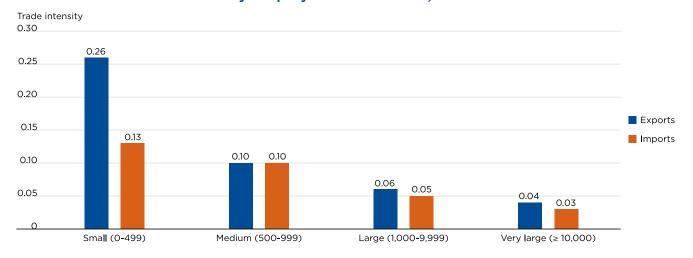
Chart 21. MNEs' U.S. Imports of Selected Services by Service Type and Employment Size Class, 2021

(Billions of dollars)

	All service types	Insurance and financial services	Charges for the use of IP n.i.e.	Telecommunications computer, and information services	development	Professional and management consulting services	A ll other services
All size classes	315.6	80.2	43.9	46.2	29.7	59.0	56.6
Small (0-499)	21.2	11.0	2.1	1.7	0.8	1.7	4.0
Medium (500-999)	12.4	3.8	1.8	0.9		1.7	4.2
Large (1,000 - 9,999)	82.4	30.6		13.5		12.6	
Very large (≥10,000)	199.6	34.8	28.1	30.2	22.3	43.1	41.1
(*) Transactions between zero and \$500 million IP Intellectual property Multinational enterprises n.i.e. Not included elsewhere			Note. The gray sha	ding is not indicative of t	\$0	\$max	

- Very large MNEs were also the largest importers, by value, for each service type shown. Very large MNEs accounted for at least 64 percent of imports for each service type except insurance and financial services (43 percent). Very large MNEs accounted for \$22.3 billion (75 percent) of research and development services; by value, professional and management consulting services were very large MNEs' largest imports (\$43.1 billion).
- Small and medium MNEs imported less than firms in the other size classes, together accounting for 14 percent or less of imports for every service type except insurance and financial services. For insurance and financial services, small MNEs accounted for \$11.0 billion (14 percent) of imports, and medium MNEs accounted for \$3.8 billion (5 percent).

Chart 22. Services Trade Intensity of MNE Services Traders by Employment Size Class, 2021

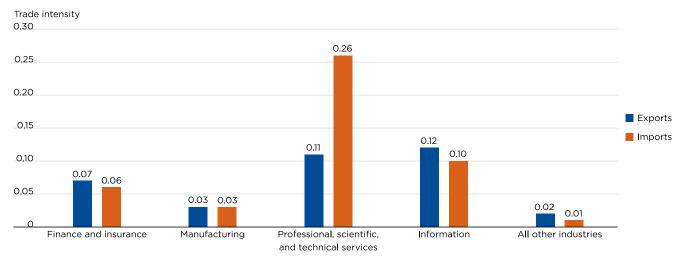


MNE Multinational enterprise

Note. For exports, the trade intensity is defined as selected services exports divided by total sales. For imports, services trade intensity is defined as selected services imported divided by purchased inputs, where purchased inputs is calculated as sales minus value added.

- Services trade intensity reflects the value of services trade relative to a firm's total sales (for exports) or total
 purchased inputs (for imports). In 2021, the services trade intensity of exports was 0.05, and the services trade
 intensity of imports was 0.04 among all MNEs (not shown).¹³
- Services trade intensity tended to decrease with increasing firm size for both exports and imports in 2021.
- The trade intensity of exports was higher than import trade intensity for every size class of MNEs except medium, for which it was nearly equal.

Chart 23. Services Trade Intensity of MNE Services Traders by Industry, 2021



MNE Multinational enterprise

Note. For exports, the trade intensity is defined as selected services exports divided by total sales. For imports, services trade intensity is defined as selected services imported divided by purchased inputs, where purchased inputs is calculated as sales minus value added.

- The most intensive exporters were in information and in professional, scientific, and technical services, with respective intensities of 0.12 and 0.11. The least intensive exporters were those MNEs classified in all other industries, with an intensity of 0.02.¹⁴
- The most intensive importers, by far, were MNEs classified in professional, scientific, and technical services, with an intensity of 0.26. Although these MNEs were also very intensive exporters, they were even more oriented toward international markets for sourcing inputs than for sales. Importers in all other industries were the least intensive importers, with an import intensity of 0.01.

