CIR Working Paper Series

TRADE IN SERVICES OR SERVICES IN TRADE?
Towards better understanding[1]

Metka Stare
Centre of International Relations
metka.stare@guest.arnes.si

CIR Working Paper No. 1
April 2005

Centre of International Relations
Faculty of Social Sciences, University of Ljubljana
Kardeljeva Ploščad 5, SI-1000 Ljubljana, Slovenia
marjana.jevsenak@fdv.uni-lj.si

Abstract

The role of services in advanced economies has gained significantly in importance in the last quarter of century, owing to technological, organisational and institutional changes related to the production process as well as to the change of consumption patterns with the increasing income. On the contrary, the share of services in world trade remained modest. This holds true also for Slovenia and it is often reflected in underestimation of the role of services in development and in increasing competitiveness. The evaluation of the importance of services in international trade is traditionally based on balance of payments data on trade in services, which however capture only a part of services that enter international trade. The paper outlines other dimensions of services integration to international trade that are the consequence of the growing internationalisation of economies and of financial flows, of increasing linkages between goods and services production and of the technological progress. Slovenian data are used to compare traditionally defined trade in services on one hand with the estimations of sales of services by foreign affiliates on the Slovenian market and with the estimation of indirect trade in services that is embedded in traded goods and services (based on input-output data) on the other hand. Bringing the broader dimensions into the evaluation and analysis of trade in services paves the way to a more holistic understanding of international trade in services and of the role of services in increasing the competitiveness of the economy.

Keywords: trade in services, internationalisation, foreign affiliate trade in services, indirect trade in services, input-output tables

[1] Paper was presented at the Statistical Days 2004, Statistical Monitoring of Globalisation and Services – A Challenge and Necessity, Radenci, November 2004.

CENTRE OF INTERNATIONAL RELATIONS

1. INTRODUCTION

In the last quarter of century services have become the dominant generator of value added and employment in most economies. The increased specialisation and range of services were made available to businesses, to the public sector and to final consumers. The use of information-communication technology (ICT) significantly contributed to the appearance of new services and to new modes of their delivery. Also, the ICT introduction to services is enhancing the productivity of the total economy and is widening the possibilities of services trade. The share of services in international trade grew as well since the 1980, however this increase was much smaller than the increase of services' share in GDP. Also, the share of services in international trade remained well below the share of goods (20% vs. 80%) and only 12 percent of world service production entered international trade in 1999 compared with an equivalent figure of 50 percent of world goods production (WDI, 2002).

There are different reasons for the dichotomy between services and goods ranging from the very nature of many services that are non-tradable and can be provided only by physical proximity of the supplier and the consumer[1], the higher regulatory barriers in international trade of services than is the case with goods trade[2] to methodological differences[3]. While recognising the importance of these and other impediments to trade in services the paper however seeks to explore the causes of "apparent" poor tradability of services that are related to the conceptual framework and the accompanying standards of measuring trade in services. How should trade in services be evaluated, measured and analysed? We borrow from Rugman (1987) who suggested that it is perhaps more appropriate to explore services in trade than trade in services. In that context, the basic aim of the paper is to point to different dimensions of services integration to international trade and to evaluate them on the basis of different data sets for Slovenia.

Like in other transition economies, the service sector was neglected in Slovenia in the past, due to inappropriate understanding of its role in spurring growth and competitiveness. This had and still has a negative impact on the competitiveness of the Slovenian services on external markets. Not questioning the need to properly address this problem, it seems that the low share of services in total trade reinforces misunderstandings concerning the role of services in international trade. In Slovenia further increase of the services share in GDP tends to be perceived as harmful for further development and competitiveness of the economy as services evidently contribute poorly to total exports. The aim of the paper is to reveal other dimensions of services in trade that might help to overcome some misperceptions regarding trade in services and to better understand the role of services in trade.

[1] This refers to many public services (e.g. healthcare) as well as to final consumer services (e.g. haircut) that are provided locally. Hence, the comparison of the share of market services in value added with the share of services in trade would immediately decrease the dichotomy between the two. However, it has to be taken into account that ICT has improved the possibilities of public services to be traded internationally (e.g. on-line training courses).

[2] Services were included into the liberalisation of international trade only in the Uruguay Round of multilateral trade negotiations that have resulted in the establishment of General Agreement on Trade in Services (GATS) in 1994.

