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NEW PROFESSIONAL AND BUSINESS-RELATED SERVICES STATUS AND PROSPECTS

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EXECUTIVE SUMMARY

Services are deemed as current and future motor for growth and innovation in all sectors of the economy in Europe. The economic importance of services has grown in the last years. For instance, services accounted for EUR 6.905 billion of value added in 2005 and employment in services represented 68.6 % of the total employment in 2006.

Scope of the study

The present study aims, firstly, at identifying new professional and business services, understanding the dynamics of their development, as well as analysing the wider business environment in which they emerge. In particular, relevant EU policies and legislations and potential differences in the regulatory framework in place in different Member States as well as their impact on providers and users are highlighted.

Secondly, the study displays how professional and business services are classified in the European classification of economic activities, as well as explores which challenges are related to the use of this classification for analysing the sector of business and professional services – in particular against the background of the transition from NACE Rev. 1.1 to NACE Rev. 2.

Thirdly, the study provides an overview of current standardisation and certification activities at European and international level in the field of services, as well as, by way of example, in two European countries among the most active ones in service standardisation, namely France and Germany.

Finally, the challenges related to standardisation in services, as well as the expected impact of standardisation on service providers and consumers are analysed. In particular, the question whether standards for business and professional services contribute to strengthen the Single Market in this sector is addressed. The needs for future standardisation activities are explored, and recommendations for a future standardisation approach are outlined.

Economic importance of business and professional services

The demand for business and professional services has grown as a result of the increasing 'tertiarisation' of the economy, i.e. the extension of the notion of 'service' to all sectors of the economy. Providing services in combination with traditional goods, as well as specific customer-oriented solutions have become key competitive advantages, leading to the manufacturing and the service sectors becoming increasingly blurred. Even if many of these service components may be often carried out in-house, more and more, companies and organisations in all economic sectors rely on external business and professional services.

Definitions

Definitions used in this report for professional and business services are based on a service-user taxonomy. This leads to two main categories, namely consumer services which are provided directly to the individual consumer and provider services which are provided by business companies, non-profit organisations or by governments to business users rather than to the end-client. Professional services are part of consumer services (if provided to the end-user) or part of business services (if provided to business). In the latter case, the services are called KIBS: knowledge intensive business services. In addition, there are also other business related services, such as trade services, transport, energy services, etc.

The business services sector - and in particular KIBS - has increasingly gained importance: growth rates in this sector, in terms of value added, as well as employment, were significantly higher in the last years than in the rest of the economy and today, about 15 million people in the EU are employed in KIBS activities.

EU policy developments

As part of the strategy 'A single market for 21st century Europe' the European Commission introduced various EU policies and legislation. For instance, the Service Directive 2006/123/EC aims at simplifying administrative procedures, removing legal and administrative barriers to the establishment and development of service activities, strengthening the rights of consumers as service users, ensuring service quality and establishing effective administrative cooperation among the Member States.

Within the context of service quality different approaches are currently discussed, for instance codes of conduct and standardisation. In close connection to the Services Directive is the need for free movement of professionals within the EU: the EC Directive on the 'Recognition of professional qualifications' (Directive 2005/36/EC) was developed in order to facilitate the mobility of workers,

International developments

In recent years, international trade of business and professional services has been increasingly liberalised and a substantial amount of business services is now being exported by EU Member States (mostly to other EU MS) – albeit the export capacity in this sector, as well as the kind of business services mostly exported vary considerably from country to country.

Export activities can be motivated by the services provided being a specialised niche on the targeted market, the service providers belonging to international groups, the domestic market becoming too small, or the internet and outsourcing driving demand for services in more locations.

Depending on whether and how often 'face-to-face' contacts between service provider and purchaser are needed, several ways of exporting KIBS exist, ranging from telematics-based service provision to service provision by own staff sent out to the delivery place and service provision through opening an own office at the place of delivery – to name but the main ones.

Barriers

However, despite of recent liberalisation efforts, serious barriers still hamper trade in business and professional services and the Single Market for services is far from being achieved. Apart from barriers 'internal' to companies (e.g. limited financial and staff resources, lack of an adequate internationalisation strategy, etc.), 'external' barriers related to restrictive legislations and regulations are the main hurdles.

Indeed, business and professional services have traditionally been a highly regulated service sector. Whilst regulation is not *per se* negative and even necessary in some cases, some regulations related to fixed and recommended prices, advertising restrictions, market entry requirements and reserved rights, as well as business structure and multi-disciplinary practices have become obsolete due to the use of new ICT applications or are perceived as maintaining protectionism and being neither economically justified nor justified by the necessity of protecting clients' interests regarding the quality of services.

