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KIEL POLICY BRIEF

Rolf J. Langhammer

Germany's Role as a Trader in Services: Difficult Factfinding and Uncertain Prospects



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- German service trade comprises about a fifth of its total trade with no substantial change since 2009. Yet, even such supposedly low dynamics places Germany among the world's leading traders of services. Unreported trade is large.
- Differentiating between services including and excluding travel is relevant as travel accounts for a quarter of total German service imports. Travel is also one of the major drivers of German trade deficit in services.
- The EU goods market is of much higher importance than the EU service market for exports as well as for imports. Future research would point to differences in the degree of completing the single market.
- There are strong trade links between Germany and the US in services, in particular when buying services from the US. They account for more than 40 percent of German total imports from the US due to the strong presence of US affiliates in Germany providing services in the financial services and in the IT sector.
- Asia has not yet emerged as a similarly important export and sourcing market for services as for goods.

OVERVIEW/ÜBERBLICK

- German service trade comprises about a fifth of its total trade with no substantial change since 2009. Yet, even such supposedly low dynamics places Germany among the world's leading traders of services. Unreported trade is large.
- Differentiating between services including and excluding travel is relevant as travel accounts for a quarter of total German service imports. Travel is also one of the major drivers of German trade deficit in services.
- The EU goods market is of much higher importance than the EU service market for exports as well as for imports. Future research would point to differences in the degree of completing the single market.
- There are strong trade links between Germany and the US in services, in particular when buying services from the US. They account for more than 40 percent of German total imports from the US due to the strong presence of US affiliates in Germany providing services in the financial services and in the IT sector.
- Asia has not yet emerged as a similarly important export and sourcing market for services as for goods.

Keywords: German trade in services 2009–2021, sectoral and regional patterns of trade, comparison with German goods trade, shortcomings in service statistics

- Der Handel mit Dienstleistungen beträgt stabil etwa 20 Prozent des deutschen Gesamthandels (einschließlich Güterhandel) zwischen 2009 und 2021. Trotz dieser vermeintlich schwachen Dynamik gehört Deutschland damit zu den führenden Akteuren im weltweiten Dienstleistungshandel. Der Anteil des unerfassten Handels ist sehr groß.
- Ausgaben für Reisen machen ein Viertel der gesamten deutschen Dienstleistungsimporte aus und tragen wesentlich mit zum deutschen Handelsbilanzdefizit bei Dienstleistungen bei. Daher ist es sinnvoll, zwischen Dienstleistungshandel mit und ohne Reisen zu unterscheiden.
- Für den Güterhandel ist der EU-Markt von größerer Bedeutung als für den Dienstleistungshandel. Dies gilt für Exporte wie Importe. Weitere Forschung müsste sich auf die Unterschiede im Vollendungsgrad des Binnenmarktes konzentrieren.
- Es gibt starke Verbindungen zwischen Deutschland und den USA im Dienstleistungshandel. Dienstleistungen tragen zu 40 Prozent zu den deutschen Gesamtimporten aus den USA bei. Dies liegt an der starken Stellung von Niederlassungen amerikanischer Finanzdienstleister und IT-Anbietern in Deutschland.
- Im Gegensatz zum Güterhandel trägt die Region Asien weder bei deutschen Exporten noch bei Importen bereits wesentlich zum Dienstleistungshandel bei.

Schlüsselwörter: deutscher Dienstleistungshandel 2009–2021, Sektoral- und Regionalstruktur, Vergleich mit Güterhandel, statistische Erfassungsschwächen

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GERMANY'S ROLE AS A TRADER IN SERVICES: DIFFICULT FACTFINDING AND UNCERTAIN PROSPECTS

Rolf J. Langhammer¹

Studies on Germany's position in global trade are very much influenced by its goods trade and questions on excessive dependence on sourcing markets like China and (in the past) Russia. While this is very relevant, it ignores the rising importance of services which become ever more tradable due to technological progress and higher cross-border mobility of persons, knowledge and capital. In addition, demographics (aging) and wealth will increase consumer's demand for services relative to goods. This prediction does not match with statistics given the extreme heterogeneity of services, large differences in trade barriers compared to goods trade and huge difficulties in statistically recording cross-border trade. The Policy Brief intends to shed a light on the overall importance of Germany's recorded service trade, in particular by pointing to the differences of various regions in goods and service trade for Germany. This macro picture leaves more issues open than answering policy questions and thus concludes with the urgent advice to focus future research on specific services especially those which so far escape documentation such as trade in digitalized services.

