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Business-related services: a key driver of European competitiveness. An enhanced economic analysis.

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EXECUTIVE SUMMARY

This working paper, containing an economic and statistical analysis of the role of services in the European economy and examining their competitiveness and the factors enhancing productivity in services, is linked to and building on the Commission Communication on business-related services (COM(2003)747 final). The paper encompasses not only extended and updated analysis of the topics addressed in the Communication, but also introduces new analysis of human skills in business-related services and global sourcing of services. It represents a first comprehensive step to address the gap in public knowledge concerning business-related services and their impact on the competitiveness of European enterprises.

This working paper deals with the wide range of market services directly affecting the competitiveness of enterprises, both manufacturers and other services providers. They are collectively referred to as "business-related services" and consist of 4 major groups of activities, namely business services, distributive trades, network services and financial services.

The working paper is based on existing official statistics, even though these do not fully reflect the scale of the sector and its economic importance, due to the missing coverage of the sector and the lack of harmonised EU statistics.

1. MAIN SOCIO-ECONOMIC PARAMETERS

Business-related services constitute the largest sector of the European economy employing around 55 million persons in 2001 in the EU 15– or nearly 55 per cent of total employment of the market economy, compared to a share of 29 per cent (or around 29 million persons employed) for manufacturing. Business-related services - in terms of employment - are especially prevalent in the Netherlands (65%) and the United Kingdom (61%). The least dominant role of business-related services is found in Portugal (45%), Italy (48%), Finland and Germany (49%).

The share of business-related services has been continuously growing in the European Union (EU15) as well as in the US since the 1980s. In the US, business-related services generated a substantial value added share of more than 55 per cent of the total value added in the American economy compared to 45-50 per cent in 2001 in the EU 15, making the EU a less service intensive economy.

In several new Member States the structure of the market economy shows surprisingly similar patterns to EU 15 regarding the importance of business-related services in terms of both employment and value added. Especially in the Baltic States, the share of business-related services in the market economy is close to the EU 15 average – and even higher for value added. On the other hand, manufacturing industry is relatively more important in Hungary, the Czech Republic, Slovenia and Slovakia.

The services sector is characterised by a very large number of micro enterprises (less than 10 persons employed). In business-related services they constitute 31 per cent of total employment within the sector in the EU 15 compared to 13 per cent in manufacturing. In

business-related services, micro enterprises are most dominant in distributive trades (37%) and business services (31%).

Entrepreneurship is one of the key elements in the new economy, and new enterprises are contributing to create a dynamic business environment through economic growth, opening of new job opportunities and innovation of production processes and products. Business-related services are the major contributor to business dynamics as 60 per cent of all new European enterprises are started up in business-related services. This is due to the fact that many services markets have small barriers to entry, allowing one or a few persons to start and run an enterprise with little capital and few human resources.

Being the dominant part of the European market economy, business-related services are important in their own right for the development and growth of the European economy. However, the most essential feature of business-related services is that they are present in - and integrated into - every stage of the value chain. They are a fundamental necessity for the performing of any enterprise activity, whether in manufacturing or services, micro or large enterprises. All enterprises need services to produce, sell or distribute their outputs and to stay competitive. Services and manufacturing industry are now indivisibly interrelated. At the same time, services are provided, incorporated and embedded to a considerable extent in the final output of manufacturing. The classical distinction between manufacturing and the services sector has long ceased to be a reality. Rather, the two are intertwining.

Growth of business-related services is usually explained by the migration of employment from manufacturing industry to services due to the outsourcing of the services functions previously produced in-house. However, the main reasons for the growth of the services sector are changes in production systems and organisational structures, stronger competition on international markets, the increasing role of ICT and knowledge and the emergence of new types of services further raising the demand for services.

Nearly 30 % of the intermediate output from the business-related services sector is consumed by manufacturing companies. Nevertheless, crucial for understanding the growth of business-related services in the last decades is the demand for business-related services created by the sector itself as a consequence of the penetration of these services into the value chain of all enterprises.

Industrial restructuring has been part of the economic development in the EU in the last decades, especially influencing the manufacturing sector, and leading to a concern about a process of deindustrialisation in Europe. A more recent trend, having caught high political attention, is the apparent increasing global sourcing of services. The concern has mainly been based on anecdotal evidence from newspapers or ad-hoc studies, as no official statistical data covering the issue giving a global picture are currently available.

As the majority of services functions require a proximity to the market and clients, the types of services being internationally sourced in this initial round are mainly back-office functions, e.g. IT services and finance / accounting enabled by the increased use of ICT and Internet connectivity by enterprises worldwide, but also functions focusing on customer contacts are being delocalised, especially call center functions.

The main driver of global sourcing is the reduction of labour costs due to the large differences in wages paid for equivalent jobs between the EU and developing countries such as India and the Philippines. But it is important to underline the benefits of increased quality of the

services offered by the company through the capability of offering services around the clock to customers. A further motivation for international sourcing is the availability of a well educated workforce with the required skills in order to overcome possible scarcity of skilled labour in the EU.

2. CONTRIBUTION TO THE EU COMPETITIVENESS

In the period 1995 – 2001, the performance of manufacturing in the EU (2.3% annual labour productivity growth) was stronger than for most services sectors – with the exception of telecommunications (8.9%) and financial services (2.8%). The better performance of manufacturing can also be observed for the United States and Japan.

With the growing importance of services, their poorer productivity performance needs to be addressed. In most EU Member States, business-related services have been the main contributor to labour productivity growth during 1995-2001. It is noteworthy that the contribution of business-related services to labour productivity growth experienced in the US has been three times that of manufacturing and higher than the services sectors in any member state.

In the 1980's and the first half of the 1990's, the EU showed annual productivity growth rates (2.2% respectively 2.3%) considerably higher than the US (1.4% respectively 1.1%), but the pattern changed dramatically in the following period 1995-2001. The annual growth rate declined to 1.7 %, while the growth in the US expanded to 2.3 %. This development was mainly caused by an impressive productivity growth in many of the business-related services in the US compared to the EU. Especially distributive trades (5.1%) and financial services (5.2%) in the US showed high annual growth rates compared to their European counterparts (1% respectively 2.8 %).

3. MAIN COMPETITIVENESS FACTORS

ICT is enabling rapid productivity growth in sectors having invested heavily in ICT. The use of ICT can help companies increase their overall efficiency in combining labour and capital, the so-called multi-factor productivity. This is assumed to be the main explanatory factor behind the recent productivity growth achieved by distributive trades in the US.

The services sector is the most intensive user of ICT and consequently, the economic impact on the performance of the services sectors can be expected to be of a larger magnitude than for the remaining sectors, although the specific problems of measuring output from services sectors distort the influence of ICT usage in services enterprises.

ICT-producing services sectors (telecommunications and computer services) have experienced high productivity growth rates in the EU, outperforming the US particularly in the period of 1995-2001. This is mainly due to the substantial productivity growth in telecommunications following liberalization of markets and introduction of new technologies. However, this group represents only a small share of total economy value added, about 5% in both the US and the EU in 2001.

Productivity gains of ICT usage in the services sector are often realised through new and innovative ways of organising work, managing knowledge or creation of networks enabled by

the use of ICT. Development of ICT has facilitated rapid transfer of information and knowledge sharing on a global level.

Research and innovation are recognised as key drivers for enhancing competitiveness; not only the traditional, technology based innovation, but also the non-technological innovations are important factors for sustainable economic growth. Non-technological innovation (e.g. new service concepts, new clients interface or new service delivery systems) is the prevailing form of innovation in business-related services; and the increasing use of ICT in enterprises has put emphasis on the importance of organisational innovation and its impact on business processes and ultimately on business performance and productivity.

Market services account for a relatively small amount of total business expenditure on R&D. The total business R&D expenditures in EU15 amounted to € 109 billion or 1.27 % of GNP in 2000. Services constitute on average 13% of the total business R&D in the EU- with large differences across Member States. The corresponding US figure is 34%, so even if the R&D expenditure of services enterprises has grown substantially since 1991, the gap in absolute terms to the US has widened in the same period.

Innovation in the services sector is generally brought about by investment in acquisition of new skills, new organisational structures, new ways of co-operation, creation of new enterprises and relations with customers and suppliers. Therefore the propensity to innovate varies substantially across different activities due to the heterogeneity of the business-related services. Business-related services show a dual pattern in terms of innovations; network services and distributive trades are lagging far behind financial services and business services.

Human capital is a key input to services innovations and therefore of fundamental and strategic importance for the performance of services enterprises. A skilled labour force contributes to productivity growth by enabling the companies to utilise and take advantage of their investments in ICT and other innovative features. The labour-intensive nature of many business-related services, the high degree of interaction with customers, the knowledge intensity of many services and the importance of tacit knowledge are all factors implying the importance of sufficient supply of skilled human capital for future productivity gains.

Business-related services have a larger share of highly skilled persons employed than in manufacturing, EU15 average for highly skilled employees in business-related services was 23 % (or 12.5 million persons), while 17 % of the employees in manufacturing belonged to the highest skill category. As the jobs are mainly created within business-related services, increased demand for highly skilled persons can be foreseen in the coming years.

The share of persons with high educational skills in business-related services shows a prominent increase from 1995 to 2002. During the period, the EU-15 average rose from 18 % to 23% and in several individual countries (especially Finland, Spain and France) the recorded increases were more substantial, indicating a rapid increase in the demand for higher skilled labour in business-related services. Given the on–going technological transformation, the skills intensity of the European economies will increase. The Lisbon goals can only be achieved by a process of an extensive general upgrading of the stock of human capital.

Becoming the most competitive and dynamic knowledge-based economy cannot be achieved by investing in formal educational attainment alone. The dynamics of the knowledge-driven economy requires a constant update of the skills of the labour force in the EU, if European businesses shall be competitive. The formal education provides a basis for the continuous

upgrading of skills, but inevitably the demand for vocational training increases along with the adoption of new production and organisational methods, usually stimulated by the introduction of new technologies. Training has become an increasingly critical tool for maintaining the adequate levels of human capital in enterprises, particularly in knowledge-intensive services.

Another way of achieving the required skills is by "skills circulation", i.e. flows of skilled persons from one business to another, from one region to another or from one country to another. Such skills circulation can be an important tool in overcoming skills gaps in certain parts of the economy as it is an important tool for transfer of knowledge and skills in general. One special type of skills circulation is the international migration of highly skilled personnel, which recently has attracted a certain political focus, especially related to the mobility of IT-personnel.

On average, more than 5 per cent of the persons employed in business-related services in the EU15 (or around 600 000 persons) were non-nationals. The major share (3.3%) of non-national persons employed in business-related services was of non EU origin and only some 2 per cent have migrated from other Member States.

Available statistics indicate considerably higher proportions of foreign-born in highly skilled employment in the US (9%), Canada (14%) and Australia (25%). The apparent low attractiveness of the European businesses to highly skilled persons from outside Europe can hamper the transfer of knowledge and skills to the knowledge-intensive business services in Europe, thus threatening the future competitiveness of businesses from all sectors in the EU.

A competitive business-related services sector should be able to export services, attract foreign investment and buy foreign companies. What makes a competitive difference is both the level of international presence in a given country and the ratio between exports and imports or between sales and acquisitions. In the EU15, services cover 23% of the total international trade (including intra and extra-EU trade) in 2002. This level has remained more or less stable in Europe with slightly upward trend during the last 20 years.

For business-related services within the EU15, the net position of exports/imports is positive and increasing from 1996 to 2002. This trend is opposite to the total trade balance (including all goods and services), where the surplus has been reduced gradually in the same period. This fact underlines the role business-related services play as the crucial sector providing a surplus in the European trade balance.

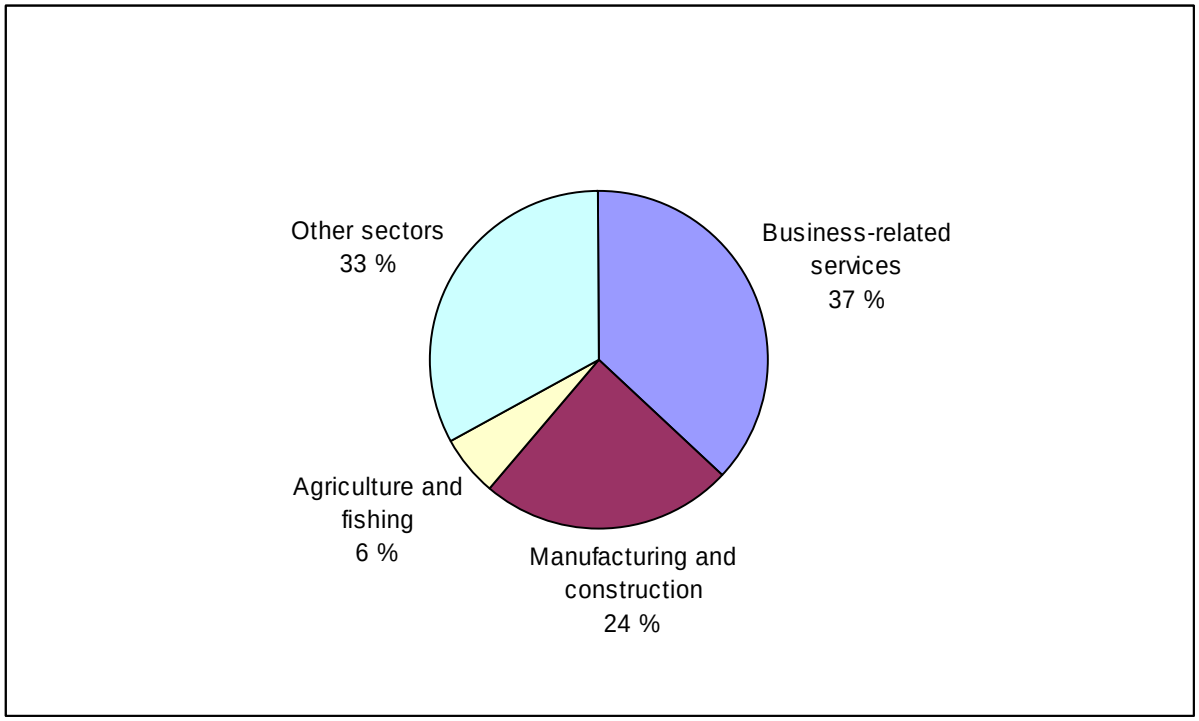
The role of services is relatively more important in foreign direct investment (FDI) than in international trade, due to the importance of proximity to the market for services companies. Services constitute 60-65 per cent of total outward FDI of the EU15 Member States, exceeding € 2 400 billion of investments in services companies abroad (intra + extra EU), compared to a share of services between 19-23% in total international trade. On the other hand, € 2 000 billion has been invested in the European services sectors across borders, including intra-EU investments.

Business services and financial services constitute the largest sub-sectors, representing together more than 60% of total services FDI. European enterprises have been investing heavily in business services enterprises abroad, accounting for close to half of the total outward FDI in services.

I. INTRODUCTION

The role of services in the economy and their potential for growth and employment creation was highlighted at the Lisbon European Council in March 2000. The importance of the services sector is justified by its sheer weight in the total economy and the increasing consumption of services by manufacturing industry, affecting the cost, price and quality of manufactured goods, c.f. figure I.1.

Figure I.1: Breakdown of total employment in EU 25 countries in 2003.



Source: Eurostat, New Cronos.

A key part of the economic reform program adopted by the European Council is to make the Internal Market work for services. The Commission Communication on an Internal Market Strategy for Services of December 2000[1] set out a strategy to remove barriers for cross-border movements of services, including an action to launch "flanking" measures (better statistics, reporting on intangibles, training and ICT skills, innovation and R&D etc.) in support of the competitiveness of the EU services sector. This action was specified in the Council Conclusions of November 2002, calling on the Commission to "complement measures to remove barriers to cross-border trade in services with other measures, aimed at improving the competitiveness of services and their contribution to the performance of enterprises in all economic sectors".

The recent Commission Communication on The competitiveness of business-related services and their contribution to the performance of European enterprises[2] was an answer to this demand for competitiveness enhancing measures to complement the legislative approach in

1 COM (2000) 888, 29.12.2000
2 COM (2003) 747, 4.12.2003

the draft Directive on Services in the Internal Market from January 2004. The Communication presented an analysis of European business-related services based upon available official statistical sources.

Box 1. Definition of Business-related services in accordance with the EU statistical activity nomenclature, NACE.

Business Services (NACE 70–74) This group can be divided into two groups: 1) Knowledge-Intensive Business Services, which are professional services, such as IT-consulting, management consulting, R&D services, advertising and professional training. 2) Operational services consisting of services such as industrial cleaning, security services and secretarial services.

Distributive Trade (NACE 50–52) This group consists of enterprises facilitating the distribution of goods and services to other sectors of the economy and to final consumers.

Network Services (NACE 40–41, 60–64) This composite group consists of electricity, gas and water supply, transport and communication services.

Financial Services (NACE 65–67) This group consists of enterprises offering inter-mediation of financial services such as banks and insurance companies.

This working paper, containing an economic and statistical analysis of the role of services in the European economy and examining their competitiveness and the factors enhancing productivity in services, is linked to and building on the Commission Communication on business-related services. The paper encompasses not only extended and updated analysis of the topics addressed in the Communication, but also introduces new analysis of human skills in business-related services and global sourcing of services.

The European Forum on Business-Related Services, established in April 2004 in accordance with the recommendations of the Communication, comprising all relevant stakeholders (enterprises, organisations and trade unions, the research community, a number of Member States and interested Commission services) has expressed the need for further analysis of the sector in its preparations of a proposal for a future Action Plan for business-related services. This paper is the first and immediate response to this call for further and more detailed economic analysis and the establishing of new knowledge about the services sector.

Furthermore, the absence of statistical analysis has hampered the visibility of the importance of the services sector for the overall economic development for the European Union and the Member States. The paper represents a first comprehensive step to address the gap in public knowledge concerning business-related services and their impact on the competitiveness of European enterprises. It is the intention of the Commission to develop and collect new statistical information on business-related services and on a continuous basis update, supplement and improve the analysis of the services sector to establish a better basis for future policy actions related to improving the framework conditions of services and finally strengthen the competitiveness of European enterprises.

II. THE IMPORTANCE OF BUSINESS-RELATED SERVICES IN EUROPE

II.1. Importance of business-related services in the European market economy

Business-related services constitute the largest sector of the European market economy employing around 55 million persons in 2001 – or nearly 55 per cent of total employment in the EU 15 market economy, while manufacturing has a share of 29 per cent (or around 29 million persons employed)[3].

Business-related services - in terms of employment - are especially prevalent in the Netherlands (65 %) and the United Kingdom (61 %). The least dominant role of business-related services is found in Portugal (45 %), Italy (48 %), Finland and Germany (49%).

On average, total value added of market economy created by business-related services constitute 53 per cent[4] in 2001 compared to 35 per cent for manufacturing. The share of value added differs substantially across EU 15 Member States, as business-related services in Luxembourg account for 61 % and in the Netherlands and United Kingdom for 60 %, compared to 44 % in Finland, 49 % in Italy and 50 % in Germany.

Germany shows in relative terms a less developed business-related services sector compared to the EU 15 average and remains well below the levels of the other two large European economies, namely United Kingdom and France. Furthermore, the southern European countries as Italy, Portugal and Spain, together with Finland are characterised by low levels of business-related services in terms of both employment and value added.

A further sectoral breakdown of business-related services indicates quite different structures of the sector across Member States. The share of business services in employment is highest in the Netherlands, Sweden and Luxembourg (around 41 %) but almost equally high in all the three largest economies, United Kingdom, Germany and France. The highest value added[5] share of business services were recorded for United Kingdom (43%) and Germany (43%). It should be noted that even though the overall share of business-related services of the market economy in Germany was of relatively minor magnitude, the business services sector was a relatively more important contributor within business-related services, reflecting the interaction between manufacturing and business services.

The data indicates that in Portugal, Austria and Finland business services generated the lowest shares of employment and value added within business-related services. The share of network services employment was the highest in Finland (29%), and in Portugal distributive trades constituted the largest share (59%) of business-related services of all EU 15 Member States.

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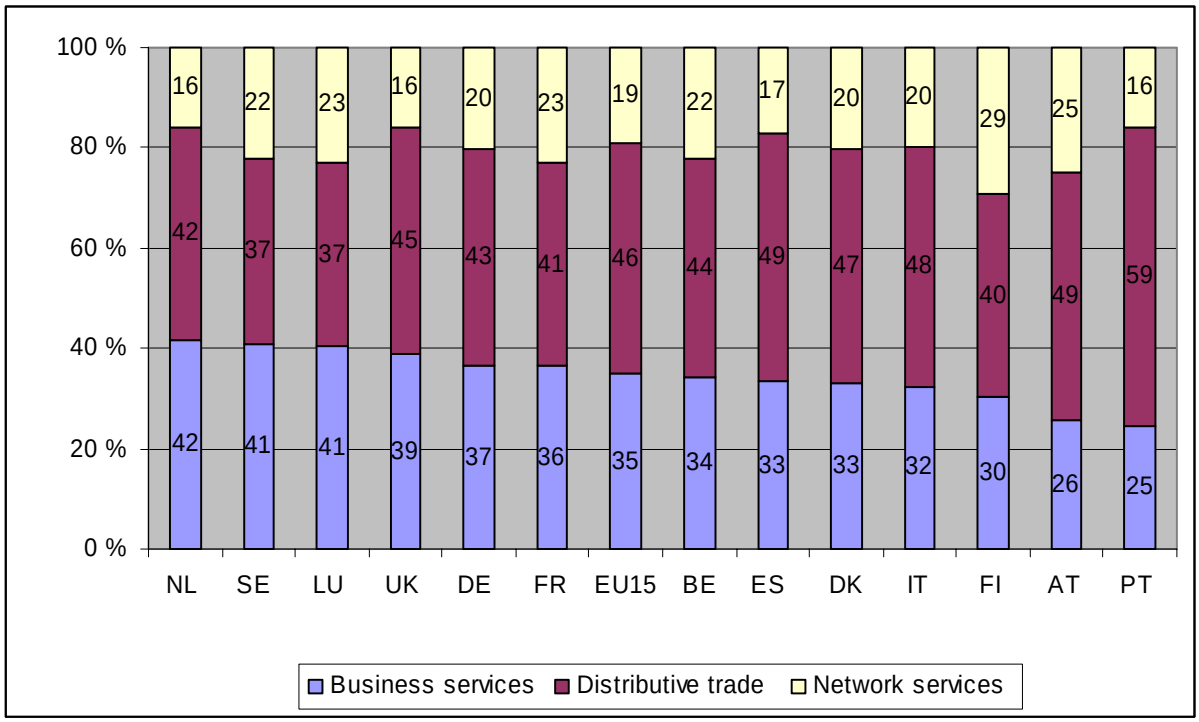
3 As the term 'business-related services' is not an aggregation used in official statistics proxies frequently has to be used, in cases where the statistics do not allow aggregation of data to the level of business-related services. The employment in business-related services - as defined in box 1 - has been estimated by using two sources, Structural Business Statistics (SBS) and National Accounts. In the SBS data used in this section, no harmonised data for financial services are available.

4 Excluding financial services, cf. footnote 3.

5 See annex figure II.5

Figure II.1. Employment in business-related services broken down by sector* 2001, EU 15.



**Excluding financial services.*

Source: Eurostat, SBS data.

Business-related services employ around 55 million persons in EU 15 being the major contributor to total European employment. Heterogeneous structures across Member States imply substantial national differences in the relative importance of business-related services. Especially, the differences in the appearance of knowledge intensive business services may hamper the economy-wide competitiveness of Member States with low intensity of business services.

II.2. Business-related services in the new Member States

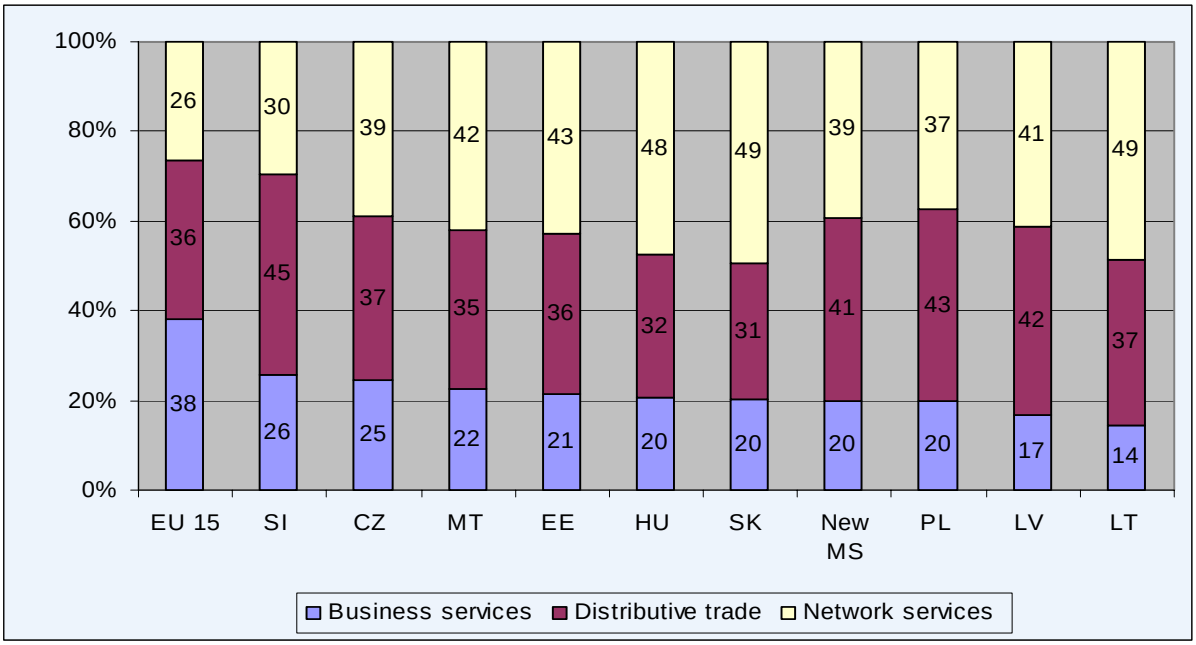
The structure of the market economy in several new Member States shows surprisingly similar patterns compared to EU 15 regarding sectoral distribution of both employment (cf. annex figure II.7) and value added. Especially in the Baltic states (Estonia, Latvia and Lithuania), the share of business-related services in the market economy is close to the EU 15 average – and even higher for value added. On the other hand, manufacturing industry is relatively more important in Hungary, Czech Republic, Slovenia and Slovakia.

The share of business-related services of value added of the market economy is on average 51 per cent for new Member States, whereas the corresponding figure for the EU 15 is slightly higher, 53 per cent. Manufacturing is on average somewhat more important in the new Member States, while the contributions for the construction sector equal the EU 15 average.

Even though the overall prevalence of business-related services in the new Member States appeared to be close to the EU 15, the sectoral breakdown reveals that the composition of business-related services are strikingly different between the EU 15 and the new Member States. Especially the business services sector is much less developed in the new Member States. The share of value added of business services of the EU 15 equalled 38 per cent of total business-related services (excluding financing services) compared to only 20 per cent in the new Member States. Consequently, the network services and – in many instances - distributive trades were clearly more prevalent in the new Member States. Referring to the present structure in the EU 15 Member States, the assumption can be made that there is huge potential for growth in the knowledge-intensive business services sector in the new Member States.

The highest shares of value added in business services (around 25 %) are found in Slovenia and Czech Republic. It is striking that some of the Baltic States showing high shares of total value added for business-related services, at the same time contribute the lowest shares for business services. In relative terms network services tend to be most important in Hungary, Slovakia and Lithuania whereas the value added share of distributive trades is more levelled across new Member States.

Figure II.2. Value added in business-related services broken down by sector* 2001, new Member States and EU 15.



**Excluding financial services.*

Source: Eurostat, SBS data.

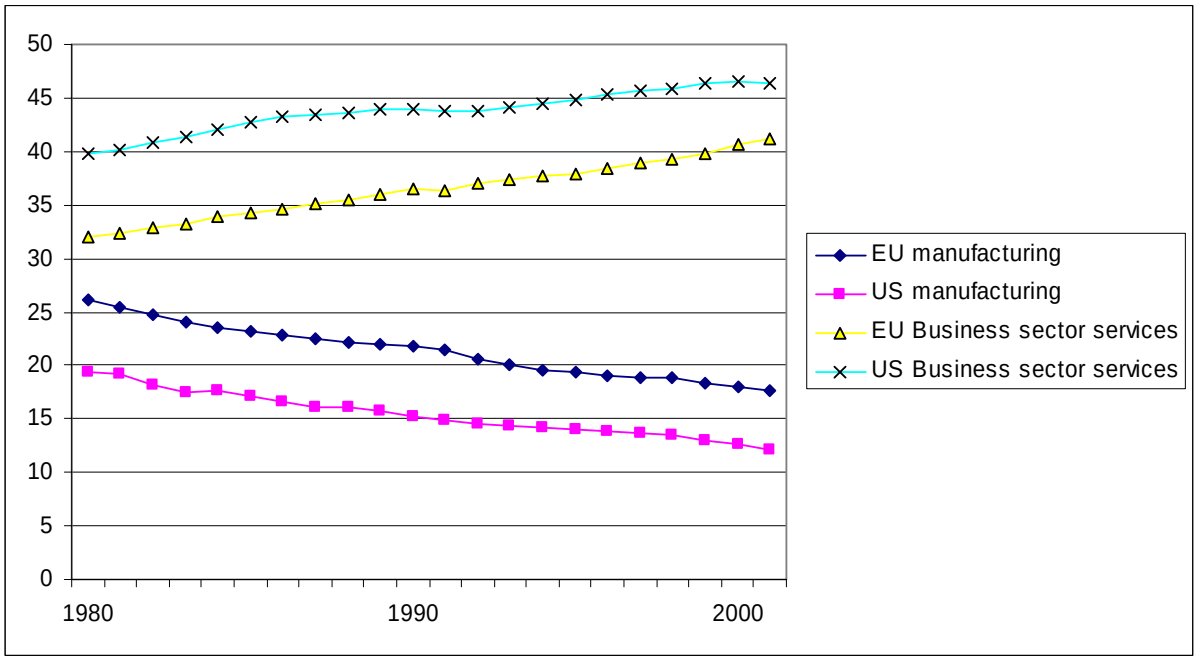
The development of business-related services in regional and local markets, also in the less developed regions of an enlarged EU, is crucial for the competitiveness and catching-up of the economies in these regions. Low current shares of business services in new Member States imply substantial growth potential in this sector.

II.3. Comparisons of employment growth services in the EU and the USA

The share of business-related services[6] has been continuously growing in the European Union (EU15) as well as in the US since the 1980s. In 1980, business-related services accounted for 32 per cent of total employment in the EU, whereas by 2001 the share has increased considerably, exceeding 41 per cent. The share of business-related services is considerably higher in the US, constituting 46 per cent in 2001, even though the experienced trend in employment growth is relatively similar in the EU and the US. In fact, the US already in 1983 surpassed the current (2001) European level of business-related services–almost twenty years ago.

Nonetheless Europe is lagging considerably behind the US concerning the level of services employment, there are some EU Member States where business-related services account for a larger or similar share of total employment as in the US – namely Luxembourg (54%), the UK (48%) and the Netherlands (46%).

Figure II.3. Share of business-related services and manufacturing in total employment 1980-2001 in the EU 15* and the US.