Types of Firms That Trade Services

This article presents statistics on trade in selected services for all services-trading U.S. firms, with greater detail presented for services traders that are part of multinational enterprises about which BEA collects detailed financial and operating data on its surveys of activities of MNEs. *MNEs* are enterprise groups in which an entity resident in one country has a direct investment in a business enterprise in another country. Direct investment—that is, control of 10 percent or more of the voting ownership of a business in another country—is distinguished from other types of international investment by the implied degree of control or influence of the investor. BEA statistics cover the following:¹

- **U.S. multinational enterprises**, which consist of U.S. parents and their foreign affiliates. The *U.S. parent* is the U.S. entity that has a direct investment interest in a foreign business enterprise. *Foreign affiliates* are foreign business enterprises that are owned or controlled at least 10 percent, directly or indirectly, by the *U.S. parent*.
- **U.S. affiliates of foreign multinational enterprises** are U.S. business enterprises that are owned or controlled at least 10 percent, directly or indirectly, by a foreign resident, which is called a *foreign parent*.

Most BEA statistics cover these groups separately. For example, previous profile articles <u>published in 2012</u> and <u>published in 2019</u> focused on the U.S. units of each of these groups of MNEs: U.S. parents and U.S. affiliates. Specifically, they cover (1) U.S. parents and (2) majority-owned U.S. affiliates (MOUSAs). A shortcoming of this approach is that the two groups partly overlap—that is, some firms are both U.S. parents and MOUSAs—making it difficult under this format to present a detailed analysis of MNEs in the United States as a whole or to disaggregate totals for MNEs by firm ownership type.

In this article, to address the overlap, BEA introduces a new firm-type classification based on whether a firm is part of an MNE and whether ownership of the MNE is ultimately in the United States or abroad. Specifically, all firms are classified into one of the following three categories, as presented in chart I and the corresponding table I.

- U.S. units of ultimately U.S.-owned MNEs ("U.S.-owned MNEs") are indicated by blue circles in chart I. This group is composed of U.S. parents that are not also U.S. affiliates (A), U.S. parents that are also minority-owned U.S. affiliates (D), and MOUSAs with a U.S. ultimate beneficial owner (UBO), including both MOUSAs that are U.S. parents (B) and those that are not U.S. parents (E).³
- U.S. units of ultimately foreign-owned MNEs ("foreign-owned MNEs") are indicated by orange circles in chart I. This group is composed of MOUSAs with a foreign UBO, including those that are U.S. parents (C) and those that are not U.S. parents (F).
- U.S. business enterprises that are neither U.S. parents nor MOUSAS ("non-MNEs" in this article) are indicated by teal circles in chart I. This group is composed of U.S. business enterprises that are minority owned (by at least 10 percent and at most 50 percent) by a foreign resident (G), and U.S. business enterprises that are not in a direct investment relationship with a foreign resident (H).⁴

BEA's new firm ownership-type classification addresses the overlap between U.S. parents and MOUSAs, thereby allowing the statistics to be shown for the full set of MNEs, in which firm ownership type is just one of several dimensions used to describe services traders. The new presentation also emphasizes whether ownership or control is ultimately held in the United States and brings the statistics into closer alignment with STEC statistics published by other countries.⁵

There is a high degree of alignment between foreign-owned MNEs in the current presentation and MOUSAs in the prior presentation, with 98 percent of total trade in selected services by MOUSAs accounted for by foreign-owned MNEs in 2022. Likewise, there is a significant alignment between U.S.-owned MNEs in the current presentation and U.S. parents in the prior presentation, with 86 percent of total trade in selected services by U.S. parents accounted for by those parents that are classified as U.S.-owned MNEs in 2022.



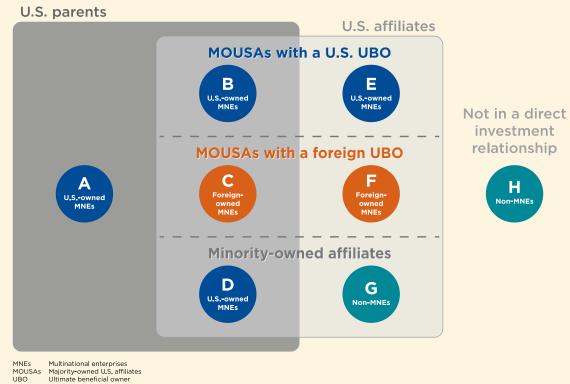
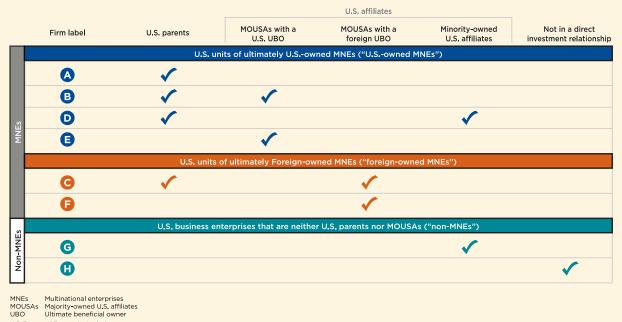