Despite recent activities of the EC aiming at improving the regulatory framework for professional services and the cross-border trade of them, considerable differences still exist between EU countries regarding the restrictiveness of regulations affecting KIBS, as well as between different kinds of KIBS, hampering innovation in the sector and leading to the distortion of competition within the EU, as well as to negative impacts on the consumer.

Drivers

Two main drivers to the development of new business and professional services can be identified. Firstly, the increasing demand for services in the whole economy, as well as the companies' intention to focus on their core-business have led to service activities being increasingly outsourced. As a consequence of trade liberalisation and the availability of new and affordable ICT applications, some outsourced services – mostly relatively unskilled work but also knowledge-intensive activities – have also increasingly been supplied from low-wage countries.

However, not all business services can be outsourced and substantial costs may be related to this, limiting the overall amount of outsourcing and offshoring of business and professional services. Secondly, the development of KIBS is also driven by the fact that the amount of knowledge, as well as its complexity, that individuals and societies as a whole have to deal with in modern knowledge societies, have grown during the last years and will further increase in the future.

Increasingly complex knowledge is needed in businesses to deal with changing societal, regulatory, economic and geopolitical environments. This leads to businesses and organisations more and more becoming 'learning organisations' and raises new challenges in terms of knowledge acquisition and management for which KIBS providers may provide an answer.

- Technology-based business services help businesses to keep pace with technological developments and to apply and integrate new technologies into their own specific business chain.
- New KIBS have emerged to provide support and advice in dealing with increasingly complex and diverse areas of regulation (e.g. regarding tax regulations or emissions regulations).
- Environmental KIBS have been developed that support the implementation of and ensure the compliance to environmental regulations regarding e.g. energy efficiency or emissions trading. The market for these KIBS is expected to grow further in the future.

Outlook

On a global scale, future growth of the KIBS sector is anticipated. The nature of the relationship between service providers and their clients is thereby expected to change towards a greater and longer-term involvement of the service provider in the whole business strategy of its clients.

Partly driven by the changing expectations of their clients, as well as the diffusion of ICT, the services supplied by KIBS are expected to increasingly converge. Likewise, convergence between the KIBS sector and other sectors of the economy may further increase. A growing internationalisation of KIBS providers is expected, as well as a concentration in some areas of the KIBS sector currently dominated by SMEs.

The development of the European KIBS sector will highly depend on whether the offshoring trend will last or whether we will see outsourcing moving back to domestic markets – as an answer to the offshoring costs, the difficulties for the client to assess quality of services outsourced, as well as the expected convergence (in the long-term) of wages between EU countries and offshoring destinations. Lastly, adequate knowledge management and the availability of a high-skilled workforce will be important success factors for KIBS providers.

Classification

For economic activities three classification systems ally: ISIC at world level, NACE at European level and national NACE at national level. Changes in economic structures and organisations, as well as technological developments, give rise to new activities and products, which may supersede existing activities and products implying constant challenges for the compilation of statistical classifications. The activity called 'Operation 2007' encompassed the revision of all classifications of the integrated system of economic classifications as presented above.

The revised ISIC (ISIC Rev. 4) was adopted by the UN Statistical Commission in March 2006. Consequently, the revised NACE Classification, NACE Rev. 2, was adopted in December 2006. Both revised classifications will enter in to force on 1 January 2008. At European level, NACE Rev. 2 is to be used, in general, for statistics referring to economic activities performed from 1 January 2008 onwards. Despite the revision of definition criteria for the classification, the main features of NACE have remained unchanged. However, new detail levels have been created to reflect different forms of production as well as emerging industries and services: NACE Rev. 1.1 had 17 sections and 62 divisions; NACE Rev. 2 has 21 sections and 88 divisions (Eurostat, 2007a). Annex 4 shows a table pointing out the correspondence between ISIC Rev.3 – NACE Rev. 1 and ISIC Rev. 4 – NACE Rev. 2 at the level of sections.

Given the importance of the business service sector, employing millions of people in Europe, *most* business services were allocated to the residual category '*Other business services*' (NACE 74) using a negative approach based on a residual criterion '*what is not in ..., not elsewhere classified'*. However, the use of the revised NACE Rev. 2 allowing a greater specification of the business services sector might – at least in the long run after a transition period – help to partly overcome these statistical difficulties: indeed, the class 74.87 '*Other business services*' of NACE Rev. 1.1 has been more specified in NACE Rev. 2 and split into eight different classes.

Nevertheless, two main limitations of using the NACE classification to describe business-related and professional services remain. Firstly, whilst *most* business and professional services are, indeed, included in the NACE divisions 72-74 often used to define those services, however, some of them, for instance, health-related services, belong to others divisions. Secondly, the limitation of using the NACE classification for studying business and professional services relates to the fact that the code allocated to a given industry or a given unit within a specific industry might not reflect the whole range of activities carried out by this industry or unit.