1 GLOBAL SERVICE TRADE IS RISING BUT BY HOW MUCH IS UNCERTAIN

In its 2021 World Trade Statistical Review, the World Trade Organization (WTO) reports the share of world exports of commercial services in total exports (service exports plus merchandise (goods) exports) to be 21.8 percent (WTO 2021: Tables A6 and Tables A8). On the import side the respective share was 20.4 percent. If one follows WTO Statistics, trade in services proved to be more dynamic in recent years than merchandise trade. Between 2010 and 2020 the annual percentage change of merchandise exports was 1 percent compared to 2 percent for commercial services exports (WTO 2021: Table A3).

Three trends suggest that trade in services will continue to grow more rapidly than merchandise trade: (1) changes in demographics (an aging population demands relatively more services); (2) changes in technology (digitalization and IT innovation make services more tradable than in the past); and (3) changes in income (with rising income relatively more services are demanded). What furthermore speaks for services as the dynamic factor in future

¹ Helpful comments by Klaus Schrader and computational assistance by Michaela Rank are gratefully acknowledged.

world trade is the fact that both cross-border movement in knowledge and know how via internet as well as rising cross-border movements of capital (via foreign direct investment) and labor (via facilitated visa regulations) will stimulate trade in services. This holds as capital and labor movement are the prerequisites of service trade either supplied by foreign affiliates operating in countries of consumption (in the WTO terminology so-called mode of supply 3: commercial presence) or supplied by natural persons moving temporarily to the country of consumption in order to supply the service (mode of supply 4).

Box 1:**Examples of the four Modes of Supply (from the Perspective of an “Importing” Country A)****Mode 1: Cross-Border**

A user in country A receives services from abroad through its telecommunications or postal infrastructure. Such supplies may include consultancy or market research reports, tele-medical advice, distance training, or architectural drawings.

Mode 2: Consumption Abroad

Nationals of A have moved abroad as tourists, students, or patients to consume the respective services.

Mode 3: Commercial Presence

The service is provided within A by a locally-established affiliate, subsidiary, or representative office of a foreign-owned and -controlled company (bank, hotel group, construction company, etc.).

Mode 4: Movement of Natural Persons

A foreign national provides a service within A as an independent supplier (e.g., consultant, health worker) or employee of a service supplier (e.g. consultancy firm, hospital, construction company).

Source: WTO, World Bank (n.d.).

The extreme heterogeneity in business and consumer services, the lack of a visible border with customs posts and tariffs, the issue of nationality or residence status of service providers and consumers, and finally the different degrees of disembodiment or embodiment of services in movement of goods and people (Grubel 1987) strongly impede a reliable statistical assessment of service trade. Increasing digitalization of services makes it even more difficult to disentangle countries of origin and destination. Service statistics come from very different sources, such as foreign income taxation of professionals, movements of tourists, bank reports on the nationality of their customers and work permits. It is thus not surprising that the WTO offers a classification list of more than 150 services but so far reports information on the regulatory framework for only 31 service sectors in 76 countries and on trade for just 12 services (WTO 2022).

Individual countries, for instance the US, have split their service trade statistics between cross-border trade (mode of supply 1), consumption abroad like tourism and travel (mode 2) and temporary cross-border movement of natural persons (mode 4) on the one hand and so-called foreign affiliates trade in services (FATS) via commercial presence of foreign affiliates (mode 3) on the other hand, the latter not being included in balance of payments statistics.

So, what we know is that it is very likely that trade in services measured on gross output base grossly underestimates the extent of trade. If it would be measured on a value-added base it would account for about 50 percent of world trade as services enter as inputs of goods (WTO, World Bank 2022).