*Source: OECD STAN database. * EU excluding Ireland, Western Germany 1980-1989, excluding Greece 1980-1984, Portugal 2000-2001, Sweden 2001.*

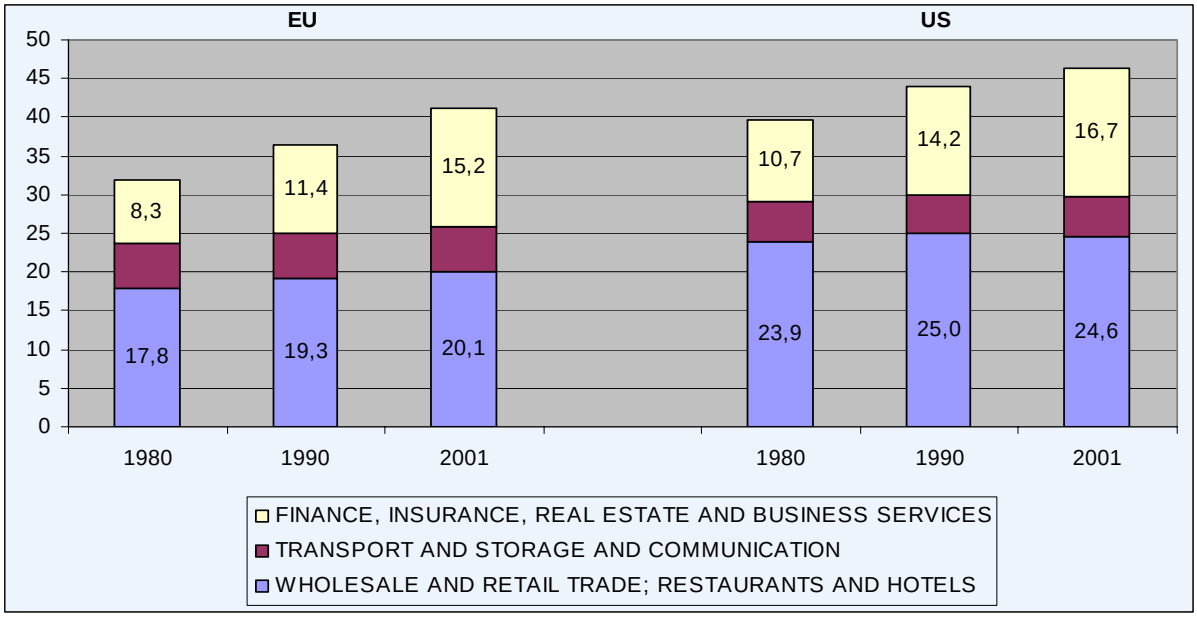
A further breakdown of business-related services reveals that the gap between Europe and the US is mainly attributed to the differences in magnitude of distributive trades and hotels and restaurants, whereas in financial and insurance services, real estate and business services the difference is not pronounced. Actually, these groups of mainly knowledge intensive business services have grown more rapidly in the EU than in the US in the 1990s. In fact, by 2001 there was a total of five EU countries showing higher or equivalent shares in financial and

[6] When based on OECD data, "business-related services" cover distributive trades, hotels and restaurants, transport and communication, financial and insurance services, real estate and business services.

business services employment than the US (17%): Luxembourg (27%), the Netherlands (19%), UK (19%), Belgium (17%) and France (17%).

Regarding the employment share of distributive trade, hotels and restaurants, the importance of these sectors in the US exceed clearly the importance in the EU, with the UK (23 %), Spain (21%), Greece (21%) and Austria (21%) showing the highest share of employment in this sector.

Figure II.4. Share of selected services in total employment in the EU 15* and the US 1980 – 2001.



*Source: OECD STAN database. *Excluding Ireland, Luxembourg 1980, Portugal 2001, Western-Germany 1980-1990.*

In terms of value added, the US economy can be characterised as a service intensive economy, whereas in the EU 15 the role of services is less pronounced in the creation of value added. In the US, business-related services generated a substantial value added share of more than 55 per cent of the total value added in the American economy. In 1980, the value added share in Europe normally constituted between 35-40 per cent of total value added in the EU 15 Member States, but has increased to around 45-50 per cent in 2001, cf. annex figure II.1. The increase in services value added since 1980 in some Member States has been rapid, implying acceleration of structural changes towards economies dominated by business-related services. An illustrative example is the UK, where business-related services accounted for 35 per cent in 1980, exceeding 50 per cent in 2001.

Knowledge intensive market services consist of a number of key sectors in business-related services including telecommunication, financial and insurance services together with business services. These sectors play a major role for dynamic economies to grow and improve their competitiveness. The contribution of knowledge intensive services to value added in the US is higher (23%) than in the major EU economies, mainly due to a larger impact of the financial sector. The major EU economies show very similar level as well as structure of knowledge intensive services value added, mainly recording around 20 per cent of total value added. In several EU 15 and new Member States the value added of knowledge intensive services constitutes around 15 per cent or even lower (cf. annex figure II.6).

Business-related services have grown considerably both in the EU and the US since the 1980s. The share of business-related services in employment is clearly lower in EU mainly due to a less prominent share of distributive trades and hotels and restaurants in Europe. Furthermore the US business-related services record higher value added shares in general but especially in the dynamic knowledge intensive services compared to the European economy.

II.4. Business-related services by enterprise size classes

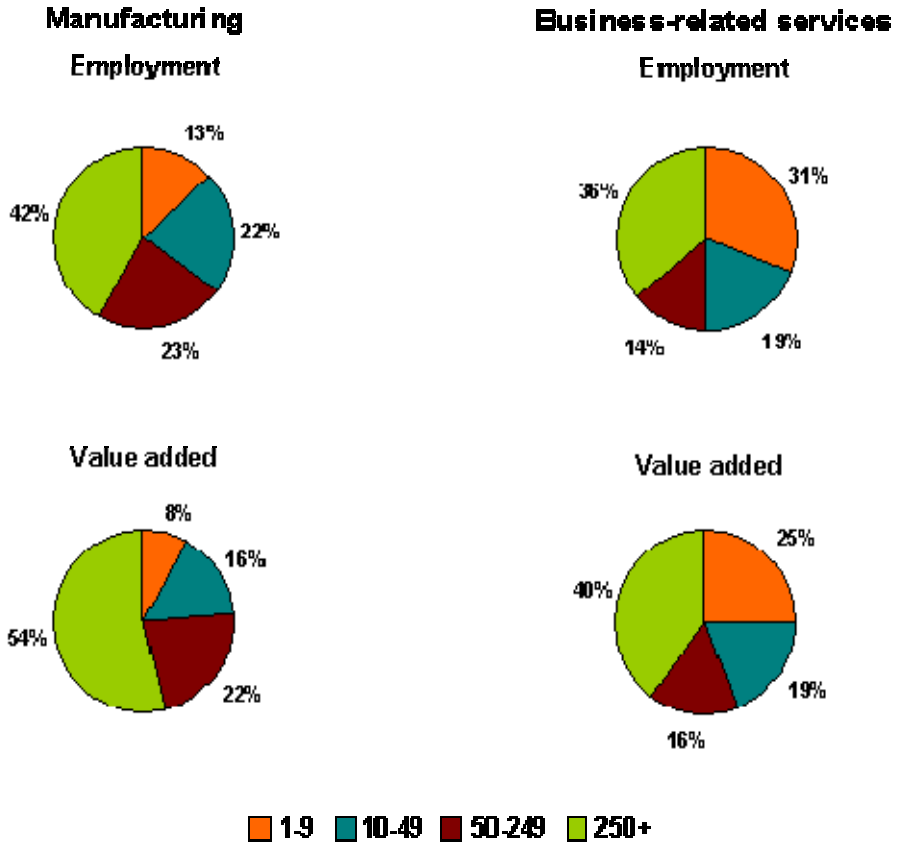
A total of around 8.5 million[7] enterprises classified in business-related services are operating in EU 15. More than half of these enterprises are in distributive trades and 40 per cent in business services. The number of enterprises recorded in manufacturing is much lower equalling 1.7 million across the EU 15 Member States.

The services sector is characterised by a very large number of micro enterprises (less than 10 persons employed). In business-related services[8] they constitute 31 per cent of total employment within the sector in the EU 15 compared to 13 per cent in manufacturing. In business-related services, micro enterprises are most dominant in distributive trades (37 %) and business services (31%). On the other hand, the large manufacturing enterprises employing 250 or more persons account for 42 % of manufacturing employment, whereas in business-related services the corresponding share of large enterprises was 36 per cent. Network services are characterised by a dominant share of employment in large enterprises (59 %).

[7] According to Eurostat SBS data, exluding financial services.

[8] Excluding financial services.

Figure II.5. Employment and value added in manufacturing and business-related services broken down by enterprise size class, EU 15 in 2001.



Source: Eurostat, SBS data. The data excludes the financial sector.

Micro enterprises are particularly dominant in southern European countries such as Italy, Spain and Portugal, whereas the United Kingdom, France and Germany show a relatively large percentage of employment in large services enterprises partly due to the size of their national economies and partly due to the domiciles of a considerable number of multinational companies.

The employment and value added shares by enterprise size classes are presented in annex table II.1. In general, the share of value added in the micro enterprises tends to be lower than the share of employment. On the other hand the large enterprises generate more value added per person employed than the smaller enterprises. This pattern can be observed for both manufacturing and business-related services with the exception of business services, where a different pattern is observed. This is the result of two different types of activities, on one hand the presence of several knowledge intensive services activities dominated by micro or small enterprises with high potential for value added creation. On the other hand, many of the largest business services enterprises – in terms of employment – are found e.g. in industrial cleaning or security services due to the labour-intensive character of these activities, where the value added creation per employee is traditionally not among the highest in business services.

The enterprises in business-related services are often SMEs operating in distributive trades or business services. Small enterprises with less than 10 persons employed are of considerable economic importance accounting for almost a third of total employment and a quarter of value added in business-related services. Policies targeting competitiveness of SMEs are therefore strongly associated with business-related services.

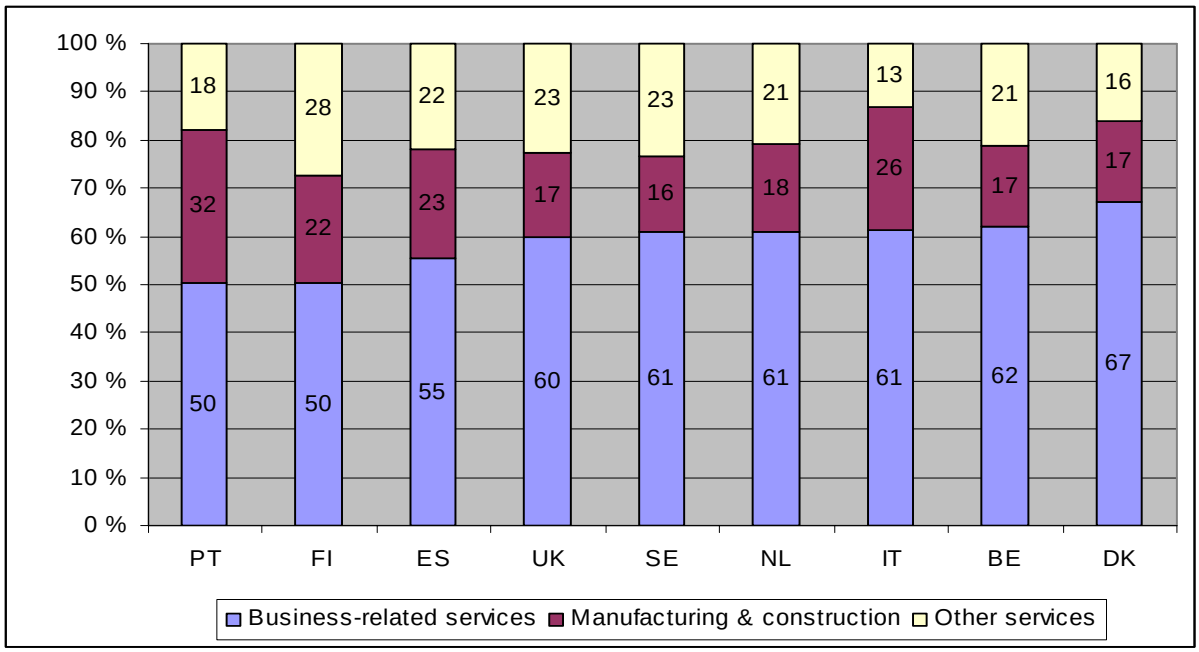
II.5. Enterprise dynamics in business-related services

As mentioned in the previous subchapters, business-related services are predominantly SMEs. This is due to the fact that many services markets have small barriers to entry, allowing one or a few persons to start and run an enterprise with little capital and few human resources. Entrepreneurship is one of the key elements in the new economy, and new enterprises are contributing to create a dynamic business environment through economic growth, opening of new job opportunities and innovation of production processes and products.

Just over 1 million new enterprises were established in 2000 in the 9 Member States for which data are available[9]. 283 000 new enterprises were created within business services, 253 000 within distributive trades compared to only 81 000 within manufacturing industry. The distribution of the new enterprises by economic activity clearly reflects the general development towards a service and knowledge based economy within the EU. More than 75 per cent of all new enterprises were created within the services sector, with business services (28 per cent) as the most outstanding sector, cf. figure II.6.

[9] The study covers Belgium, Denmark, Spain, Italy, the Netherlands, Portugal, Finland, Sweden and the United Kingdom. Source: Statistics in Focus, Theme 4 – 9/2003: Business Demography in 9 Member States

Figure II.6. New enterprises broken down by sector – 2000.



Source: Eurostat: Business Demography data.

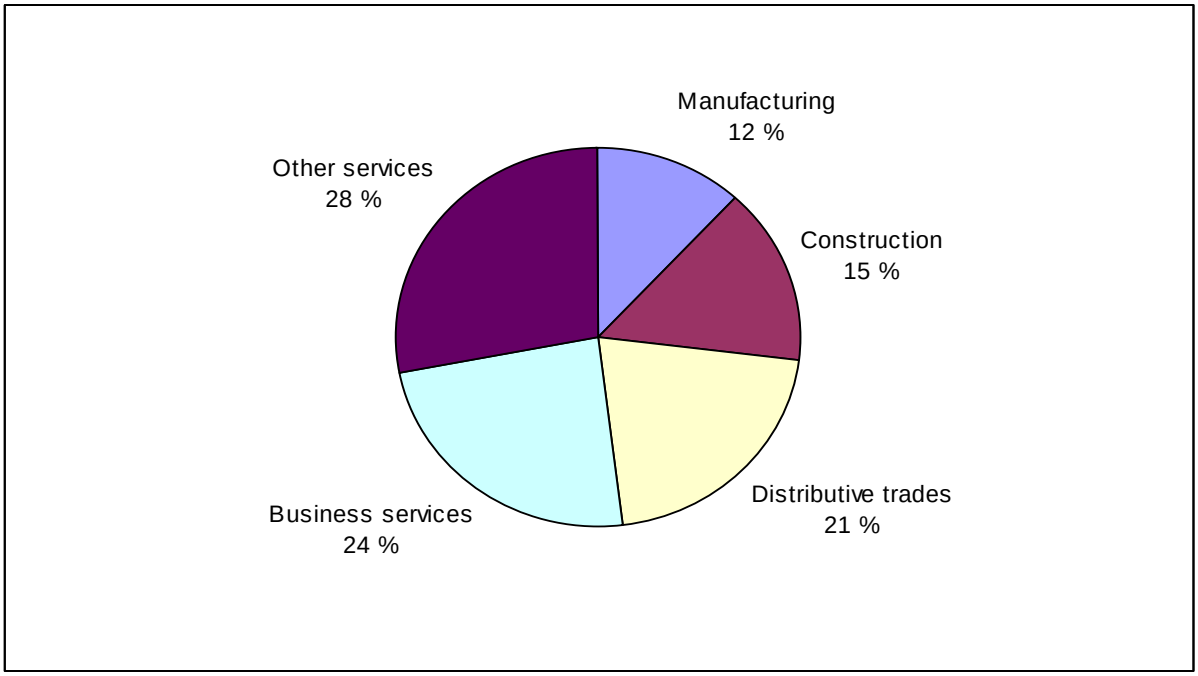
In order to better understand the dynamics of the different sectors, the number of new enterprises can be compared with the existing stock of enterprises (enterprise birth rate). The highest share of new enterprises is found within business services with 10.9 per cent, followed by hotels and restaurants (8.7 per cent). At the other end, new enterprises in the manufacturing industry only account for 6.0 per cent of the existing stock.

The establishment of a new enterprise is not in itself a criterion of success. The decisive element is the contribution of new enterprises to the creation of value added and employment. New enterprises are truly micro-enterprises, as only 1.5 per cent of all new enterprises had 10 or more employees. In total, new enterprises employed approx. 1.9 million persons in their year of start-up.

The distribution of employment in new enterprises is somewhat different from the distribution of the population of new enterprises. The services sector is still dominant with 28 per cent of all persons employed in "other services"[10], followed by business services with 24 per cent and distributive trades with 21 per cent. But construction (15 per cent of all persons employed in new enterprises) and manufacturing industry (12 per cent) are of relative larger magnitude when looking at average job creation per enterprise.

[10] 'Other services' includes e.g. hotels and restaurants, collective and personal services.

Figure II.7. Employment in new enterprises broken down by sector – 2002.



Source: Eurostat:Business demography data.

The ultimate achievement in relation to new enterprises is not only the creation, but also the survival of new enterprises in order to create sustainable new job possibilities and new products and services.

Not every new activity is sustainable, and a share of new enterprises will close down again. Nearly 75 per cent of the new enterprises established in 1998 survived their two first years of activity. In all Member States –for which data are available- the new enterprises within manufacturing industry had a higher survival rate than in services, except for the United Kingdom. Especially in sectors as retail trade and hotels and restaurants, where the entry barriers are low, a relatively low survival rate can be observed.

A further aspect of business dynamics is the cessation of activity of existing enterprises. 960.000 enterprises stopped their activities in 1999 in the 9 Member States covered. This is an average death rate of 7.9 per cent. Enterprise death rates can especially be observed within hotels and restaurants, financial services and business services, reflecting the dynamic and volatile business environment within the services sector. In comparison, the manufacturing industry only experienced a death rate of 6.5 per cent.

The renewal and restructuring of European industries is mainly occurring as births of new enterprises within the services sector and less by the deaths of existing manufacturing enterprises.

Business-related services sector is the major contributor to business dynamics – in terms of both enterprise creations and cessations - in Europe. Nearly 60 per cent of all new European enterprises are started up in business-related services. The highest share of new enterprises was established in business services reflecting the dynamic and volatile environment of the sector.

III. THE INTERACTION BETWEEN BUSINESS-RELATED SERVICES AND OTHER SECTORS OF THE ECONOMY

Being the dominant part of the European market economy, business-related services are important in their own right for the development and growth of the European economy. However, the most essential feature of business-related services is that they are present in - and integrated into - every stage of the value chain. They are a fundamental necessity for the performing of any enterprise activity, whether in manufacturing or services, micro or large enterprises. All enterprises need services to produce, sell or distribute their outputs and to stay competitive. A great variety of services are consumed throughout the different phases of the supply chain. In order to illustrate the heterogeneity of services used by enterprises, main services groups by production function are presented in box III.1.

Box III.1. Main services required for the performance of enterprises (functional approach)

FUNCTIONS IN ENTERPRISES	MAIN BUSINESS-RELATED SERVICES
Administration	Management consultancy Legal services Auditing and accounting
Human resources	Temporary work Recruitment of personnel Professional training
Financial intermediation	Banking Insurance Renting and leasing
Production and technical function	Engineering and technical services Tests and quality control – R & D services Industrial design Maintenance and repair of equipment

FUNCTIONS IN ENTERPRISES	MAIN BUSINESS-RELATED SERVICES
Information management	Computer and IT services Telecommunications
Marketing and sales	Advertising Distributive trades Public relations Fairs and exhibitions After-sales services
Transport and logistics	Logistics Transport services Express courier
Facility management	Security services Cleaning services Catering Environmental services / waste disposal Energy and water services Real Estate (warehouses)

Services can be produced either internally by the enterprise itself – independent of its activity – or they can be purchased. Many enterprises have outsourced some of their services activities previously produced in-house in order to procure these services in a competitive market or to obtain greater flexibility. As a consequence, business-related services have become more specialised and thus capable of delivering products of higher quality, lower prices and introducing differentiation in their product portefeuille or products of innovative character, increasing the competitiveness of the users of these services.

III.1. Outsourcing of services activities

The process of externalisation of services functions has been an important driver of the growth in the services sector. Outsourcing decisions are frequently driven by the need to gain access to specialised skills (quality aspects) and/or to reduce the costs of resources employed

by business (cost aspect) and to increase flexibility. An enterprise has to make strategic and often long-term decisions: to produce the necessary services by itself or to contract these services out to specialised companies. Part of the economic performance of manufacturing and services enterprises related to price, quality or market positioning can be linked to the "to make or to buy" decision. These developments have been greatly facilitated by widespread use of ICTs. The adoption of new technologies has enabled firms to organise themselves more horizontally, and to change the processes of delegation and decision making. The increased flexibility of internal organisation has been accompanied by greater flexibility in procurement of services from outside the firm.

In addition to the advantages related to quality and cost, outsourcing allows concentrating on the core business and furthermore, some outsourced services can provide better access to new markets. To fully benefit from the advantages related to outsourcing of especially advanced business related services, the availability of a combination of services produced both in-house and externally is increasingly important. The high expertise offered by services providers can be optimised and utilised in innovative ways if the clients possess in-house access to highly skilled people being able of actively interacting in the process of provision of the required services.

On the other hand, outsourcing confronts the enterprises with certain initial organisational and managerial costs which can influence the decision of potential externalisation of services. Also issues as loss of control, leakage of strategic know-how or the financial viability of the services provider can hamper the decision of outsourcing services activities. In addition to the cost of services, the lack of appropriate skills among the employees is a possible reason, particularly for SMEs, to contract out the more advanced business services to continuously benefit from high quality services.

The great significance of services for growth and employment arises not only from the considerable and growing size of the services sector but even more importantly from the fact that services and manufacturing industry are now indivisibly interrelated. At the same time, services are provided, incorporated and embedded to a considerable extent in the final output of manufacturing. The classical distinction between manufacturing and the services sector has long ceased to be reality. Rather, the two are intertwining.

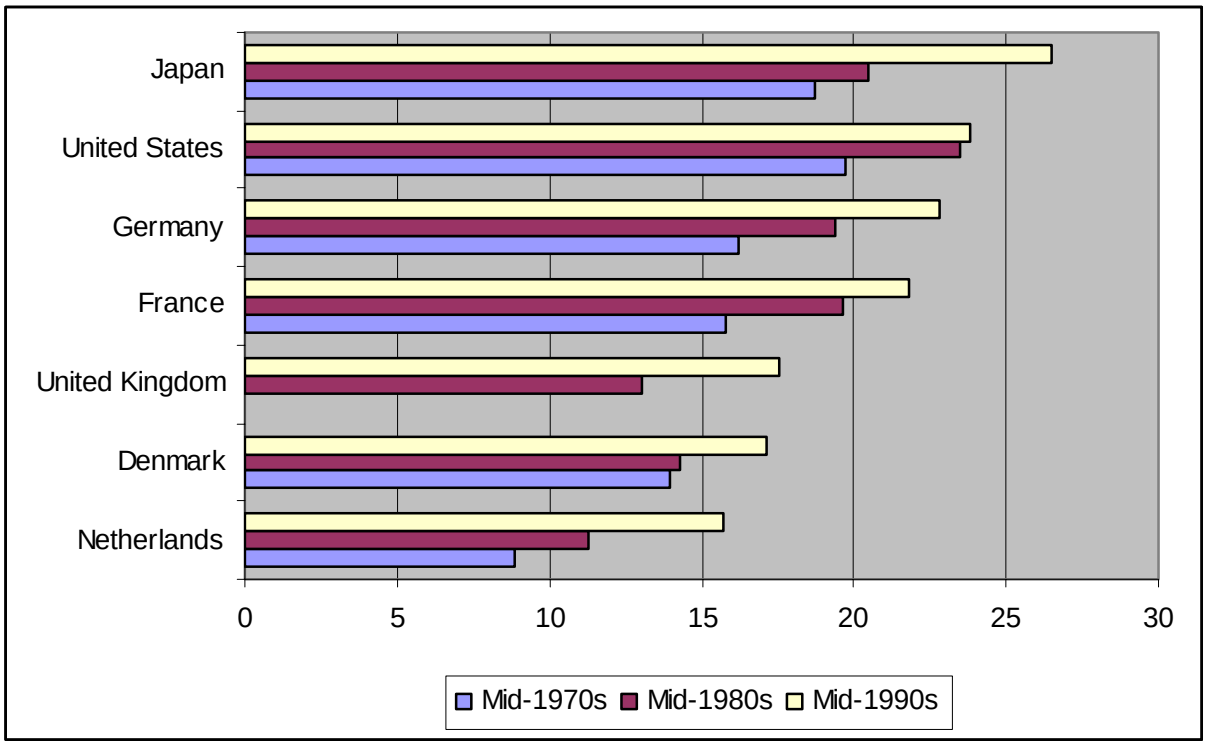
The interaction between services and manufacturing is not well documented in the official statistics. One possible source for a more generic illustration of the relationship is the input-output tables from the National Accounts, available at an aggregated level for a limited number of Member States.

The increasing demand for services by the manufacturing sector and their vital importance for the sector is reflected in figure III.1. By the mid 1990s the amount of services embodied in one unit of final demand for manufactured goods was significantly higher than in mid 1970s in the countries studied[11]. High contributions of services value added for the US were observed since mid 1970s. However, the share has stabilized around 24 per cent, recorded for both mid 1980s and 1990s, perhaps suggesting matured levels of interaction in the US. Strong growth of embodied services since mid 1980s took place in the UK and the Netherlands, which are the two Member States with the highest share of business-related services, but in

[11] OECD, Science, Technology and Industry Scoreboard 2003 – Towards a knowledge-based economy.

particular in Japan, where the share of 27 per cent in mid 1990s was the highest among the countries studied.

Figure III.1. Services sector value added embodied in manufactured goods, percentage of total value of manufactured goods in final demand.

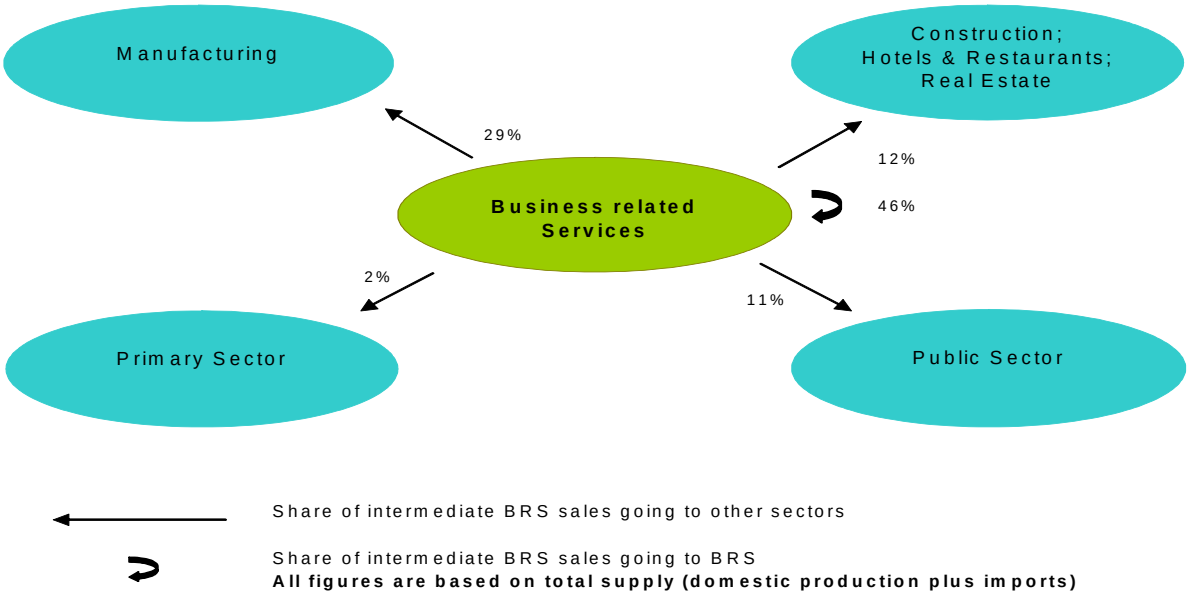


Source: OECD input-output database, 2003.

Growth of business-related services is usually explained by the migration of employment from manufacturing industry to services due to the outsourcing of the services functions previously produced in-house. The main reasons for the growth are multiple, such as changes in production systems, more flexibility, stronger competition on international markets, the increasing role of ICT and knowledge and the emergence of new types of services further rising the demand for services. Due to a lack of statistical information also in the field of demand for services by the different sectors of the economy, the interrelationship between the sectors is currently not well documented. However, according to economic analysis using input-output tables from National Accounts it is possible to indicate the magnitude of the interrelationship between the different sectors of the economy, see figure III.2[12].

[12] The estimated intermediate consumption of business-related services at aggregated EU-15 level is calculated by using available harmonised input-output tables for 9 Member States for the latest year available.

Figure III.2. The relations between business-related services and the other sectors of the economy in the EU.



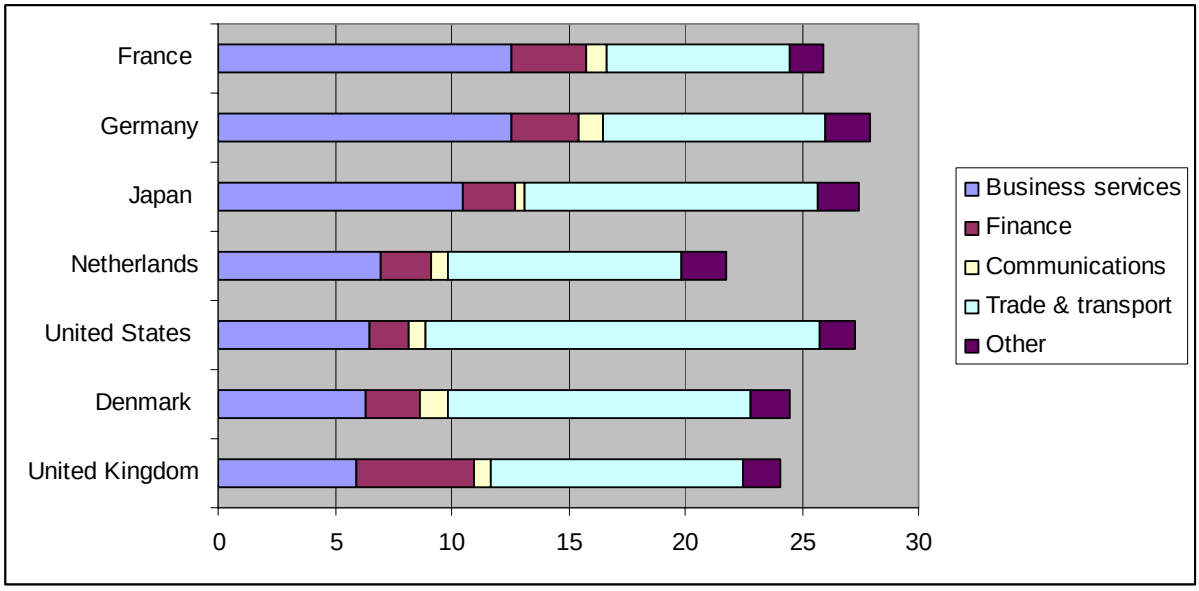
Source: Calculations based on OECD input/output database.

The figure shows that manufacturing industry is an important user of business-related services, as nearly 30 % of the intermediate output from the sector is consumed by manufacturing companies. Nevertheless, crucial for understanding the growth of business-related services in the last decades is the demand for business-related services created by the sector itself as a consequence of the penetration of these services into the value chain of all enterprises. The role of the public sector, as a market consuming around 11 % of business-related services, is also noteworthy. The public sector is an important market for business-related services, with a considerable growth potential.

If one analyses the interaction from the demand side, services contribute about a quarter of total intermediate consumption by the manufacturing sector in most large economies indicating no large differences in total demand for business-related services by manufacturing companies in the EU or the US. However the composition of business-related services consumed imply substantial differences across countries[13] since business services in the large manufacturing economies, France and Germany, add up to about half of the services consumed, while in the US and the UK business services only account for around a quarter of the consumption of services by the manufacturing sector, cf. figure III.3. It should also be noted that the dominant share of the services consumed by manufacturing in the United States are distributive trades and transport services.