[3] GDP statistics record goods and services on the basis of their contribution to the net value or valued added while balance of payment statistics record gross value of goods and services that are traded (intermediate inputs + value added). This methodological difference might to some extent explain the dichotomy between the share of services in value added and in international trade as services on average embody bigger value added than goods.

2. EVOLVING CONCEPTS IN DEFINING AND MEASURING TRADE IN SERVICES

Traditionally, international trade in services was defined as invisible trade of non-factor services between residents and non-residents. In line with this *traditional or narrow definition* balance of payments data were used to measure the volume of trade in services. This is still the main concept applied when estimating the involvement of services in international trade. The share of service in world exports increased in the 1980s however it remained quite stagnant in the last ten years accounting for approximately 19.7 percent of the total exports, both in 1992 and in 2002 (WTO, 2003). While recognizing the measurement problems related to recording different service items in balance of payment statistics that underestimate the actual flows[4] it is being claimed that the share of services in international trade is not likely to increase significantly in the future, due to the rapid growth of foreign direct investments in services (Daniels, 2000).

The intensive debate on integrating services into multilateral trade negotiations on liberalisation of trade held before the beginning and during the Uruguay Round in the 1980s resulted in a *broad definition* of trade in services[5]. Broad definition complements the traditional definition of trade in services between residents and non-residents with a new element that includes permanent movement of production factors (e.g. trade in services based on residency is complemented with trade based on the ownership of entity that supplies services)[6]. Accordingly, local sales of majority-owned foreign affiliates are included to trade in services. Broad definition might seem questionable from the perspective of combining different criteria and concepts, however it was needed, given the actual service flows and the increasing internationalisation of businesses and economies. On the other hand, broad definition of services trade points to ever increasing links between international production and international trade. It is necessary to take into account both to get better insight into ways and means different categories (goods or services) enter international trade. This is even more important for services as many of them require physical proximity of the supplier and the consumer to deliver the service. In such cases, the establishment of affiliates presents for suppliers of some services the only way of selling services on foreign markets.

The relevance of the above considerations is confirmed by the trends in foreign direct investment (FDI) that reveal a clear shift towards services. In the early 1970s, the service sector accounted for only one-quarter of the world FDI stock; in the 1990s this share was approximately one-half; and by 2002 it had risen to about 60 percent of the world FDI stock or an estimated $ 4 billion (WIR, 2004). Available data for OECD economies shows that for services, establishment abroad and local sales of services surpass total exports of services by compiling countries[7] (OECD, 2003). Given the growing internationalisation of service activities, including the off shoring and establishment of shared service centres, it is highly probable that this will generate dynamic growth of foreign affiliate sales of services and of international sales of services not related to equity investment.

[4] To mention only few problems: balance of payment data lump many services together into broad categories (e.g. travel), some services are registered in net terms (e.g. insurance), some countries do not report data on important service items (e.g. maritime and air transport), repairs of equipment are included into goods trade. For details see Arkell, 2002.

[5] General Agreement on Trade in Services (GATS) identifies four modes of supply of services in international trade: cross-border supply, consumption of services abroad, commercial presence of service suppliers, movement of natural persons. For details see Stare, 2002.

[6] For details see Stare, 2002.

[7] Turnover from services by Japanese affiliates located abroad is 8 times higher than total Japanese service exports, compared with 4.5 times in Finland, 3.1 times in the United States and 2.7 times in Germany.

In the middle of the 1990s the GATS introduced the broad definition of trade in services however the methodological background for reporting data that would respond to the requirements of broad definition was not available at that time. This task was accomplished only in 2002 when six international organisations[8] published Manual on Statistics of International Trade in Services that presents a coherent conceptual framework, an international standard and guidelines for reporting statistics on broadly defined trade in services[9] (MSITS, 2002). The Manual includes reporting of data on trade in services between residents and non-residents and reporting of data related to sales of services via commercial presence of foreign affiliates[10] (Foreign Affiliates Trade in Services-FATS). Nevertheless, the Manual does not equate the exports/imports of services with foreign affiliates sales of services but only allows comparing their size and dynamic. The implementation of the standards recommended by Manual by the national statistical offices will be a complex and long–term process, not only due to non-availability of data on FATS in most countries, but also due to the need to develop appropriate statistics on the trade related movement of people, as service suppliers or employees of service suppliers (Cave, 2002).