Standardisation

European standards for services are expected to provide momentum within the Single Market as the European standards did for the manufacturing sector. However, the number of available services standards does not represent the importance of this sector.

The intangibility as well as the specific character of the relation between service providers and consumers is challenging when standards are developed. The International Organisation for Standardisation (ISO) supports this view by stating in 2007 that the development for standards in the service sector is still 'one of [the] biggest challenges' for them.

Standardisation at European level is covered to a large extent by the European Committee for Standardization (CEN) which developed about 30 standards in the services sector until 2005. CEN is presently involved in 11 projects addressing standards for the service sector with support of a number of national standardisation bodies. The largest project is called CHESS – CEN Horizontal European Service Standardization Strategy with the aim to explore the feasibility of a generic approach to European service standardisation and its benefits compared to following a sector-specific approach.

European standards are systematically transposed, without any modification, into national standards in every country of the European Economic Area, with compulsory withdrawal of the conflicting national standards. Therefore, national standardisation bodies are often involved in developing European standards. Two national examples are presented in the study: France and Germany.

Needs for standards

Standardisation needs relate to aspects such as 'terminology of services', 'assessment of services', service 'specifications' and 'classification of services'. From the consumer's point of view, priority should be given to the elaboration of standards related to systems of registration, licensing, supervision, insolvency guarantees, complaints-handling procedures, the provision of key information concerning the service provider, conditions of sale, total price, options available, advice services, service delivery and after-sales service.

Another issue discussed in the context of standardisation is the question whether a harmonised code of conduct would be more appropriate for professional services than standards. However, the opinions on this are still controversial.

Another issue that might require further standardisation is public procurement. A further opening up of public procurement markets is seen as an important aspect of a future Single Market policy. Standardisation needs relate to specifications, helping to compare offers and allowing service providers to better demonstrate the competitiveness of their bid.

Standardisation in services is expected to allow service providers to increase their productivity since the coordination between different phases of the service-providing process and the value chain can be optimised. This leads to economies of scale and to a competitive advantage compared to competitors not using standards in their service-providing process.

Standards in services therefore enable competition to put a stronger focus on efficiency in providing standardised aspects, leading to an increased service quality, performance and safety, and to an intensified price competition. Standards are also expected to increase the transparency and quality of the services offered, using standards allowing and realising compatibility and interoperability to international networks. Standards furthermore support government policies related to competitiveness, innovation, the reduction of trade barriers, the protection of consumer interests, etc.

However, standards are often perceived as negative when they result in increased costs as well as less flexibility or innovation capacity. Too rigid standards might make it difficult for service suppliers to customise their products and also involve their clients in the development process.

Furthermore, since the use of standards increases the intensity of competition, individual or smaller companies may experience lower profits and difficulties surviving in the market. In addition, there is the risk of 'over standardisation'.

Impact on consumers

The expected impact on consumers from standards in services is highly controversial. Positive effects of a successful standardisation can be expected with regard to the quality of the relation between service providers and consumers, as well as regarding the price and quality of services and consumers' autonomy. Furthermore, standardisation in services can contribute to building and strengthening consumer confidence in the services provided, as well as reducing misunderstanding between service providers and consumers.

However, consumer representatives' main concern relates to the composition of standardisation bodies (all interested parties should be involved) and to the standardisation process itself as well as the way the standards are developed.

Which approach for standardisation?

A 'new approach' for service standardisation similar to the 'new approach' in standardisation of goods is discussed. However, no horizontal framework guiding standardisation for services (in particular, there is no common European approach for ensuring the safety and quality of services) exists to date. In addition, it is questionable that standards for services could and should be developed using the same structures and procedures as for product standardisation.

In the context whether standards should be compulsory or voluntary, self-regulations might be a solution since it holds the promise of allowing more flexibility and quicker adaptation to changing market conditions. A standard for self-regulation could be developed, for instance, by CEN addressing issues such as openness, independence, accountability, clear information requirements, adequate monitoring and enforcement provisions, adequate complaints-handling mechanisms, mechanisms for redress, procedures for regular revision of the codes and, most importantly, the involvement of stakeholders in the preparation of codes.

A horizontal versus a vertical approach for service standardisation standards is discussed. Horizontal approach means that a given standard is valid across different service sectors and a vertical approach implies that specific standards are only valid within a given service sector. The benefits that can be expected for the consumers from cross-sectoral safety standards are being addressed within the CEN Horizontal Service Standardisation Strategy.