[13] OECD, Science, Technology and Industry Scoreboard 2003 – Towards a knowledge-based economy.

Figure III.3. Intermediate consumption of services by the manufacturing sector.



Source: OECD input-output database, 2003.

As stated above, outsourcing has become a core part of the new interrelationship between services and manufacturing. However, many services companies increasingly outsource parts of their services and thus intensively consume services themselves, as shown in figure III.2. Nowadays some services such as call center services, ticketing, software programming, technical support etc. are increasingly outsourced from manufacturing and services companies. The types of services remaining within the companies are "headquarter activities" (e.g. coordination, management, quality control, design). These activities are so knowledge intensive that they can only be provided by face to face transactions (e.g. passing tacit knowledge that cannot be codified). At the same time, however, there is a distinct trend towards cooperation between firms in R&D activities and outsourcing of R&D functions by many SMEs not capable to carry out these tasks efficiently.

Parallel to the increased outsourcing of services by manufacturing firms, there is also a phenomenon of manufacturing firms increasingly becoming service providers, as part of their goods production is being delocalised often to countries outside the EU. Apart from the above-mentioned strategic "headquarter services", the manufacturing companies might increasingly focus on providing different types of customised after-sales services as a source of value and competitive advantage.

The process of externalisation of services functions has been an important driver of the growth of the services sector in the previous decades. The vital importance of business-related services is reflected by increasing demand for services by manufacturing industries. Services constitute about a quarter of total intermediate consumption by the manufacturing sector. However, it is crucial to recognise that the externalisation process is not the only explanatory factor. The business-related services sector itself creates an even larger demand for services than the manufacturing sector. Business-related services have become mature, developing innovative, specialised and high quality products creating demand on their own premises.

III.2. Global sourcing of services

Industrial restructuring has been part of the economic development in the EU in the last decades, especially influencing the manufacturing sector, and leading to a concern about a process of deindustrialisation in Europe.[14] A more recent trend, having caught high policy attention, is the apparent increasing global sourcing of services. The concern has mainly been based on anecdotal evidence from newspapers or ad-hoc studies, as no official statistical data covering the issue giving a global picture or presenting the evolution of the phenomena are currently available.

As the majority of services functions require a proximity to the market and clients, the services being internationally sourced in this initial round are mainly back-office functions, e.g. IT services or finance/accounting, enabled by the increased use of ICT and Internet connectivity by enterprises worldwide. A recent survey among the European top 500 companies shows that nearly 60 per cent has offshored back office functions.[15]

But also functions focusing on customer contacts are being delocalised, e.g. by the use of intelligent telephone software since the late 1990'es, especially call center functions. The above-mentioned survey shows that more than 25 per cent of the interviewed companies have conducted offshoring projects related to front office functions.

A number of companies within business-related services, especially banks, telecoms operators, travel agents and IT companies have already moved parts of their services functions outside Europe. The UNCTAD/Roland Berger study identifies financial services companies being the services companies sourcing most jobs internationally.

The main driver of global sourcing is reduction of labour costs due to the large differences in wages paid for equivalent jobs between the EU and developing countries such as India and the Philippines. 70 per cent of the interviewed European top 500 companies indicated labour costs reductions as the main objective for global sourcing. But it is important to underline that the UNCTAD/Roland Berger study also stresses the benefits of increased quality of the services offered by the company such as the capability of offering services around the clock to customers. This benefit was mentioned by more than 40 per cent.

A further motivation for international sourcing is the availability of a well educated workforce with the required skills in order to avoid possible scarcity of skills in the country of domiciliation, also in the foreseeable future. As a consequence, newspaper articles can report on increasing delocalisation of more knowledge-intensive jobs as IT engineers, researchers and analysts. This reason was mentioned by 30 per cent of the interviewed companies.

The increased presence in markets outside the EU, e.g. in South-east Asia, can also be motivated by the fact that the manufacturing clients of the services companies have already moved their production processes to the Asian countries; and consequently services companies simply have to establish themselves in these markets in order to stay competitive by continuously being able to deliver the same services to their existing clients. Nearly half of the companies mentioned the consideration of following competitor's best practise as the main motivation for choosing country destination of global sourcing.

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[14] COM (2004) 274 final

[15] UNCTAD/Roland Berger: Service offshore, June 2004

Global sourcing of services as a business model is being facilitated by the increased globalisation of services markets as a consequence of market deregulations and trade liberalisations, including the recent enlargement of the EU. Half of the companies interviewed had chosen Europe and nearly 40 per cent Asia as the target region for global sourcing. Another significant facilitator is the technological development, especially within ICT, allowing companies to codify and transfer information and knowledge globally.

As mentioned, we currently have little evidence of the evolution and extent of global sourcing in terms of official statistics. A recent study by the OECD, using existing balance of payment data, shows that India has experienced the largest, observed compound annual growth rate of 37 percentages in the value of reported exports of other business services and computer and information services in the period 1995 - 2002, followed by Romania (29%), Estonia (22%) and Ireland (20%)[16]. Some of the major services economies such as the US (11%), the UK (12%), the Netherlands (7%) show smaller but still considerable growth rates, while Germany (3%) and France (- 2%) performed relatively poorly in the period 1995 – 2002.

Another existing data source, used for estimating the potential number of job losses is the employment statistics. The OECD study shows that the number of jobs potentially affected by global sourcing accounts for nearly 20% of the total employment in the EU15. Especially business-related services activities are potentially exposed for job losses such as computer services (nearly 80% of total employment), financial services (approx. 65%) and Research and Development activities (approx. 45%) compared with much lower sensitivity for retail trade, land transport or construction (all around 10% of total employment).[17]

The impact of international sourcing of services functions is a sensitive and complex issue. The expected cost savings make the companies more competitive and also offering the companies new market opportunities and, via reengineering processes, foster organisational innovations again improving competitiveness and sustainable development implying new job creations. On the other hand, delocalisation of services inevitably causes immediate job losses in the European countries affected, challenging the capability of the European labour market to re-employ the persons having lost their jobs via new job opportunities based on increased competitiveness and growth of European enterprises and sufficient training opportunities to upgrade skills required for the new jobs being created.

A number of companies within business-related services have already moved part of their services activities outside Europe in order to stay competitive. The key driver for global sourcing is the savings in labour costs facilitated by adequate supply of qualified low-cost labour in many South-east Asian countries. Furthermore, as manufacturing clients of services providers are increasingly establishing themselves abroad, it is imperative for service companies to be able to provide their services globally.

16 The growth rates should be interpreted with caution as some countries experience a high growth from a very low starting level, cf. OECD: Potential offshoring of ICT-intensive using occupations (DSTI/ICCP/IE(2004)19 (forthcoming).

17 The share of employment identified as potentially affected by global sourcing has been classified on the basis of individual occupations. These occupations have been identified using a number of criteria such as the intensity of ICT use, ICT enabled tradability of the output of the occupations, high share of "knowledge" content and no necessity of face-to-face contact

IV. PRODUCTIVITY IN BUSINESS-RELATED SERVICES

Business-related services play a key role in fulfilling the ambitious objectives of the Lisbon strategy. The Lisbon strategy for sustainable development combines the goals of competitiveness, full employment, social cohesion and environmental sustainability. It is recalled that business-related services constitute the main segment of the European economy and that they are at the same time the major contributor to the performance of the other sectors of the economy. Consequently, business-related services should be at the forefront of the simultaneous pursuit of the objectives – enhanced competitiveness, full employment, social cohesion and environmental sustainability – which lie at the core of the Lisbon strategy.

Economic growth is a precondition for obtaining a sustainable increase in real income and standards of living. Historically, growth in productivity has been the principal source of economic growth. Productivity growth depends on the availability and quality of physical capital, improvements in the skills of the labour force, technological advances and new ways of organising these inputs.

Traditionally, services have been regarded as stagnant or slowly growing sectors of the economy compared to manufacturing industry[18]. The argumentation is based on the different characteristics of the two sectors, as labour can more easily be substituted with capital investments in manufacturing. Services are characterised by being very labour-intensive and many services cannot be delivered without personal interaction between the service provider and the client, making substitution difficult. The potential for productivity growth by increased investments in physical capital or technological progress appears to be limited.

Historically seen, services have experienced lower growth in productivity than manufacturing and - with the growing importance of services – this can certainly lead to concern about the future global performance of European productivity and the possibilities to achieve the Lisbon objectives. However, recent trends indicate that the traditional classification of the sectors into a productive manufacturing industry and an unproductive services sector can be disputed. Due to the increased use of ICT in services and the growth of the services used for intermediate demand, certain ICT-related, financial or business services have shown a strong productivity growth, especially in the second half of the 1990's[19].

IV.1. Recent trends in labour productivity

In the period 1995 – 2001, the performance of manufacturing in the EU (2.3% annual labour productivity growth) was stronger than for most services sectors – with the exception of telecommunications (8.9%) and financial services (2.8%)[20]. The similar overall pattern can be observed across all Member States, except for the UK, and the difference is for a large number of Member States more marked than the EU average, cf. figure IV.1. The better performance of manufacturing can also be observed for the United States and Japan. Apart from the factors influencing productivity growth mentioned above (such as technological development and usage of ICT), the importance of outsourcing of services from

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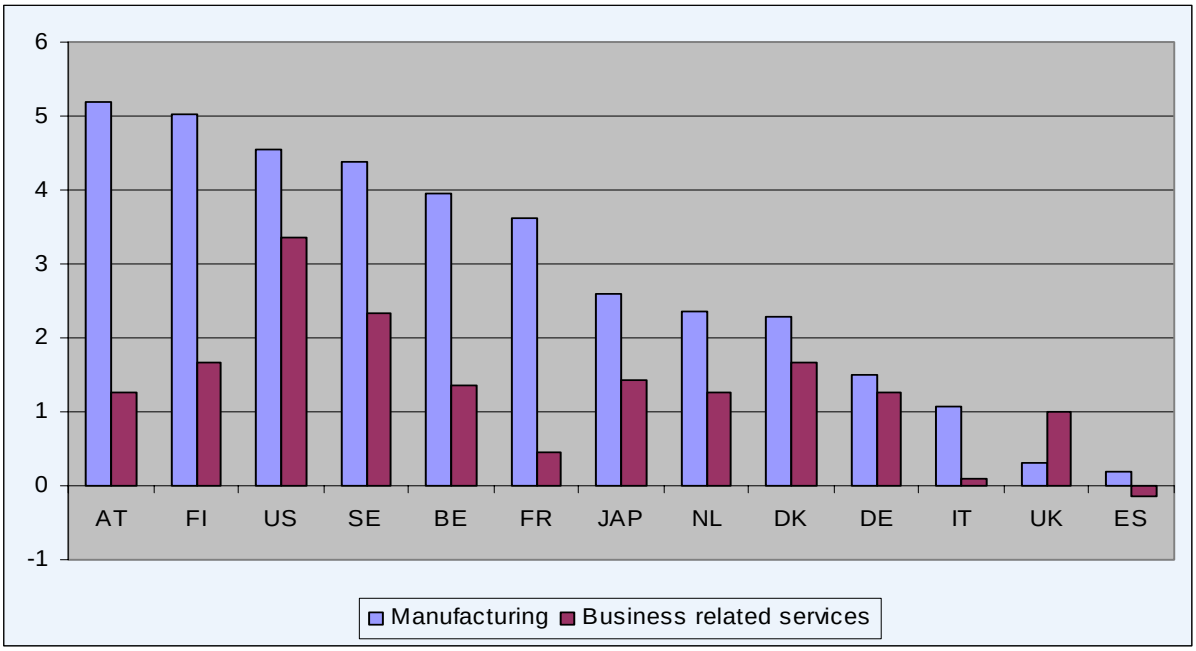
18 The so-called Baumol's disease is a classical example of this argumentation based on empirical findings from the 1960's, see European Competitiveness Report 2002 for a short description.

19 As argued below, the problems of measuring productivity in services should also be taken into consideration when comparing the performance of the different sectors of the economy.

20 O'Mahony, van Ark (ed.): EU productivity and competitiveness: An industry perspective. European Commission 2003.

manufacturing enterprises should be emphasised, enabling manufacturing enterprises to purchase the services cheaper (than if produced in-house) and to focus more on their core business, implying productivity gains for the sector.

Figure IV.1. Labour productivity growth by sector, 1995-2000/01.



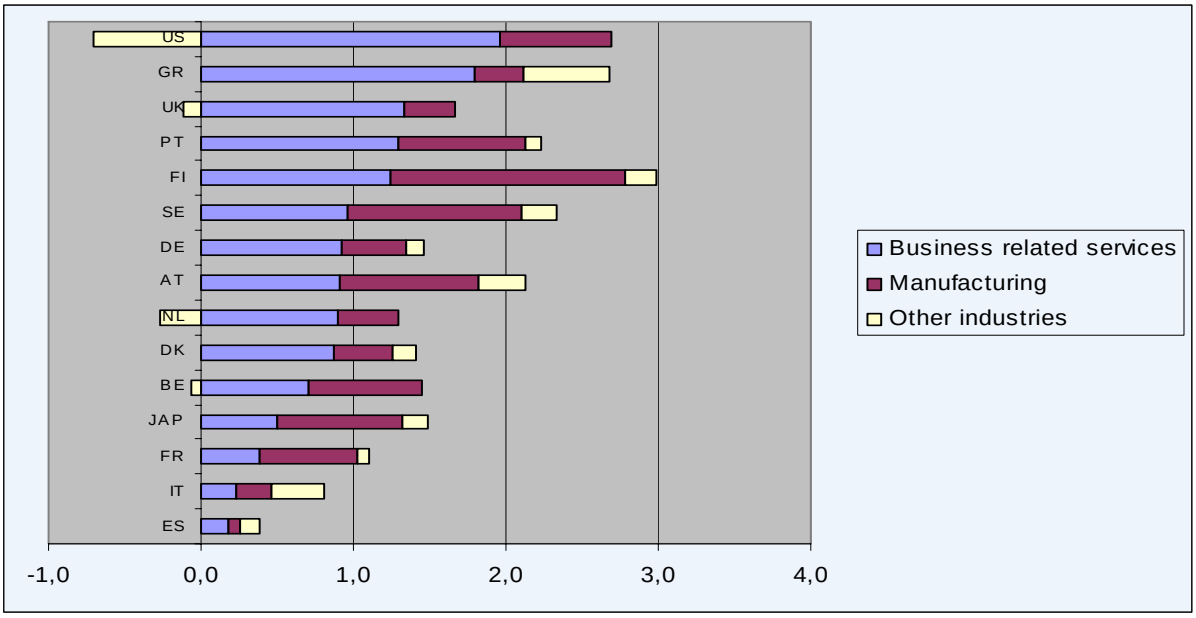
Source: OECD STAN database.

With the growing overall importance of services, their poorer productivity performance needs to be addressed. In most EU Member States, the business-related services have been the main contributor to labour productivity growth during 1995-2001. Only in a few Member States such as Finland, Sweden, Belgium and France manufacturing still accounts for the largest part of total productivity growth, cf. figure IV.2. As a general pattern the countries having experienced high overall labour productivity growth rates show parallel strong performance in services. It is noteworthy that the contribution of business-related services to labour productivity growth experienced in the US has been three times that of manufacturing and higher than the services sectors in any Member State.

In the 1980's and the first half of the 1990's, the EU showed annual growth rates (2.2% respectively 2.3%) considerably higher than the US (1.4% respectively 1.1%), but the pattern changed dramatically in the following period 1995-2001. The annual growth rate declined to 1.7 %, while the growth in the US expanded to 2.3 %. The development was mainly caused by an impressive growth in many of the business-related services in the US compared to the EU. Especially distributive trades (5.1%) and financial services (5.2%) in the US showed high annual growth rates compared to their European counterparts (1% respectively 2.8%), mainly due to the increased use of ICT and new working methods[21]. Also the manufacturing industry in the US performed much better than the European manufacturing industry. The main exception from this pattern was telecommunications which showed clearly higher growth rates in the EU (8.9%) compared to the US (6.9%).

[21] O'Mahony, van Ark (ed.): EU productivity and competitiveness: An industry perspective. European Commission 2003 and European Commission: Competitiveness Report 2002.

Figure IV.2. Contribution to labour productivity growth by industry, average annual growth rate over 1995-2001.

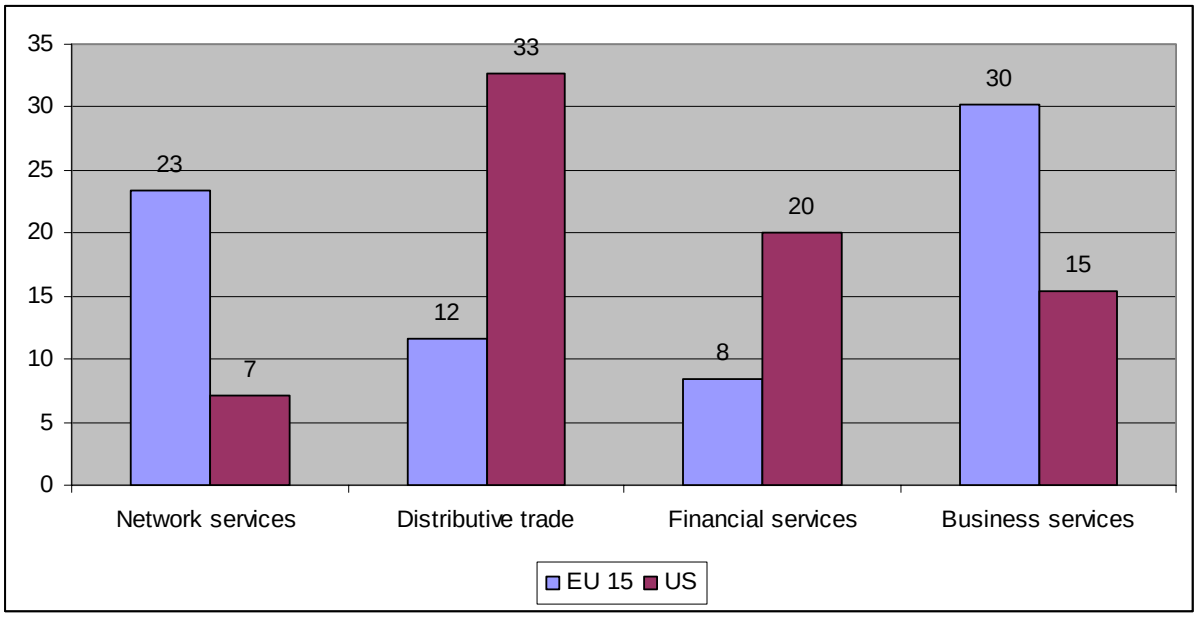


Source: OECD, STAN database 2003.

In both the EU and the United States the importance of business-related services to total labour productivity growth cannot be underestimated since they account for about three quarters of total labour productivity gains in these economies. The underlying trends are important when analysing the reasons for the different performance of European and US business-related services, since sector specific patterns can be observed. More than half of the annual average labour productivity gains for the period 1995-2001 in the EU can be attributed to two sectors, namely network services, especially telecommunications caused by the increasing competition due to market liberalisation, and business services, cf. figure IV.3. In the US, these sectors performed relatively poorly contributing slightly more than 20 per cent to the total US labour productivity growth.

The sectors causing concern for the EU in terms of productivity developments are distributive trades and to a lesser extent financial services. These two sectors account for more than half of the total labour productivity growth in US economy. Particularly the performance of distributive trades in the US is outstanding and the sector alone accounts for 33 per cent of the increase in US labour productivity experienced during 1995-2001. At the same time the EU distributive trades sector contributed only 12 per cent to the growth in labour productivity. The underlying sectoral contributions to total labour productivity in the business-related services are remarkably different in the EU and the US.

Figure IV.3. Contribution of business-related services to average annual labour productivity growth 1995-2001, as a share of total growth.



Source: Calculations based on O'Mahony and van Ark (ed.) 2003 industry database[22].

The recent development in overall productivity growth in the EU causes concern and threatens the possibility of achieving the goals of the Lisbon strategy. Especially the productivity performance of distributive trades and financial services is lagging considerably behind the equivalent sectors in the US.

The analysis shows that business-related services have been the major contributor to labour productivity growth in several EU countries during 1995-2001, but also that the services sectors – except for telecommunications and financial services – are performing poorer than manufacturing in Europe. However, in the United States the importance of business related services is even more pronounced equalling three times the labour productivity gains of manufacturing sector and being higher than in any EU country.

The Commission communication on business-related services pointed out that in order to ensure a sustainable development in the EU there is an urgent need to focus on the competitiveness of European business-related services. Framework conditions must be established furthering productivity enhancing factors such as increasing use of new technologies, strengthening the competitive pressures by market liberalisation, encouraging innovation in services and upgrading the human skills of the European labour force.

22 The industrial database uses OECD STAN database as an important input. In addition special data series and advice have been received from various national statistical offices. Although there are shortcomings when compiling a longitudinal internationally comparable datasets on productivity, the dataset is the only one available providing data on adequate sectoral and country detail for estimating productivity developments in business-related services and its subsectors. For further methodological detail, see O'Mahony and van Ark (ed.): EU Productivity and competitiveness: An industry perspective. European Commission 2003.

IV.2. Productivity measurement problems in services

The reported figures on the continuing labour productivity gap with the US give cause for concern, but before analysing and explaining the reasons for the slow growth of productivity, the problems related to measurement of services productivity should be emphasised. The concepts of labour productivity work well for manufacturing enterprises, but are subject to considerable uncertainty when it comes to measuring productivity in the services sectors.

Productivity improvement in business-related services depends heavily on investment in intangibles, such as training, customer relationship management and creation of an efficient organisation, as well as investment in software and information and communication technologies. There is an urgent need for defining "intangible investment", both in statistical terms and in company reports, to enable intangible assets to be identified, measured and reported, establishing the foundation for in-depth analysis of productivity performance in business-related services.

An illustration of the deficiencies in existing services statistics and thus in the measurement of economy-wide productivity are shown in annex box IV.1.

In general, the statistical coverage of the services sector is lagging behind the coverage of manufacturing, but the statistical gaps are particularly serious in relation to measurement of productivity. Improvements in productivity measurement can only be achieved through development of the conceptual framework for measurement issues highlighting the specific features of services.

Lack of reliable information about the intangible assets of a company results in uncertainty and speculation on its real value. Measurement and reporting of intangible assets have become a major concern for governments, enterprises, investors and other stakeholders. Services enterprises are particularly exposed to this problem since their production is almost entirely based on intangible assets.

IV.3. Productivity enhancing factors for business-related services

To better understand the performance of different subsectors of business-related services, several factors need to be investigated in more details. These include sectoral differences in types and levels of investment, adoption of ICT, organisational changes and new methods of working, the qualifications of human capital, market liberalisation, R&D and innovation. In the following chapters, three productivity enhancing factors will be further examined, namely use of ICT, innovation and R&D, human capital and skills. All of these factors are mutually dependent implying that a balanced mixture of them should be available in order to end up with optimal conditions for strengthening business performance.

Evidence from recent studies on productivity growth and *use of ICT* suggests that ICT is enabling rapid productivity growth in sectors having invested heavily in ICT[23]. The use of ICT can help companies increase their overall efficiency in combining labour and capital, the so-called multi-factor productivity. This is assumed to be the main explanatory factor behind the recent productivity growth achieved by distributive trades in the US.

[23] European Competitiveness Report 2002 (SEC (2002) 528), O'Mahony and van Ark (ed.): EU Productivity and competitiveness: An industry perspective (2003). OECD (2004): The Economic Impact of ICT.

ICT is also an important enabler of managing and distributing knowledge within the companies themselves and within the networks set-up for research purposes and thus also facilitating innovation processes. The possibility of codifying, storing and distributing knowledge globally by the use of ICT is an important factor in understanding the increasing importance of innovation in services. The increased use of ICT and introduction of new application software also further organisational changes within companies which is an important part of the non-technological services innovations.

Research and Development and innovation are recognised as key drivers for enhancing competitiveness and productivity. Innovation often takes place in a form of introducing new products and processes, organisational changes or new patterns of delivery of services and dealing with clients. The diffusion of new innovative features across all economic sectors remains a key policy issue. Increasing competition and market liberalisation tend to speed up the diffusion process of productivity enhancing innovations. In terms of productivity gains, the time span needed for adoption of productivity enhancing innovations is of critical nature. In order to be truly innovative, businesses need a sufficient level of potential embodied in the firm – generally adequate ICT-tools combined with knowledge and skills.

Human capital is a key input to services innovations and therefore of fundamental and strategic importance for the performance of services enterprises. A skilled labour force contributes to productivity growth by enabling the companies to utilise and take advantage of their investments in ICT and other innovative features. The labour-intensive nature of many business-related services, the high degree of interaction with customers, the knowledge intensity of many services and the importance of tacit knowledge are all factors implying the importance of sufficient supply of skilled human capital for future productivity gains.

V. PRODUCTIVITY ENHANCING FACTOR: USE OF ICT

The most important factor influencing the performance of the economy in the 1990's is the dramatic expansion in the use of information and communications technology (ICT), illustrating the pervasive character of this technology and its diffusion into all parts of modern economy and society. However, existing statistics and analysis can only partly verify the possible implications of the use of ICT on aggregate productivity growth and individual performance of enterprises[24].

The use of computers may affect productivity and growth in enterprises in several ways. Computers may be used directly as inputs to the production process, as a specific form of capital good contributing to overall capital deepening. Numerous production processes have been computerised raising labour productivity. But computers may also be used to organise or streamline the underlying business processes. When computers are linked into networks, they facilitate standard business processes such as order taking, inventory control, accounting services, tracking product delivery and become electronic business processes. This can additionally increase the efficiency of enterprises, contributing to a more rapid multifactor productivity growth.

In order to optimise the use of ICT, enterprises often have to carry out complementary investments, e.g. in appropriate skills of their employees or non-technological innovations

[24] For an overview of the economic impact of ICT on economic performance, see OECD: The Economic Impact of ICT. Measurement, Evidence and Implications, 2004.

such as organisational changes or new strategies. Depending on the competitiveness of the markets, the enterprises might not be able to fully benefit from their ICT related investments They will have to share the productivity gains with their clients by offering lower prices, better quality or improved convenience.

The services sector is the most intensive user of ICT and consequently, the economic impact on the performance of the services sectors can be expected to be of a larger magnitude than for the remaining sectors, although the specific problems of measuring output from services sectors distort the influence of ICT usage in services enterprises[25].

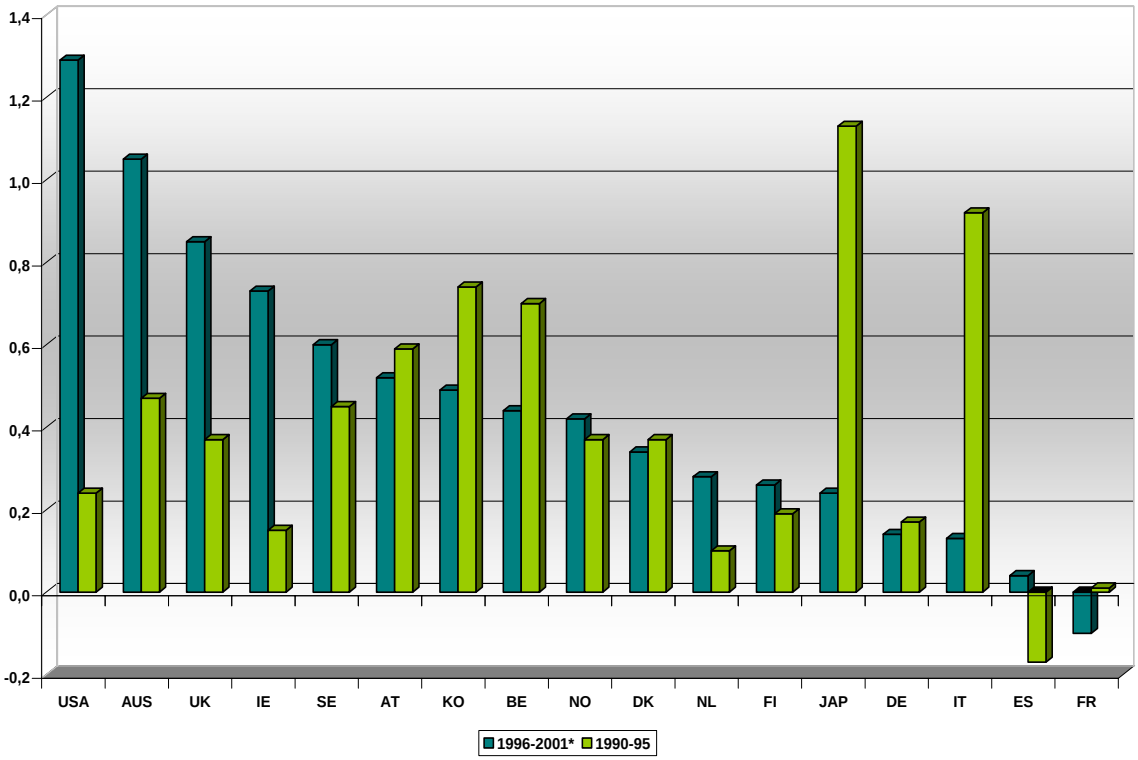
V.1. ICT use and labour productivity

As mentioned above, the productivity gains of ICT usage are not only achieved through automatisation of production processes, but certainly also through efficiency gains from new and innovative ways of organising the work, managing the knowledge or creation of networks enabled by the use of ICT. Evidence from recent studies on productivity growth and use of ICT suggests that ICT is contributing to rapid productivity growth in sectors having invested heavily in ICT in the US, especially in the ICT using services sectors such as distributive trades and financial services. US statistics on fixed assets show that more than 30% of the total stock of equipment and software (excl. communications equipment) in wholesale and business services consists of IT and software, compared to the average of 11% for all sectors of the economy. Also financial services with nearly 20% are well above the average.

Unfortunately, no harmonised sectoral data are available, but overall IT expenditures in the EU amounted to 3.0 % of GDP in 2003 compared to 3.6% in the US and 2.7% in Japan. Only 3 existing Member States, Sweden (4.4%), the United Kingdom (4.0%) and the Netherlands (3.7%), and one new Member State (the Czech Republic (3.8%)) exceeded the US, while especially the Southern European Member States like Greece (1.2%), Spain (1.6%) and Italy (1.9%) are clearly lagging behind.

[25] See annex box IV.1.

Figure V.1. Contribution of ICT-using services to annual average labour productivity growth, percentage points.



Note: ICT –using services include distributive trade, financial services and business services

Source: OECD.

Assuming that ICT diffusion in Europe is following similar patterns to those observed in the United States, but at a lower level, the most important ICT-using services (distributive trades, business and financial services) in the EU and their contribution to aggregate labour productivity growth can be identified, see figure V.1. Some EU Member States like the United Kingdom, Ireland and Sweden have experienced a considerable growth in the contribution of ICT-using services, while in a number of Member States the ICT-using services have experienced a negative contribution. In general, the performance of European ICT-using industries is very poor compared to non-European countries, such as the US and Australia which are especially dominated by the strong productivity growth within distributive trades and financial services[26].

There are considerable differences to be found across the ICT-clusters used in table V.1 examining cross-industry differences in labor productivity performance and their association with ICT. The analysis suggests that the use of ICT can help companies increase their overall efficiency in combining labour and capital, the so-called multi-factor productivity. This is

[26] Similar conclusions are obtained by recent academic studies, cf. Mary O'Mahony and Bart van Ark (ed.): EU productivity and competitiveness: An industry perspective, European Commission Enterprise publications 2003. Bart van Ark and Robert Inklaar (2002) 'Productivity, ICT and Service Industries: Europe and the United States'. Papers for ZEW Conference on Economics of Information and Communication Technologies. Mannheim.

assumed to be the main explanatory factor behind the recent productivity growth achieved by distributive trades and financial services in the US.