3. MISSING ELEMENTS IN EVALUATING SERVICES TRADE

Notwithstanding the improvements in evaluating trade in services enabled by the Manual, there remain "grey zones" of recording broadly defined trade in services. To mention only few: large part of services trade that constitute intra-firm trade is not recorded due to firm's interests and will always escape measurement. This has become much more important with the Internet which makes e-enabled trade in services much easier and simpler that was not the case in the past (Stare, 2003). New services have appeared that enable distant supply to customers (e.g. call centres, design and management of web pages, the authorisation of credit cards). Further, FATS cover only foreign-affiliate sales of majority-owned affiliates while sales of other affiliates are not recorded although they are very similar[11]. The same refers to the sales of services by firms that engage in non-equity arrangements with foreign partners (e.g. subcontracting, licensing, partnerships, franchises[12]). Those cases however do not provide an exhaustive list of possible areas of underestimation of services integration to international trade.

In the following we refer to another dimension of services involvement in international trade that is rarely taken account of. The complexity of the production processes and the increasing links among sectors are blurring the borders between services and goods production. This makes the traditional approach to evaluating international trade in services based on the measurement of exports and imports of final products not only deficient but perhaps even questionable. Service intensity of the production processes is growing and has resulted in sophisticated products that include very small

[8] United Nations, European Commission, International Monetary Fund, Organisation for Economic Cooperation and Development, United Nations Conference on Trade and development and the World Trade Organisation.

[9] Broad definition of services trade includes services supplied by the movement of natural persons that is only to some extent captured by the balance of payment data. The implementation of the Manual will have to provide for a better measurement of this mode of supplying services.

[10] According to GATS only sales of majority foreign-owned affiliates are regarded as trade in services.

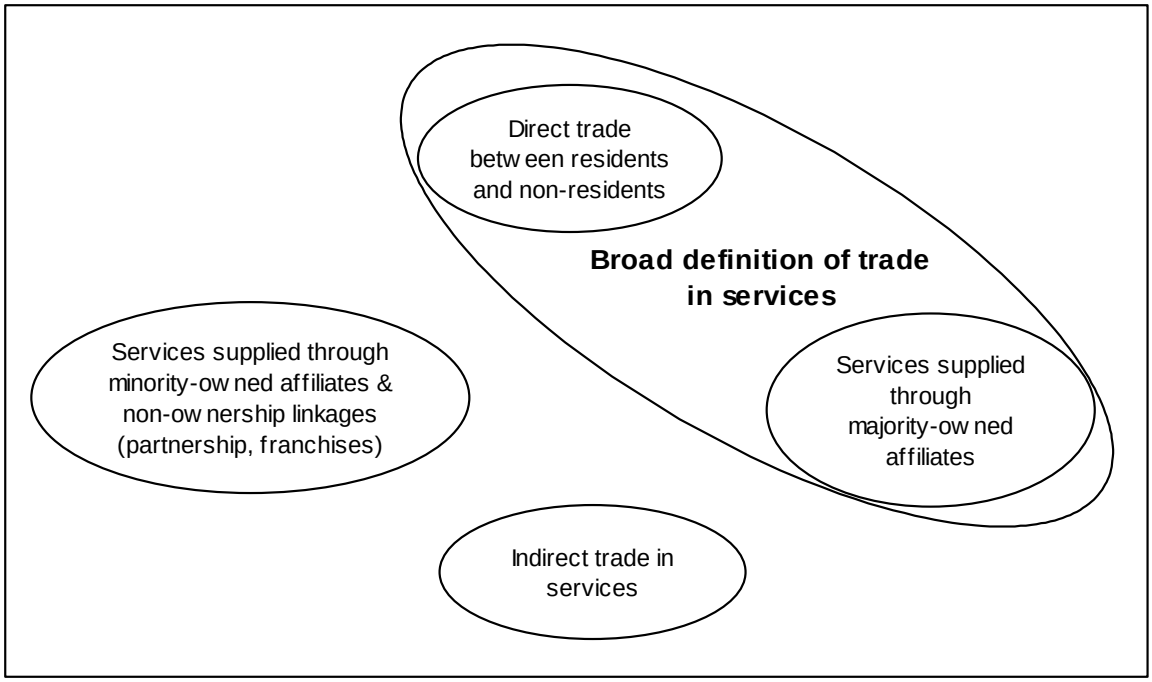
[11] The delineation between less than 50 percent and over 50 percent as the ownership criteria is problematic, however it is necessary to draw the line. This benchmark should however not be mixed with the OECD Benchmark Definition of Foreign Direct Investment – Third Edition. The latter stipulates that direct investment enterprise is defined as an incorporated or unincorporated enterprise in which a direct investor, who is resident in another economy, owns a minimum of 10 percent of the ordinary shares or voting power or the equivalent (MSITS, 2002).

