PORTUGUESE INTERNATIONAL TRADE IN SERVICES*

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1. INTRODUCTION

The economic relevance of the services sector has been increasing for some decades. The shift to services translated into rising shares of this sector in total gross value added (GVA) and in total employment in most industrialized countries (Chart 1). In addition, trade in services expanded rapidly since the eighties, as technological changes allowed a strong growth of international exchanges of electronically transmitted business services. However, the underlying assumption in classical economic theory was that services were essentially non-tradable, as opposed to manufactured goods which were considered tradable and thus subject to international competition. Nowadays, this distinction is still broadly valid, though the borderline between the two categories has clearly moved in a way that more services became tradable. In fact, as discussed in Blinder (2006), the available technology – especially in transportation, information and communications – largely determines what can be traded internationally and what cannot. Sectors such as community, social and personal services, clearly related with the activity of general government, and wholesale and retail trade remain almost exclusively non-tradable in the classical sense. Similarly, sectors like transportation, communications and tourism

Chart 1

SHARE OF THE SERVICES SECTOR IN THE ECONOMY
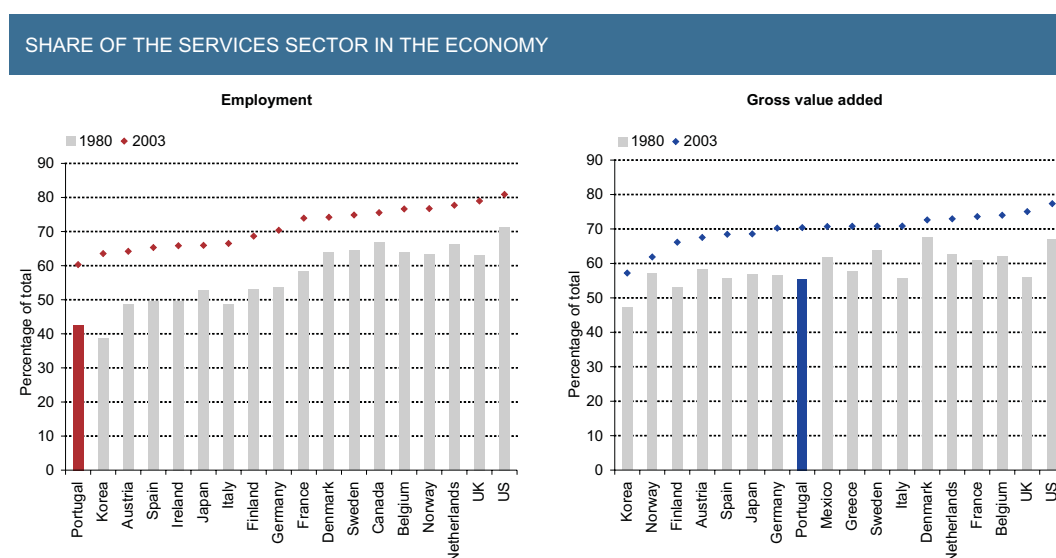
Sources: OECD-STAN database and authors' calculations.
Note: France's last year for employment data = 2002.

Sources: OECD-STAN database and authors' calculations.

have a long tradition of a significant presence in international transactions. On the contrary, sectors like financial services, computer and information services and other business services have been gaining share in international trade as a result of the sharp progress in information and communication technology. Thus, it is important to briefly summarize the main drivers of these structural changes.

Several simultaneously competing and complementary explanations have been presented in the literature to account for the rising share of services in GVA and employment.[1] The first explanation was initially proposed by Clark (1951), who argued that services satisfy higher needs than goods, *i.e.*, the so-called "hierarchy of needs" hypothesis. Under this hypothesis, the higher the income, the larger the share used for the purchase of services. This would explain the higher relevance of services in GVA and employment in higher income countries. Baumol (1967, 2001) challenged this interpretation, arguing that the increase in the share of services employment is the result of a differential in productivity growth and stating that, when measured at constant prices, the relative demand for services does not depend on income. Nevertheless, since productivity in services increases less than in manufacturing, the share of employment in services would be higher in high-income countries. In addition, if wages evolve closely in the different sectors, *i.e.*, not reflecting the differences in productivity, the share of services in nominal output would also rise with income. The two arguments are complementary as they provide explanations for the higher shares of services in both employment and output. The contradictory point lies on the overall demand-income elasticity in services, though within each sector it is possible to identify cases where such elasticity is higher or lower than one.

A complementary explanation for the shift to services is based on social preferences and the role of the public sector in the economy. The long-run tendency for the public sector to grow relative to national income is a stylized fact in public economics – the so-called "Wagner's Law". The Wagner's Law has been widely tested empirically with different results across countries and time periods, but it has generally received ample support (see, for instance, Henrekson (1993) and Peacock and Scott (2000)). This phenomenon can partly account for the increased share of services in employment and output over time.

Another explanation for the rising share of services in output and employment is based on the organization of production in different sectors of the economy. In national accounts, firms are typically classified according to their main activity, regardless of other secondary activities carried out within the firm. In addition, in labour market surveys, workers are classified not according to the specific characteristics of their activity but rather on the sectoral classification of the workplace. In parallel, the reorganization of production within firms has been changing and some activities are presently performed more efficiently and cheaply through outsourcing (see Abraham and Taylor (1996)). Therefore, as this phenomenon develops the share of output and employment in services activities increases. Nevertheless, this is just the result of the reallocation of activities between sectors and not a change in the type of activities that are carried out in the economy. In the same vein, the increased participation of women in

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[1] See Schettkat and Yocarini (2006) for an overview of the literature on the shift to services and ECB (2006) for a detailed analysis of the evolution of the services sector in the euro area.

the labour market implied some outsourcing of domestic activities, increasing the share of services in total employment and output.

