
7.4. How heterogeneous are Portuguese international traders of non-tourism services?

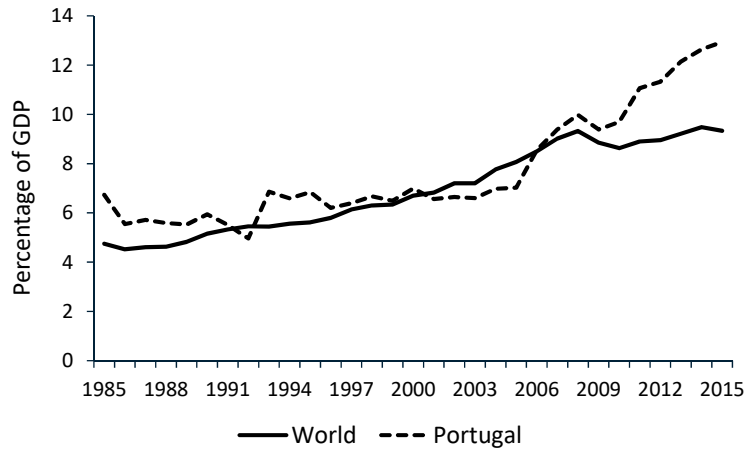
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1. Motivation

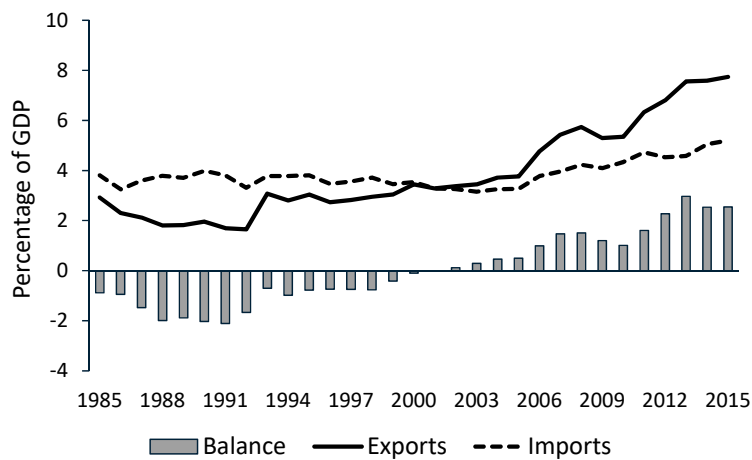
In recent decades, international trade in services has been growing strongly, leading to higher shares of this sector in total gross output, employment and trade. As new technological developments reduce the need for face-to-face interactions and facilitate remote connections, in the near future, more workers should start providing services abroad, even in those tasks that today require a physical presence (Baldwin, 2016).

Portugal has been experiencing a progressive increase in its trade openness and there has been also a growing importance of trade in services. Even if tourism remains the largest sector in Portuguese trade in services, accounting for around 45 percent of exports and 28 percent of imports, non-tourism services have been gaining importance in the last decade (Figure 62). In 2015, total Portuguese trade in non-tourism services represented around 13 percent of GDP, which compares to around 9.5 percent in the world economy. In addition, since the beginning of the 2000's, Portugal has been recording surpluses in the non-tourism services account, which contrasts with the systematic deficits registered previously. In 2015, the Portuguese services account, excluding tourism, showed a surplus of 2.5 percent of GDP, with exports and imports representing 7.7 and 5.2 percent of GDP, respectively.

This Section is based on Amador *et al.* (2018) that provide a portrait of Portuguese international trade in non-tourism services at the firm-level. The analysis relies on firm-year-service-country data on Portuguese international trade in non-tourism services at a disaggregated breakdown level, as collected by the Statistics Department of Banco de Portugal, merged with firms' balance-sheet information for 2014 and 2015. We classify international traders of services in three groups in line with their trading status: only export (one-way exporters), only import (one-way importers) or engaging in both activities (two-way traders). The general term importers (exporters)



(a) International trade in non-tourism services



(b) Portuguese exports and imports of non-tourism services

Figure 62: International trade of non-tourism services as a percentage of GDP

Notes: Nominal Balance of Payments transactions and nominal GDP are denominated in current US dollars. Exports and imports of services exclude transactions of the travel account.

Source: CEPII-Chelem database.

refers to firms importing (exporting) services irrespective of the export (import) dimension. For simplicity, non-tourism services are referred to as services in the remaining of this section.

We find that a substantial share of Portuguese service traders is active in both flows (45 percent). Furthermore, there is a high concentration of both exports and imports of services in these firms: two-way traders account for 90 percent of total Portuguese international trade in services. Compared with firms that only export and that only import, two-way traders of services tend to be more productive and

more profitable. Moreover, as found for international trade in goods, we show that multi-service and multi-country firms are crucial in explaining the level of Portuguese international trade in services. In sum, these facts confirm a high degree of firm-level heterogeneity in Portuguese services trade.