[12] Balance of payment data do include income from franchising, royalties and licensing that may not be disaggregated between services and goods.

value of materials, but increasing value of different services. For example, the export of the cellular phone is statistically recorded as the export of manufacturing product while the biggest share of its value was added by specialised services, from new product development and testing, protection of intellectual property rights, design of new product to marketing and management of the whole business process.

The balance of payments data refer only to exports/imports of final products and services, while the exports/imports of intermediate products and services integrated in final products remain unregistered and figure only as an analytical category through the use of input-output tables[13]. This indicates that services increasingly enter international trade *indirectly*, or embedded in goods trade (Grubel, 1987). Consequently, the international trade in services as recorded in balance of payments data shows only a part of services in trade. It is being claimed that services embedded in traded goods represent a multiplier of traditionally defined services trade. The empirical evidence in some countries confirms this statement. The analysis for Australia revealed that direct export of services recorded in balance of payments amounts to 20 percent of total exports of goods and services, while direct and indirect export of services account for 40 percent of total exports of goods and services (Intelligent Exports, 1994).

Figure 1: "Multi-dimensional framework of services in trade"



Source: Stare, 2002.

The above discussion confirms that services, as a very heterogeneous category, enter international trade in different ways, which are difficult to capture, register and collect statistical data. Figure 1 presents a simplified illustration of the multi-dimensional framework of services in trade. Some of

[13] Wholesale and retail trade contribute a significant share to total value added in national accounts, however they do not feature in the services balance of payment data, being included in the goods data.

the dimensions will remain out of statistical recording also in the future[14] while others reach beyond traditional concepts of measuring trade in services although data sets for their evaluation are available in some countries. We examine some complementary data sets for Slovenia to improve our understanding of services involvement in international trade.

4. THE ILLUSTRATION OF DIFFERENT DIMENSIONS OF SERVICES IN TRADE – THE CASE OF SLOVENIA

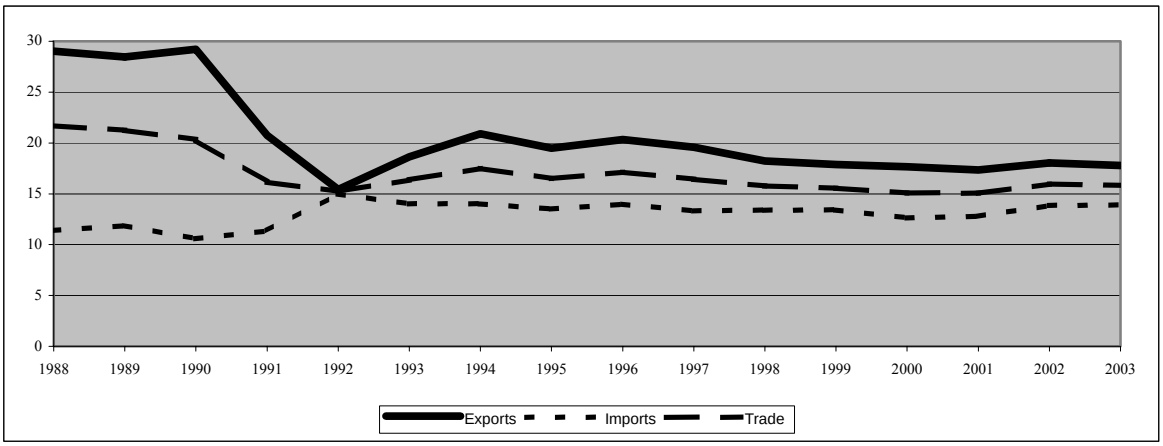
The aim of this section is not to analyse different dimensions of Slovenian trade in services in detail, but rather to present the main tendencies and to compare them. To this end we use balance of payments data on trade in services between residents and non-residents, data for foreign affiliate sales of services on the Slovenian market and data on indirect trade in services from input-output table (IOT). This enables to get a broader insight into different dimensions of services in trade.