The explanations for the increased importance of services in international trade are partly related with the above trends and partly linked with the underlying reasons for the increase in the international trade of manufactured goods (see Hoekman (2006) for an overview of the liberalization of trade in services). Firstly, advances in information and communication technologies are increasingly allowing cross-border trade in services. Secondly, the overall reduction in political and economic trade barriers and the participation of new countries in world trade stimulated imports and exports of services. Thirdly, market liberalization in specific services sectors like airline, trucking and rail transportation increased their international exchanges. Fourthly, globalization and the related mobility of capital and labour lead to a strong expansion of trade in tourism, financial and communications services, also contributing to increase their shares in domestic employment and output. Finally, the international fragmentation of production, with firms producing different stages of production in separate countries according to local comparative advantages, has an impact in international trade of services because several business services are outsourced to foreign countries (see Mankiw and Swagel (2006) for a discussion).

This paper examines Portuguese international trade in services at a relatively disaggregated level over the last two decades and taking a large set of countries as benchmark. It is organized as follows. Section 2 describes the data used to analyse the evolution of Portuguese trade in services and discusses some conceptual issues related with the definition of international trade in services. Section 3 examines the main trends in Portuguese trade in services over the last twenty years. The analysis of the geographical and sectoral pattern of specialization of Portuguese exports of services is included in Section 4. The traditional Balassa (1965) index of revealed comparative advantage is used to examine the relative sectoral specialization of Portuguese exports of services. Finally, Section 5 presents some concluding remarks.

2. SERVICES SPECIFICITIES AND DATA

The services sector has several specificities that lead to essential differences between trade in services and trade in goods (see Hoekman and Mattoo (2008)). Firstly, services are intangible and hence its international trade does not involve shipping, in contrast with goods transactions. As a consequence, services are inherently more difficult to monitor, measure and tax. Secondly, services are non-storable, so its production and consumption tend to occur simultaneously. Thirdly, services are highly differentiated, as they are sometimes tailored to the needs of customers. In addition, all services require some form of interaction between producer and user, the so-called joint production. It can be a direct person-to-person contact (*e.g.*, haircut), a telecommunication (*e.g.*, internet banking) or an exchange of written documents. Some services may require the consumer to move to the location where the services are supplied (*e.g.*, tourism), while others may require the producer to move his location (*e.g.*, maintenance engineering). As a result, even with the strong improvements in information and

communication technologies, services are still less tradable than goods.

Since services are intangible, in general, tariffs cannot be levied on services transactions, except for a few activities like transportation and tourism. Therefore, barriers to trade in services are mostly non-tariff barriers, like quotas, prohibitions and government regulations. These restrictions can take the form of limits on the market shares of foreign providers of services or on the scope of their activities. Government regulations on the services sector often act as important barriers to trade. These regulations include, for instance, provisions on licensing and certification, technical and environmental standards or government procurement and sourcing policies. In fact, as discussed in Conway and Nicoletti (2006), services are the sectors in which most economic regulation is concentrated and where domestic regulations are more relevant for economic activity. Several studies examine the impact of barriers to trade in services and its process of liberalization, in particular after the General Agreement on Trade in Services (GATS).[2] The GATS, which came into force in 1995, resulted from the Uruguay Round and its implementation is under the aegis of the World Trade Organization. It extends the multilateral trading system to the services sector, as the General Agreement on Tariffs and Trade (GATT) does for merchandise trade. However, as discussed in Hoekman (2008), at present still little progress has been made in liberalizing services trade and investment.

The intangible nature of trade in services also makes these flows very difficult to measure. As such, finding efficient ways of collecting data on services international transactions is a statistical challenge. There are several studies devoted to the measurement of trade in services (see, for instance, Lipsey (2006) and Sturgeon *et al.* (2006)) and most country studies on trade in services also discuss this issue in detail. In line with the classical approach to trade in services, balance of payments data is still the main source used to measure international trade in services. Nevertheless, there is a broad consensus that the growth of services trade is being significantly underestimated, as we will discuss in detail below.

The literature on international trade in services is still limited when compared with the large number of studies on international trade in goods. Part of the explanation for the relatively scarce literature relates with the novelty of the phenomenon and with the difficulties in compiling and interpreting data on international trade in services. Lejour and Smith (2008) edited a selection of papers on the globalization of trade in services, which provides a useful summary of the main research issues. Several individual and cross-country studies on the pattern of specialization of exports of services have also been produced in the recent years. For example, ECB (2008) presents an overview of services trade in the euro area and other major exporters of services, Bensidoun and Unal Kesenci (2008) analyse the pattern of trade in services of several OECD countries and Lee and Lloyd (2002) examine the relevance of intra-industry trade in services for 20 individual OECD countries. A few recent studies estimate gravity equations for bilateral services trade, using large samples of countries and comparing them to those of goods trade. Head *et al.* (2009) and Kimura and Lee (2006) find that the distance effect is more important for services than for goods, Ceglowski (2006) finds similar distance effects, while Lejour and

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Verheijden (2007) find that distance seems to be somewhat less important for trade in services than for trade in goods in Europe.[3] The international outsourcing of services is another area where the empirical evidence is still scarce but further investigation is progressing fast (see Crinò (2009) for a review of the literature on services offshoring). Amiti and Wei (2005, 2006), Liu and Trefler (2008), Geishecker and Görg (2008) and Hijzen *et al.* (2007) are examples of empirical studies on the effects of services offshoring, the latter using firm-level data. The studies on international trade in services using firm-level data are even scarcer, given the lack of comparable data. A couple of exceptions are Hijzen *et al.* (2006) that analyse imports and exports of services at the firm-level in the UK, Breinlich and Criscuolo (2008) that present a set of stylized facts on firms engaging in international trade in services in the UK and Eickelpasch and Vogel (2009) that study the determinants of the export behaviour of German services firms.

In this paper the source of data for international trade in services is the Balance of Payments services account, which measures services transactions between resident and non-resident entities, in accordance with the IMF (1993) Balance of Payments Manual (5th edition). This definition of international trade in services is narrower than the one of GATS, which has broadened the statistical concept of trade in services, moving away from an approach based on a subset of the balance of payments and reflecting instead the modes by which services are supplied in practice.