2 HOW GERMANY FARES IN WTO AND BUNDESBANK STATISTICS ON SERVICE TRADE

In 2021, Germany kept the third rank among the leading exporters and importers of services, with 6.2 percent of world global service exports (next to the US and the UK) and 6.7 percent in imports (next to the US and China) (WTO 2021: Table A8). This ranking equals that in merchandise trade (7.8 percent in exports and 6.6 percent in imports) (WTO 2021: Table A6). Given Germany's traditionally strong position in trade in manufactures, such leading position in service trade comes somewhat at a surprise and thus warrants a closer look from Bundesbank statistics. The Bundesbank reports regionally disaggregated data on trade in services for thirteen service sectors with some sub-sectors (Bundesbank 2022).

During the period 2009–2021, the share of services in export revenues of goods and services rose from 17.0 percent to 19.3 percent and that of services in import expenditures for goods and services fluctuated between 22.2 percent and 21.8 percent, with a peak of 23.6 percent in 2016 (Table 1).

This share differs substantially between three major trading partners, EU-27, the US and Asia (including Australia, New Zealand and other Oceania). Since the EU is not only Germany's largest trading partner in goods but also in services, not surprisingly the shares for the EU match those of total trade. Service trade, yet, matters more in trade with the US. In 2021, 34.7 percent of total export revenues from trading with the US came from services, along a rising trend since 2009. In expenditures for imports, the US as a source of services for the German economy, was even stronger: In 2021, 42.1 percent of total imports from the US was due to buying services from the US, in particular firm-specific services such as R&D, management and professional services, and technical services.

Table 1:
Share of German Services Exports and Imports in Total Exports and Imports from Individual Regions, 2009–2021
(percent)^a

	World		EU-27		USA		Asia, Australia, New Zealand, Other Oceania	
	Export	Import	Export	Import	Export	Import	Export	Import
2021	19.3	21.8	15.5	21.2	34.7	42.1	n.a.	n.a.
2020	19.0	21.7	16.5	20.7	29.1	40.0	16.2	n.a.
2019	19.6	23.6	16.8	22.6	29.8	42.0	18.1	n.a.
2018	19.0	23.0	16.1	21.7	29.1	43.0	17.6	n.a.
2017	18.4	23.5	15.5	22.2	30.9	44.8	16.4	n.a.
2016	18.4	23.6	15.3	22.2	31.8	45.2	16.2	n.a.
2015	17.8	22.8	14.8	21.5	28.3	40.5	16.0	17.0
2014	17.1	22.2	14.8	21.1	26.6	42.2	14.4	17.0
2013	16.0	22.2	13.9	21.0	25.8	43.3	13.1	17.4
2012	15.5	20.8	13.2	19.9	26.4	40.8	12.5	15.6
2011	14.9	19.7	12.3	19.2	27.7	40.1	12.2	13.6
2010	15.7	20.8	12.8	20.4	28.6	39.5	13.1	13.3
2009	17.0	22.2	13.9	21.8	30.2	40.7	14.7	13.9

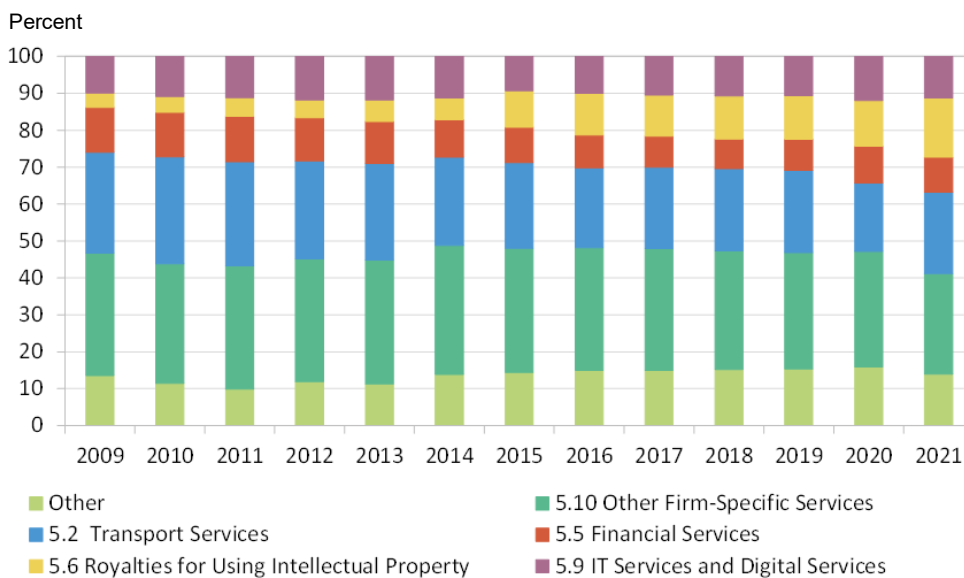
^an.a. = not available.