Table I. Correspondence Between Direct Investment Relationships and Firm Ownership Types



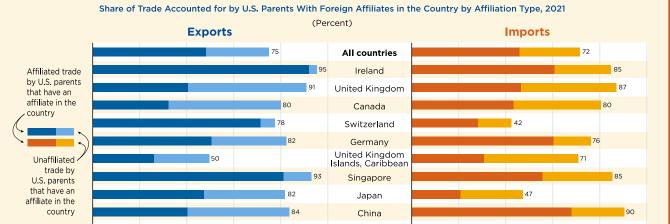
- For more detailed information on concepts and definitions used in BEA's International Economic Accounts, see U.S. International Economic Accounts: Concepts and Methods.
- 2. To be considered majority owned, more than 50 percent of the U.S. affiliate's voting power or voting interest (if legally incorporated) or an equivalent interest (if unincorporated) is owned, directly or indirectly, by its foreign parent(s).
- 3. The UBO is the entity that ultimately owns or controls and thus ultimately derives the benefits and assumes the risks from owning or controlling an affiliate.
- 4. Although minority-owned U.S. affiliates are in a direct investment relationship with a foreign parent, they are not included in the statistics on U.S. affiliates presented in this article, because they are typically subject to a smaller degree of influence and control by their owner. Therefore, a UBO's residency is not a factor in classifying minority-owned U.S. affiliates. This treatment follows the approach used in BEA's AMNE publications, which feature measures for MOUSAs, and likewise, for majority-owned foreign affiliates, in order to emphasize those affiliates that are unambiguously under control of their direct investors. In the standard publications, and in the classification presented here, no distinction is made between U.S. parents on the basis of whether they have majority-ownership over any affiliates.
- 5. In particular, BEA's new firm ownership-type classification is in line with that used by Eurostat, as described in its *Compilers Guide for statistics on Services Trade by Enterprise Characteristics (STEC)*.
- 6. The remaining 2 percent of trade attributable to U.S. affiliates is included with U.S.-owned MNEs under the new firm-type presentation because the affiliates have a U.S. UBO.
- 7. The remaining 14 percent of trade attributable to U.S. parents is included with foreign-owned MNEs under the new firm-type presentation because those parents are also U.S. affiliates with foreign UBOs.

Affiliated Relationships and Trade in Selected Services

This article emphasizes firm ownership, and in particular, whether the ownership or control of a U.S. firm is ultimately held in the United States. This perspective is analytically useful and aligns well with similar statistics on services traders published by other countries. This characterization of firm ownership also eliminates overlaps between firms that are part of U.S. multinational enterprises and U.S. affiliates of foreign multinationals. ¹

The statistics in this box differ from the rest of this article by presenting details for the two groups of MNEs featured in BEA's standard publications—namely, parents of U.S. multinational enterprises and U.S. affiliates of foreign multinationals. This view highlights the prevalence of trade with affiliated entities for U.S. parents and U.S. affiliates, in particular trade between a U.S. parent and its foreign affiliates and trade between a U.S. affiliate and its UBO. Chart I presents U.S. parents' trade in services by country, highlighting patterns of trade by affiliation with countries that host the affiliates of U.S. MNEs. Chart II presents U.S. affiliates' trade in services by country, highlighting patterns of trade by affiliation with the countries of the UBOs of U.S. MNEs.

Chart I. U.S. Parents' U.S. Trade in Selected Services With the Top 10 Partner Countries



UBO Ultimate beneficial owner

40

60

80

Notes. The countries included in this chart are the top 10 countries by total trade (exports plus imports) in selected services by U.S. multinational enterprises. The values indicated at the end of each bar are the percent shares of U.S. parent trade in selected services with each country by U.S. parents owning one or more foreign affiliates in that country. The share of trade with a country by U.S. parents without an affiliate in that country can be calculated as 100 percent minus the shares presented in this chart.