In order to understand the consequences on the analysis arising from alternative definitions of trade in services, it is necessary to provide additional detail and examples. The UN *et al.* (2002) Manual on Statistics of International Trade in Services describes in detail the four modes through which services may be traded internationally, taking into account the location of both suppliers and consumers of traded services. Mode 1 (cross-border supply) applies when suppliers in one country provide services to consumers in another country without either of them moving into the territory of the other. This mode is similar to the traditional notion of trade in goods, where both the consumer and the supplier remain in their respective territory. Freight transport services, correspondence courses and telediagnosis are examples of cross-border supply of services. Mode 2 (consumption abroad) comprises the cases when a consumer resident in one country moves to another country to obtain a service. Tourism services and related activities are typical examples of consumption abroad. Medical treatment of non-resident persons and language courses taken abroad are other examples of mode 2. Mode 3 (commercial presence) includes the situations when firms supply services internationally through the activities of their foreign affiliates. Medical services provided by a foreign-owned hospital and services supplied by a domestic branch of a foreign bank are examples of supplies through commercial presence. Most mode 3 services concern domestic sales of foreign affiliates that are not included in the Balance of Payments services data, as they are considered transactions between residents. Statistics on foreign affiliates trade in services (FATS) are the main sources of data on international trade in services through mode 3. The main exception refers to short-term construction projects done by unincorporated site offices, which are recorded in the Balance of Payments under construction services. Mode 4

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(3) Grunfeld and Moxnes (2003) and Mirza and Nicoletti (2004) analyse bilateral services exports for large samples of countries using gravity models but with a different focus. Both studies confirm the importance of size and distance for services exports.

(presence of natural persons) describes the process by which an individual moves temporarily to the country of the consumer in order to provide a service. This mode of supply includes trade in services in the Balance of Payments sense, like auditing services by a foreign auditor or entertainment services by a foreign artist on tour in the host country. In addition, mode 4 also includes non-permanent employment in the country of the consumer, which is recorded in the Balance of Payments as labour income.

From the discussion above it results that the Balance of Payments trade in services broadly covers modes 1, 2, a significant part of mode 4 and a small part of mode 3. Overall, the Portuguese trade in services is being underestimating when it is measured as Balance of Payments transactions in services. This underestimation can be significant since recent evidence points to the fact that foreign direct investment (FDI) is an important channel for the international provision of services, as many of them remain effectively non-tradable in the traditional sense (see Bensidoun and Unal Kesenci (2008)). Nevertheless, services data based on the GATS approach was not fully available, so it was not an option for this work.
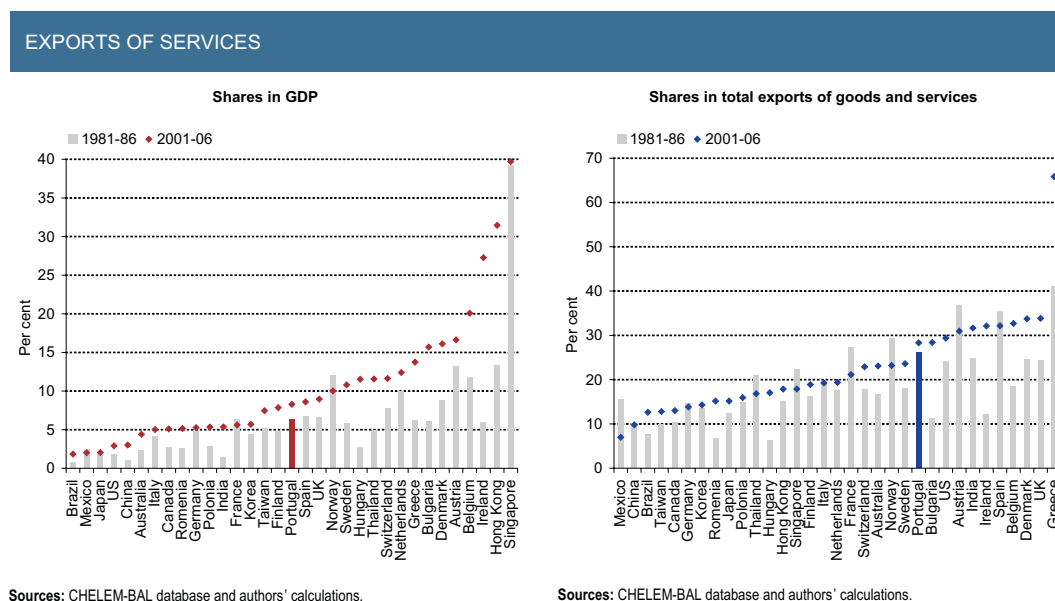
The data used in this paper comes from the CHELEM Balance of Payments Database of the CEPII (CHELEM-BAL), which reports balance of payments flows for around 200 individual countries and geographical zones, covering the whole world.[4] The data is provided in current US dollars (millions) and in accordance with the IMF (1993) Balance of Payments Manual (5th edition). The classification of services follows the Extended Balance of Payments Services Classification (EBOPS) which contains 11 main components. The sample period starts in 1967 and ends in 2006, but the detailed information on the different types of services is only available from 1995 onwards. In addition, bilateral data from the Banco de Portugal Balance of Payments database is used to examine the geographical specialization of Portuguese exports of services.

3. PORTUGUESE INTERNATIONAL TRADE IN SERVICES (1985-2006)

The services sector in Portugal increased its weight not only in GVA and employment but also in international trade, in line with the evolution observed in most industrialized countries (Chart 2). In fact, the reduction of information and communication costs, the sharp increase in technological progress and the removal of political and economic barriers to trade led to a significant growth of the international transactions of services. Portuguese exports of services represent 28.3 per cent of total exports of goods and services in the period 2001-2006, which compares to 26.1 per cent in the period 1981-1986. Greece, which is an economy typically associated with significant services exports, stands out with a ratio of services exports in total exports of goods and services of 65.8 per cent in the average of the 2001-2006 period. The ratio of Portuguese exports of services to GDP also increased, from 6.4 per cent in the average of the years 1981-1986 to 8.3 per cent in the period 2001-2006. In spite of this increase, Portuguese exports of services as a ratio of GDP are still lower than in most European coun-

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(4) See Boumellassa and Unal Kesenci (2006) for a detailed description of this database.