Source: Bundesbank (2022); own composition.

In German service imports, travel expenditures traditionally account for a large share. In 2019, before the pandemic took its toll with its severe travel restrictions, this share amounted to about one quarter of total service imports, yet less than at the beginning of the observation period when in 2009 this share was almost one third. Traditionally too, Germany has never been a major host for tourists from abroad with only 12–15 percent share in German service export revenues before the pandemic and then declining to 6 percent in 2021. Due to the special character of travel-related services as a consumer service, in the following the sectoral and regional structure of German service trade is discussed excluding travel services.

Without travel, two broad sectors emerge as major pillars of German service trade both on the export and on the import side. These are firm-specific services and transport services. In 2021, they accounted for about half of German service exports with firm-specific services (27 percent) being more important than transport services (22 percent). In imports, the dominance of the two sectors was even stronger. In 2021, they accounted for 61 percent of total expenditures for imported services, again with firm-specific services (33 percent) being more important than transport (about 28 percent). In 2009, revenues from transport services (27 percent) were more important than those from firm-specific services (22 percent) while on the import side the two sectors accounted for almost 73 percent of total service expenditures (transport: 32.6 percent and firm-specific services: 39 percent) (Figures 1 and 2).

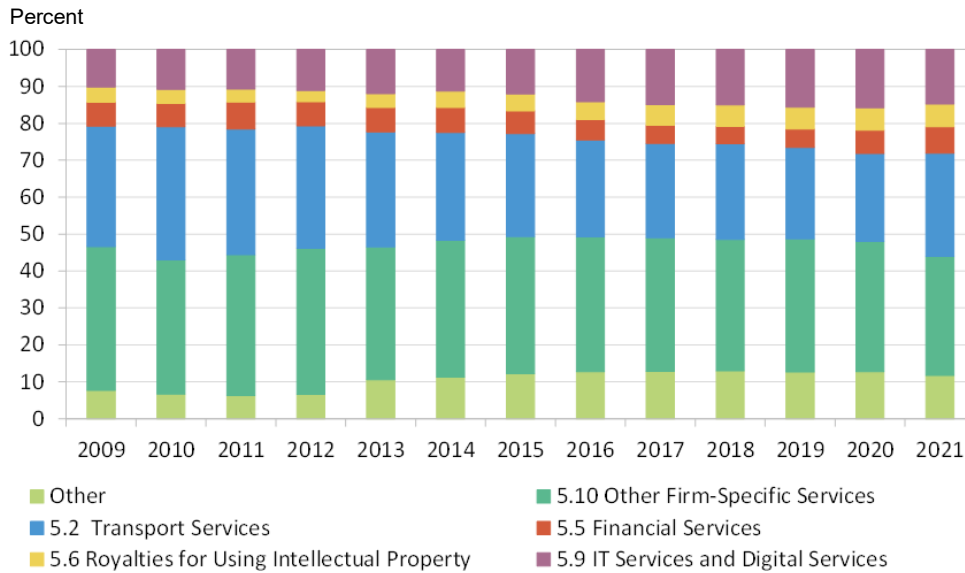
Figure 1: Sectoral Composition of German Service Exports, 2009–2021, by Major Services, in Percent of Total Services (Excluding Travel Services)^a



^aFollowing the nomenclatura of the German Bundesbank.

Source: Bundesbank (2022); own illustration.

Figure 2:
Sectoral Composition of German Service Imports, 2009–2021, by Major Services, in Percent of Total Services (Excluding Travel Services)^a



^aFollowing the nomenclatura of the German Bundesbank.

Source: Bundesbank (2022); own illustration.

Transport services are closely linked to goods trade and thus self-explanatory. Firm-specific services, however, warrant further explanation. Unfortunately, disaggregation by three sub-sectors is not much more enlightening. These subsectors are payments for research and development, professional services and management services, and technical services and commission payments. The two latter ones are more important than payments for research and development.