4.1. Trade in services- Balance of payments data

The service sector in Slovenia was significantly transformed in the last 15 years due to the need of overcoming the gaps from the past. Accordingly, the share of services in value added and employment increased dynamically. On the contrary, that was not the case with services trade. Late 1980s and the beginning of the 1990s was not favourable period for the Slovenian trade in services. Dissolution of Yugoslavia and political instability had the most negative effects on trade in transport and travel, the dominant components of service exports from Slovenia. Consequently, the share of services in total exports of goods and services decreased from 29 percent in 1988 to only 15 percent in 1992 (Stare, 1996). The recovery of service exports that resulted in its more dynamic growth relative to goods exports lasted only few years. After recording almost 21 percent of the total exports in 1994 the share of services in Slovenian exports started to decline again, with the exceptions in 1996 and in 2002. In 2003 the share of services accounted for 17.8 percent of the total exports. These data confirm not only the lagging of service export growth in Slovenia behind that of goods but also divergent trends between the share of services in trade and in GDP. Relative shares of services in total exports, imports and trade are revealed in Figure 2.

[14] The growth of service transnational corporations generates significant intra-firm cross-border flows of knowledge and information that are not well documented because they cannot be monitored (Bryson et al., 2004).

Figure 2: "Relative share of services in total trade, 1998-2003*, in percent"



*Data series for exports and imports of goods and services are not fully comparable for the whole period, however it is expected that the relative share of services were not affected.
Source: Bank of Slovenia.

4.2. Sales of services by foreign affiliates

As mentioned in section 2 local sales of majority foreign-owned affiliates can be treated similarly as exports/imports of services. On one hand, the sales of services by Slovenian affiliates on the foreign markets can be compared to Slovenian exports of services and on the other hand the sales of services by foreign-owned affiliates on the Slovenian market can be compared with Slovenian imports for services. As data for the sales of Slovenian affiliates on foreign markets are not available it is not possible to estimate these sales[15]. Thus, we use data on the sales of services by the majority-owned foreign affiliates on the Slovenian market[16] to get to the estimation of this element of services trade that is related to inward foreign direct investment. This estimate is then compared to total imports of services. The comparison of both elements for individual service activities is hampered by the peculiarities of data[17].

Table 1: "Imports of services and sales of services by foreign affiliates in Slovenia, 1996 and 2001"

	1996		2001		Index
	Mil EUR	%	Mil EUR	%	2001/96
Imports*	1165.5	82.8	1,588.8	73.4	136
Sales of foreign affiliates**	241.3	17.2	575.8	26.6	239
TOTAL	1,406.8	100.0	2,164.6	100.0	154

* Excluding imports of financial and governmental services.
**Excluding foreign affiliate sales of financial services.

[15] To collect data on the activities of foreign affiliates established abroad is much more difficult and only some OECD countries have those data (Arkell, 2002).
[16] These data are obtained from income statements. Only the sales of foreign affiliates whose main activity is registered under service activity are taken into account. The sales of financial services by foreign affiliates are excluded from the estimations due to the fact that the estimation of sales of financial services suppliers is by far more complicated than in other activities.
[17] For detailed methodology of estimating sales of services by foreign affiliates see Stare, 2002.

Source: Stare, 2002.

Table 1 suggests that the importance of sales of services by foreign affiliates on the Slovenian market is increasing relative to the importance of imports of services. In the period 1996-2001 the growth of foreign affiliate sales of services outpaced the growth of service imports. In 2001 the sales of services by foreign affiliates accounted for EUR 575 million or 26.6 percent of the broadly defined trade in services. The results of the above comparison leads to the conclusion that also in Slovenia services increasingly enter international trade via foreign affiliate sales. This fact is however ignored, as foreign direct investment is not as important in Slovenia as in other transition economies (Rojec, Jaklič, 2004). Nevertheless, taking into account that FDI inflows to Slovenian service sector may increase due to the EU membership it is to be expected that the importance of foreign affiliate sales of services on the Slovenian market will further increase.