Chart 2

EXPORTS OF SERVICES

Shares in GDP

Shares in total exports of goods and services

Sources: CHELEM-BAL database and authors' calculations.

Sources: CHELEM-BAL database and authors' calculations.

tries, particularly in Ireland that shows a ratio above 25 per cent in 2001-2006. The growing importance of internationally traded services in Ireland is partly linked with the significant presence of foreign-owned subsidiaries in the financial and high-technology sectors.[5] Other services export-oriented economies in this period are Hong Kong and Singapore, with ratios close to 30 and 40 per cent, respectively.

Portugal has been recording surpluses in the services account in the last decades, which contrasts with the systematic deficits in the goods account. In the average of the period 1985-2006, the Portuguese services account showed a surplus of 1.9 per cent of GDP (Chart 3). In terms of total exports and imports of services as a percentage of GDP, both flows have increased their importance in the Portuguese economy and tended to move in the same direction in most years. The main contribution to the positive balance in Portuguese international transactions of services came from the travel sector, with an average surplus of 2.8 per cent of GDP over the last two decades, though with some decline in the first half of the nineties. On the contrary, there was a reduction of the negative contribution of net exports of other services since the nineties. In fact, the evolution of the balance of other services was significant, from a deficit of 2.1 per cent of GDP in 1990 to a surplus of 0.6 per cent of GDP in 2006.

The market share of Portugal in world exports of services increased over the last decades. This fact contrasts with the disappointing evolution of Portuguese export market shares of goods over the last 20 years.[6] Over the 1985-2006 period, Portuguese exports of services show a cumulative increase of market share of 32.8 per cent in nominal terms (Chart 4). This cumulative growth of Portuguese export share in services resulted mostly from gains obtained until the mid-nineties, since there was a stabilization of market shares over the last decade. The increase of Portuguese market share is higher than the one observed in Spain, where the export share in services increased by 20.7 per cent in cumulative

(5) See Grimes (2006) for a detailed analysis of the internationalisation of services activities in Ireland.

(6) See Amador and Cabral (2008) for an analysis of the evolution of Portuguese market shares in world exports of goods.
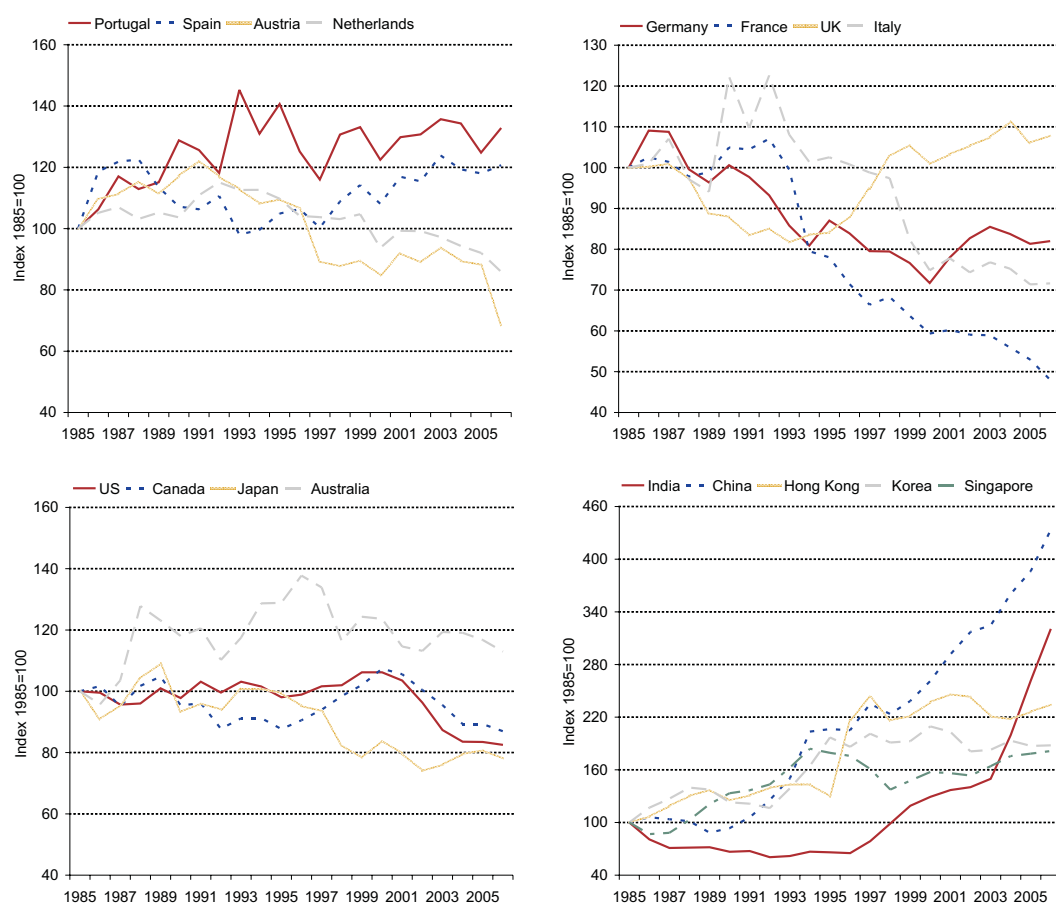
Chart 3