ICT-producing services sectors (telecommunications and computer services) have experienced high growth rates in the EU, outperforming the US particularly in the period of 1995-2001, cf. table V.1[27]. This is the only ICT grouping for which the EU shows acceleration in productivity growth from the mid 1990s, whereas the US shows a deceleration. This is mainly due to the substantial productivity growth in telecommunications due to liberalisation of markets and new technologies. However, this group represents only a small share of total economy value added, about 5% in both the US and the EU in 2001.

Table V.1. Annual labour productivity growth of ICT-producing, ICT-using and non-ICT industries in the EU and the US.

	Productivity growth					
	1979-1990		1990-1995		1995-2001	
	EU	US	EU	US	EU	US
Total Economy	2.2	1.3	2.3	1.1	1.7	2.2
ICT Producing Industries	7.2	8.7	5.9	8.1	7.5	10.0
ICT Producing Manufacturing	12.5	16.6	8.4	16.1	11.9	23.7
ICT Producing Services	4.4	2.4	4.8	2.4	5.9	1.8
ICT Using Industries	2.2	1.2	2.0	1.2	1.9	4.7
ICT Using Manufacturing	2.4	0.5	2.4	-0.6	1.8	0.4
ICT Using Services	2.1	1.4	1.8	1.6	1.8	5.3
Non-ICT Industries	1.8	0.5	2.1	0.3	1.0	-0.2
Non-ICT Manufacturing	3.0	2.1	3.6	2.7	1.6	0.3
Non-ICT Services	0.6	-0.2	1.2	-0.5	0.5	-0.3
Non-ICT Other	3.4	2.0	3.2	1.2	2.1	0.7

Note: For industries 30-33 (NACE) the US deflators have been used for all countries. For methodological details on calculations see Source: Mary O'Mahony and Bart van Ark (ed.): EU productivity and competitiveness: An industry perspective.

[27] Source : Mary O'Mahony and Bart van Ark (ed.) 2003: EU productivity and competitiveness: An industry perspective.

Productivity gains of ICT usage in the services sector are often realised through new and innovative ways of organising work, managing knowledge or creation of networks enabled by the use of ICT. The ICT using services contribution to labour productivity growth in the EU has been moderate compared to the US, recording particularly strong productivity growth in distributive trades and financial services. However, the EU has performed better in ICT-producing services such as telecommunication and computer services.

V.2. ICT use and e-commerce in business-related services[28]

The rapid break through of communication networks experienced in the late 1990s have changed the ways in which business is performed. The development of information and communication technologies have facilitated rapid transfer of information and knowledge sharing on a global level, based on ever faster but also less costly networking. The penetration of network technologies enhances the potential for productivity gains across the economy.

Broadband connections are getting popular, facilitating the information to be transferred more rapidly and in larger quantities. Broadband connections are extensively used in the Nordic countries, Spain, Belgium and Austria[29]. Business services tend to be the frontrunner in adopting broadband connections in all the countries where data are available. In the Nordic countries around 85 % of the Internet connections in business services were broadband connections.

Internet use in businesses is widely spread over industries as an information and communication tool, but also increasingly used as a channel to carry out business. The European average in Internet use by businesses is 86 % for all sectors and 89 % for business related services. Manufacturing companies typically use Internet and are connected via broadband less frequently than business-related services companies. In the Nordic countries the use of Internet has been fairly advanced and in Denmark, Finland and Sweden the share of enterprises using Internet is close to 100 per cent in several business-related services activities.

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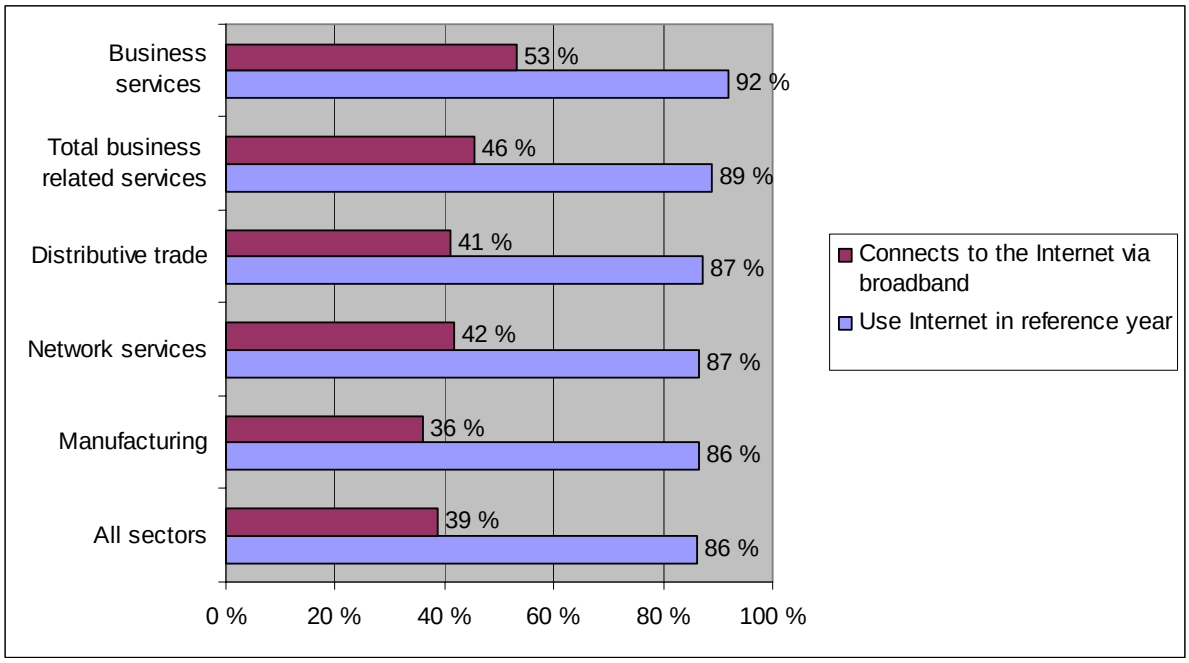
28 The data presented in this paper is mainly based on EUROSTAT Community Survey on ICT Usage in Enterprises 2003. It should be noted that the data do not cover micro enterprises with less than 10 persons employed. The country coverage depends on variables in question, but France and Greece are completely missing. The concept of business-related services covers here the NACE sectors of Distributive trade, Transport and communication, Renting and business services, but excludes Electricity, gas and water supply, and Finance and insurance.

29 EUROSTAT, Community Survey on ICT usage in enterprises 2003.

Figure V.2. Share of enterprises in business-related services using Internet and having broadband connection by sector 2003 in EU.



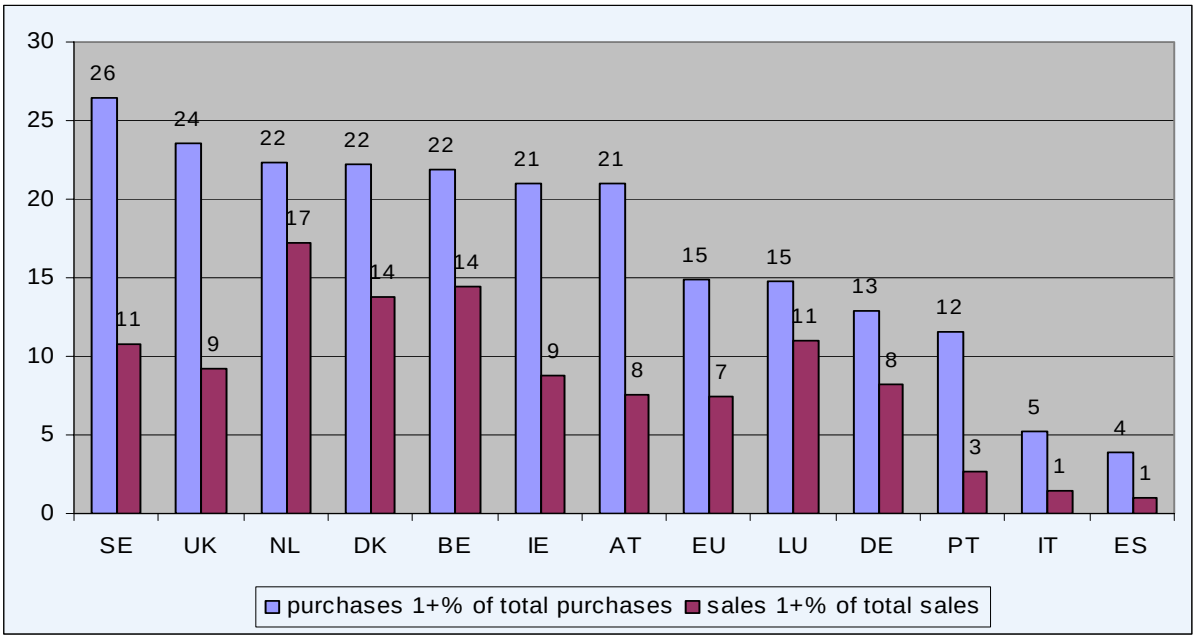
Source: EUROSTAT, community survey on ICT usage in enterprises 2003.

Even though Internet provides the basic platform for networking there are also other types of networks – such as Intranet and Extranet - employed for information and communication purposes. However, these networks appear to be in use to a much lesser extent than the Internet. Almost 30 % of all businesses reported to be connected with Intranet and 12 % with Extranet. The business services firms were the most frequently connected with these networks as on average 37 % had Intranet and 17 % Extranet connections. In business-related services the Nordic countries together with Austria, Belgium and Luxembourg used Intranet most often whereas in Extranet use the Netherlands show levels ahead of other countries (see annex V.1).

Online sales are most appropriate if products can be standardised and / or digitised to be traded or delivered online[30]. As the degree of standardisation of inputs and outputs is rather limited in many business-related services (e.g. operational services), on-line sales cannot be expected to become a frequently used sales channel for all business-related services. According to the study the most important impacts of selling on-line in business services are the increase in sales volume and an enlargement of the sales area.

[30] According to E-business watch sector report, July 2004 No 9 –I: Business services.

Figure V.3. Share of enterprises in business-related services having internet purchases and sales in 2003.



Source: EUROSTAT, community survey on ICT usage in enterprises 2003.

Whereas the data revealed significant differences in the use of Internet by businesses, the gaps in Internet purchases were even more pronounced. On EU level, around 15 % of the enterprises in business-related services reported 1 % or more of total purchases via the Internet. The share was the highest in Sweden (26%) and UK (24%), but in the majority of countries it exceeded 20 %. In southern European countries only about 5 % of the firms have carried out purchases valued 1 % or more on the Internet. Business-related services, with the exception of transport sector, tend to be purchasing more frequently via the Internet than all businesses on average. The sector with most frequent Internet purchases was business services (21%).

It has to be kept in mind that purchasing on-line can be interpreted in a rather broad sense and means different things for large and small companies as well as for different sectors[31]. Complex e-procurement systems, for example fit better for companies with large volume of direct inputs for providing continuous services (e.g. industrial cleaning) and for companies with complex supplier networks (e.g. architectural services). According to the e-business watch study the most important effects of online purchasing on business services firms are a reduction in procurement costs and an improved efficiency of processes.

The Internet sales are taking place less frequently than the purchases in business-related services. On average only 7 % of enterprises generated more than 1 per cent of their sales on the Internet whereas most often Internet sales were carried out in the Netherlands, Belgium and Denmark. On sectoral level the Internet sales were most frequent in distributive trades and network services (8 %), although the differences between sectors remained modest (see annex V.2).

[31] According to E-business watch sector report, July 2004 No 9 –I: Business services.

Development of ICT has facilitated rapid transfer of information and knowledge sharing on a global level. The companies within business-related services are in general advanced users of Internet as well as other networks. E-business as purchases and sales in the Internet are frequently applied within business-related services, though the differences across the Member States and sectors are substantial reflecting heterogeneous patterns in adapting and using new ICT tools.

V.3. ICT induced changes in business processes

In the late nineties, the policy interest focused on the possibilities and advantages from carrying out e-commerce. The official statistics on Internet usage and e-commerce carried out by enterprises show that e-commerce has developed very slowly, only constituting less than 2 per cent of total turnover in the business sector.

The current situation, with a large proportion of all enterprises connected to the Internet and e-commerce being of minor importance has changed the main policy challenge from e-commerce to the effective and productive integration of ICT into business processes in order to make European enterprises more competitive.

The term '*e-business*' covers both e-commerce (both buying and selling on-line) and the restructuring of business processes to make best use of digital technologies[32]. Evidence from different sources suggests that all aspects of e-business are of high importance for the performance of business-related services.

In pursuing improved performance and productivity gains, businesses do not only implement new technologies together with upgraded human skills, but they need to adjust their business processes in accordance with the new environment. Networking is perhaps the most important driver for changes in business organisations facilitated by ICT. Cooperation between firms and other bodies on a global scope through networks is an increasingly cost efficient way to maintain the competitive edge. Adopting e-business processes automates and connects existing business processes. It can also change the way companies conduct, not only these processes, but also their entire business and operations through organisational changes. The effects of organisational changes may rival the effects of changes in the production process. Viewed this way, computer networks are a productivity-enhancing technology[33].

Further examples of typical business processes that may be carried out in electronic form include customer support, marketing, advertising and public relations, recruitment of new employees, information resource sharing among employees, strategic and tactical planning, distributed inventory control functions, payroll and benefits management[34].

Many of the outsourced business processes, now being produced by business-related services, such as accounting or security services, are becoming increasingly ICT-based and require substantial ICT-support functions to be operational. In fact, the overwhelming presence of ever more sophisticated ICT solutions influences the business behaviour in several ways, given the critical importance of a competitive environment. Technological development of ICT tools and networks provides a basic infrastructure for outsourcing of various kinds of business functions globally in search for optimal performance solutions. These kind of

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32 Source : http://europa.eu.int/information_society/eeurope/2005/all_about/ebusiness/text_en.html

33 Brynjolfsson and Hitt (2000)

34 European Competitiveness report 2003.

strategic decisions frequently induce changes in business structures and processes facilitating the performance gains (see chapter III on interaction). Furthermore, to manage the advanced ICT systems, high levels of skills and competence are required to be embodied in the firms. Particularly for SMEs, these requirements are difficult to fulfil and thus outsourcing, supplying access to external, high quality knowledge and skills, is an attractive alternative.

Even without outsourcing plans, services activities - being intensive ICT users - are facing the challenge of how to organise and constantly reorganise their functions in order to optimise their efficiency in services production. However, it should be underlined that the benefits an organisation is able to gain through ICT usage are dependent on the characteristics of the organisation, i.e. costs versus benefits may vary substantially across sectors of the economy as well as across enterprise size.

There are increasing evidence that it takes a considerable time to realise the productivity gain originated from ICT and that greatest benefits from ICT investments are realised when they are combined with organisational changes or other non-technological innovations, such as new business strategies and practices and new organisational structures[35].ICT-enabled business practices can significantly increase efficiency and productivity through improved customer service, reduced cost and streamlined business processes.

Organisational changes, new business strategies and models are key elements when extracting the full potential of benefits accrued by ICT investments. Furthermore, in many business-related services co-operation through networks is an increasingly cost efficient way to maintain competitive edge on the markets.

VI. PRODUCTIVITY ENHANCING FACTOR: R&D AND INNOVATION

Research and innovation must be recognised as key drivers for enhancing competitiveness; not only the traditional, technology based innovation, but also the non-technological innovations are important factors for sustainable economic growth. Non-technological innovation (e.g. new service concepts, new clients interface or new service delivery systems) is the prevailing form of innovation in business-related services; and the increasing use of ICT in enterprises has put attention to the importance of organisational innovation and its impact on business processes and ultimately on business performance and productivity. Some of Europe's most innovative companies are to be found in the business-related services, even if the overall level of R&D and innovation in these sectors is generally lower than in manufacturing and lags substantially behind the US.

[35] European Competitiveness report 2003.

As the services sector has been generally perceived as being non-innovative due to the less importance of technological innovation, insufficient attention has been given to innovation in the services sector, in spite of this sector's potential not only for significant growth in employment and output, but also for its impact on the competitiveness of European enterprises in general[36].

Research is the most frequent source for innovation in manufacturing, but sources such as knowledge from customers, co-operating and networking enterprises or employees are also significant inputs for innovation in services. Consequently, innovation in services requires investments in different types of intangible assets - not only in R&D, but also in product development, training, customer relationship management and creation of an efficient organisation with the ability of managing knowledge using information and communication technologies.

Co-operation and networking play an ever greater role in services[37] and have become more formalised owing to the increasing use of external knowledge and cost sharing between enterprises. According to innovation surveys, services rely extensively on other firms for knowledge inputs and sharing. The increasing specialisation and co-operation between services providers and users could result in interface problems. This problem could be alleviated by appropriate use of agreed voluntary standards. Consultants, training, R&D and computer services play a crucial role in innovation networks, as they help disseminate technology and innovative concepts to other firms. These knowledge-intensive business services thus facilitate innovation in other firms and are important drivers for innovation in all sectors of the economy.

VI.1. Research and development in services

Whilst the EU economy has developed into a services economy in the last decades, market services[38] still account for a relatively small amount of total business expenditure on R&D. The total business R&D expenditures in EU15 amounted to € 109 billion or 1.27 % of GNP in 2000 (see also annex table VI.1). Services constitute on average 13% of the total business R&D in the EU15 - with large differences across Member States (more than 30% in Spain and Denmark compared to around 10% in Germany and France), cf. annex figure VI.1. The corresponding US figure is 34%, so even if the R&D expenditure of services enterprises has grown substantially since 1991, the gap in absolute terms to the US has widened in the same period.

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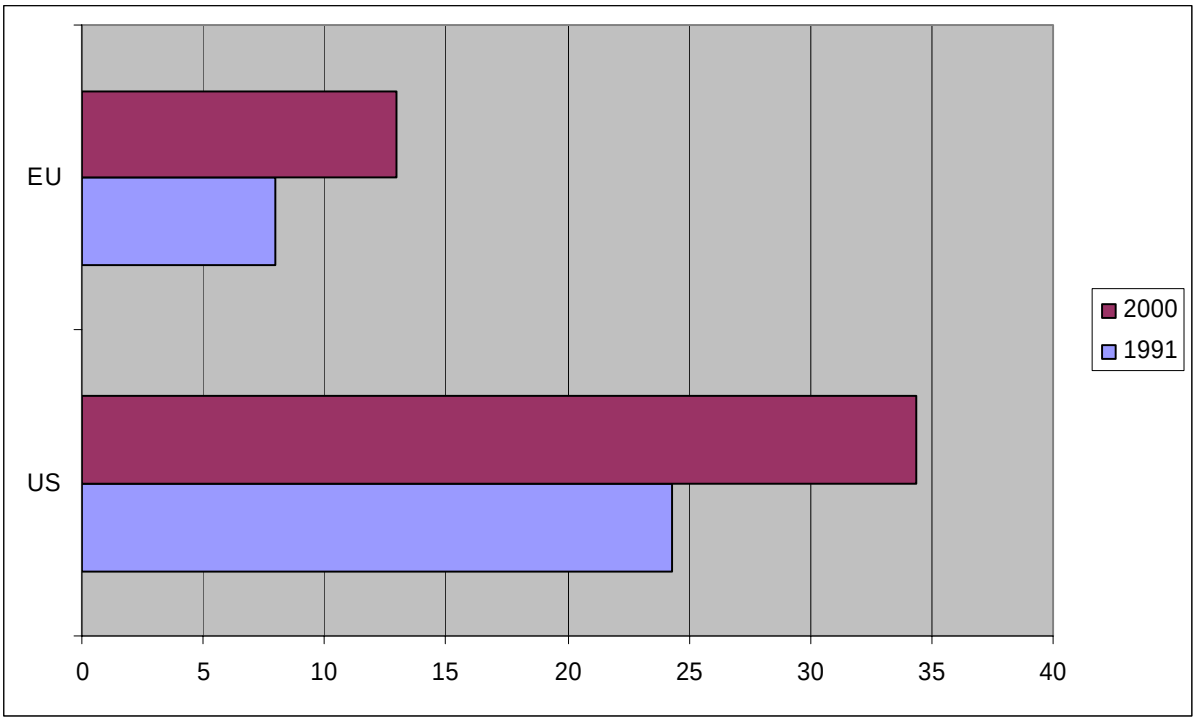
36 Innovation in a knowledge-driven economy, COM (2000) 567 final.

37 Innovation and Productivity in Services, OECD 2001.

38 It is important to note that sectoral breakdown of R&D expenditures is subject to considerable problems of methodology and international comparability. Nevertheless, the trends are judged to be of sufficient robustness. The data gaps in services R&D do not allow sectoral analysis to be carried out for business-related services.

Figure VI.1. Share of services in business R&D.



Source: OECD, ANBERD database 2003.

Traditionally, the services sector has been considered not to engage in R&D activities, apart from telecommunications and computer services, but R&D in services is constantly growing although still at a relatively low level compared to manufacturing. There are several factors contributing to the growing share of services in business R&D expenditures, such as an increasing outsourcing of R&D activities previously carried out in-house in manufacturing companies, but now frequently purchased from knowledge-intensive business services companies. Another factor is related to the measurement of R&D. Statistics on R&D in services is being improved in a number of countries, indicating that the growing share of services in R&D partly should be interpreted as the result of improvements in statistical practices and better coverage of services[39].

The available data suggests that the growth of R&D in services varies considerably from country to country, but in all countries it has been increasing faster than in manufacturing, cf. table VI.1. In the majority of EU countries, the R&D in services grew clearly faster than in the US (8.1%) or Japan (7.7%) during the 1990's, but the initial low level of R&D in services in the European countries has to be taken into consideration when judging the growth in Europe. The most rapid annual growth rates were recorded for Ireland (26%), the Netherlands

[39] The latest version of Frascati manual (2002) makes efforts in particular for improving R&D statistics in the services sector. The following difficulties in defining the boundaries of R&D in services activities are identified: firstly it is difficult to identify projects involving R&D and secondly the line between R&D and other innovative activities is a tenous one. Furthermore, in services R&D is not always organised as formally as in manufacturing companies (e.g. with dedicated R&D departments). The concept of R&D in services is still less specific and sometimes goes unrecognised by the enterprises involved.

(19%) and Finland (17%), while less favourable developments for services R&D have taken place in UK (4%), Belgium (7%) and France (8%).

Table VI.1. R&D in selected services industries and manufacturing sector, average annual growth rate 1991 – 2001.

	Total manufacturing	Total services	Communications	Computers and related activities
Belgium (1992-2001)	6,1	6,8	45,8	5,2
Denmark (1991-99)	7,0	11,0	9,6	19,9
Finland	11,3	17,0	25,6	-9,2
France (1992-2000)	0,9	8,0	..	2,0
Germany (1991-2000)	2,5	12,4	..	..
Ireland (1993-99)	6,0	26,1	23,8	33,1
Italy	-2,1	8,5	-12,8	7,1
Netherlands (1991-2000)	3,3	18,5	..	..
Spain	-0,7	10,8	15,6	17,5
Sweden	8,4	11,2	..	..
United Kingdom	1,7	3,9	5,8	1,1
United States (1991-2000)	2,3	8,1	..	8,9
Japan (1996-2000)	4,5	7,7	..	6,9

Source:OECD, ANBERD database, 2003.

The R&D statistics for telecommunications and computer services show diverse development across Member States[40]. In Ireland, where some large US-based companies have established themselves during the nineties, and in Spain, the R&D expenditures have experienced rapid growth throughout 1990's in both communication and computer services. In Belgium and Finland, the R&D in the telecommunication sector shows considerable expansion rates, while the development in computer services has been modest.

The Commission communication on business-related services pointed out that a greater direct involvement in collaborative R&D projects, together with the high tech industries, could result in more rapid development of technologies as well as a faster deployment of the new technologies. The involvement of services companies in the Research Framework Programme could also be increased by inclusion of appropriate topics in the work programme. The EU target of devoting 3 % of GDP to research and development[41] will be less difficult to achieve if the services sector plays a larger role, reflecting its overall economic weight.

VI.2. Innovations in business-related services

As stated in the introduction, innovations in services often consist of elements of non-technological nature as new service concepts, new ways and channels of communicating with intermediary and final clients and innovative services organisations are needed to be built to provide these new services[42].

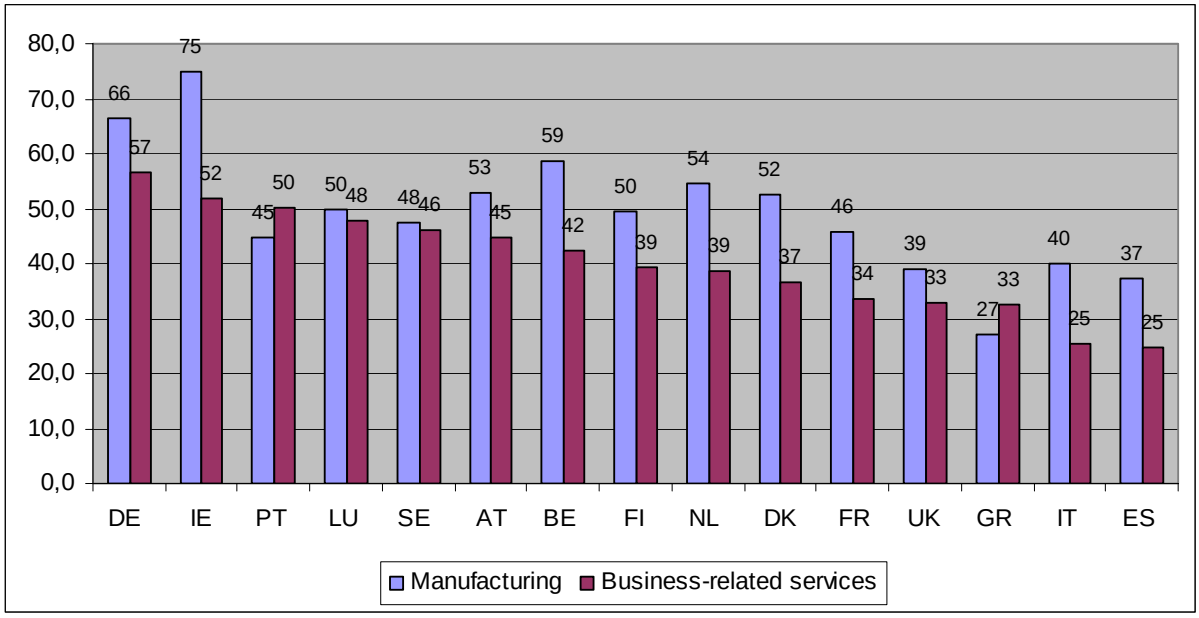
40 The conclusions here should be interpreted with caution since the data are only available in a limited number of countries.

41 Communication from the Commission. More research for Europe - Towards 3% of GDP. COM (2002) 0499 final, and investing in Research, an action plan for Europe. COM (2003) 226 final.

42 Bart van Ark, Lourens Broersma, Pim den Hertog 2003 : Services Innovation, Performance and Policy: A Review.

The enterprises in business-related services are rapidly catching up on the traditionally strong position of manufacturing in innovation in a number of Member States. In several Member States, the gap in the share of innovative enterprises between manufacturing and business-related services is insignificant, cf. figure VI.2. According to the CIS3[43] study the German and Irish enterprises are most frequently engaged in innovative activities in both manufacturing and business-related services, where more than half of the enterprises reported to have such activities. At the other end, in Spain and Italy only about a quarter of the enterprises in business-related services were engaged in innovative activity.

Figure VI.2. The share of innovative enterprises in business-related services and manufacturing in 2000.



Source: Eurostat, New Cronos, Community Innovation Survey 2000.

Innovation in the services sector is generally brought about by investment in acquisition of new skills, new organisational structures, new ways of co-operation, creation of new enterprises and relations with customers and suppliers. Therefore it is apparent that the propensity to innovate varies substantially across different activities due to the heterogeneity of the business-related services[44] (c.f. figure VI.3). Business-related services show a dual pattern in terms of innovations; network services and distributive trades are lagging far behind

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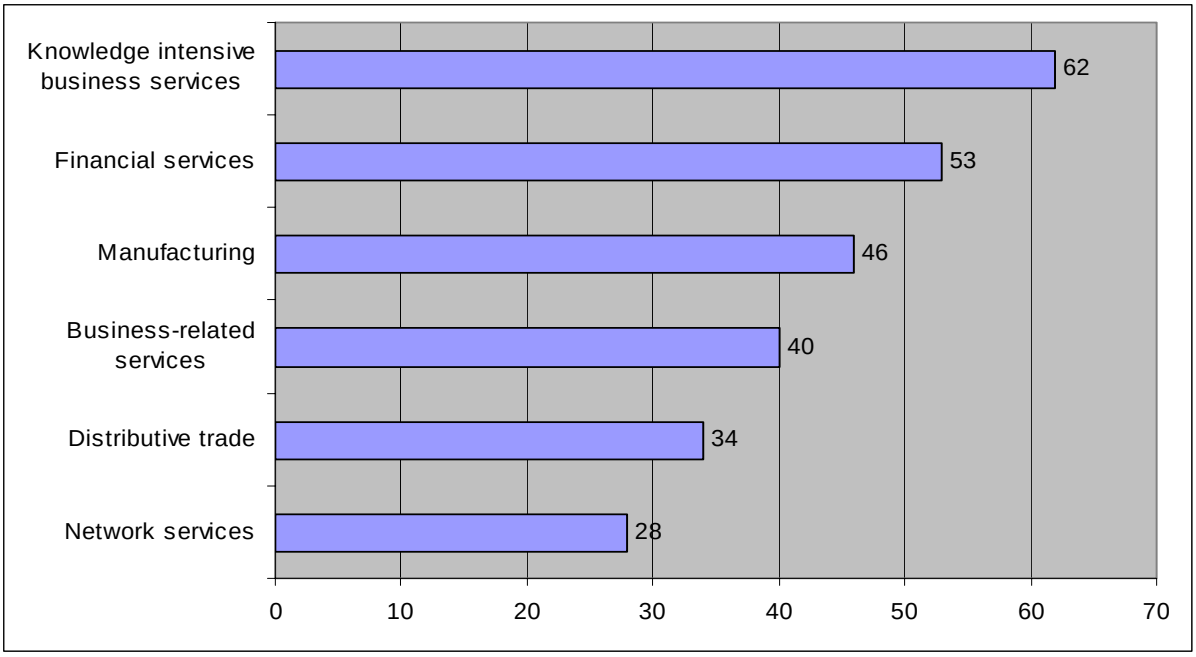
43 Community Innovation Survey 3. This chapter mainly uses CIS3 as a source. However, some methodological reservations have to be made on the results. Business-related services are only partially covered as some activities belonging to business-related services are not included in CIS3 study. In brief, the following services are covered: Wholesale trade, Transport storage and communication, Financial intermediation, Computer and related activities, Research and development, architectural and engineering activities and technical testing and analysis. In addition, there are also differences in the coverage across participating countries. The reference population covers enterprises with 10 or more persons employed.

44 It can be argued that the CIS type of survey is not able to adequately capture the non-technological part of innovations of tacit nature. A recent study found a large group of businesses involved in a significant way with more indirect, disembodied and intangible forms of innovations that have little or no involvement in the more traditional, direct forms (CIS-type) of innovation, c.f. Howells, Tether, Innovation in Services: Issues at Stake and Trends 2004, European Commission (forthcoming).

financial services and business services. Not surprisingly, as the companies within financial services and business services are often engaged in various knowledge intensive operations fostering innovative activities to an extent which exceeds the level of manufacturing enterprises.