4.3. Indirect trade in services

Following the discussion in section 3 on the intensification of links between services and goods production we argue that this fact has important impact on the relation between direct export of services (as evidenced in balance of payment data) and indirect export of services (analytical category). The analyses suggest that in developed countries goods are still dominant in direct exports, however when combined exports (direct and indirect) are considered, services prevail (Francois, Reinert, 1995, Segebarth, 1990). It is being claimed further that in countries progressing on the ladder of development from the middle-income to higher-income level the shift is taking place towards larger weight of services in combined exports.

What follows is an attempt to estimate the relative size of direct and indirect exports of services for Slovenia using data from input-output table (IOT). The application of the matrix of sectoral multipliers obtained from IOT enables to decompose each unit of products or services consumed in intermediate consumption to individual element of final consumption. As we are interested only in exports as a part of final consumption this procedure provides for the estimation of the portion of the individual activity, which is directly or indirectly dependent on exports. Subtracting the value of direct exports from total exports of individual activity results in indirect exports of the activity[18]. The Table 2 illustrates the relative size of each component of exports for an aggregated category of goods and services[19].

Table 2: "The share of goods and services in direct, indirect and total exports of Slovenia in 1993 and 2000, %"

	Direct export (1)		**Indirect export (2)**		**Direct + indirect export (3)**		**C(i/d)* (4)**	
	1993	2000	1993	2000	1993	2000	1993	2000
Goods	88.2	90.5	56.0	53.1	76.7	77.8	0.6	0.6
Services	11.8	9.5	44.0	46.9	23.3	22.2	3.7	4.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	1.0	1.0

[18] For detailed explanation of the methodological approach see Stare, 1999.
[19] Goods refer to activities A-F and services to activities G-O of Standard Classification of Activities.

*Ci/d- coefficient of specialisation indicates the proportion of sectors' share in indirect export relative to its share in direct export.
Source: own calculations based on Input-output tables for 1993 and 2000, Statistical Office of the Republic of Slovenia.

An empirical exercise based on IOT data for Slovenia shows that the weight of services in indirect export is much bigger than in direct export[20] and the opposite is true for the weight of goods (column 4). Services accounted for only 11.8 and 9.5 percent of direct exports in 1993 and in 2000, while their share in indirect export accounted for 44 and 46.9 percent in respective years. This points to the fact that services enter export much more intensively as intermediate than final products making them less transparent in the evaluation of international trade. Further notice has to be made regarding the shifts in the period 1993-2000. Notwithstanding the shortness of the period considered the trends for Slovenia suggest that services are increasingly entering trade indirectly as intermediate inputs to production of goods and services.

5. CONCLUSIONS

The measurement, analysis and understanding of different issues related to services have improved significantly in the past 25 years, however there remain many gaps where further advancement is necessary. In that context, the gap in understanding the involvement of services in trade seems to be the most obvious. The diversity and complexity of the ways through which services enter international trade have proliferated on account of technological progress, liberalisation and globalisation processes. On the other hand, the improvement in conceptualizing, understanding and in measuring these ways has been rather slow. This has resulted in the dichotomy between the increasing weight of services in GDP and rather low share of services in international trade when perceived through the lens of traditional concepts and measurement methods.

The paper argues that services are increasingly underestimated in international trade if the latter is defined in narrow terms based on trade in services between residents and non-residents. Consequently, the paper calls for a more holistic approach to understanding and evaluating the involvement of services in international trade. Using different data sets for Slovenia complementary dimensions are introduced into the measurement and analysis, which enable to better capture the diversity and dynamics of services in trade. The balance of payments data for Slovenia reveal that the share of services in total exports has been declining since 1994. However, the sales of services by foreign affiliates on the Slovenian market have increased much faster than imports of services, pointing to a dynamic character of the sales of services by foreign affiliates that often escape the perception of trade in services. Further to that, due to increased intermediate consumption of services in the production process, the indirect export of services in Slovenia has grown rapidly in the period 1993-2000 and has in 2000 accounted for 47 percent of the total indirect export.