PORTUGUESE SERVICES ACCOUNT
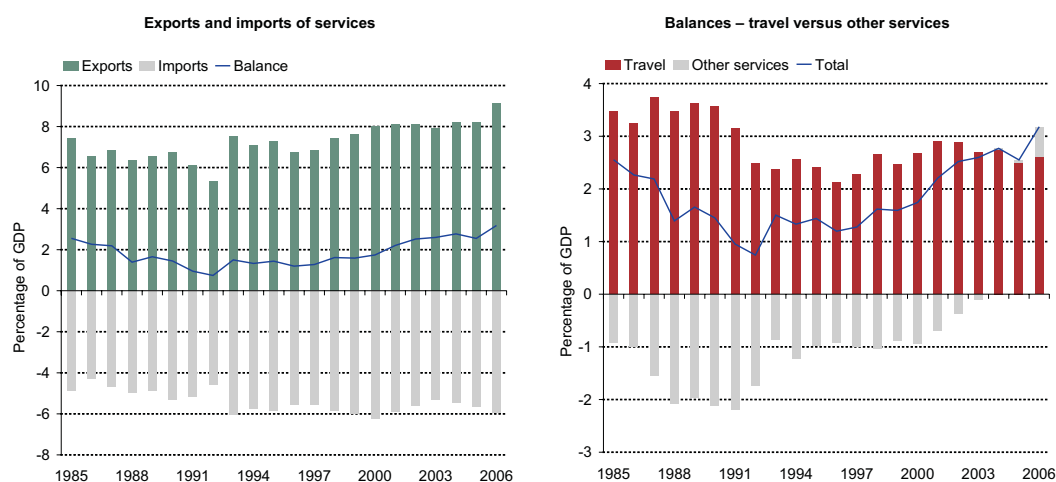
Exports and imports of services

Balances – travel versus other services

Sources: CHELEM-BAL database and authors' calculations.

Sources: CHELEM-BAL database and authors' calculations.

Chart 4

MARKET SHARE IN WORLD EXPORTS OF SERVICES

Cumulative results in nominal terms

Sources: CHELEM-BAL database and authors' calculations.

terms over the 1985-2006 period. Other European Union (EU) countries like Austria and the Netherlands recorded important cumulative losses in the same period. Regarding Greece and Ireland, the data on exports of services is very volatile until the late nineties. Nevertheless, these countries are typical benchmarks for the Portuguese economy, so we computed the cumulative changes of market share in the period 2000-2006. Ireland experienced a remarkably strong gain of market share in this period (105.0 per cent), while the Greek economy recorded a modest cumulative increase (2.1 per cent), lower than the one of Portugal in the same period (8.5 per cent).

The export market shares in services of large industrialized EU economies, like Germany and Italy, declined by 18.0 and 28.4 per cent in cumulative terms between 1985 and 2006, respectively. In addition, in France, there was a strong and sustained reduction of share in world exports of services since the nineties, reaching a cumulative loss of more than 50 per cent in the period 1985-2006. On the contrary, the UK recorded a cumulative increase in its market share in world services exports of 7.8 per cent in this period. As for the group of extra-EU large industrialized economies, the export shares of the US and Canada showed relatively similar paths over the 1985-2006 period, with cumulative losses of 17.5 and 13.1 per cent, respectively. The exports of services of Japan also lost market share over this period (22.0 per cent), while Australia had a cumulative gain of 12.9 per cent from 1985 to 2006.

Emerging economies in East Asia gained substantial market shares in world exports of services over the last two decades, similarly to what is observable in the goods markets. The nominal market share of Hong Kong in world exports of services increased by 134.4 per cent in cumulative terms from 1985 to 2006, while Korea and Singapore had cumulative gains of share of more than 80 per cent in the same period. Important players like China and India experienced impressive cumulative gains of 333.7 and 220.7 per cent, respectively. Nevertheless, the large scale of these economies and the low initial shares in world services exports contributed to this path. Overall, the Portuguese economy performed positively in terms of the evolution of services export shares. In the next section, we detail the analysis of Portuguese exports of services by looking at the geographical and sectoral specialization, comparing the latter with that of the world.

4. THE SPECIALIZATION PATTERN OF PORTUGUESE EXPORTS OF SERVICES (1995-2006)

4.1. Geographical specialization

This subsection examines the main destination countries of Portuguese exports of services over the 1996-2006 period using data from the Banco de Portugal Balance of Payments database. Chart 5 includes a geographical breakdown of Portuguese exports of services, including the 15 trading partners with a share above 1 per cent in the 2001-2006 period, which account together for more than 90 per cent of total exports. Portuguese exports of services are mostly directed to other advanced European countries, with the US, Brazil, Angola and Canada being the main exceptions. The set of top five destinations of Portuguese exports of services coincides with that identified for the exports of goods, *i.e.,*

UK, Spain, France, Germany and the US (in descending order of importance). Nevertheless, the ranking of the main five partners in Portuguese exports of services is different from the one in exports of goods, where Spain and Germany are the leading destinations. The main destination of Portuguese exports of services is the UK and its share increased strongly over this decade, from 15.5 per cent in the average of the period 1996-2000 to 18.7 per cent in the period 2001-2006. Spain is the second main destination and its share also increased over this period, from 12.9 per cent in 1996-2000 to 14.7 per cent in the most recent period. However, the proportion of Spain in total Portuguese exports of services is much lower than the corresponding share observed in Portuguese exports of goods. France and Germany are also important destinations of Portuguese exports of services, with shares of 13.8 and 10.8 per cent in 2001-2006, respectively, but their shares declined over this decade. The US is the fifth major destination, but its share in total Portuguese exports of services decreased from 9.1 percent in 1996-2000 to 5.7 per cent in the most recent period. The shares of Belgium and Canada in total Portuguese exports of services also decreased by more than 1 percentage point over this period. On the contrary, Portuguese exports of services to Ireland and Italy grew clearly above average.