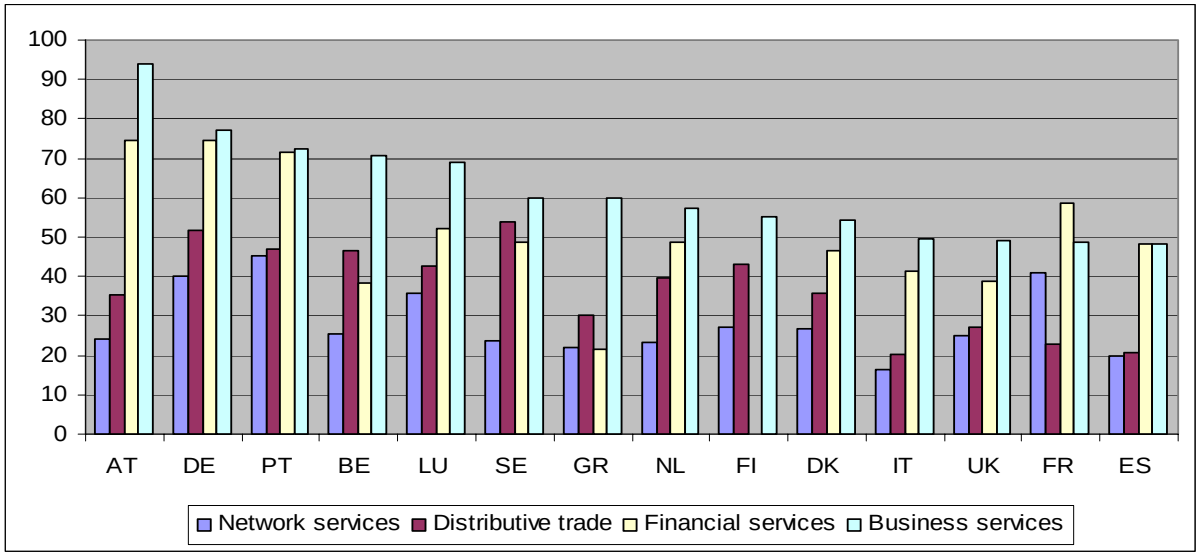
Figure VI.3. The share of innovative enterprises in business-related services by activity in 2000.



Source: Eurostat, New Cronos, Community Innovation Survey 2000.

Figure VI.4 below confirms the pattern that innovation in business-related services is most frequently carried out by firms operating in business services. In Austria even more than 90 per cent of business services enterprises were innovative, followed by Germany (77 %) and Portugal (72 %). The exception appears to be France where the financial sector recorded the highest propensity to innovate in business-related services. The share of firms with innovative enterprises in the distributive trades sector ranged from 54 % in Sweden down to 20 % in Italy, showing a particularly heterogeneous behaviour across the EU, although a relatively higher share of innovative enterprises was generally found in the Northern part of the EU.

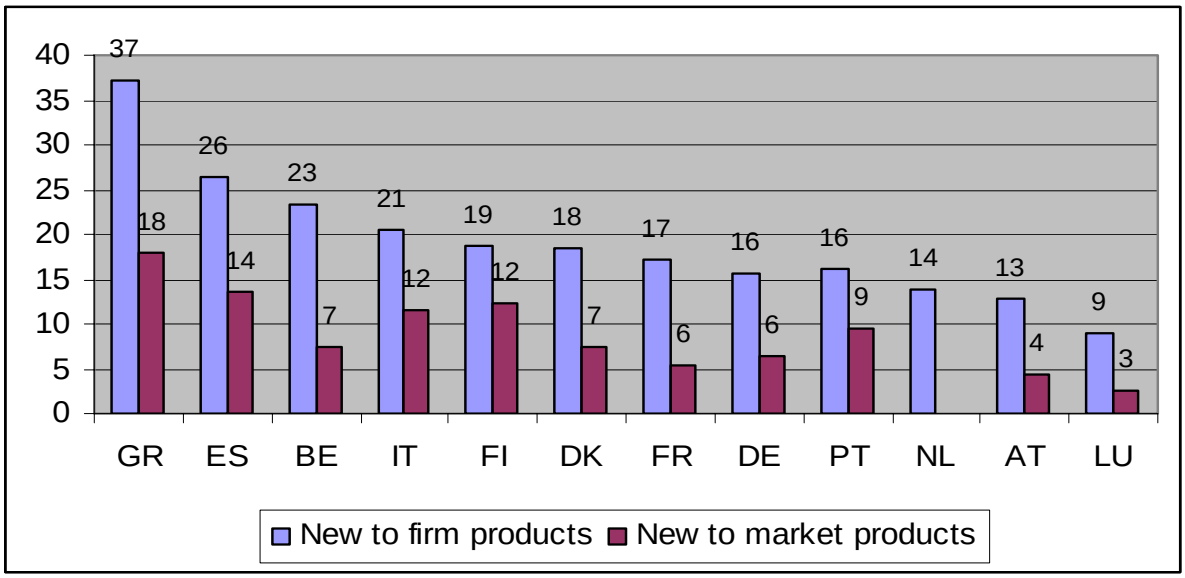
Figure VI.4. The share of innovative enterprises in Business-related services in 2000.



Source: Eurostat, New Cronos, Community Innovation Survey 2000.

A substantial amount of the turnover of the services companies in the EU is associated with 'new to firm' products - on average almost 20 per cent of the turnover of innovating enterprises, cf. figure VI.5. However, turnover from products 'new to the market' was of much less importance – usually below 10 per cent of turnover in services companies were associated with these products implying considerably lower barriers to 'adapt' and innovate in products new to the firm than to the markets.

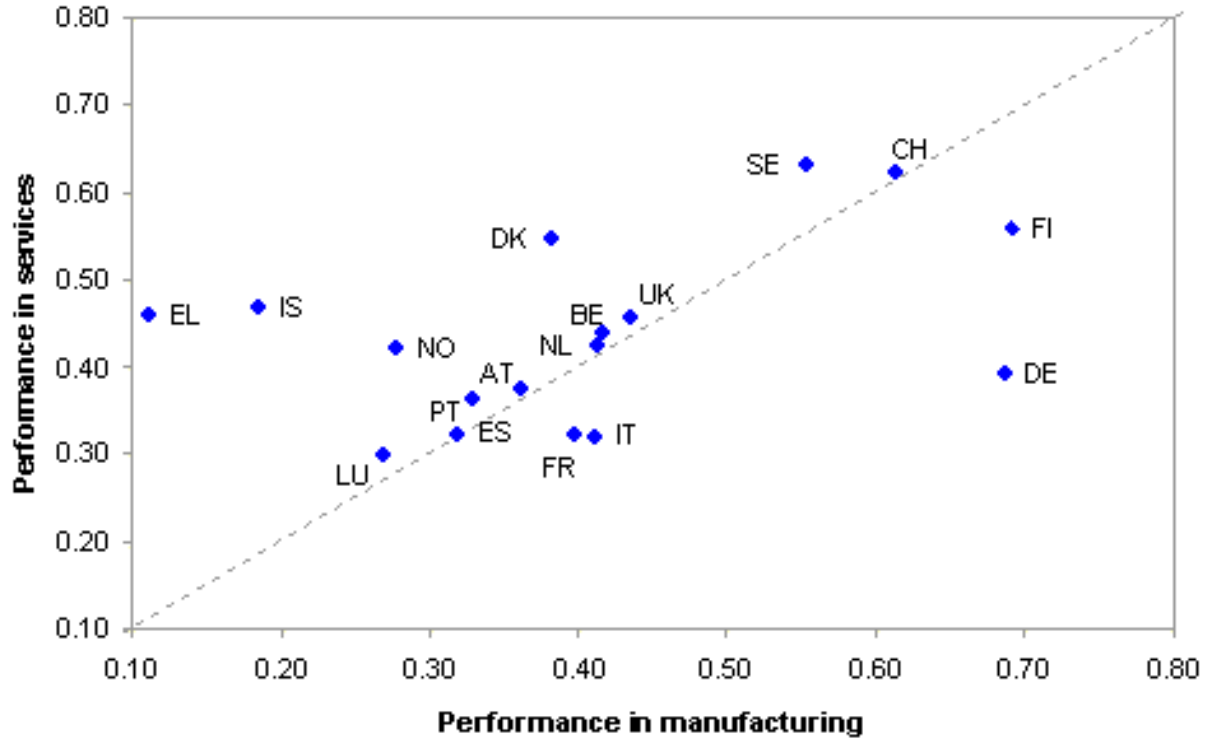
Figure VI.5. Turnover from innovative products in services as a share of turnover of innovative firms.



Source: Eurostat, New Cronos, Community Innovation Survey 2000.

The latest Community Innovation Survey (CIS3) made new data available on innovation in the service sector[45]. This opened the way to extending research into comparing innovativeness in the services and the manufacturing sectors. Figure VI.6 demonstrates differences between innovativeness in manufacturing and in services for fourteen EU countries and the three associated countries. The vertical axis gives a composite index[46] for services and the horizontal axis gives the composite index for manufacturing. Countries above the dotted line perform relatively better in services, those below perform relatively better in manufacturing. It should be noted that there is a positive correlation between performance in manufacturing and services. This is probably due to spill-overs in knowledge between the two sectors and reflects the intertwining between the manufacturing and the business-related services sectors. However, some Member States having a relatively large services sector show a better performance in services innovation (Denmark and Sweden) while others, such as Germany, Finland and Italy, all characterised by large manufacturing sectors, perform better in manufacturing.

Figure VI.6. Innovation in services and manufacturing.



Source: European Innovation Scoreboard 2003.

Existing innovation policies need to be made more services friendly by also focusing on non-technological innovation in particular through a deepening of existing innovation policies.

45 European innovation scoreboard 2003.

46 The composite index includes indicators as R&D expenditures, SMEs innovating in-house, SMEs involved in innovation co-operation, innovation expenditures, sales of new to market products, sales of new to the firm but not new to the market products, volatility rates of SMEs.

VI.3. Enterprise interaction as services innovation facilitator

Enterprise interactions constitute an important source for innovation in services. According to a recent study[47], non technological innovations are mostly a joint effort carried out by the services companies and their clients or suppliers in both vertical and horizontal networking, including public and private research institutes. These interactions can be of both formal and informal character. Especially the knowledge intensive business services plays a major role in developing, transferring and enabling innovation for their client companies and thus manufacturing and services innovating companies are increasingly interdependent. New products and services tend to combine an increasing number of technological elements. To remain competitive, many firms focus on core competencies and complement their own knowledge and expertise by gaining access to externally produced knowledge and expertise, via outsourcing or cooperation, often with knowledge intensive business services[48]. On the other hand, an observable trend in manufacturing is to expand their activities to offering product-related services to improve their market position or open up new markets, for instance within mechanical engineering[49].

Furthermore, in many sectors the costs of developing innovative products and services and introducing these new outputs to the market have increased considerably. Recent changes in the internal organisation of firms and their information and communication systems have reduced the cost of accessing external sources of information and interacting with external partners. The set-up of more interactive and flexible organisational structures has enabled firms to develop the organisational and management skills needed for cooperation.

Cooperation in innovation activities frequently takes place in business-related services where 19 per cent of innovative enterprises reported to be engaged in cooperative arrangements, whereas in manufacturing these practices were somewhat less frequent (17%), see figure VI.7. In particular, intensive cooperation has been established by business services enterprises where 27 per cent of innovating enterprises have established cooperation arrangements.

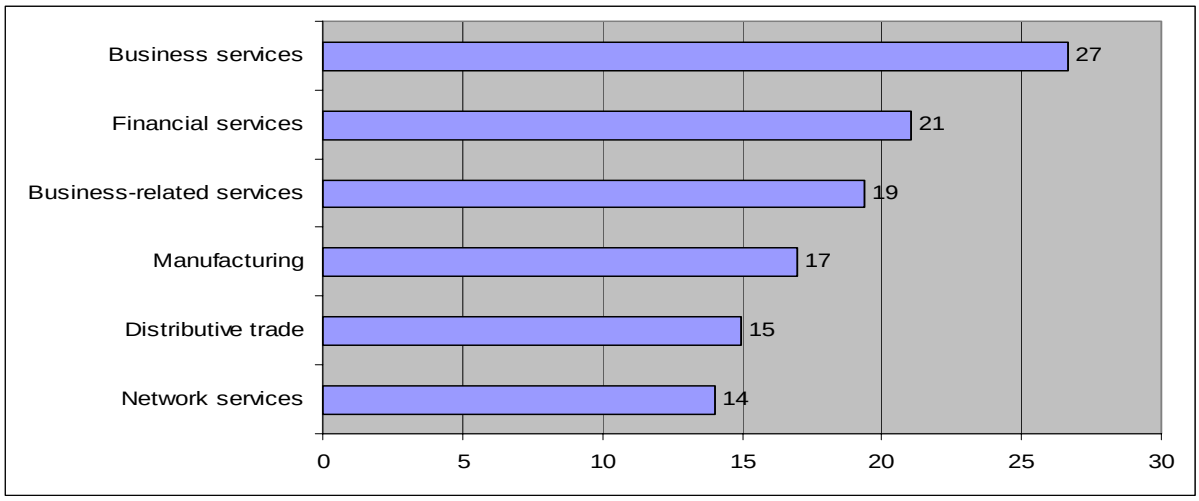
It is important to stimulate the effective spread of knowledge and technologies among businesses. Member States and regional and local authorities should play an active role, particularly by encouraging initiatives based on business clusters. As manufacturing and services innovations get increasingly intertwined, there seems to be little need for specific innovation policies aimed exclusively at services industries. It will be increasingly difficult to target such policies to service firms, and unambiguously exclude manufacturing firms that also perform service functions. Therefore, when new innovation policy initiatives are considered they should be aimed at innovation in service functions in both services and manufacturing enterprises.

47 Bart van Ark, Lourens Broersma, Pim den Hertog 2003 : Services Innovation, Performance and Policy : A Review.

48 See OECD Science, Technology and Industry outlook 2002.

49 Kurt Hornschild et al. : Product-related services : Operator Models in German Mechanical Engineering Firms in : DIW Economic Bulletin Vol.41, N°2, Feb. 2004

Figure VI.7. Co-operation arrangements in innovation activities during 1998-2000 as a share of innovative enterprises.



Source: Eurostat, New Cronos, Community Innovation Survey 2000.

VII. PRODUCTIVITY ENHANCING FACTOR: HUMAN CAPITAL

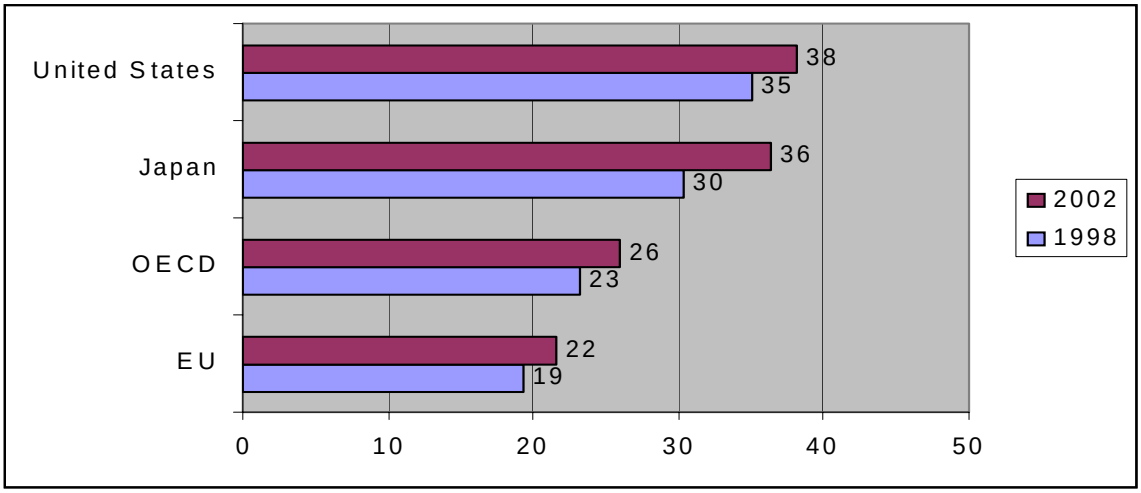
Human capital plays a fundamental role in economic and productivity growth, and investments in education and training are key driving factors in a knowledge-based economy[50]. Human capital covers a broad range of skills, from highly science intensive ones to those developed through training and upgraded through lifelong learning. The acquisitions of skills reduce the cost of implementation of existing technologies and generate incentives for new technologies and non-technological innovations to be developed.

Economies with a high level of education are able to adapt faster new technologies developed abroad and with less costs compared to those with a smaller stock of human capital; moreover, these economies have a greater potential to produce domestically scientific, technological and commercial innovations[51]. Furthermore, higher levels of human capital associated with R&D intensive activities facilitate faster rate of technological progress.

50 COM(2002)262 final : Productivity : The Key to Competitiveness of European Economics and Enterprises, COM(2003)685 final : 'Education and Training 2010'. The success of the Lisbon Strategy hinges on urgent reforms.

51 European Commission, Competitiveness Report 2002.

VII.1. Trends in educational attainment 1998 and 2001.



Source: OECD, Educational attainment database, February 2004.

In the EU, 43.5 million persons had obtained a tertiary education[52] in 2002, equalling 22% of population aged 25-64 years. This share is considerably lower than the shares in the US (38%) and Japan (36%). Consequently, the EU is lagging behind the other main knowledge-based economies in generating a sufficient stock of highly skilled human capital, threatening the achievement of the Lisbon goals.

The EU has been investing considerably in education; mirrored by the growth of the share of persons with a tertiary education – growing by 15% (from 19 to 22 percentages points) from 1998 to 2002 – but little progress has been made in catching up with the US – the latter experiencing a growth rate of 9% in the same period (from 35 to 38 percentages points). At the same time, Japan has experienced a growth rate similar to the EU.

The picture is strikingly diverse across the EU 15 Member States. The highest tertiary education attainment proportion is that for Finland (32%), the UK and Denmark (29%); closest to the level of the US and Japan. The lowest shares of higher education are found in Portugal and Italy with about 10 per cent of the populations aged between 25 – 64 years.

Even if the EU is investing heavily in education, Europe is not catching up with the US and Japan. Furthermore, the share of the population with a tertiary education is so low in a range of Member States that special efforts to increase the supply of highly educated persons are urgently needed if sustainable growth of business-related services shall be maintained.

VII.2. Level of educational attainment in business-related services

A skilled labour force contributes to productivity growth and competitiveness by enabling the companies to utilise and take advantage of their investments in ICT and other innovative features. The labour-intensive nature of many business-related services, the high degree of interaction with customers, the knowledge intensity of many services and the importance of

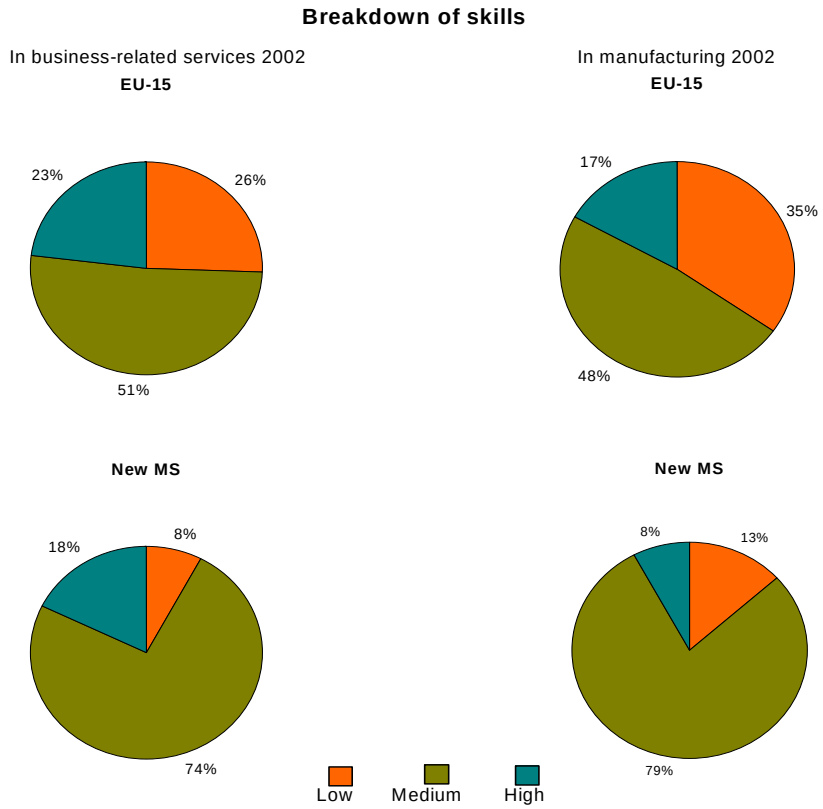
[52] As human skills in totality, including work experiences, personal competences, postgraduate training etc., is impossible to capture in official statistics, educational attainment data is the most commonly used proxy for human capital or skills measurement.

tacit knowledge are all factors implying the importance of a sufficient supply of skilled human capital for future productivity gains.

Business-related services have a larger share of highly skilled[53] persons employed than in manufacturing, cf. figure VII.2. EU15 average for high skilled employees in business-related services was 23 % (or 12.5 million persons), while 17 % of the employees in manufacturing belonged to the highest skill category. In the new Member States the difference is even more pronounced: 18 % of the employed persons in business-related services are highly skilled compared to only 8 % in manufacturing. As the jobs are mainly created within business-related services, increased demand for highly skilled persons can be foreseen in the coming years.

The employees with medium skills are the dominant group in both business-related services and manufacturing constituting around half of the employment. In the new Member States this share is considerably higher compared to EU15 Member States, accounting for more than three-quarters of the employment.

Figure VII.2. The breakdown of educational skills levels in business-related services and manufacturing in 2002.

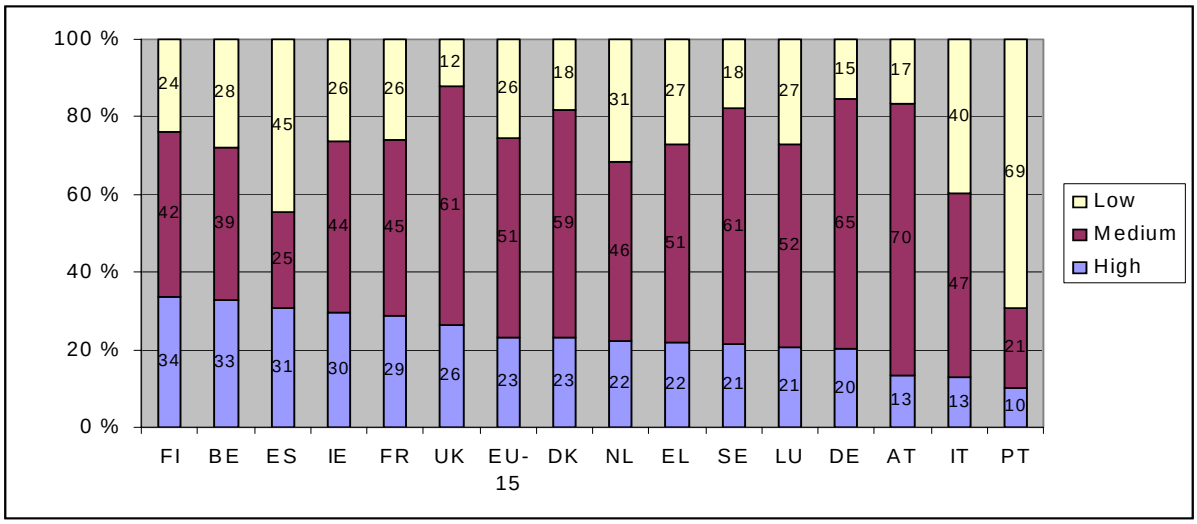


Source: Eurostat, Labour Force Survey, spring data.

53 The analysis of skills is based on the Eurostat Labour Force Survey (LFS) data where the skills can be defined in accordance with educational attainment by using International Standard Classification of Education (ISCED). ISCED 1-2 correspond to low skills, ISCED 3-4 to medium skills and ISCED 5-6 to high skills. The Labour Force Survey is based on a sample implying that at a more detailed breakdown of data, the results should be interpreted with caution. Furthermore, changes in methodology and coverage over time may influence the comparability.

The breakdown of skills levels in business-related services by country is shown in figure VII.3. In Finland, Belgium (both countries also accounting for similar shares of the highly skilled in the population in general), Spain and Ireland the highly skilled persons account for the largest shares (around 30 %) in the EU. The medium skilled employees tend to dominate the labour in business-related services across the EU 15, showing an average of 52 %. In Spain, Italy and Portugal the emergence of low skilled personnel is exceptionally high, reflecting the general level of educational attainment in these countries.

Figure VII.3. The breakdown of educational skill levels in business-related services, Member States 2002.



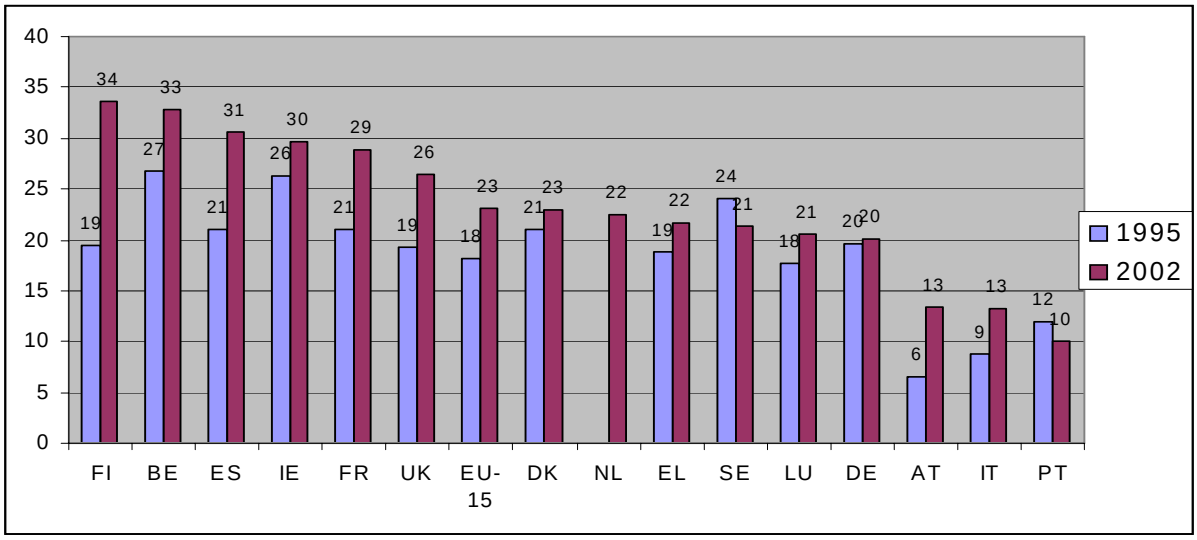
Source: Eurostat, Labour Force Survey, spring data.

The share of persons with high educational skills in business-related services shows a prominent increase from 1995 to 2002[54], cf. figure VII.4. During the period, the EU-15 average rose from 18 % to 23% and in several individual countries (especially Finland, Spain and France) the recorded growth was more substantial, indicating a rapid increase in the demand for higher skilled labour in business-related services[55].

[54] It should be noted that changes in the methodology and coverage of Labour Force Survey may explain part of the exceptionally large growth rates recorded in some countries.

[55] Only in Sweden and Portugal reverse development seem to have occurred, but as stated earlier the time series data have to be interpreted with caution.

Figure VII.4. The share of high educational skill levels in business-related services 1995* and 2002 in Member States.



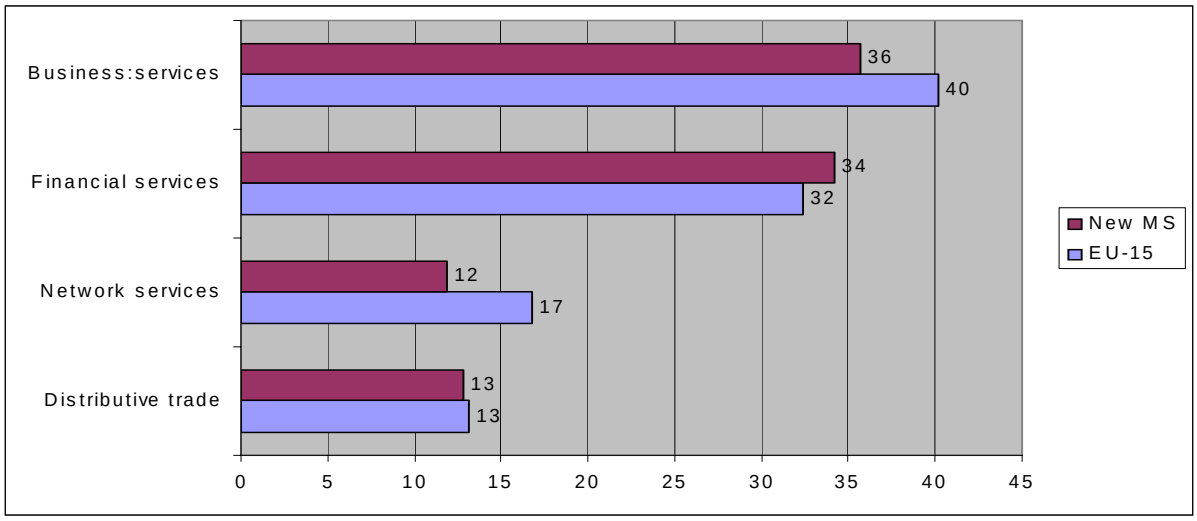
Source: Eurostat, Labour Force Survey, spring data. without NL in 1995.*

In the previous analysis, business-related services have been treated as one single entity without further breakdown by activity. As business-related services comprise very heterogeneous groups of activities the sector is broken down into 4 subgroups in order to better understand the performance of the sector. The differences are obvious when studying the skills structures by each subgroup.

Business services can be characterised as the most knowledge intensive activity of all four subgroups. Over 40 per cent of the personnel were classified under high skills, while the financial services recorded slightly over 30 per cent shares. Network services and distributive trades employ shares of around 10-15 % of highly skilled employees measured by educational attainment.

When comparing skills in new Member States to the EU 15 the differences are not very significant. New Member States are lagging behind in business services and network services but are actually employing a larger share of highly skilled persons in financial services compared to the EU 15 Member States.

Figure VII.5. The share of high educational skill levels in business related services 2002, average of EU 15 and new Member States.



Source: Eurostat, Labour Force Survey, spring data.

VII.2.1. Business services

This chapter especially addresses business services (classified in real estate, renting, computer services and other business services (NACE K))[56], which can be characterised as the key activities providing highly specialised services to enterprises operating in all sectors of the economy. The EU-average of highly skilled persons in business services is 40 per cent, well above the average 23 % of business-related services in general. In some countries such as Belgium, Greece and Ireland more than half of the employed persons in business services were found in the high skills category.

Business services, and especially computer services, can be recognised for their outstanding levels of educational attainment compared to the other sectors. On average more than half of the persons employed in computer services are highly educated and in some countries such as Belgium, Spain, France and Ireland the share reached more than 70 %.

Business services consists of several *knowledge intensive* services, such as management consultancy, advertising, legal services and accounting. In addition, business services engage labour intensive *operational* services, such as security and cleaning. For a limited number of countries data are available, showing major differences in the share of high skilled employees in knowledge-intensive business services (around 50%) and operational services (around 15%)[57].

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56 Other studies focusing on skills issues confirm the findings that several of the business services demand highly specialised labour. In M. O'Mahony and B. van Ark: EU Productivity and Competitiveness: An Industry Perspective (2003) skills profiles by different activities were compiled based on the Eurostat Labour Force Survey. These results confirm the previous conclusions of the knowledge intensive nature of business services.