2. Aggregate descriptive statistics

Table 16 shows the representation of firms and trade flows according to 10 broad categories of services at the 2-digit level of EBOPS classification, based on the 29 types of services considered in the database. In terms of number of firms, "Other business services" is the largest category for both exporters and importers, followed by "Transport" on the export side and "Telecommunications, computer and information" on the import side. The two latter service categories are third in the ranking of number of importers and exporters. In terms of values traded, "Transports" accounts for almost half of the value exported (48.2 percent), followed by "Other business services" (30.6 percent). On the import side, "Other business services" rank first (35.7 percent) and "Transports" second (27.5 percent). "Telecommunications, computer and information" accounts for the third highest share in exports and imports (10.6 and 15.6 percent, respectively). Hence, Portuguese international trade in non-tourism services is dominated by three main categories of services: "Other business services", "Transports" and "Telecommunications, computer and information". Within these broad categories, the most important types of services are "Air transport", "Telecommunications", "Computer services", "Scientific and other technical services", "Trade-related services" and "Other business services n.i.e", both on the export and import sides.

To examine the geographical composition of Portuguese international trade in services, Table 17 reports the ten largest export and import partner countries in terms of their percentage share in the respective trade flows and number of firms. The main trade partners are almost identical on the export and import side, where countries of the European Union (EU) and Portuguese speaking countries dominate. UK, Spain and France are the top export destinations, while Spain, UK and Germany are the top import origins. Interestingly, Spain represents a larger share of Portugal's imports than exports (17.7 versus 11.1 percent). In addition, Spain is also the country that accounts for the largest number of both exporters and importers. Regarding non-European countries, Angola and Brazil are more relevant in terms of exports than imports, while USA has a higher importance in imports than exports.

Code	Description	Exports	Exporters	Imports	Importers
SB	Maintenance and repairs	3.4	5.1	4.9	7.9
SC	Transports	48.2	19.1	27.5	11.6
SE	Construction	4.4	6.7	1.5	2.8
SF	Insurance	0.4	3.4	1.0	4.6
SG	Financial services	0.5	2.2	1.1	5.3
SH	Charges for the use of intellectual property	0.5	1.4	9.1	2.9
SI	Telecommunications, computer, and information	10.6	8.3	15.6	17.9
SJ	Other business services	30.6	50.0	35.7	41.0
SK	Personal, cultural, and recreational services	1.3	3.7	3.5	5.8
SL	Government goods and services	0.00	0.02	0.00	0.16
	Total	100.0	100.0	100.0	100.0

Table 16: Shares in total trade and in total number of firms by broad service categories, 2014-2015

Notes: The 29 types of services are aggregated in 10 broad categories at the 2-digit level of EBOPS 2010 for presentation purposes. Firms are counted each time they export/import a specific service type at the disaggregated breakdown level of 29 service types in the current year, implying that a firm-year can appear more than once across the broad categories of services listed. The share of each aggregate service category represents its percentage fraction in total exports or imports in both years.

Countries	Exports	Exporters	Countries	Imports	Importers
UK	12.1	5.9	Spain	17.7	14.2
Spain	11.1	10.5	UK	13.4	8.8
France	10.3	7.6	Germany	10.2	7.5
Germany	7.9	6.8	USA	9.0	5.0
Angola	7.2	2.9	France	8.4	8.0
Brazil	5.7	1.6	Netherlands	6.2	5.3
USA	5.5	3.2	Switzerland	4.1	2.9
Switzerland	4.8	3.2	Belgium	3.9	3.8
Netherlands	3.7	4.7	Ireland	3.3	3.6
Italy	3.3	3.4	Brazil	3.3	1.7
Other	28.4	50.1	Other	20.6	39.1
Total	100.0	100.0	Total	100.0	100.0

Table 17: Main partner countries - shares in total trade and in total number of firms, 2014-2015

Notes: Firms are counted each time they export or import with a different partner country in the current year, implying that a firm-year can appear more than once across the listed countries. The share of each country represents its percentage fraction in total exports or imports in both years.