Recently, a few empirical studies applied the traditional gravity formulation to the international trade of services and found evidence that geographical proximity tends to play a somewhat stronger role in services than in goods (see Kimura and Lee (2006)). In the Portuguese case, the verification of this result is not straightforward. On the one hand, the closest country (Spain) shows a higher importance in the trade of goods than in the trade of services. On the other hand, not very distant European countries like France, Belgium, Switzerland and the Netherlands present somewhat higher shares in Portuguese exports of services than in exports of goods.

Chart 6 further examines the main trading partners of Portuguese exports of services by displaying the composition of exports by destination country in the average of the 2001-2006 period. The travel sec-
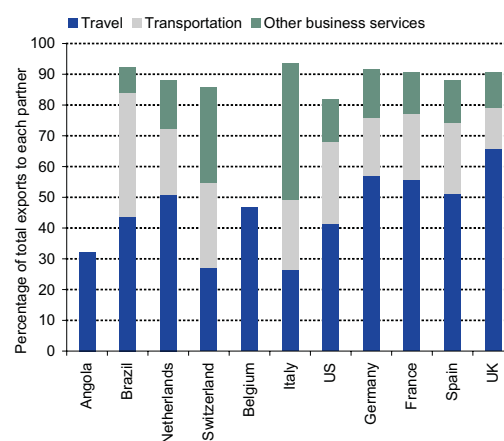
Chart 5

MAIN TRADING PARTNERS IN PORTUGUESE
EXPORTS OF SERVICES
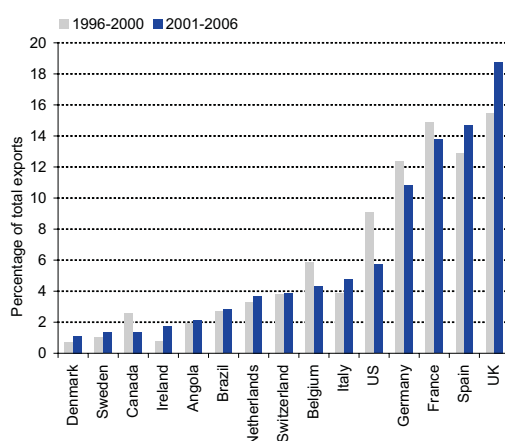
Sources: Banco de Portugal Balance of Payments database and authors' calculations.

Chart 6

COMPOSITION OF PORTUGUESE EXPORTS OF
SERVICES TO MAIN TRADING PARTNERS,
AVERAGE 2001-2006

Sources: Banco de Portugal Balance of Payments database and authors' calculations.

tor represents more than 50 per cent of total Portuguese exports of services to Germany, France, Spain and the Netherlands, and more than 65 per cent in the case of the UK. Transportation is typically the second largest type of services exported to these geographical destinations. This sector is especially important in Portuguese exports of services to Brazil, where it represents more than 40 per cent of total. In the cases of Switzerland and, in particular, Italy, other business services account for the largest share of Portuguese exports of services to these countries.

4.2. Sectoral specialization and Balassa indices

This subsection is devoted to the sectoral specialization of Portuguese exports of services over the 1995-2006 period. It starts by examining the shares of each sector in total Portuguese exports of services. In Portugal, three sectors have substantial shares in services exports (Table 1). Travel is the most important sector, representing more than 50 per cent of Portuguese exports of services in the average of the 1995-2006 period. However, there was a significant reduction of the share of this sector in total exports in the last years, in particular since 2001. In contrast, the share of the second most relevant sector in Portuguese exports of services, the transportation sector, increased since 1999, accounting for around 20 per cent of total in the most recent period. Portuguese exports of transport services include mostly air transport of passengers but exports of freight services increased strongly over this period, in particular in

Table 1

STRUCTURE OF PORTUGUESE EXPORTS OF SERVICES BY MAIN CATEGORIES Shares as a percentage of total exports of services			
	Shares in Portuguese exports		
	1995-2000	**2001-2006**	**1995-2006**
Transportation (205)	17.4	19.9	19.0
of which: Air transport, Passenger (211)	9.5	8.4	8.8
Other transport, Freight (216)	2.3	4.6	3.7
Travel (236)	59.3	52.2	54.9
Communications services (245)	2.9	3.2	3.1
of which: Telecommunications (247)	2.7	2.9	2.8
Construction services (249)	2.5	2.6	2.6
Insurance services (253)	0.8	0.7	0.8
Financial services (260)	2.7	1.4	1.9
Computer and information services (262)	0.6	0.9	0.8
of which: Computer services (263)	0.6	0.9	0.8
Royalties and license fees (266)	0.3	0.3	0.3
Other business services (268)	11.0	16.2	14.2
of which: Merchanting (269)	4.8	7.4	6.4
Miscellaneous business services (273)	5.9	8.4	7.4
Personal, cultural and recreational services (287)	1.4	1.3	1.3
Government services (291)	1.1	1.2	1.2
Other services not elsewhere specified (nes)	0.0	0.0	0.0

Sources: CHELEM-BAL database and authors' calculations.
Note: Extended Balance of Payments Services Classification (EBOPS) codes in parenthesis.

road transport freights. Portuguese exports of other business services also grew strongly over the last ten years, corresponding to more than 16 per cent of total exports of services in the 2001-2006 period. Portuguese exports of merchanting and other trade-related services increased strongly since 1999, reaching 7.4 per cent of total exports in the most recent period. Legal, accounting, management consulting and public relations services and architectural, engineering and other technical services also represent a rising share of Portuguese exports of services. As regards other categories of services, there was a slight increase of the shares of communications services and of construction services in Portuguese exports over this period. The increase of the export proportion of communications services is mostly associated with telecommunications. There was also an increase of the relative importance of computer and information services, due to higher exports of computer services, though they still represent a small proportion of exports in the most recent period. On the contrary, there was a significant reduction of the share of exports of financial services, from 2.7 per cent in 1995-2000 to 1.4 per cent in 2001-2006.