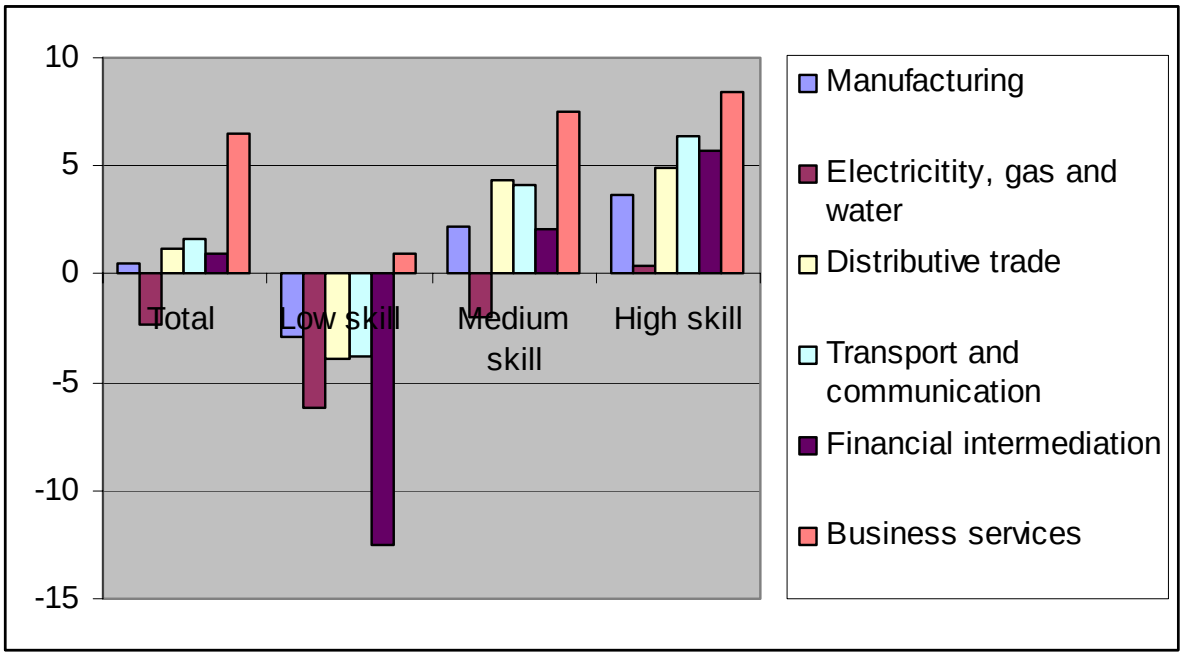
57 It should be emphasised that the data should be interpreted with utmost caution, as the Labour Force Survey is not designed to provide results broken down by detailed level of activity.

The increasing growth of knowledge-intensive business services and their demand for highly skilled employees exceeds the general growth in persons with tertiary educational attainment. Thus, the future growth of knowledge-intensive business services is threatened.

VII.3. Is Europe confronted with skills gaps?

Business-related services, and especially the knowledge-intensive business services, which are the main consumers of highly skilled persons, have experienced a considerable employment growth in the second half of the nineties, cf. chapter II. Although the EU at the same time has experienced a continuing high level of unemployment and a plentiful labour supply is available, recent analysis points out the emergence of skills gaps in Europe. The European Competitiveness report 2002 studied extensively the emergence of skills gaps in Europe. According to the study, the acceleration in the growth of high-skill employment across the European Union during the second half of the 1990s, particularly in the high-tech and knowledge-intensive sectors, has contributed to the emergence of skills gaps in Europe, amplified by the co-existence of a continuously high level of unemployment in the EU, cf. figure VII.6.

Figure VII.6. Employment growth by NACE 1 digit sector, 1995-2000.



Note: ISCED 1-2: low skills ISCED 3-4: medium skill. ISCED 5-6: high skills

Source: Eurostat. Labour Force Survey

Skills gaps reflect poor availability of potential skilled employees within the existing workforce. Tertiary-level skills gaps emerge within a sector, if the demand exceeds the supply of high-skilled persons. Sustained income and productivity growth depends crucially on smooth adjustments in the labour market. Skills imbalances[58] are invariably very disruptive of this process and the prevention of such imbalances is becoming an important challenge in an

[58] Productivity : The Key to Competitiveness of European Economies and Enterprises, COM(2002)262 final.

environment of rapid technological change, associated principally with the expanding diffusion of ICT across sectors and economies. The problems of skills shortages are addressed in the European Employment Strategy and have led to considerable, but not sufficient, investment in a general upgrading of the European labour force.

Given the on–going technological transformation, the skills intensity of the European economies will increase. The Lisbon goals can only be achieved by a process of an extensive general upgrading of the stock of human capital in Europe. It is essential, therefore, that a cluster of coherent policies – education, science, training, mobility, etc. – reinforce each other to ensure that the emerging demand for skills is met on a durable basis.

VII.4. Vocational training in business-related services

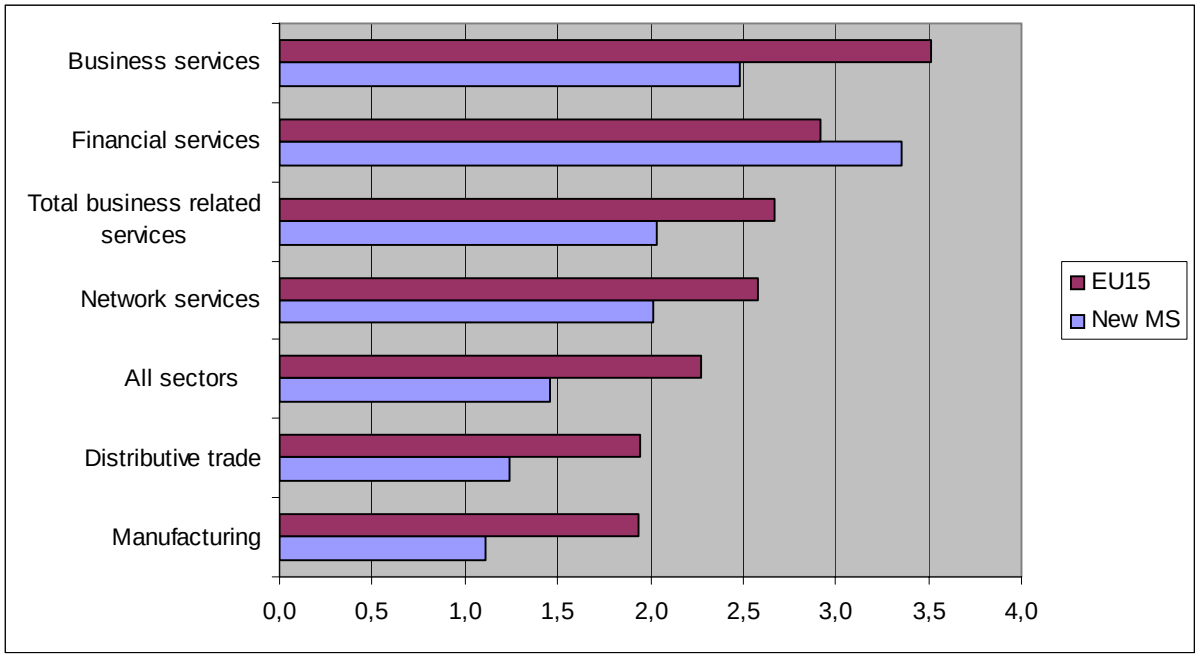
Becoming the most competitive and dynamic knowledge-based economy cannot be achieved by investing in formal educational attainment alone. The dynamics of the knowledge-driven economy requires a constant update of the skills of the labour force in the EU, if European businesses shall be competitive. The formal education provides a basis for the continuous upgrading of skills, but inevitably the demand for vocational training increases along with the adoption of new production and organisational methods, usually stimulated by the introduction of new technologies. Training has become an increasingly critical tool for maintaining the adequate levels of human capital in enterprises, particularly in knowledge-intensive services.

Official statistics covering vocational training are sparse, but the CVTS2 survey[59] gives a certain insight into the vocational training activities in the EU. An indicator of the level of vocational training in different sectors of the economy is the share of costs of enterprises devoted to training activities of total personnel costs, cf. figure VII.7. The EU 15 enterprises in business services reported the highest training costs, 3.5 per cent of total labour costs, equivalent to € 11 200 million. This is not surprising, as these services include a number of knowledge intensive activities where training is perceived by companies as a key element to maintain their competitive edge in the markets. On the other hand, distributive trades showed the lowest share, less than 2% of total personnel costs.

The CVTS2 data also indicate that the adaptation and implementation of new technologies trigger demand for training of personnel. This is true for business-related services as well as for manufacturing, where computer related training was commonly supplied to employees in these activities. Training in sales and marketing, accounting and finance together with management and administration were more typical for business-related services than for manufacturing. The difference in relative costs of CVT courses (c.f. figure VII.7) in the old and new Member States was relatively small, and in financial services the share is larger for the new Member States.

[59] Continuing Vocational Training Survey, reference year 1999. The study was carried out in EU15 Member States as well as in the new Member States.

Figure VII.7. Costs of CVT courses as % of total labour cost (all enterprises).



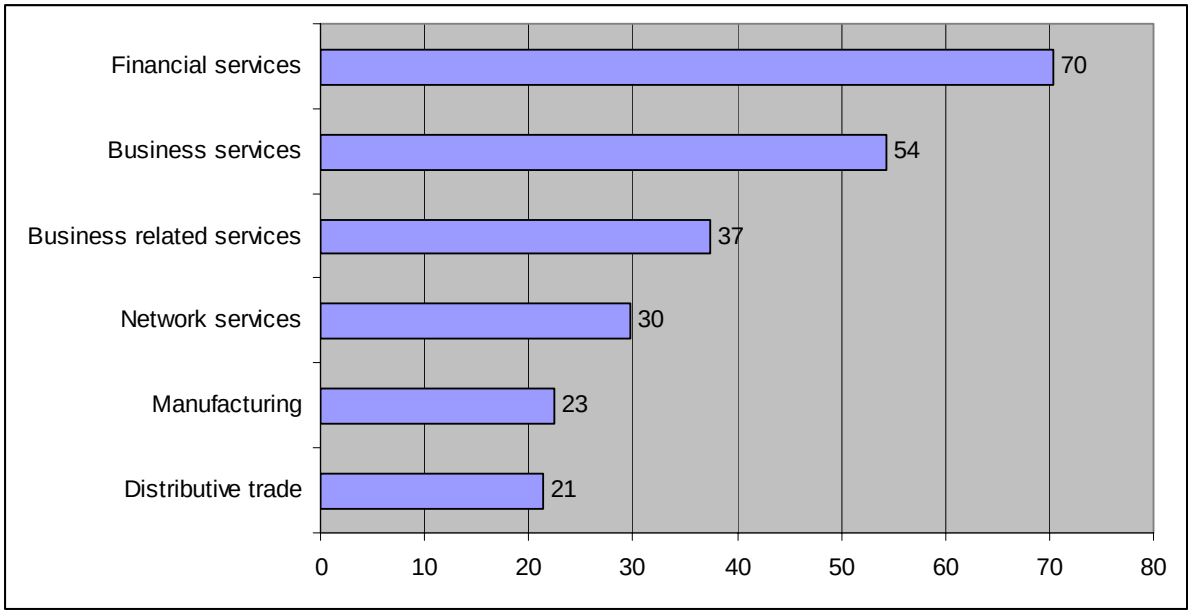
Source: Eurostat, CVTS2.

Continuous learning and updating of skills is of special importance for the competitiveness of business-related services' enterprises due partly to their labour intensity, partly to the fact that the quality of the input of the individual employee is of vital importance for the services offered. The supply of training for employees of SMEs must be specifically addressed in the policy framework. Business-related services are highly sensitive to changes in labour market conditions encountering continuously emerging needs with regard to employment flexibility, which should be accounted for in labour market regulations (for instance part-time employment, temporary work contracts and mobility).

VII.5. ICT skills

Adequate ICT skills of the labour force in business-related services form the basis for enhancing productivity and making it possible for enterprises to adjust themselves into dynamic market conditions and developments in ICT related tools. The competitive advantage of services companies increasingly rely on a labour force with sufficient ICT competencies facilitating productivity gains to be achieved through different phases of the value chain. It is an increasing challenge for businesses to keep up with the rapidly changing environment of ICT. This means constant follow-up and updates of technological tools and software, but most importantly continuous upgrading of the ICT skills of employees. Only by combining the new ICT–features with adequate training and education, it would be possible to extract the maximum benefits of the potential generated by these developments.

Figure VII.8. Share of broad ICT employment in total employment 2002, EU 15.



Source: OECD calculations based on Eurostat Labour Force Survey.

In the recent study by OECD[60] on ICT-skills, activities were ranked according to the intensity of ICT employment by using the Eurostat labour force survey data on occupations for 2002. In general, business-related services are shown to be highly ICT skills intensive in their employment as shown by figure VII.8. Financial and business services occupied the top ICT high intensity posts of all industries. However, also network services were ranked rather high in the ICT skills intensity of the persons employed whereas distributive trades were the only sector of business-related services employing less ICT skilled persons than the manufacturing sector[61].

Business-related services is a very ICT intensive sector in terms of ICT occupations. There are several reasons explaining this pattern. Business related services being the most intensive as regards ICT employment are also the ones where most businesses are predominantly based on use of new technology and innovations, requiring highly skilled personnel in order to perform in a competitive environment. Increasing outsourcing of non-core activities previously provided in-house may have triggered a shift in the skills structure in favour of the specialised business services providers employing an increasing number of 'better jobs', such as ICT professionals.

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60 The OECD study identifies ICT using sectors by their employment of ICT-skilled personnel, in other words through the degree of actual ICT usage. Industries are then regrouped according to the degree of ICT skills specialisation of their workforce, or the share of the industry's ICT-skilled employment. For further details, see OECD Information Technology Outlook 2004 (forthcoming).

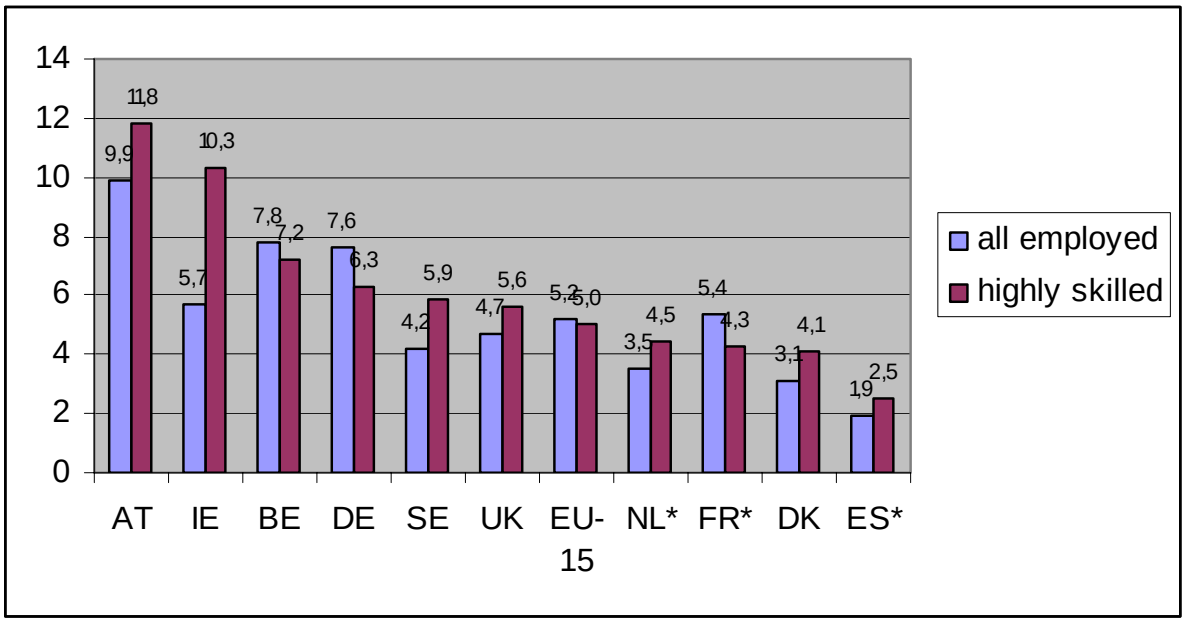
61 In the next phase of the study the industries were ranked on a two digit NACE level into low, medium and high ICT employment classes. There were several business-related services located in the high intensity group, such as business services, real estate and wholesale trade. In fact, a total of 11 out 18 activities in high intensity group can be identified as belonging to business-related services. The medium intensity group was dominated by manufacturing industries, although also including some business-related services, such as retailing and transport related activities.

VII.6. International mobility of skilled personnel

Another way of achieving the required skills is by "skills circulation", i.e. flows of skilled persons from one business to another, from one region to another or from one country to another. Such skills circulation can be an important tool in overcoming skills gaps in certain parts of the economy as it is an important tool for transfer of knowledge and skills in general. One special type of skills circulation is the international migration of highly skilled personnel, which recently has attracted a certain political focus, especially related to the mobility of IT-personnel[62].

In general, studies show that there are several net positive effects in migration for the host countries, notably the stimulation of innovation capacity, an increase in the stock of available human capital and the international dissemination of knowledge[63].

Figure VII.9. Share of non-nationals (EU+non EU) in highly skilled and total employment in business-related services 2002.



*Source: Tabulations based on Eurostat Labour Force Survey, spring data.*Data reliability with reservations.*

On average, more than 5 per cent of the persons employed in business-related services (or around 600 000 persons) were non-nationals, cf. figure VII.9. The major share (3.3%) of non-national persons employed in business-related services was of non EU origin and only some 2 per cent have migrated from other Member States.

The share of non-nationals in the highly skilled workforce in business-related services remained slightly below the overall average suggesting that there appears to be no overall tendency towards more intensive mobility among highly skilled persons. However, there are clear differences between Member States, as the largest economies (Germany and France – with UK as the exception) attract a relative minor share of non-national highly skilled persons compared to the smaller Member States. Especially Austria and Ireland show high shares of

62 European Commission : Employment in Europe 2003. Recent trends and Prospects.

63 See for instance OECD Observer : International Mobility of the Highly Skilled, July 2002.

non-national highly skilled persons. The highly skilled migration tend to be coming from other EU countries somewhat more frequently than overall migration – although the skilled migration from outside the EU still accounts for more than a half of the total[64].

The non-national highly skilled persons employed in business-related services are the most substantial contributions to the labour force in Austria, Ireland, Belgium and Germany. In Ireland and Austria more than 10 % of the highly skilled workers were non-national. Also the overall share of non-national labour in Austria, Belgium and Germany is remarkable.

In manufacturing, an average share of 6.4 per cent of the total employment in the EU was non-nationals. However, clearly fewer non-nationals (4.4%) were registered amongst the highly skilled personnel. Two thirds of all non-national persons employed in manufacturing came from outside the EU, while skilled persons migrate equally from outside and within the EU.

There are no official harmonised statistics showing the share of non-nationals in the highly skilled labour force outside the EU, but available statistics indicate considerably higher proportions of foreign-born in highly skilled employment in the US (9%), Canada (14%) and Australia (25%)[65].

Mobility of the labour force is an important tool in overcoming skills shortages and facilitating growth. Especially the international mobility of highly skilled employees is important, taking into consideration a stagnating labour force caused by an ageing population in Europe. The apparent low attractiveness of the European businesses to highly skilled persons from outside Europe can hamper the transfer of knowledge and skills to the knowledge-intensive business services in Europe, thus threatening the future competitiveness of businesses from all sectors in the EU.

VIII. INTERNATIONAL TRADE AND FOREIGN DIRECT INVESTMENT

A competitive business-related services sector should be able to export services, attract foreign investment and buy foreign companies. However, a major proportion of imports, outward investment and sales of companies do not necessarily mean that the sector concerned is not competitive; these types of "import flows" are usually more important in countries with competitive sectors than in countries with less competitive sectors. What makes a competitive difference is both the level of international presence in a given country and the ratio between exports and imports or between sales and acquisitions.

Not all services follow the same pattern. In general, the weight of services in international trade is rather low, while their importance in foreign direct investment is much higher. This is due to many reasons, such as the intangible and non-storable character of many services, the

64 The Commission Proposal for a Directive on the Recognition of Professional Qualifications (COM(2002)119) can make a key contribution to increase skills mobility through improved conditions for free movement of qualified professionals throughout the EU.

65 OECD Observer : International Mobility of the Highly Skilled, July 2002.

existence of barriers to international trade[66] or the importance of physical presence in the market.

VIII.1. International trade in business-related services

In EU15 countries services cover 23% of the total international trade (including intra and extra-EU trade) in 2002. This level has remained more or less stable in Europe with a slightly upward trend during the last 20 years (around 18%-20% in the 1980s, around 20-22% in the 1990s). The explanation is not only the natural and artificial limitations of international trade in services, but also that the growth rates in services trading have been similar to those of trading in goods. In other words, international trade in services has grown in absolute terms, but at the same rate as international trade in manufactured goods. Business-related services represent 14% of total international trade of goods and services. The major contributors within business-related services are business services (6%) and transport services (5%) (cf. annex table VIII.1).

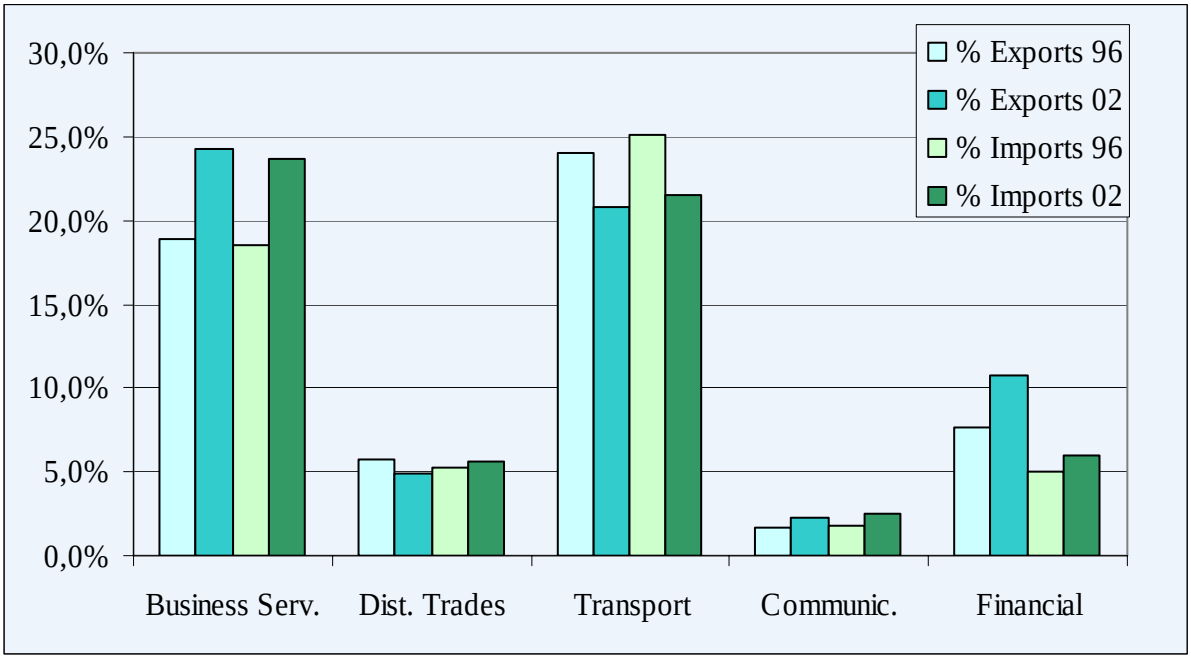
Business-related services represent 61% of total EU15 trade in services in 2002. The remaining 39% is mainly accounted for by travelling (24%) and royalties and license fees (6%). Trade in business services and transportation constitute about three quarters of the total trade in business-related services.

Growth rates in international trade in business-related services are higher than in total services or total goods trade: 14% of annual nominal growth rate (current prices) versus 9-10% in goods and 12% in total services. However, growth rates among different categories are uneven. Financial services and communications present the highest growth rates in exports (23%) followed by business services (20%). Exports in distributive trades and transportation have grown less (8%). In imports, recent trends are similar, lead by communications (24%) and business services (20%). Imports in transport services have grown moderately (8%).

The share of business-related services in total international trade in services for 1996 and 2002 is shown in figure VIII.1. Shares in exports and imports are more or less even in four of the five categories: only financial services recorded a larger share in exports than in imports. Trends from 1996 to 2002 are very positive for business services and financial services exports, but less favourable for communications and negative for transport services. During this period, business services have taken the leadership in international trade in business-related services, replacing transport services since 1996.

[66] Services still face many obstacles to international trade both at intra-European and global level. The proposed Directive for Services in the Internal Market is a consequence of the obstacles encountered in cross-border trade in services within the EU.

Figure VIII.1. Share of business-related services in total international trade in services EU15, 1996 and 2002.

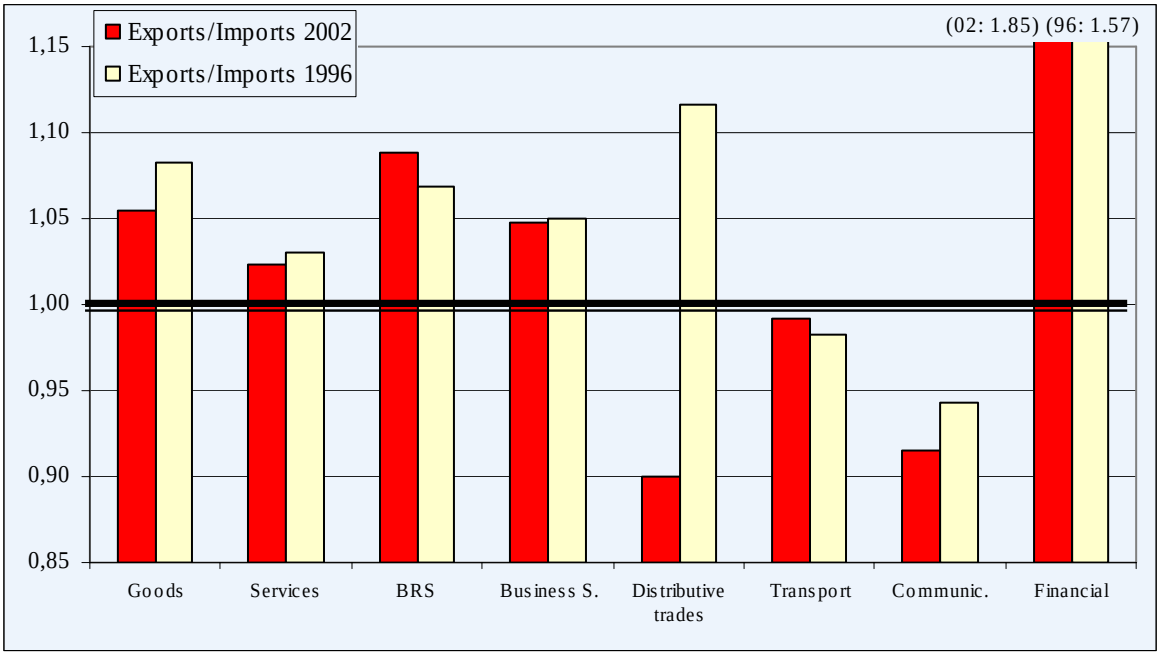


Source: International Trade Statistics 2002, Eurostat New Cronos.

For the total of business-related services activities within the EU15, the net position of exports/imports is positive and increasing from 1996 to 2002. This trend is opposite to the total trade balance (including all goods and services), where the surplus has been reduced gradually in the same period. This fact underlines the role business-relates services play as the crucial sector providing a surplus in the European trade balance.

The most export oriented sector is financial services, with increasing coverage rates (1.85 in 2002 compared to 1.57 in 1996, cf. figure VIII.2). In business services, the positive position (1.05) has remained stable during the last years, while transport services have slightly increased their competitive position. In communication services, the already negative position in 1996 has worsened in 2002. However, the most critical development has taken place in distributive trades, where the surplus in 1995 has been turned into a considerable deficit in 2002.

Figure VIII.2. Coverage ratio (exports/imports) for goods and services in EU15, 1996 and 2002.



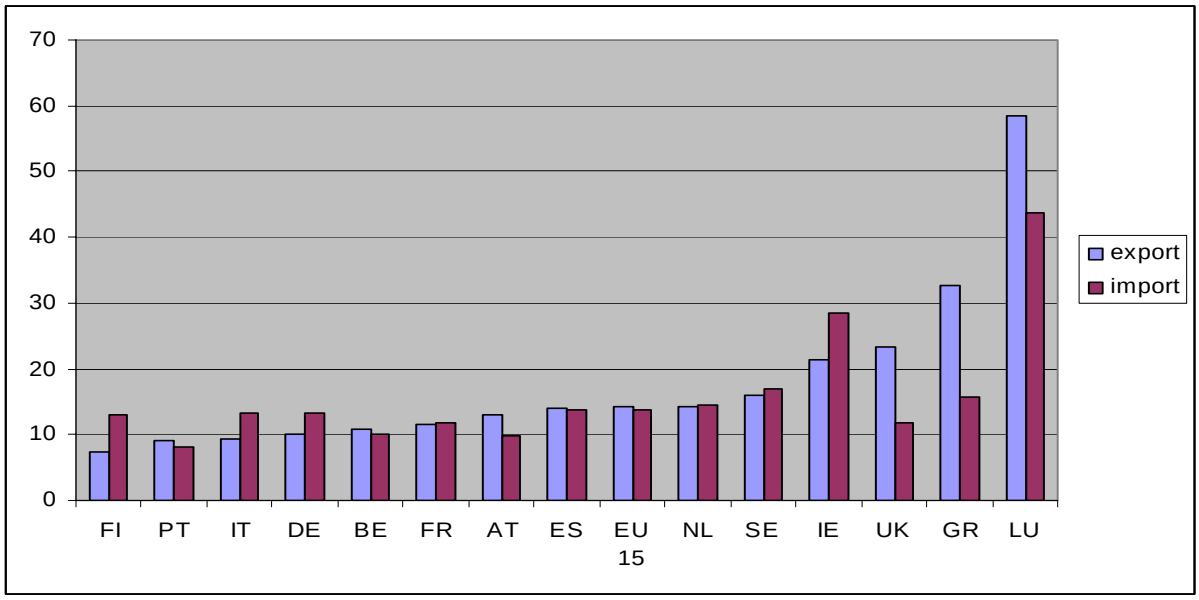
Source: International Trade Statistics 2002, Eurostat New Cronos.

Comparing Intra-EU and Extra-EU trade in business-related services, intra-trade is more important than extra-trade in all major sectors (c.f. annex table VIII.2). The intra-oriented balance is more important in goods than in services, providing an indication of better integration of goods markets compared to services markets. In business-related services, the intra-EU orientation of exports is less notable than in the total of services. This is due to the extra-EU orientation of distributive trades, transportation and insurance. Regarding imports, all activities covered are oriented towards intra-EU trading.

The trend towards more intra-EU trading has been identified in all sectors of business-related services except exports by transportation and distributive trades and imports by business services. Comparing annual growth rates in intra-EU trade and extra-EU trade leads to mixed results. For instance, growth in extra-EU trade is slightly higher than in EU-trade in goods (around 10% versus around 9%). In business-related services, large growth rates are registered in intra-EU trade for communications, financial services and business services. In short, the trading of most services is much less intra-EU oriented than that of goods. However, recent developments suggest some convergence between goods and services growth rates are taking place.

The most prominent shares of business-related services in international trade were found in Luxembourg, Greece, United Kingdom and Ireland. In all these countries business-related services account for more than 20 per cent of total exports, while in Luxembourg and Ireland these services account for a considerable share of imports as well. In the majority of EU countries both exports and imports of business-related services remain around the level of 10 per cent respectively. It is noteworthy that both in Germany and France the exports shares of business-related services remain far behind the levels of the United Kingdom.

Figure VIII.3. Share of business-related services in foreign trade in 2002.



Source: International Trade Statistics 2002, Eurostat New Cronos.

In the international net balance for business-related services, the UK is the leading economy in absolute terms running a surplus of € 43.2 billion. This is even larger than the surplus of EU15 (€ 38.4 billion) or the United States (€ 7.6 billion). In addition Belgium-Luxembourg (€ 10.4 billion), Austria (€ 4.1 billion) and Sweden (€ 1.8 billion) also recorded large surpluses. The largest deficits are counted for Germany (€13.9 billion) and Italy (€ 11.2 billion).