The trends in data for Slovenia related to different dimensions of services involvement in trade cannot be generalized to other countries, still they illustrate that services increasingly participate in trade, but we lack indicators to assess that properly. While the combination of different methodological concepts and classifications in evaluating services integration to trade might be looked at only as data exercise it however helps in explaining the apparent dichotomy between trends in services share in value added and in trade. The multidimensional approach to assessing the

[20] Direct export of services based on IOT data underestimates service exports as recorded by the balance of payments data, due to methodological differences in collecting data for individual services in both sets of data (e.g. in IOT data the consumption of non-residents in Slovenia related to travel services are not distinguished from the consumption of residents while the balance of payments data provide for separate data). Nevertheless, we use IOT data for direct export to be able to compare it with data on indirect exports.

size and particularly the dynamic of services trade is necessary to better measure and understand services in trade. Also, it can display more accurate estimates of services involvement in trade that might eventually raise the awareness on the importance of services in increasing the competitiveness of an economy. Finally, better knowledge of services in trade should also help in shaping the policies towards enhancing the integration of services in trade.

REFERENCES

1. Arkell, Julian, 2002, STATS ON FATS!, Statistics on Foreign Affiliate Trade in Services- The New International Statistical Standard, A Mark Twain Institute Publication.
2. Bryson, R. John, Daniels, W. Peter, Warf, Barney, 2004, Service Worlds, London: Routledge.
3. Cave, William, 2002, Measuring International Trade in Services and the New demands on the Family of Classifications, International Association of Statistics, London, August 27-29, 2002. http://www.statistics.gov.uk/iaoslondon2002/
4. Daniels, W. Peter, 2000, Export of Services or Servicing Exports?, Geografiska Annaler, Series B, No.82, pp. 1-15.
5. Francois F. Joseph, Reinert A. Kenneth, 1995, The Role of Services in the Structure of Production and Trade: Stylized Facts from a Cross-Country Analysis. CEPR Discussion Paper Series, London, no. 1228.
6. Grubel G. Herbert, 1987, All Traded Services are Embodied in Materials or People. The World Economy, Amsterdam, vol.10, no.3, pp. 319-330.
7. Intelligent Exports and the Silent Revolution in Services, 1994, Sydney : Australian Trade Commission.
8. MSITS, 2002, Manual on Statistics of International Trade in Services, Statistical Papers, Series M No. 86, United Nations. http://unstats.un.org/unsd/tradeserv/Papers/m86_english.pdf
9. OECD, 2003, Indicators of Economic Globalisation, Organisation foe Economic Development and Cooperation, Paris, DSTI/IND(2003)4, http://www.oecd.org/dataoecd/53/10/2500744.pdf
10. Rojec, Matija, Jaklič, Andreja. 2004, Integration of Slovenia into EU and global industrial networks in McGowan, F., Radošević, S., Tunzelmann, N. (eds.), The Emerging Industrial Structure of the Wider Europe,. London and New York: Routledge, pp. 158-174.
11. Rugman, Alan, 1987, Multinationals and Trade in Services: A Transaction Cost Approach. Weltwirtschaftliches Archiv, Tubingen, 123, pp. 651-67.
12. Segebarth Karine, 1990, Some Aspects of the International Trade in Services: An Empirical Approach. Service Industries Journal, vol. 10, no.2, pp. 266-283.
13. Stare, Metka, 1996, Vključitev Slovenije v mednarodni pretok storitev. Strategija ekonomskih odnosov s tujino: Temeljna področja zunanjeekonomske strategije Slovenije. Ljubljana : Ministrstvo za ekonomske odnose in razvoj, 1996, pp. 87-95.
14. Stare, Metka, 1999, Tokovi mednarodne menjave proizvodnih storitev in njihov razvojni pomen : doktorska disertacija. Ljubljana.
15. Stare, Metka, 2002, Celovit pristop k razumevanju in zajemanju mednarodne menjave storitev, Delovni zvezki, letnik 11, št. 6,. Ljubljana: Urad Republike Slovenije za makroekonomske analize in razvoj.
16. Stare, Metka, 2003, The Scope for E-commerce in Central and Eastern European countries' services trade, *Service Industries Journal*, vol. 23, no. 1,pp. 27-42.
17. WDI, 2002, World Development Indicators, www.worldbank.org/data/wdi2002
18. WIR, 2004, World Investment Report- The Shift towards, Services, United Nations, New York and Geneva.
19. WTO, 2003, International Trade Statistics 2003, World Trade Organisation, Geneva.