One way to check whether German service trade just follows the regional pattern of goods trade can be assessed by comparing the shares of exports and imports to specific regions in total trade. The closer the shares and the larger the similarities in the regional pattern, the more one can assume that at least partly service trade is a “handmaiden” of goods trade.

Data show that overall the EU-27 market was of higher importance for German goods exporters than for German service exporters. In 2021, the EU market absorbed 53.6 percent of German goods exports against only 39.1 percent of German non-travel service exports. Thus, the EU goods market was by 14.5 percentage points more important for German exporters than the EU service market (Table 2). Whether this could be explained by the more advanced state of completion of the EU single market for goods than for services or by stronger intra-EU supply chains for goods than for services should be subject to further research broken down to individual services. In 2009, this regional bias of goods exports towards the EU compared to service trade was largely the same (+15.5). The only exception came from financial services which until 2021 had developed a slightly stronger bias towards exports to non-EU countries than the reference case of goods exports (-2.1).

Table 2:
Dissimilarities in the Regional Structure of German Goods and Services Exports and Imports, 2009, 2021 (percentage points)^a

			Total Services Excl. Travel	Transports	Financial Services	Fees from Using Intellectual Property	Telecom- munication and Information Services	Other Firm Specific Services
EU-27	Exports	2009	+15.5	+18.9	+7.6	+24.3	+10.7	+16.0
		2021	+14.5	+15.8	-2.1	+24.4 ^d	+7.9	+8.3
	Imports	2009	+7.5	+4.4	+3.8	+32.4	+5.7	+7.3
		2021	+6.0	+5.4	+15.2	-0.7 ^d	+8.3	+4.5
America ^b	Exports	2009	-11.0	-13.4	-5.5	-19.2	-11.7	-8.4
		2021	-11.9	-9.0 ^d	-2.5 ^d	-16.2 ^d	-6.2 ^d	-4.8
	Imports	2009	-10.8	-9.0	+0.4	-53.5	-13.4	-9.7
		2021	-9.9	-5.5 ^d	-5.4 ^d	-14.1 ^d	-14.9 ^d	-10.1
Asiac	Exports	2009	+1.3	-6.4	+10.7	-4.2	+3.2	+2.5
		2021	+2.6 ^d	-3.0	+13.8 ^d	-7.0 ^d	+5.8 ^d	+3.7 ^d
	Imports	2009	-1.8	-1.0	-13.6	+9.2	-0.6	-1.0
		2021	+0.4 ^e	+1.6	-17.5	+6.2 ^b	+0.1	-0.3

^aDifference between the share of a destination region (exports) and origin region (imports) in German goods exports and the respective share in German exports and imports in specific service industries in percentage points; + (-) = region is more (less) important in goods trade than in service trade. — ^bNorth and South America. — ^cAsia, Australia, New Zealand, other Oceania. — ^d2020. — ^e2019.

Source: Bundesbank (2022); own compilation and calculations.

Trade with America (both North and South America) follows a different regional pattern. For all services and for all five sub-sectors of services over the entire period, America as a service destination market was more important for Germany than as a goods market. Especially when receiving fees for using intellectual property, America as a buyer of intellectual property rights was of higher importance among all buyer markets than America was as a buyer of goods from the EU-27 (2020: -16.2).

The third sub-market, Asia, shows the smallest dissimilarities in its importance as a goods versus a service market for German exports. In 2020, the Asian goods market was only by 2.6 percentage points more important for German exporters than for service exports. This goods bias is the strongest in financial services probably because of the more segmented, less open and less sophisticated structure of Asian financial markets.

Interestingly, the regional pattern is much more similar between German goods and service imports than on the export side. The EU market as a sourcing market for German goods demand has always been of slightly higher importance than for services. Such bias towards sourcing more goods than services from the EU gets larger if travel expenditures of German tourists are excluded. Including travel expenditures and given the high preference of German tourists to spend their holidays in the EU, the importance of the EU as a sourcing market was almost the same for goods as for services. In 2021, the difference in shares towards goods imports over service imports was 6.0 percentage points (Table 2) but only 1.9 percentage points with travel expenditures included. Only when paying fees for using intellectual property, non-EU markets in 2020 were slightly more important as recipients of such fees from Germany than compared to these markets as suppliers for goods.