The evolution of the Portuguese export structure of services must be placed in perspective against the world average to evaluate the relative specialisation of Portugal and to identify the comparative advantages revealed *ex-post* by international trade. For that purpose, the analysis of the specialization of Portuguese exports of services is developed through the computation of the traditional Balassa (1965) index of revealed comparative advantages, as it is usually done for international trade in goods.[7] The Balassa index is defined as the ratio between the share of a given sector in total exports of the country under analysis and the share of that sector in total world exports. If the indicator reaches a value higher than 1, then the country is classified as being relatively more specialized in that sector, that is, as having a revealed comparative advantage in the sector.

Portugal reveals a clear and sustained comparative advantage in the travel sector over the last decade (Table 2). The sector of communications services has also high specialization coefficients over the sample period, although smaller than those observed in the travel sector. Portuguese exports of services are also relatively specialized in personal, cultural and recreational services, but some reduction of the Balassa indices is observed over the period. On the contrary, there was an increase of the Portuguese specialization in construction services, which resulted in Balassa indices above 1 since 2001. All other services sectors have indices lower than 1 in the average of the periods analysed.

The analysis of the relative specialization of Portuguese exports of services can be enhanced by taking a set of countries as a benchmark, thereby investigating their relative behaviours. Table 3 presents the Balassa indices of the main sectors in Portugal, in other EU countries and in several non-European countries, including some developing Asian countries, in the period 2001-2006. Starting with the comparison between Portugal and the other initial EU Cohesion Fund beneficiaries (Spain, Greece and Ireland), there are contrasting situations. Comparing Portugal and Spain, some similarities are evident, namely the strong specialization of both countries in the travel sector. However, in the cases of Greece and, especially, of Ireland the differences in terms of relative specialization are remarkable. In Ireland, the shares

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Table 2

THE SPECIALIZATION OF PORTUGUESE AND WORLD EXPORTS OF SERVICES BY MAIN CATEGORIES								
Shares as a percentage of total exports of services and Balassa indices								

	Shares in Portuguese exports			Shares in world exports			Balassa indices		
	1995-2000	2001-2006	1995-2006	1995-2000	2001-2006	1995-2006	1995-2000	2001-2006	1995-2006
Transportation (205)	17.4	19.9	19.0	22.9	21.4	22.0	0.8	0.9	0.9
Travel (236)	59.3	52.2	54.9	31.4	27.5	29.0	1.9	1.9	1.9
Communications services (245)	2.9	3.2	3.1	2.0	2.2	2.1	1.4	1.4	1.4
Construction services (249)	2.5	2.6	2.6	2.6	2.0	2.2	1.0	1.3	1.2
Insurance services (253)	0.8	0.7	0.8	1.8	2.3	2.1	0.5	0.3	0.4
Financial services (260)	2.7	1.4	1.9	4.5	6.2	5.5	0.6	0.2	0.3
Computer and information services (262)	0.6	0.9	0.8	1.8	4.1	3.2	0.3	0.2	0.3
Royalties and license fees (266)	0.3	0.3	0.3	4.7	5.0	4.9	0.1	0.1	0.1
Other business services (268)	11.0	16.2	14.2	22.3	23.6	23.1	0.5	0.7	0.6
Personal, cultural and recreational services (287)	1.4	1.3	1.3	1.1	1.2	1.2	1.3	1.1	1.1
Government services (291)	1.1	1.2	1.2	3.3	2.6	2.9	0.3	0.5	0.4
Other services not elsewhere specified (nes)	0.0	0.0	0.0	1.5	1.8	1.7	0.0	0.0	0.0

Sources: CHELEM-BAL database and authors' calculations.
Notes: Extended Balance of Payments Services Classification (EBOPS) codes in parenthesis. All Balassa indices higher than 1 are highlighted.

of computer and information services and of insurance services in total exports of services are much higher than the world average, resulting in extremely high specialization coefficients. Irish exports are also relatively specialized in financial services, but to a much lesser extent than in the two previous categories. As regards Greece, its exports of services are mainly concentrated in two categories: transportation and travel. In particular, the proportion of the sector of transportation services in Greek exports is more than twice the world average in the period 2001-2006.

In what concerns other countries, the cases in which we detect the higher indices of revealed comparative advantage in the 2001-2006 period include several situations that have been separately documented in the literature. For example, the US and Japan have strong revealed comparative advantages in royalties and licence fees. In addition, Japan and Germany present high Balassa indices in construction services. In Canada, the shares of personal, cultural and recreational services and of insurance services in total exports are much higher than the world average, resulting in strong specialization coefficients. The UK, a leading world financial market, shows a very high revealed comparative advantage in financial services. Korea and, to a lesser extent, Singapore stand out for their specialization in the transportation sector. Singapore is also relatively specialized in other business services and in insurance services, while the highest specialization coefficients of Hong Kong are in other business services, financial services and transportation services. Finally, India is identified by its widely debated and extremely strong revealed comparative advantage in computer and information services, showing the highest Balassa index of Table 3. In contrast, China's exports of services seem more broad-based, with Balassa indices above 1 in travel, construction services and other business services.[8]

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[8] See Bussière and Mehl (2008) for a detailed analysis of the integration of India and China in world markets.