In relative terms, the coverage ratio (exports/imports) is extremely positive for Latvia (2.4), the UK (1.75) and Lithuania (1.72). In fact, net positions are also significant in Estonia (1.3) and Slovenia (1.2). In general, all EU countries have a positive or balanced (close to 1) coverage rates for business-related services except Germany (0.85), Italy (0.7), Hungary (0.8), and Finland (0.7).

Some countries perform well regarding the annual growth rates during 1996-2002. This is the case of Ireland representing the most dynamic economy in international trade in business-related services during this period. High growth rates (around 20%) are also registered in some other countries, such as Spain, Sweden, Belgium-Luxembourg and Cyprus.

In international trade, European business-related services show a surplus (exports minus imports), mainly due to the role of business services and financial services. In transport, communications and distributive trades imports are higher than exports.

The European surplus in international trade of business-related services is largely led by the UK. However, Germany and Italy have large deficits in the provision of business-related services. Some new Member States, such as Latvia and Lithuania, have a positive coverage rate.

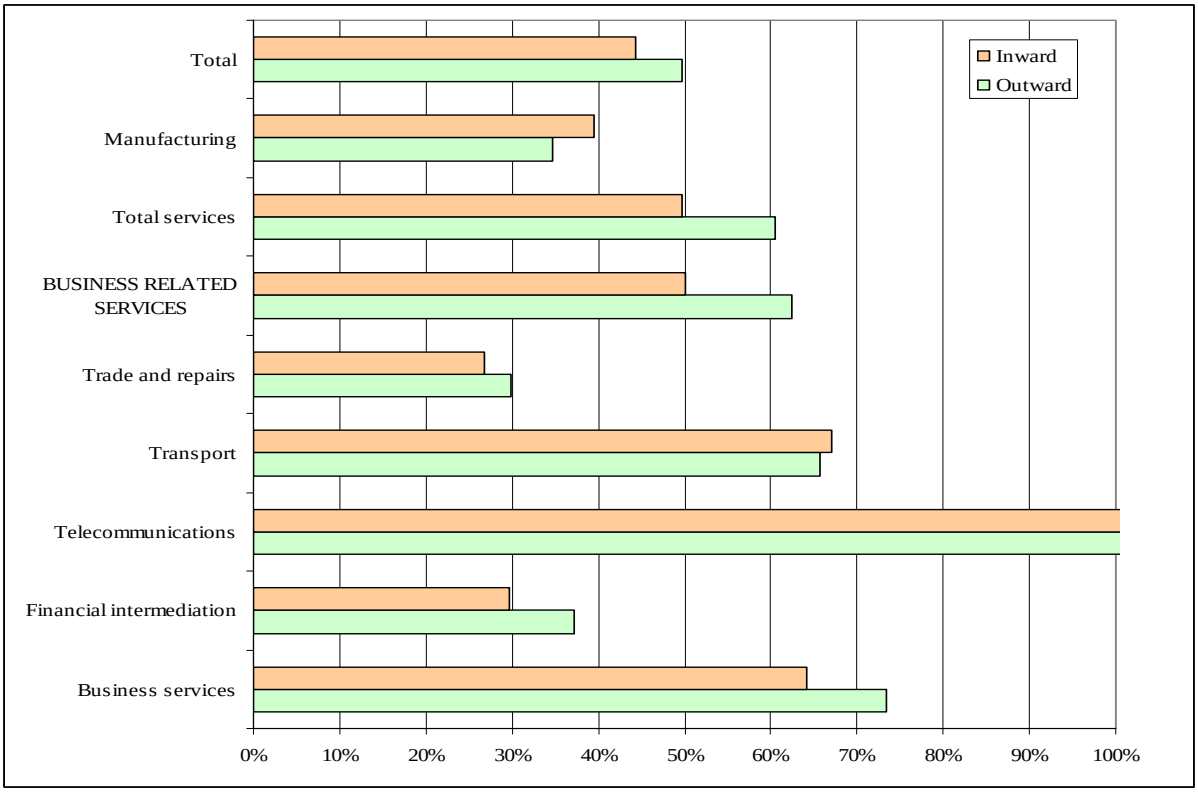
VIII.2. Foreign Direct Investment

The role of services is relatively more important in foreign direct investment (FDI) than in international trade, due to the importance of proximity to the market for services companies. Services constitute 60-65 per cent of total outward FDI of the EU15 Member States, exceeding € 2400 billion of investments in services companies abroad (intra+extra EU), compared to a share of services between 19-23 per cent in total international trade. On the other hand, € 2 000 billion has been invested into the European services sectors across borders, including intra-EU investments. In fact, business-related services represent most of the FDI at EU level, around 95% of total services FDI.

Business services and financial intermediation constitute the largest subsectors representing together more than 60% of total service FDI. European enterprises have been investing heavily in business services enterprises abroad which account for close to half of the total outward FDI in services (€ 930 billion). Both business services and financial services in Europe have been popular areas of investments, each accounting for almost a third of foreign direct investments in services.

Telecommunications has been an attractive sector for FDI following the lines of the huge investments made in Europe during the boom of the "new economy" and the liberalisation of the sector (c.f. figure VIII.4). The foreign investment amounted to € 420 billion exceeding substantially the outward investments (€ 190 billion) in the sector. Except in distributive trades and financial services, growth rates in major business-related services categories are higher than in manufacturing.

Figure VIII.4. Growth in business-related service FDI, stocks, 1996-2002, EU15.



Annual growth rates based on current prices

Source: FDI, Eurostat New Cronos.

The trends in extra-EU and intra-EU foreign direct investment are unambiguous. European FDI are to a larger extent directed towards other Member States than towards third countries, cf. annex table VIII.6. This trend is more pronounced when considering inward than outward FDI. Especially ratios in telecommunication, transport and business services are very high for 2001 in inward FDI. In manufacturing, as well as in financial services, FDI is much less intra-EU oriented. Especially financial services have shown a trend towards a larger proportion of extra-EU FDI since 1996.

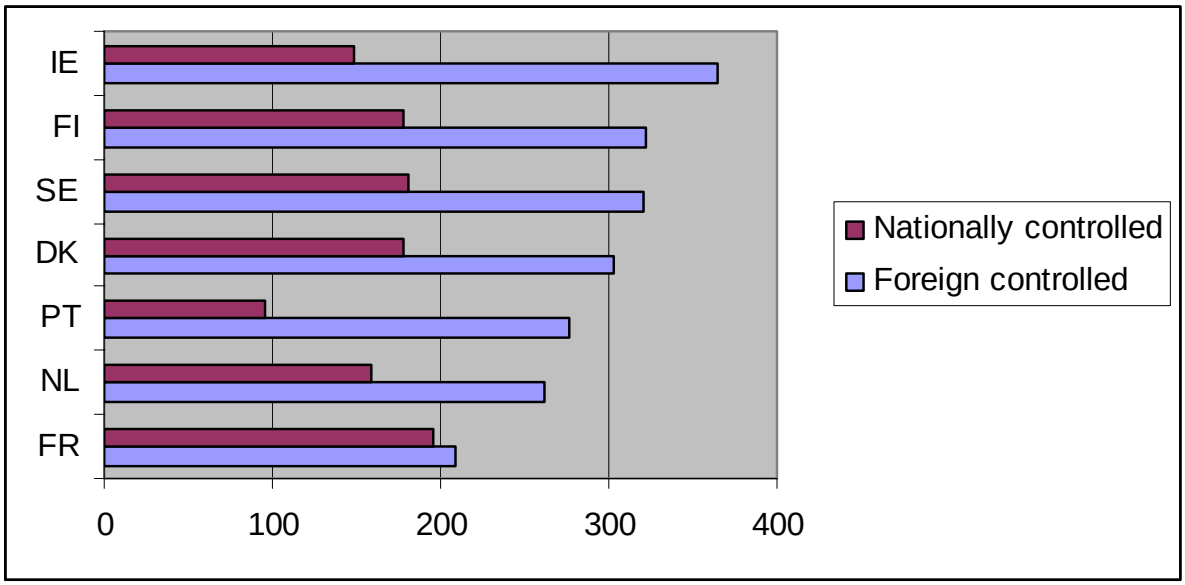
VIII.3. Mergers and acquisitions

A particular aspect of FDI is the purchases or sales of enterprises facilitating a quick access to markets and resources. Services account for more mergers and acquisitions than the manufacturing sector and business-related services constitute 90-95% of all operations in services, cf. annex table VIII.7. The most dynamic sector in terms of the number of operations is business services, accounting for 30% of purchases and 35% of sales in services. The reason is that the access to existing expertise and existing clients is often deemed of crucial importance in the knowledge-intensive business services, due to the lack of transparency in the markets.

The number of purchases is much higher than the number of sales (approximately 10 times more) indicating the strong position of European companies on global markets. There are no large differences among the business-related services, but sales are relatively more important in business services than in financial and real estate services. Distributive trades and business

services are oriented towards mergers and acquisitions within the EU, while operations in financial and real estate services are targeted more often to outside the EU.

Figure VIII.5. Turnover per person employed in business-related services[67] broken down by nationally and foreign controlled enterprises (in 1000 Euros).



Source: Eurostat, FATS statistics.

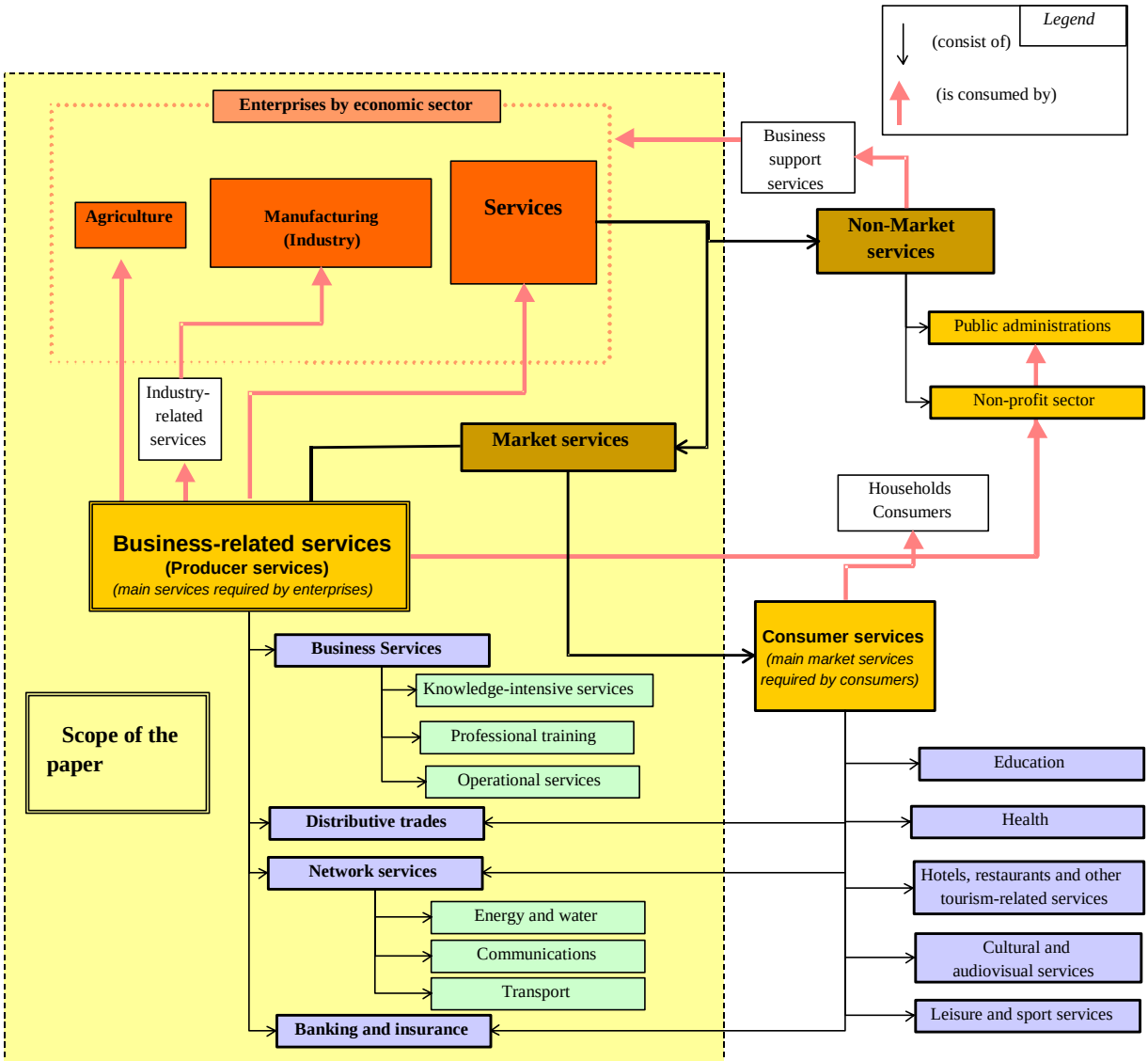
Foreign affiliates have major economic impact although being relative few in numbers. According to recent Foreign Affiliates Statistics (FATS), the share of foreign controlled enterprises in the business sector is larger in terms of turnover and value added than in terms of employment. The pattern of foreign controlled enterprises generating higher turnover per person is unambiguous, even if turnover per person employed diverse widely across the Member States, cf. figure VIII.5.

[67] Business-related services excluding financial services and network services. The number of employees as used as a proxy for the number of persons employed for France.

ANNEX

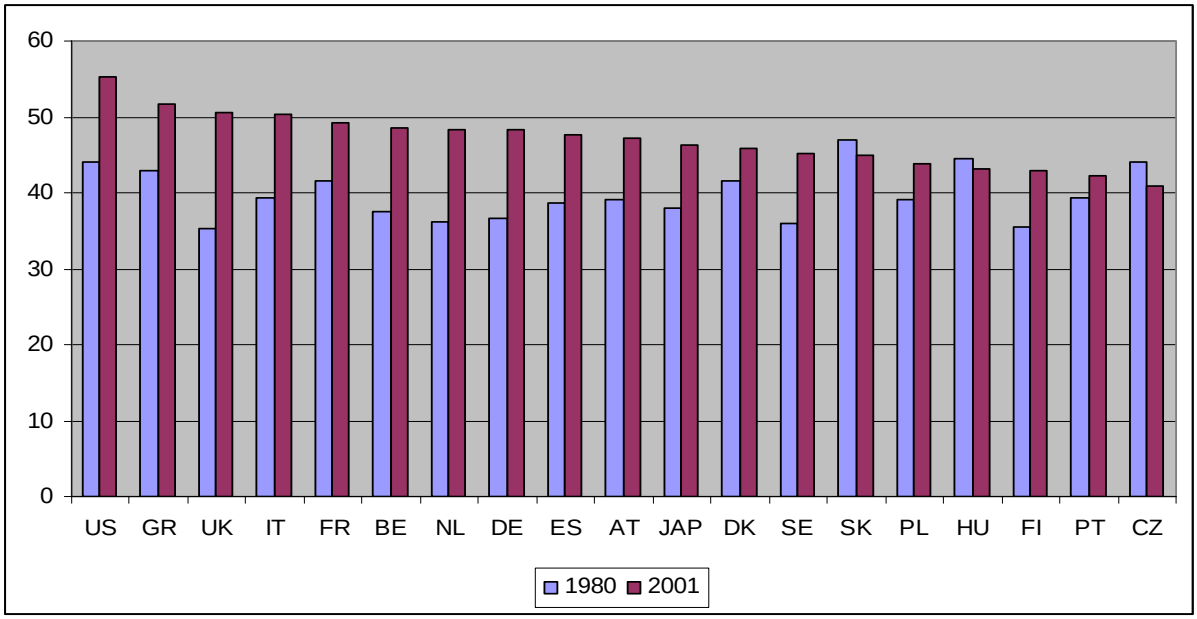
ANNEX: STATISTICAL TABLES AND FIGURES BY CHAPTER

Annex Figure 1: The interrelations between services and enterprises: The place of business-related services and the scope of the paper



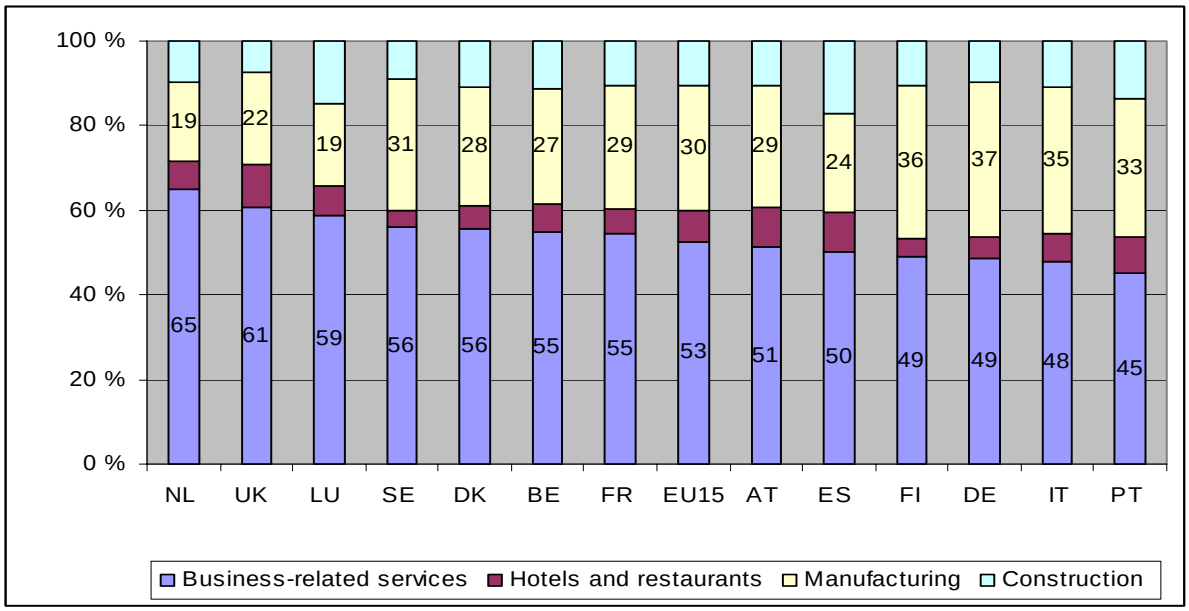
Chapter II: The importance of business-related services in Europe

Annex figure II.1: Share of business sector services in total value added, 1980 and 2001 or nearest years available.



Source: OECD STAN database March 2003.

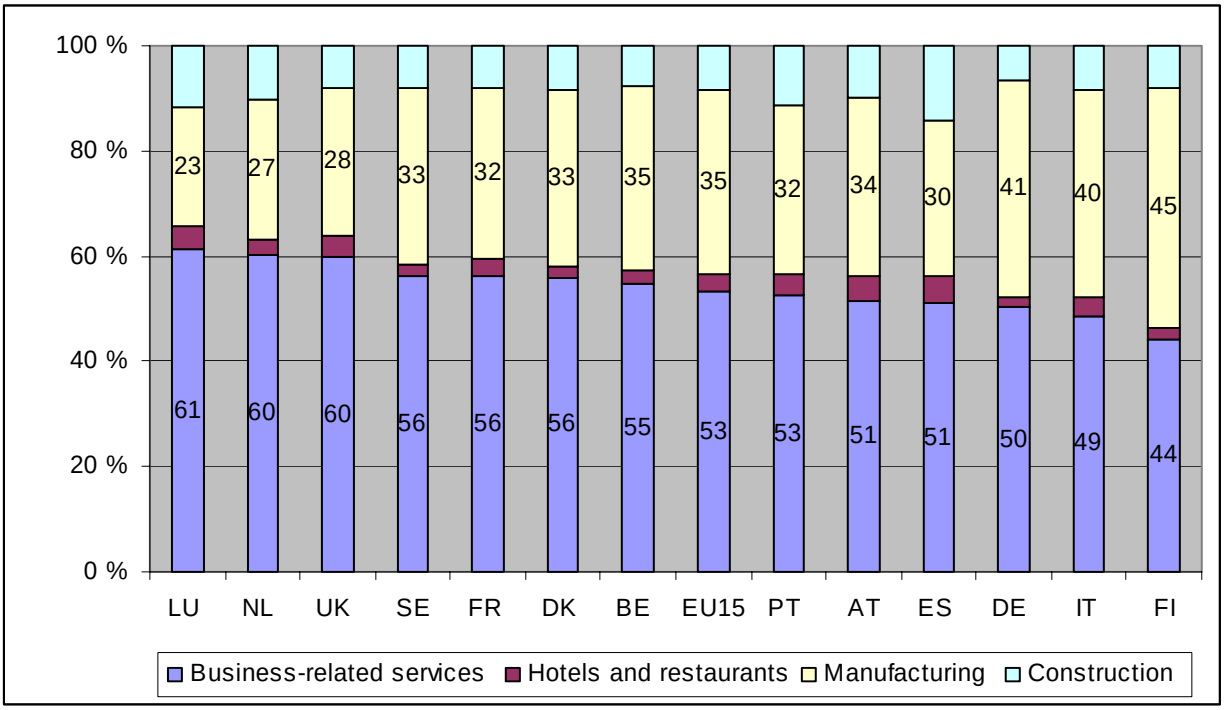
Annex figure II.2: Employment in the market economy 2001 in EU 15*, broken down by sector.



**Excluding financial services.*

Source: Eurostat SBS data.

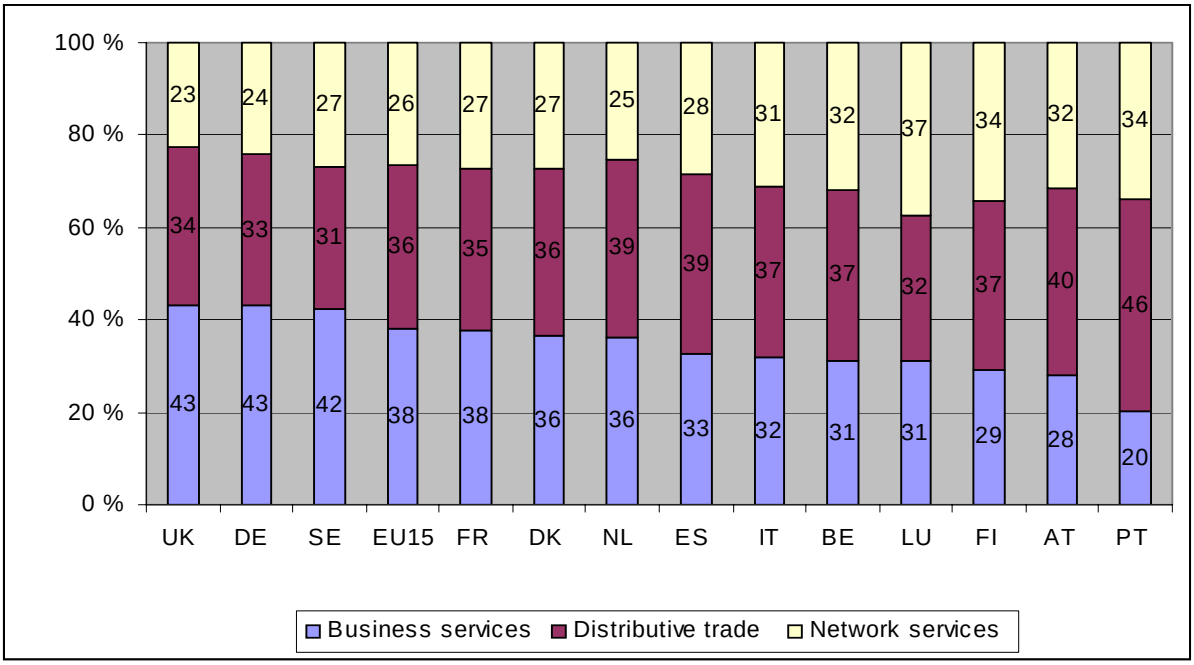
Annex figure II.3: Value added in the market economy 2001 in EU 15*, broken down by sector.



** Excluding financial services*

Source: Eurostat SBS data

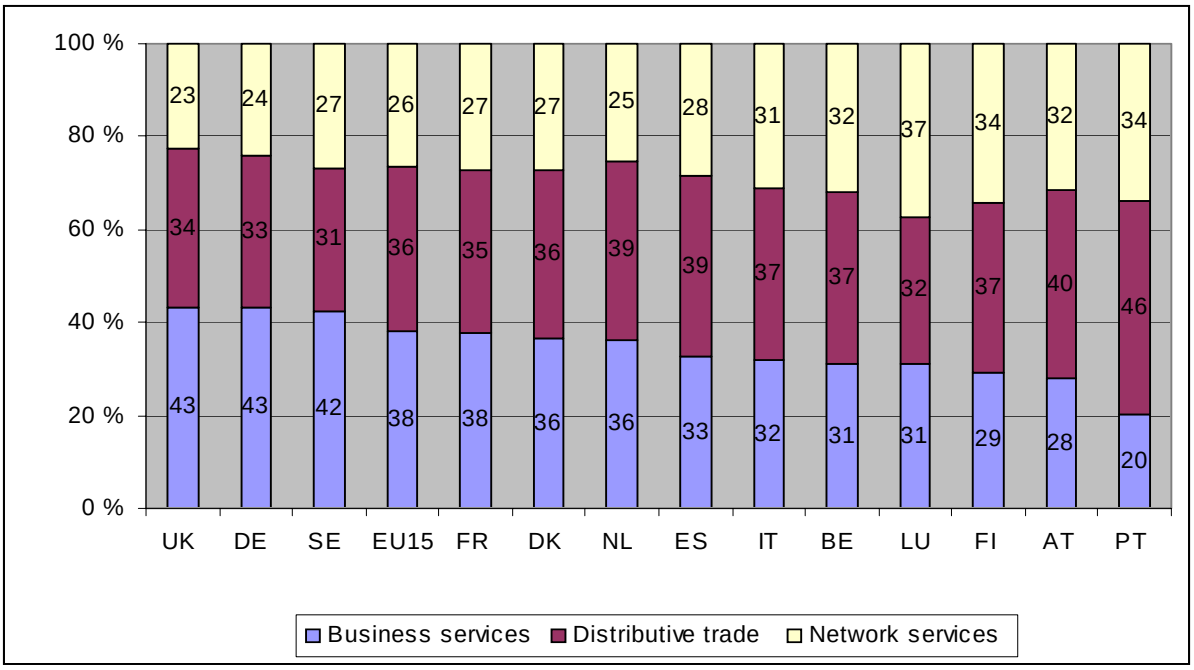
Annex figure II.4: Value added in the market economy 2001 in new Member States* and EU 15, broken down by sector.



** Excluding financial services*

Source: Eurostat SBS data.

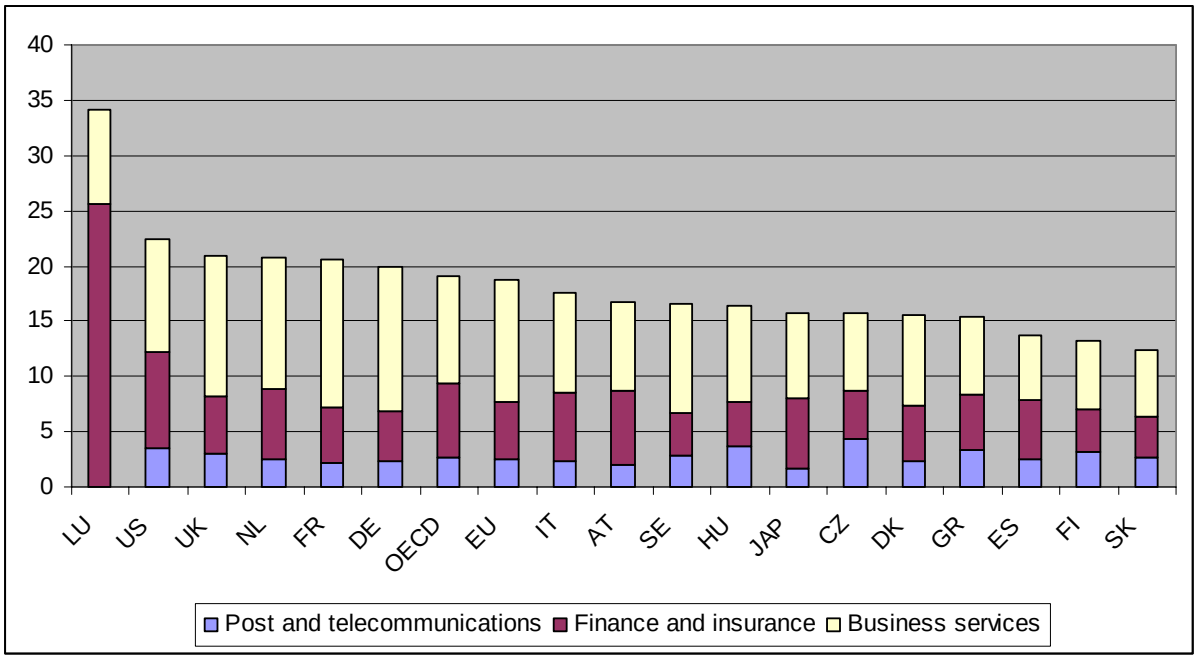
Annex figure II.5: Value added in business-related services broken down by sector* 2001, EU 15.



**Excluding financial services.*

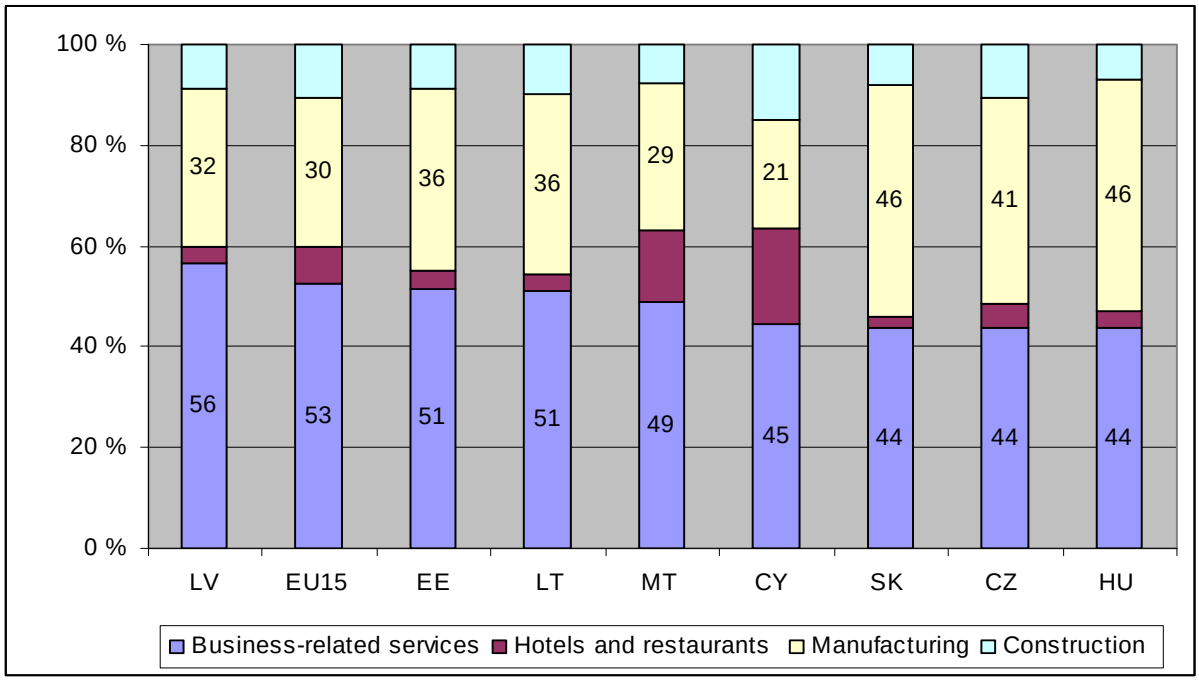
Source: Eurostat, SBS data.