The Americas as the second sub-market proved to be more important as a source of service imports than as goods source while Asia again as in German exports was of similar importance

as an origin of services compared to a source of goods. Yet, deviations from this overall result were large for sub-sectors, especially for financial services. Here, Germany had to pay much less to Asian suppliers of financial services than it had to pay for goods.

3 OPEN ISSUES AND PROSPECTS

This brief look at Germany's trade in services highlights the shortcomings of an analysis based on short coverage over twelve years only and high sectoral aggregation. The former does not allow for differentiating between cyclical and structural drivers of trade and the latter hides a clear and comprehensive description of services in detail. A distinction between the four modes of supply is not possible. For instance, whether German individuals export services by temporarily moving to the country of consumption to provide the service (Juergen Klopp–FC Liverpool example: mode 4 supply) or whether the foreign subsidiary of a German bank sells services to non-German residents in the host country (mode 3 supply) or whether foreigners buy services from German suppliers via internet (mode 1 supply) cannot be derived from the Bundesbank statistics.

This hinders an analysis of the effectiveness of WTO commitments for liberalizing trade since these commitments are based on the four modes of supply, either for various modes if a service can be supplied by various modes or for the explicitly specified mode only.

It is fairly obvious that even when disregarding the shift towards digitalized supplied services and the rising difficulties in identifying the country of origin in imports of digitalized services, the fluid nature of services makes traditional gravity type analyses based bilateral trade flows very difficult. This holds in particular when services are totally decoupled from goods trade and when the aggregation level is high. Therefore, the case for studies on trade performance of individual services with very specific data sources is strong.

What can be concluded from this analysis? Germany's service trade comprises about a fifth of its total trade with no substantial change since 2009. Yet, even such supposedly low dynamics places Germany among the world's leading traders of services. Without doubt, the share of unreported trade is large. To differentiate between services including and excluding travel is relevant as travel accounts for a quarter of total German service imports. Travel is also one of the major drivers of German trade deficit in services.

The EU goods market is of much higher importance than the EU service market for exports as well as for imports. Future research would point to differences in the degree of completing the single market.

There are strong trade links between Germany and the US in services, in particular when buying services from the US. They account for more than 40 percent of German total imports from the US. This is due to the large importance of German expenditures for US financial and IT services supplied by affiliates of US parent companies operating in Germany (mode 3 supply). Whether or not this stands for a high degree of technological dependence which would give rise to concern or for the traditionally strong position of US banks in global finance only should be subject to future research.

Asia has not yet emerged as a similarly important export and sourcing market for services as for goods.

Given the large share of unreported trade and the high level of aggregation, it is difficult to draw policy conclusions from an incomplete empirical observation. Therefore, the following statements are hypotheses pointing to research questions rather than conclusions.

In the absence of tariffs, non-tariff barriers which still differ between EU member states in services trade, are more present in “behind border measures”, such as less favorable treatment of foreign against local suppliers than in barriers against market access. To assess the size and effects of such barriers, one would need detailed inventories of legal requirements for foreign service suppliers.

Germany’s competitiveness in services seems to be more linked to its competitiveness in manufactured trade where services enter as inputs than to the genuine competitiveness of a disembodied service or such as the film industry, media services and consultancy services.

Technological backwardness in the IT sector can delay and impede structural change in the German industry. Such backwardness is likely to be rooted in four areas: lack of data which can be marketed, lack of human capital with skills in state-of-the art informatics and artificial intelligence, strict privacy protection regulations and the rudimentary state of the German start-up capital market.

One way to strengthen German competitiveness in service trade beyond pure inputs for the manufacturing sector is the completion of the single market for services and the invitation to foreign investors to invest in the German service industry. Yet, this raises concerns about the loss of control in critical infrastructure with its software and thus requires a balance assessment of chances and risks. In a completed single market for services, Germany would be better prepared to attract and use the skills of migrants and the labor force from other EU-member states in consumer services like health and old age care and would raise the productivity of those who see better opportunities for careers in business instead of consumer services.

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IMPRESSUM

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