Firm size	Exports			Exporters				
	Only Exp	Exp & Imp	Total	Only Exp	Exp & Imp	Total	By firm type	
							Only Exp	Exp & Imp
Micro	1.7	2.5	4.1	19.2	14.4	33.6	49.7	23.4
Small	3.1	10.2	13.2	14.2	24.1	38.2	36.7	39.2
Medium	2.3	17.4	19.6	4.5	16.0	20.5	11.7	26.0
Large	3.9	59.1	63.0	0.7	7.0	7.7	1.9	11.4
Total	10.9	89.1	100.0	38.6	61.4	100.0	100.0	100.0

Firm size	Imports			Importers				
	Only Imp	Exp & Imp	Total	Only Imp	Exp & Imp	Total	By firm type	
							Only Imp	Exp & Imp
Micro	0.3	2.3	2.6	8.9	14.5	23.4	23.4	23.4
Small	1.4	8.3	9.8	16.6	24.2	40.8	43.5	39.2
Medium	1.8	18.6	20.4	10.2	16.1	26.2	26.6	26.0
Large	2.8	64.4	67.2	2.5	7.0	9.5	6.5	11.4
Total	6.4	93.6	100.0	38.2	61.8	100.0	100.0	100.0

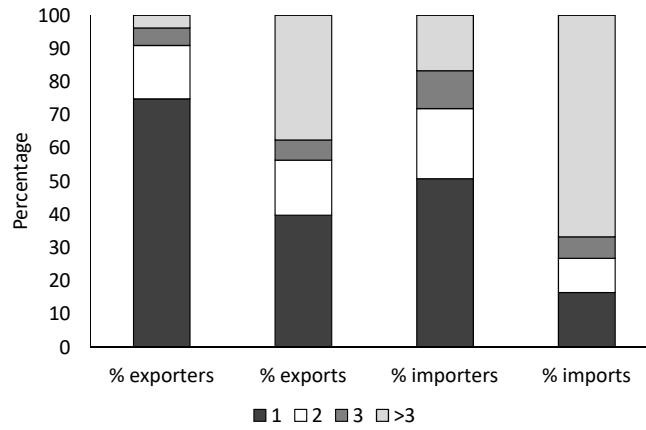
Table 18: Joint distribution of trade values and traders by firm type and size category

Notes: Each cell represents the percentage of total exporters (importers) or exports (imports) associated with firms-year belonging to a certain size class (row category) and firm type (column category) in 2014-2015. The four size classes are defined according to the EU official classification.

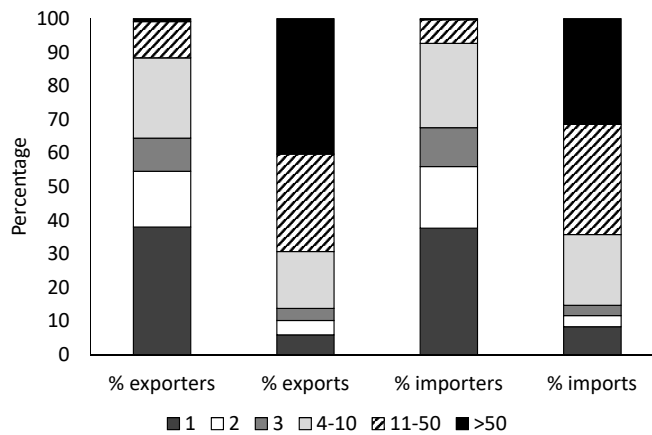
3. Characteristics of Portuguese international traders of services

Table 18 presents the joint distribution of traded values and traders by their type and size categories. The four size categories are defined according to the EU official classification, which combines number of employees, turnover and balance-sheet total. Large firms account for the majority of international trade flows of services in Portugal, representing 63 percent of exports and 67 percent of imports. However, most international traders of services are micro and small firms. In particular, around half of one-way exporters are micro firms, while more than 40 percent of one-way importers are small firms. The proportion of large firms is higher in two-way traders, representing more than 11 percent of the total. The distribution of firms and international trade flows of services along size classes is in line with that identified for Portuguese international trade in goods (Amador and Opromolla, 2013).

Figure 63 depicts the marginal distributions of service traders and trade values along the service and geographical dimensions. Most Portuguese firms trade only one service type abroad: around three-quarters of total Portuguese exporters sell only one service type and around half of importers buy only one service. However,