Annex figure II.6: Share of total value added for knowledge intensive 'market' services 2000.



Source: OECD STAN and National Accounts databases, May 2003.

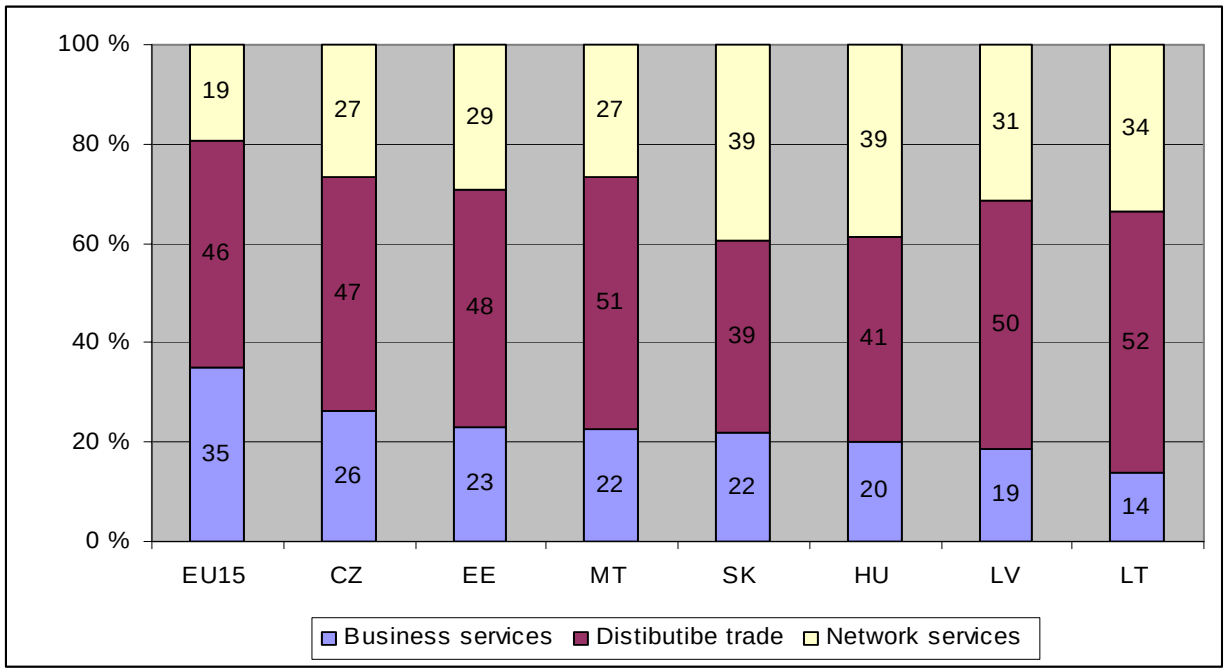
Annex figure II.7: Employment in the market economy broken down by sector* 2001 in new Member States and EU 15.



** Excluding financial services*

Source: Eurostat SBS data.

Annex figure II.8: Employment in business related services broken down by sector* 2001 in new Member States and EU 15.



**Excluding financial services.*

Source: Eurostat, SBS data.

Annex table II.1: Employment and value added broken down by employment size class 2001, EU 15.

	Persons employed					Value added				
	1-9	10-49	50-249	250+	TOTAL	1-9	10-49	50-249	250+	TOTAL
Manufacturing	13	22	23	42	100	8	16	22	55	100
Business-related services*	31	19	14	37	100	25	19	16	40	100
Network services	15	14	12	59	100	10	10	11	69	100
Distributive trade	37	21	12	29	100	28	24	17	32	100
Business services	31	18	16	35	100	33	20	18	29	100

Source: Tabulations based on Eurostat, SBS data. Excluding financial sector.

Chapter IV: Productivity in business-related services

Annex box IV.1. Methodological problems related to measurement of productivity in services.

Defining the output of services. For several services activities, outputs are difficult to measure due to their intangible nature. Detailed information about the "products" produced by services enterprises are lacking as well as the composition of the turnover of services enterprises. What is the output of banking or retailing?

Price and quality of services. Little information exists about services producer prices and changes in the quality of the outputs produced. How to deflate output and adjust for quality changes?

Impact of labour input. The skills of the employees are crucial for the quality of the services offered. How to measure quality and impacts of skills for services outputs?

Impact of technology input. Currently, no official data are available on the measurement of the impact of IT on business processes. How does the use of IT influence the productivity of enterprises?

Mutual dependency of users and producers of services. The productivity of manufacturing enterprises is influenced by their usage and purchase of business-related services. How is outsourcing of services or take-up of new innovative services products influencing the performance of manufacturing enterprises and how is the increasing interdependence between manufacturing and services enterprises influencing the overall productivity growth?

Annex table IV.1: Annual labour productivity growth 1979-2001.

	EU 15			US		
	1979-90	1990-95	1995-01	1979-90	1990-95	1995-01
Total economy	2,2	2,3	1,7	1,4	1,1	2,3
Manufacturing	3,4	3,5	2,3	3,4	3,6	3,8
Electricity, gas and water supply	2,7	3,6	5,7	1,1	1,8	0,1
Distributive trades	1,3	1,9	1	1,8	1,5	5,1
Transport	2,8	3,8	2,3	3,9	2,2	2,6
Communications	5,2	6,2	8,9	1,4	2,4	6,9
Financial services	2,2	1	2,8	-0,7	1,7	5,2
Business services*	0,7	0,7	0,3	0,1	0	0

* includes real estate

Source: O'Mahony and van Ark (ed.) 2003 industry database.

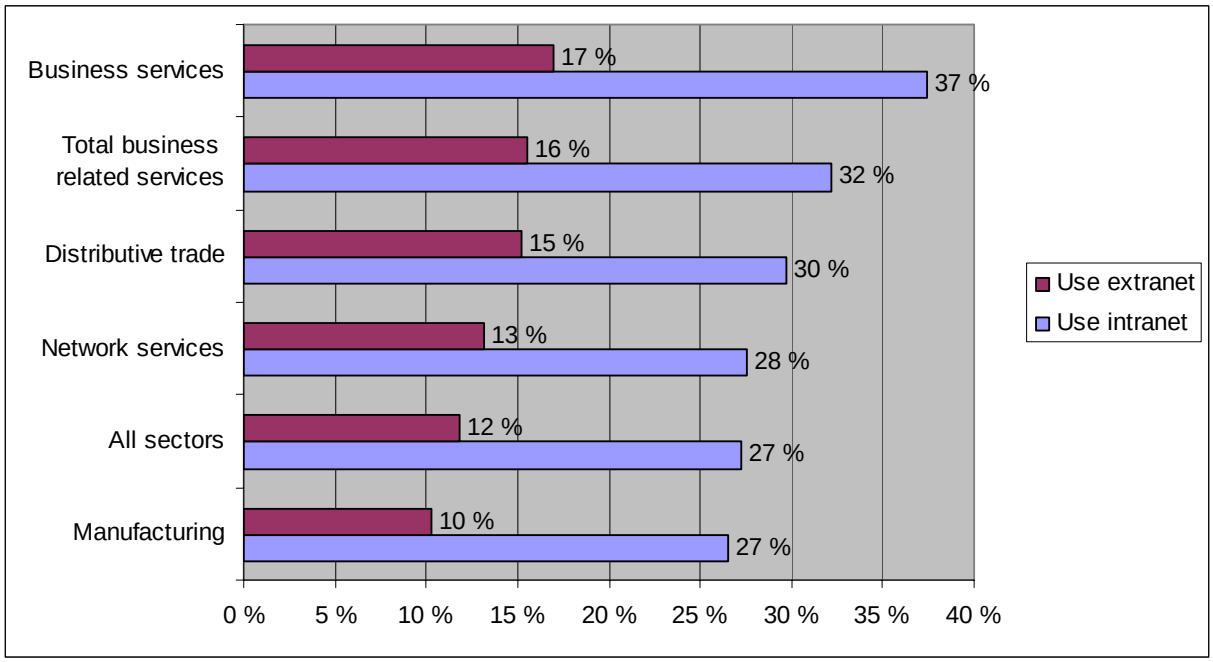
Annex table IV.2: Contribution of business-related services to annual labour productivity growth 1979-2001 as a share of total growth

	US			EU 15		
	1979-90	1990-95	1995-01	1979-90	1990-95	1995-01
Total economy growth rate	1,26	1,099	2,25	2,249	2,285	1,712
Contribution to labour productivity in per cent						
Network services	4,8	16,9	7,2	15,4	15,0	23,4
Distributive trade	27,4	23,0	32,7	11,9	14,4	11,7
Financial services	0,9	6,9	20,0	9,6	4,3	8,4
Business services	28,7	18,4	15,4	15,0	17,7	30,1
Business -related services	**61,7**	**65,2**	**75,2**	**51,8**	**51,4**	**73,6**

Source: Calculations based on O'Mahony and van Ark (ed.) 2003 industry database.

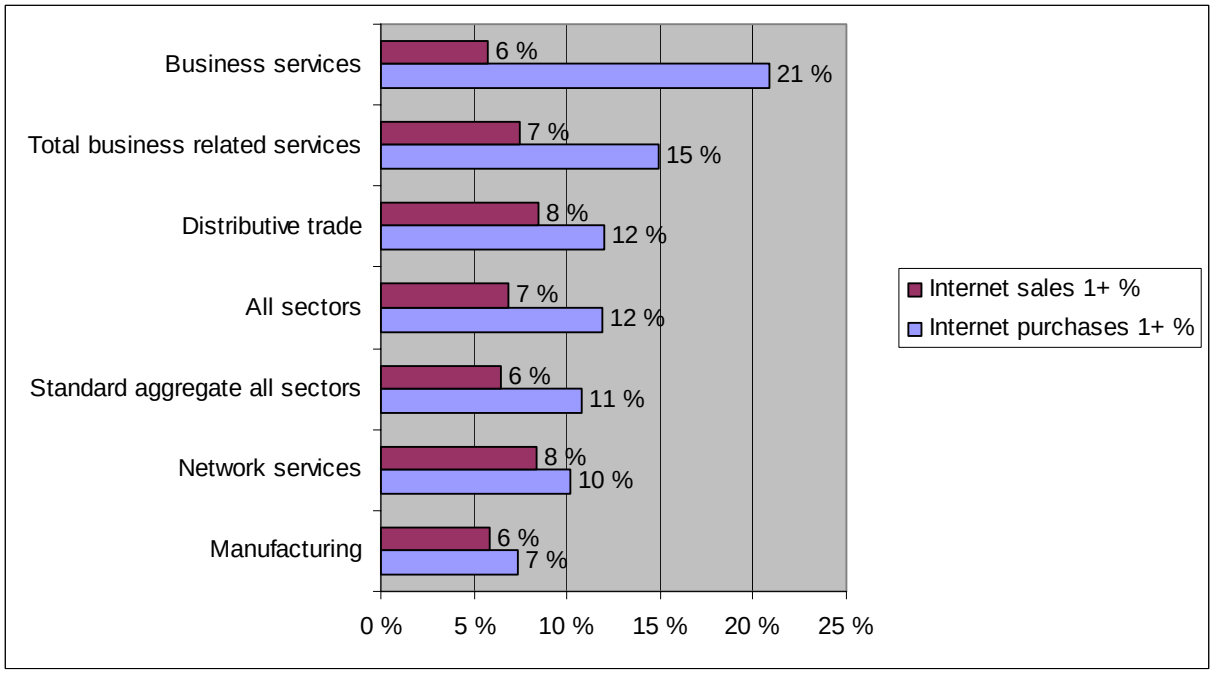
Chapter V: Productivity enhancing factor: Use of ICT

Annex figure V.1: Share of enterprises using Intranet and Extranet by sector in EU15, 2003.



Souce: EUROSTAT, community survey on ICT usage in enterprises 2003.

Annex figure V.2: Share of enterprises having internet purchases and sales by sector in EU15, 2003.



Source: EUROSTAT, community survey on ICT usage in enterprises 2003.

Chapter VI: Productivity enhancing factor: R&D and innovation

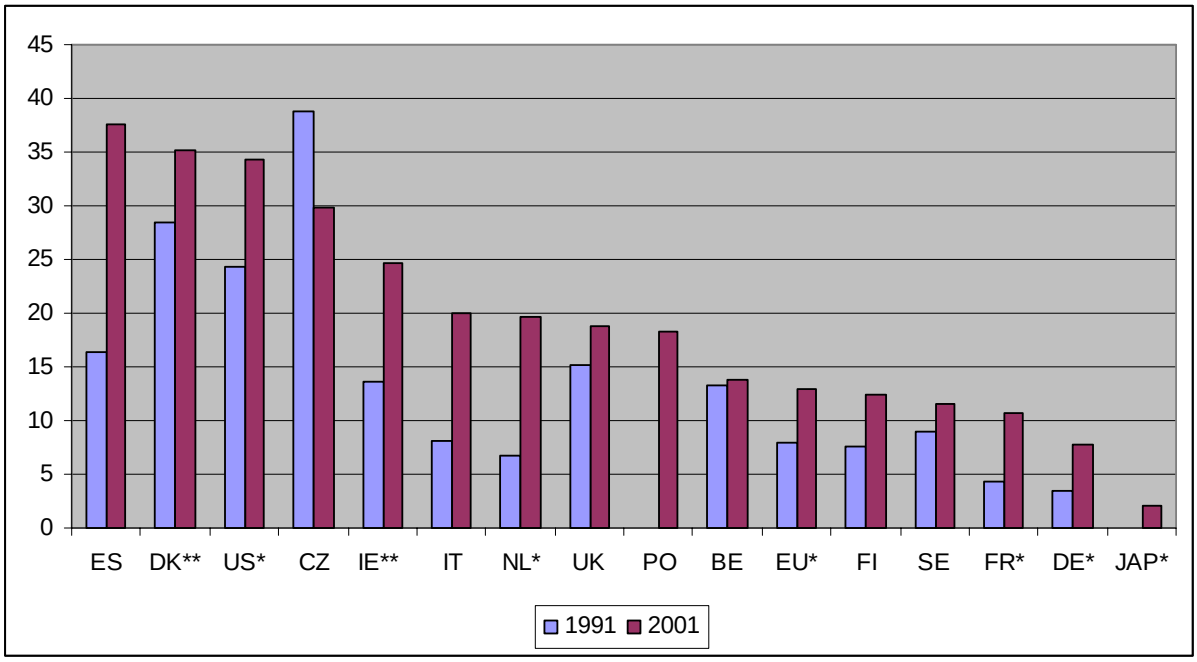
Annex table VI.1: Research and development expenditure in industry 2001. (Millions of current PPP US dollars)

	Manufactu -ring	Services	Wholesale and retail trade	Communic ation	Business services	Computer services	R&D	Total business enterprises
1.1.								
Belgium	3768	624	45	69	415	177	10	4546
Czech republic	832	363	15	0	290	30	238	1218
Finland	2812	413	2	-	-	149	-	3325
France*	17469	2183	-	-	1122	527	-	20548
Germany	34562	3191	-	-	2606	-	931	38036
Italy	6793	1704	50	9	1422	223	1010	8558
Netherlands*	3657	947	192	90	528	261	119	4815
Poland	642	169	2	47	32	0	30	926
UK	15672	3712	86	-	2435	1130	770	19796
Spain	2587	1619	30	369	1155	268	719	4311
Sweden	6710	887	5		682	387	272	7680
1.1.1.								
United States*	129594	68564	25132	1407	-	14799	14018	199539
Korea	14048	2137	75	515	1504	1093	56	16957
Japan	69243	5504	301	-	5064	1227	3688	76455

* 2000

Source: *Research and development expenditure in industry database 1987-2001 (OECD).*

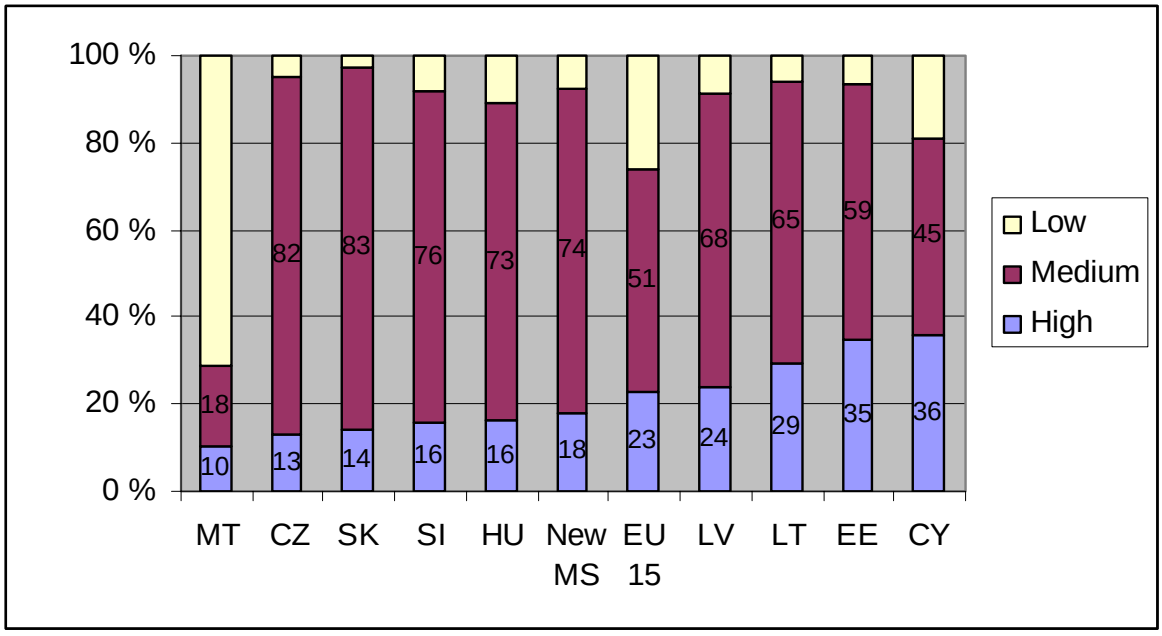
Annex figure VI.1. Share of services in business R&D



*Source: OECD, ANBERD database July 2003, *=2000, **=1999.*

Chapter VII: Productivity enhancing factor: Human capital

Annex figure VII.1: Breakdown of skills in business-related services 2002, new Member States and EU 15.



Source: Eurostat, LFS- Spring data. New Member States without PL.

Annex table VII.1: Percentage of the total hours in CVT courses by field of training and NACE, EU 15 and new Member States.

	Business-r	All sectors	Manufcatu	Network se	Distributive	Financial s	Business s
EU 15							
Languages	3	4	7	4	3	4	3
Sales and Marketing	11	9	5	6	20	19	6
Accounting, finance	7	5	3	4	4	13	8
Management and administration	12	11	9	12	14	13	8
Office work	2	2	1	2	2	3	2
Personal skills/development, working life	12	12	10	11	14	13	10
Computer science/Computer use	16	17	17	14	13	15	22
Engineering and manufacturing	12	16	27	10	13	3	17
Environment protection, occupational health and safety	8	9	10	10	6	5	9
Services	7	5	1	16	2	3	6
Other field of training	10	10	9	10	10	10	10
New Member States							
Languages	11	12	13	9	12	13	13
Sales and Marketing	10	7	5	4	23	8	11
Accounting, finance	11	8	6	7	11	23	9
Management and administration	7	7	8	5	8	7	8
Office work	2	1	1	1	1	5	1
Personal skills/development, working life	7	8	10	7	9	10	4
Computer science/Computer use	14	11	7	10	9	17	22
Engineering and manufacturing	12	17	24	18	7	4	10
Environment protection, occupational health and safety	4	6	8	5	5	1	4
Services	7	5	2	9	5	1	10
Other field of training	16	17	16	25	10	10	9

Source: Eurostat, CVTS2. Excluding Cyprus, Malta and Slovakia.

Annex table VII.2: Costs of CVT courses as a percentage of total labour costs (all enterprises)

COUNTRY	. SECTORS	) SERVICES	ACTURING	NETWORK	TRIBUTIVE	FINANCIAL	BUSINESS
		SERVICES		SERVICES	TRADE	SERVICES	SERVICES
EU15	2,3	2,7	1,9	2,6	1,9	2,9	3,5
EU25	2,3	2,7	1,9	2,6	1,9	2,9	3,5
New MS	1,5	2,0	1,1	2,0	1,2	3,4	2,5
AT	1,3	1,8	1,1	1,8	1,3	3,7	1,4
BE	1,6	1,8	1,5	1,6	1,4	2,0	2,3
DE	1,5	1,9	1,3	1,8	0,9	2,5	2,6
DK	3,0	3,2	2,6	3,7	2,0	4,4	5,3
ES	1,5	1,8	1,5	2,0	1,3	2,5	1,5
FI	2,4	3,0	2,1	4,1	2,0	3,1	3,4
FR	2,4	2,7	2,0	3,3	1,8	3,3	2,8
GR	0,9	1,0	1,0	0,2	1,0	1,4	1,0
IE	2,4	2,0	2,5	2,3	1,4	2,0	2,4
IT	1,7	2,3	1,2	1,9	1,5	2,8	3,1
LU	1,9	2,2	1,9	0,8	1,5	2,5	4,5
NL	2,8	3,2	2,3	2,9	2,2	5,4	3,5
PT	1,2	1,7	1,0	1,7	1,0	2,6	2,0
SE	2,8	3,0	2,6	3,4	2,0	3,0	3,5
UK	3,6	3,8	3,7	3,2	3,5	3,2	5,2
CZ	1,9	2,7	1,4	2,7	1,4	5,0	3,3
EE	1,8	2,6	0,9	1,7	3,7	4,8	1,9
HU	1,2	1,6	0,9	1,6	1,1	1,7	2,1
LT	0,8	1,2	0,6	1,5	0,5	1,6	1,1
LV	1,1	1,6	0,5	1,7	1,2	2,9	1,6
PL	0,8	1,0	0,8	0,8	0,9	1,7	1,2
SI	1,3	1,7	1,2	2,0	0,7	2,6	2,0

Source: Eurostat, CVTS2. Note UK not comparable with other countries due to the omission of the indirect labour costs in the total labour costs data. Excluding Cyprus, Malta and Slovakia.

Chapter VIII: International trade and foreign direct investment

Annex table VIII.1: Key data on total international trade in business-related services: EU15 breakdown by main sector

European Union 15	*Exports (X) 2002 (*)*	*Annual Growth Rate X 96/02*	*Imports (M) 2002 (*)*	*Annual Growth Rate M 96/02*	*(X-M)/ Total services 2002*	*(X+M)/ Total economy 2002*	*Net position (X-M) 2002*	*Coverage ratio (X/M)*
Goods	2554969	9%	2423385	10%	335%	77%	131584	1.05
Services	751100	12%	734040	12%	100%	23%	17060	1.02
BRS	473015	14%	434605	14%	61%	14%	38410	1.09
Business Serv.	182118	20%	173858	20%	24%	6%	8260	1.05
Commerce	37008	8%	41136	13%	5%	1%	-4128	0.90
Transport	156275	8%	157550	8%	21%	5%	-1275	0.99
Communications	16846	23%	18408	24%	2%	1%	-1562	0.92
Financial	80768	23%	43653	17%	8%	2%	37115	1.85

MIO_EUR Millions of euro (from 1.1.1999)/Millions of ECU (up to 31.12.1998)

Source: Based on International Trade Statistics 2002, Eurostat New Cronos, 2004

Annex table VIII.2: Key data on EU international trade in business-related services: Intra EU trade versus Extra EU trade

Ratio: Intra EU trade / Extra EU trade	*2002*		*Difference 2002-1996*	
	Exports	*Imports*	*Exports*	*Imports*
Goods	1.61	1.62	-1.0%	-0.9%
Services	1.23	1.35	0.4%	0.8%
Business related services	1.11	1.36	0.1%	1.5%
Business Services	1.25	1.39	1.5%	-0.8%
Transportation	0.98	1.16	-1.8%	0.5%
Communications	1.87	1.66	9.6%	6.7%
Insurance	0.71	2.19	1.6%	1.6%
Financial	1.31	1.79	1.7%	7.7%
Distributive trades	0.97	1.54	-2.5%	7.0%

Annual growth rates 1996-2002: **intra EU and extra EU trade**	*Intra-EU*		*Extra-EU*	
	Exports	*Imports*	*Exports*	*Imports*
Goods	8.7%	9.5%	10.4%	10.9%
Services	12.0%	12.4%	11.3%	11.2%
Business related services	14.3%	14.8%	14.1%	12.2%
Business Services	21.3%	19.2%	18.1%	21.0%
Transportation	6.6%	8.0%	9.4%	7.3%
Communications	30.6%	30.0%	13.3%	16.6%
Insurance	30.3%	14.5%	26.2%	11.8%
Financial	22.5%	25.2%	18.9%	11.9%
Distributive trades	5.8%	18.5%	9.7%	8.0%

Source: Based on International Trade Statistics 2002, Eurostat New Cronos, 2004

Annex Table VIII.3: Key data on total international trade in business-related services: EU15 breakdown by country

	Exports (X)			***Imports (M)***			***Net position (X_M)***	***Coverage rate (X/M)***
	2002	**EU15= 100**	**Annual G. Rate 96/02**	**2002**	**EU15= 100**	**Annual G. Rate 96/02**	**2002**	**2002**
EU15 European Union (15 countries)	473015	100.0%	14.2%	434605	100%	13.6%	38410	1.09
BLEU Belgo-Luxembourg	43053	3.1%	17.9%	32622	7.5%	17.5%	10431	1.32
DE Germany	76290	23.0%	13.7%	90149	20.7%	14.7%	-13859	0.85
GR Greece	10328	1.5%	12.9%	6846	1.6%	43.3%	3482	1.51
ES Spain	27809	7.6%	21.2%	28851	6.6%	21.7%	-1042	0.96
FR France	47845	16.6%	5.6%	45187	10.4%	6.4%	2658	1.06
IE Ireland	25823	1.4%	184.4%	27712	6.4%	66.0%	-1889	0.93
IT Italy	31094	13.7%	3.5%	42310	9.7%	3.1%	-11216	0.73

NL Netherlands	44108	4.8%	8.9%	41586	9.6%	14.3%	2522	1.06
AT Austria	15046	2.4%	12.4%	10944	2.5%	7.8%	4102	1.37
PT Portugal	3554	1.4%	11.2%	3888	0.9%	8.6%	-334	0.91
FI Finland	3966	1.5%	-0.9%	5468	1.3%	3.9%	-1502	0.73
SE Sweden	17930	2.8%	25.1%	16164	3.7%	24.8%	1766	1.11
UK United Kingdom	100745	18.1%	20.7%	57581	13.2%	17.8%	43164	1.75
NO Norway	17221	2.2%	13.6%	11493	2.6%	12.3%	5728	1.50
CY Cyprus	2297	0.1%	101.9%	1693	0.4%	35.3%	604	1.36
CZ Czech Republic	3965	0.9%	8.1%	4569	1.1%	17.9%	-604	0.87
EE Estonia	1417	0.1%		1082	0.2%		335	1.31
HU Hungary	3593	0.8%		4538	1.0%		-945	0.79
LT Lithuania	958	0.2%		556	0.1%		402	1.72
LV Latvia	1129	0.1%		473	0.1%		656	2.39
PL Poland	5353	2.2%	6.2%	5116	1.2%		237	1.05
RO Romania	1929	0.5%	33.4%	1866	0.4%	16.5%	63	1.03
SI Slovenia	1184	0.3%	15.4%	985	0.2%	9.9%	199	1.20
SK Slovak Republic	1971	0.3%	16.8%	1789	0.4%	12.2%	182	1.10
US United States	131762	120.9%	13.2%	124145	28.6%	16.8%	7617	1.06
JP Japan	48887	46.0%	4.2%	68001	15.6%	2.3%	-19114	0.72

BRS, US and Japan without Merchanting

Not enough data for Denmark and Malta

Source: Based on International Trade Statistics 2002, Eurostat New Cronos, 2004

Annex table VIII.4: Key statistics on FDI in business-related services. EU stocks in 2001.

	Volume in Mio Euro FDI *All* countries of the world		*Relative level Services=100*		*Annual Growth rates 1996/2001*	
	Outward	*Inward*	*Outward*	*Inward*	*Outward*	*Inward*
Total	3960083	3133226	163%	155%	50%	44%
Manufacturing	1184171	916031	49%	45%	35%	40%
Total services	2435074	2017024	100%	100%	60%	50%
Business-related services	2303734	1915638	95%	95%	62%	50%
Trade and repairs	238815	269634	10%	13%	30%	27%
Transport	54350	37866	2%	2%	66%	67%
Telecommunications	422406	189249	17%	9%	1454%	727%
Financial intermediation	773353	487932	32%	24%	37%	30%
Business services	814810	930957	33%	46%	73%	64%

Source: Based on FDI, Eurostat New Cronos, 2004

Annex table VIII.5: Key statistics on FDI in business-related services. EU15 stocks in 2001. Breakdown by country (available data)

	Outward	Inward	Outward/inward	Outward	Inward	Outward/inward
GEO	2001	2001	2001	1996/2001	1996/2001	1996/2001
EUR 15	2311973	1931669	1.20	63.0%	50.9%	3.4%
DK Denmark	61414	65633	0.94	68.6%	93.7%	-4.4%
DE Germany	487691	411007	1.19	48.1%	50.3%	-0.6%
GR Greece	6033	6197	0.97			
FR France	373795	246187	1.52	78.5%	62.8%	3.8%
NL Netherlands	198084	192304	1.03	33.2%	55.0%	-5.8%
AT Austria	22745	28133	0.81	49.9%	43.4%	2.0%
PT Portugal	23666	26956	0.88	167.2%	40.5%	41.9%
UK United Kingdom	492986	328784	1.50	85.9%	65.9%	4.6%

Growth rates at current prices

Source: Based on FDI, Eurostat New Cronos, 2004

Annex table VIII.6: Key statistics on FDI in business-related services. EU15 stocks in 2001. Intra-EU FDI versus Extra-EU FDI

	Intra-EU/Extra-EU 2001		*Intra-EU/Extra-EU 1996*		*Intra-EU/Extra-EU. Trends 2001-1996*	
	Outward	*Inward*	*Outward*	*Inward*	*Outward*	*Inward*
Total	1.23	2.08	1.09	1.31	0.13	0.77
Manufacturing	1.00	1.87	0.82	1.05	0.19	0.82
Total services	1.49	2.13	1.57	1.52	-0.07	0.61
Business-related services	1.52	2.13	1.61	1.53	-0.09	0.60
Trade and repairs	1.37	2.13	1.78	1.35	-0.41	0.79
Transport	1.40	4.52	0.76	1.02	0.65	3.50
Telecommunications	2.65	5.44	1.66	1.12	0.98	4.31
Financial intermediation	1.19	1.18	1.79	1.20	-0.61	-0.02
Total business services	1.52	2.48	1.36	2.14	0.16	0.35

Source: Based on FDI, Eurostat New Cronos, 2004

Annex table VIII.7: Number of mergers and acquisitions in business-related services (Total number of operations between 1993 and 2003)

	Purchases (Extra EU15)	**Relative Services=100 %**	**Sales (Extra-EU)**	**Relative Services=100 %**	**Difference: Purchases /sales**	**Number of Intra-EU deals**
Total of sectors	16590	191%	1739	173%	10	16618
Primary sector	147	2%	9	1%	17	71
Manufacturing	7745	89%	723	72%	11	7379
Services	8698	100%	1008	100%	9	9168
Network industries	1951	22%	194	19%	10	1885
Distribution	1301	15%	157	16%	8	1940
Financial and real estate	2278	26%	194	19%	12	1840
Business services	2615	30%	361	36%	7	2925
Business-related services	8145	94%	905.5	90%	9	8590
Other services	553	6%	102	10%	5	578

Source: DG ECFIN, MASI Database