100

India

85

80

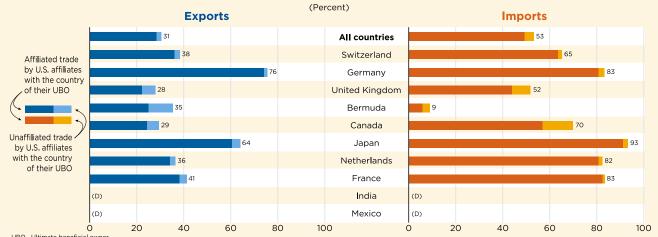
40

100

- In 2021, U.S. parents exported 75 percent of their selected services exports to countries that hosted their foreign affiliates. However, not all exports to those countries were destined to affiliated parties. Affiliated trade accounted for 48 percent of selected services exports, while unaffiliated trade accounted for 27 percent of exports to countries where affiliates were located. Among all U.S. parents' selected services exports, only 25 percent went to countries where the parent had no foreign affiliates.
- The importance of direct investment relationships in services trade varies by country. For example, half of exports to the United Kingdom Islands, Caribbean were attributable to U.S. parents without foreign affiliates in that country. In contrast, exports to Ireland were dominated by U.S. parents with affiliates in the country (95 percent), and most of those were affiliated (92 percent of parents' exports to Ireland).
- U.S. parents' selected services imports were also dominated by countries hosting their foreign affiliates; 72 percent of imports were from countries that hosted their affiliates. Imports from countries hosting affiliates were composed of affiliated imports (46 percent) and unaffiliated imports (26 percent).
- The composition of imports among trade by U.S. parents with and without affiliates in the country varied widely by country. For example, only 42 percent of selected services imports from Switzerland were attributable to parents with affiliates in the country. In contrast, 90 percent of imports from China were attributable to U.S. parents with affiliates in the country.

Chart II. U.S. Affiliates' U.S. Trade in Selected Services With the Top 10 Partner Countries

Share of Trade Accounted for by U.S. Affiliates With a UBO in the Country by Affiliation Type, 2021



(D) Suppressed to avoid disclosure of data of individual companies

Notes. The countries included in this chart are the top 10 countries by total trade (exports plus imports) in selected services by U.S. affiliates. The values indicated at the end of each bar are the percent of U.S. affiliate trade in selected services with each country by U.S. affiliates with a UBO located in that country. The share of trade with a country by a U.S. affiliate without a UBO in that country (including trade with a country in which another member of the foreign parent group is located) can be calculated as 100 percent minus the shares presented in this chart.

- In 2021, U.S. affiliates traded selected services with countries other than where their UBOs are located to a greater extent than U.S. parents traded with countries other than where their foreign affiliates are located. This observation was somewhat expected because a U.S. affiliate has only one UBO located in a single country, whereas a U.S. parent typically has many affiliates spread across a large number of countries.⁵
- Trade with countries where U.S. affiliates' UBOs are located was dominated by affiliated trade to a greater extent than U.S. parents' trade with countries hosting their foreign affiliates.
- U.S. affiliate exports of selected services were predominantly to countries other than the countries of the location of their UBOs. Just 31 percent of exports were to the country in which an affiliate's UBO is located. However, most trade with the UBO country tended to be affiliated.
- Of the countries shown, the extent to which U.S. affiliate exports were focused on the country of their UBO was highest for Germany (76 percent) and Japan (64 percent), for which most trade was affiliated. In contrast, just 28 percent of U.S. affiliates' exports to the United Kingdom were attributable to affiliates with UBOs there.
- Compared with exports, U.S. affiliates' imports were more focused on countries where their UBOs were located. Overall, 53 percent of U.S. affiliate imports of selected services were from countries where their UBOs were located.
- The shares of imports from countries where UBOs were located varied widely. Only 9 percent of U.S. affiliates' imports from Bermuda were attributable to trade by affiliates with UBOs in the country. In contrast, 93 percent of imports from Japan were attributable to affiliates with Japanese UBOs and most was affiliated trade.
- 1. See the box "Types of Firms That Trade Services" for more detail on firm ownership types.
- 2. See the box "Types of Firms That Trade Services" for more on how U.S. parents and U.S. affiliates, including both majority-owned and minority-owned U.S. affiliates, are defined and how those definitions relate to the firm ownership types concept used throughout the main text of this article.
- 3. The UBO is that person, proceeding up a chain of majority ownership, beginning with and including the foreign parent, that is not owned more than 50 percent by another person. The UBO ultimately owns or controls, and thus ultimately derives the benefits and assumes the risks from owning or controlling, the U.S. affiliate.
- 4. Typically, but not always, the country of a U.S. affiliate's foreign parent is the same as the country of its UBO. For this reason, the shares of U.S. trade accounted for by U.S. affiliates with a foreign parent in the country and the share of affiliated trade were quite similar to the shares presented in chart I.
- 5. On average, in the most recent benchmark of U.S. direct investment abroad (in 2019), U.S. parents had 8.7 affiliates with at least (+/-) \$25 million in assets, sales, or net income. For details, see table I.A.1 in BEA's comprehensive data on the activities of U.S. MNEs.