Table 3

THE RELATIVE SPECIALIZATION OF EXPORTS OF SERVICES – BALASSA INDICES								
Average 2001-2006								

	Portugal	Spain	Ireland	Greece	Italy	Germany	France	UK	Netherlands
Memo item:									
Share in total world exports of services	0.6	3.8	2.2	1.3	3.7	6.3	4.9	8.4	3.2
Transportation (205)	0.9	0.8	0.2	2.2	0.7	1.1	1.1	0.7	1.3
Travel (236)	1.9	1.9	0.3	1.5	1.5	0.7	1.4	0.5	0.5
Communications services (245)	1.4	0.7	0.7	0.5	1.1	1.0	1.2	1.3	1.9
Construction services (249)	1.3	0.8	0.0	0.4	1.3	2.6	1.6	0.2	1.9
Insurance services (253)	0.3	0.3	7.1	0.3	0.8	1.4	0.5	1.7	0.2
Financial services (260)	0.2	0.5	1.6	0.1	0.2	0.6	0.2	3.2	0.2
Computer and information services (262)	0.2	0.9	8.2	0.1	0.2	1.3	0.3	1.3	1.0
Royalties and license fees (266)	0.1	0.1	0.2	0.0	0.2	0.8	0.9	1.3	0.9
Other business services (268)	0.7	0.8	1.0	0.2	1.3	1.2	1.0	1.2	1.5
Personal, cultural and recreational services (287)	1.1	0.9	0.5	1.0	0.8	0.5	1.5	1.5	0.8
Government services (291)	0.5	0.3	0.3	0.1	0.5	1.9	0.3	0.7	1.0
Other services not elsewhere specified (nes)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

	Portugal	US	Canada	Japan	India	China	Hong Kong	Korea	Singapore
Memo item:									
Share in total world exports of services	0.6	16.1	2.3	4.3	1.8	2.8	2.6	1.8	2.0
Transportation (205)	0.9	0.8	0.8	1.6	0.5	0.9	1.4	2.4	1.8
Travel (236)	1.9	1.0	0.9	0.3	0.5	1.5	0.6	0.6	0.4
Communications services (245)	1.4	0.7	1.7	0.3	1.6	0.4	0.6	0.5	0.5
Construction services (249)	1.3	0.5	0.2	3.6	0.6	1.5	0.4	0.1	0.6
Insurance services (253)	0.3	0.8	2.8	0.3	0.7	0.3	0.3	0.1	1.2
Financial services (260)	0.2	1.2	0.4	0.8	0.4	0.0	1.6	0.5	0.9
Computer and information services (262)	0.2	0.5	1.6	0.3	10.2	0.6	0.1	0.0	0.3
Royalties and license fees (266)	0.1	3.0	1.2	3.2	0.0	0.1	0.1	0.8	0.2
Other business services (268)	0.7	0.8	1.1	1.0	1.0	1.3	1.7	0.9	1.6
Personal, cultural and recreational services (287)	1.1	1.7	2.9	0.1	0.1	0.1	0.3	0.4	0.3
Government services (291)	0.5	2.1	0.9	0.7	0.3	0.3	0.0	1.2	0.1
Other services not elsewhere specified (nes)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Sources: CHELEM-BAL database and authors' calculations.
Notes: Extended Balance of Payments Services Classification (EBOPS) codes in parenthesis. All Balassa indices higher than 1 are highlighted.

5. CONCLUSIONS

Over the last decades, there has been a general trend of sectoral re-allocation towards the services sector in most developed countries. The share of the services sector in the Portuguese economy increased over the last two decades, reaching 70.4 percent of total gross value added and 60.3 per cent of total employment in 2003 (55.5 per cent and 42.6 per cent in 1980, respectively). In addition, Portugal has accompanied the trend of growing importance of services exports, which presently represent more than 28 per cent of total Portuguese exports.

This paper characterizes Portuguese international trade in services over the last two decades, defined as the cross-border flows included in the balance of payments services account. A comparative perspective of the main features of Portuguese trade in services is provided, as most of the analysis is carried out considering also other countries as benchmarks.

Travel is the most important sector in Portuguese trade in services and it has been a major factor behind the maintenance of an average surplus in the services account close to 2 per cent of GDP in the last two decades. Nevertheless, the contribution of net exports of other services has progressively moved from clearly negative in 1990 to slightly positive in 2006.

The market share of Portuguese exports of services behaved favourably over the last decades, in contrast with the disappointing evolution of export shares of goods. Over the last two decades, the nominal rate of change of Portuguese exports of services was higher than that of world services exports, leading to a cumulative increase of market share of 32.8 per cent from 1985 to 2006. This increase is higher than those observed in several European countries, but much smaller than those registered in some developing Asian economies.

Portuguese exports of services are mostly directed to other advanced European countries, with the main five destinations matching those of exports of goods, though with a different ranking. The main destination of Portuguese exports of services is the UK and its share in total exports increased strongly to 18.7 per cent in the 2001-2006 period. The travel sector constitutes the bulk of Portuguese exports of services to the UK, representing more than 65 per cent of total in this period. Spain is the second main destination of Portuguese exports of services, with a share of 14.7 per cent in the most recent period, which is much lower than the corresponding share observed in Portuguese exports of goods. France and Germany are also important destinations of Portuguese exports of services, accounting individually for more than 10 per cent of total.

The travel sector is the most important sector in Portuguese exports of services, representing more than 50 per cent of total. However, the share of this sector declined over the last years, in particular since 2001. The second most relevant sector in Portuguese exports of services is the transportation sector, with a share of around 20 per cent in the 2001-2006 period, while exports of other business services account for more than 16 per cent of total exports in this period. In contrast with the evolution observed in the travel sector, there was a significant increase in the shares of these two sectors in total

Portuguese exports of services over the last years.

Portugal has a clear and sustained comparative advantage in travel services over the last decade, as measured by the Balassa index. The sector of communications services has also high Balassa indices over this period, although smaller than those observed in the travel sector. In the period 2001-2006, Portuguese exports of services are also relatively specialized in construction services and in personal, cultural and recreational services. Comparing Portugal and Spain, some similarities are evident in terms of relative export structures, namely the strong specialization of both countries in the travel sector. In the cases of Greece and, especially, of Ireland the differences are substantial. Ireland has extremely high specialization coefficients in computer and information services and in insurance services, while the share of transportation services in Greek exports is more than twice the world average. In addition, we identify several country-specific features that have been separately documented in the literature. The UK stands out for its specialization in financial services and Germany has high Balassa indices in construction services. The US and Japan have strong revealed comparative advantages in royalties and licence fees, while Korea has a strong specialization in the transportation sector. In India, the shares of computer and information services in total exports are remarkably higher than the world average, resulting in the highest Balassa index of all countries and sectors considered.

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