(a) Number of services traded

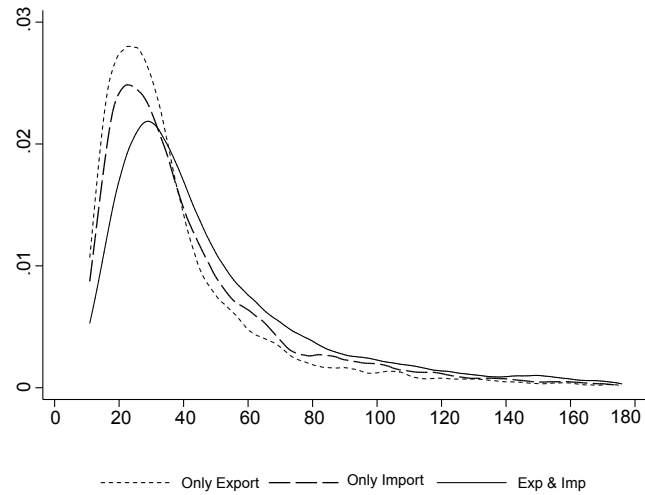


(b) Number of partner countries

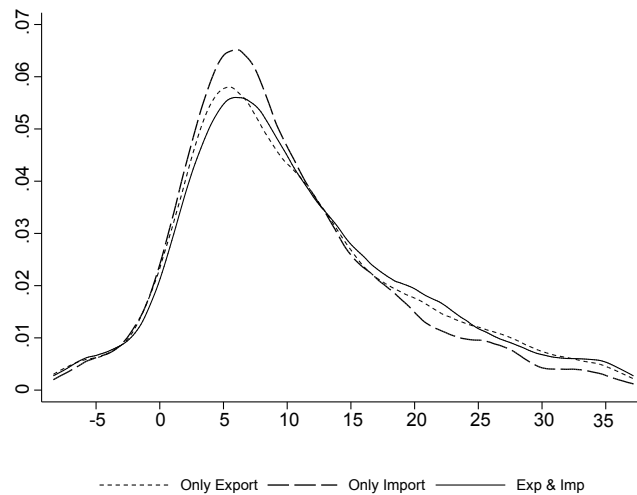
Figure 63: Distribution of trade values and traders by number of services and partner countries, 2014-2015

Notes: For the number of services, the values represent the percentage of total exporters (importers) and exports (imports) associated with firms-year exporting (importing) a certain number of service types in 2014-2015. For the number of partner countries, the values represent the percentage of total exporters (importers) and exports (imports) associated with firms-year exporting (importing) to (from) a certain number of partner countries in 2014-2015.

these firms are responsible for much smaller proportions of total trade, 39.8 percent for exports and 16.5 percent for imports. The diversification is higher in terms of partner countries than in terms of service types traded. Firms that have only one destination country represent 38.0 percent of total exporters and 5.9 percent of total exports of services. The proportions are similar on the import side, with traders with only one source country accounting for 37.6 percent of total importers and 8.3 percent of total imports. Considering both dimensions together, firms that only export one



(a) Labour productivity



(b) Profitability

Figure 64: Distribution of labour productivity and profitability, 2014-2015

Notes: Labour productivity is in thousand euros and it is defined as a firm's gross value added divided by the number of employees. Profitability is defined as the percentage share of a firm's earnings before interest, taxes, depreciation and amortization (EBITDA) in total assets. Firms-year with values in the lower 5th and upper 95th percentiles are excluded.

service to one country represent 34.5 percent of total exporters but only 4.2 percent of total exports. On the import side, firms with a single service and source country represent 30.8 percent of importers and account for 5.1 percent of total imports.

Conversely, firms that trade multiple services are responsible for disproportionate large shares of total values traded. Firms that export

more than 3 service types represent 3.8 percent of exporters and 37.6 percent of exports (16.7 percent and 66.8 percent for importers and imports, respectively). This feature is particularly evident on the geographical dimension: firms that export to more than 50 countries represent only 0.9 percent of exporters but 40.3 percent of exports, while firms that import from more than 50 source countries represent 0.4 percent of total importers and 31.5 percent of total imports. When the service and geographical dimensions are taken together, firms that export more than 3 services to more than 50 countries represent just 0.3 percent of total exporters but account for 27.9 percent of total exports. Values are similar for imports as firms that buy more than 3 services from more than 50 source countries represent 0.2 percent of importers and 31.1 percent of imports.

The two panels of Figure 64 depict the distributions of labour productivity and profitability of the three types of Portuguese international traders of services. Labour productivity is defined as gross value added per worker. Profitability is defined as the ratio of earnings before interest, taxes, depreciation and amortization (EBITDA) over total assets, which is an approximate measure of operating cash flow based on income statement data. This is an indicator commonly used for profitability assessment and usable for small and large firms. We tested alternative measures like earnings before taxes over total assets or simple price-cost margins and the results are similar. All distributions of labour productivity are markedly right-skewed, but two-way traders tend to have higher productivity levels. In addition, firms that only import services appear to be somewhat more productive than those that just export. The profitability distributions are closer to a normal distribution, but that for two-way traders presents less density at lower profit rates. Therefore, this set of firms tends to be not only more productive but also more profitable than one-way traders of services.

4. Final remarks

The increase in the share of exports in Portuguese GDP has been one positive development of the latest years. This path signals a reorientation of resources towards the tradables sector, thus consolidating the correction of Portuguese external imbalances. In addition, non-tourism services are becoming increasingly tradable and this contributes to the structural transformation of the Portuguese economy. The structure of service traders resembles the one observed for international traders of goods, with multi-service and multi-country firms playing a major role. Moreover, around 45 percent of Portuguese service traders engage simultaneously in exports and imports, rep-

representing around 90 percent of total trade value. Compared with one-way traders, these two-way traders of services tend to be more productive and more profitable.

References

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