Footnotes

- 1. The U.S. Census Bureau (Census) publishes an annual article, "A Profile of U.S. Importing and Exporting Companies," that features goods trade by enterprises on the Census Business Register that have been linked to export or import transaction records.
- 2. The last article in this series covered data for 2008–2017. See Jennifer Bruner and Alexis Grimm, "A Profile of U.S. Exporters and Importers of Services, 2017," Survey of Current Business 99 (December 2019). For an earlier article in this series, covering 2008, see Kevin Barefoot and Jennifer Koncz-Bruner, "A Profile of U.S. Exporters and Importers of Services," Survey 92 (June 2012): 66–87.
- 3. The services that are out of scope for this article are mainly based on source data other than BEA-administered surveys, with the exception of certain transport and maintenance services, and thus cannot be linked at the firm level to BEA AMNE surveys. The services that are out of scope for this article consist of maintenance and repair services (including those covered by BEA's trade-in-services surveys); transport; travel (for all purposes including education), which includes transactions by individual persons; and government goods and services, which includes military transactions.
- 4. MNEs are enterprise groups in which an entity resident in one country has a direct investment in a business enterprise in another country. BEA separately presents statistics on two groups of MNEs in its standard publications, U.S. MNEs and U.S. affiliates of foreign MNEs. This article applies a new firm ownership-type classification that addresses the overlap between the two standard groups of MNEs so that statistics can be shown for the full set of MNEs. For more information on how MNEs are defined in this article, see "Types of Firms That Trade Services."
- 5. The FAQ "What information does the Bureau of Economic Analysis publish on services trade by enterprise characteristics?" on BEA's website provides details on how the statistics in this article were prepared, including how the link between surveys was established, how trade statistics based on a combination of survey data and other calculations were attributed to specific companies, and how industries were assigned. The FAQ also presents a comparison of the scope of the services covered in this article with the services covered in the 2019 article in this series.
- 6. For comparable firm-level information on all services traders, BEA's international trade in services data would need to be linked to external data that included information on the operations of non-MNEs, such as data collected by the U.S. Census Bureau.
- 7. In this article, the industry attributed to the U.S. service-trading firm is the industry in which its consolidated sales were the largest. Firms can operate in multiple industries, and, in some cases, firms with activities primarily in goods-producing industries, such as manufacturing, engage in a large volume of services trade, as indicated in chart 2, and produce a variety of services (see chart 6).
- 8. In BEA's published trade in services statistics and in the 2019 article in this series, financial and insurance services were presented as two separate service categories. They are combined in this article for presentational ease. Similarly, the category "all other services" presented in this article represents the sum of the following standard service categories that appear in BEA's published trade in services statistics: construction; technical, trade-related, and other business services; and personal, cultural, and recreational services.
- 9. Note that banks were not included in annual reporting on BEA's surveys of foreign direct investment in the United States until 2007 and were not included in the annual surveys of U.S. direct investment abroad until 2009. Therefore, the statistics for MNEs included here do not fully cover bank MNEs until 2009. Between 2009 and 2022, U.S.-owned MNEs' selected services exports more than doubled, while foreign-owned MNEs' exports grew 91 percent, and non-MNEs' exports grew 89 percent. U.S. MNEs' imports increased to 2.5 times their 2009 level by 2022, while foreign-owned MNEs' imports grew 30 percent, and non-MNEs' imports grew 39 percent over the same period.
- 10. For a more detailed look at affiliated trade in services, see the box "Affiliated Relationships and Trade in Selected Services," which features affiliated trade for U.S. affiliates—a group that largely overlaps with foreign-owned MNEs.
- 11. International services statistics are first released in June or July for the previous year; statistics on the activities of MNEs are released in August or November of the second year after the reference year. Although the preliminary AMNE statistics for 2022 have not yet been compiled and published, BEA's information on the universe of direct investment enterprises enabled the development of a list of MNEs that could be linked to the trade in services data.
- 12. The share of U.S. MNEs' U.S. trade in selected services accounted for by two-way traders for all firms is shown in chart 15.
- 13. For exports, the trade intensity is defined as selected services exports divided by total sales. For imports, services trade intensity is defined as selected services imported divided by purchased inputs, where purchased inputs is calculated as sales minus value added.
- 14. All other industries includes those major industries that are not shown separately above, specifically mining, wholesale trade, retail trade, real estate and rental and leasing, and other industries.



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