The results of this survey will help to establish a uniform and transparent standardisation of service activities in the European market. However, with regard to business-related services and KIBS in particular, concrete standards should derive from an analysis of the service value chain and of the specificities of KIBS and should not be too rigid, in order to allow taking pace with the rapid evolution of the KIBS sector.

International standardisation

The discussion on which role the EU should play in international standardisation activities is controversial. A heavier presence of the European Commission may bear the risk of reducing the diversity of discussions – if the EU speaks with one voice – and the level of commitment of individual Member States.

However, standards should be compatible with other international standards in order not to hinder cross-border trade of services. In addition, the EU should move away from developing its own standards for services when (better) international standards already exist. In particular, more convergence with the main European trading partners – in particular with the USA, India, China, Japan, Argentina, Brazil and Russia is needed.

If standardisation activities are funded by the industrial organisations which are likely to profit from standards development this will hamper cross-sectoral and horizontal standards development. Since the composition of a balanced representation and active participation of all stakeholders seems to be vital in the standardisation process, funding schemes might have to be developed to support participation in the standardisation process of SMEs, as well as consumers.

GLOSSARY

List of abbreviations used in the main document

AFNOR	French standards association (French: 'Association française de normalisation')
ANEC	European Association for the Coordination of Consumer Representation in Standardisation (French: 'Association européenne pour la coordination de la représentation des consommateurs dans la normalisation')
ANZSIC	Australian and New Zealand Standard Industrial Classification
CEC	Commission of the European Communities
CEN	European Committee for Standardization
CEPLIS	European Council of the Liberal Professions (French: 'Conseil Européen des Professions Libérales')
CHESS	CEN Horizontal European Service Standardization Strategy
CPA	European Classification of Products by Activity
DIN	German Institute for Standardization (German: 'Deutsches Institut für Normung')
EC	European Commission
EFBRS	European Forum on Business Related Services
GATS	General Agreement on Trade in Services
GDP	Gross Domestic Product
ISIC	United Nations' International Standard Industrial Classification of all Economic Activities
ISO	International Organisation for Standardization
JSIC	Japan's Standard Industrial Classification
KIBS	Knowledge-intensive Business Services
LFS	Labour Force Survey
MS	Member States
NACE	European Classification of Economic Activities (French: 'Nomenclature Générale des Activités Économiques')
NAF	French classifications of economic activities (French 'Nomenclature d'Activités française')
NAICS	North American Industry Classification System
R&D	Research and Development
SBS	Structural Business Statistics
SME	Small and Medium-sized Enterprises
STS	Short-term Business Statistics
UN	United Nations

1. INTRODUCTION

With the transition to the knowledge-based economy, the bulk of economic activity, employment, and output are taking place in service sectors of the economy, reflecting the growth of marketed services as well as public services (CEC, 2002b). Beyond the obvious social role played by specific services like, for instance, educational or health services, power and water supply or public services (Graz et al., 2007), the economic importance of services has grown in the last years. According to national accounts, services[1] accounted for EUR 6.905 billion of value added in 2005. Their share in the EU-25's GDP rose from 63.4% and 63.8% between 1995 and 2005 (Alajkääskö, 2006). Employment in services as a share of total employment grew from 63.4% to 68.6% in the EU-27 between 1995 and 2006. These figures are even higher when considering only the former 25 EU Member States where employment in services grew from 65.3% to 70.3% (CEC, 2007) and this trend is expected to hold for the next years (Alajkääskö, 2006).

Future demand for services is expected to further increase (Alajkääskö, 2006). In particular, professional and business-related services – provided to private companies, as well as public organisations –, especially knowledge-intensive business services (KIBS), play a key role in the knowledge-based economy (Hirschfeld, 2007a), since they help to cope with the increasing amount of knowledge and information that individuals and society as the whole, as well as businesses and organizations have to deal with in their daily life or daily business. In this regard, they contribute to businesses and organizations being able to keep pace with changing socio-economic and regulatory environments, as well as technological developments. It is therefore hardly surprising that these services – and in particular KIBS – have increasingly gained importance: growth rates in business services, in terms of value added, as well as employment, were significantly higher in the last years than in the rest of the economy; today, about 15 million people in the EU are employed in KIBS activities (Hirschfeld, 2007a).

The importance of business services is furthermore underlined by the 'supporting' role they play in the innovation process – as pointed out in a recent OECD study (OECD, 2007): firms providing business services can be a '*source* of innovation if they play a role in initiating and developing innovation activities in client organisations. Alternatively, they may be *facilitators* of innovation if they support an organisation in the innovation process, such as when the innovation does not originate from the supplier, nor is it transferred from an external organisation to the client organisation. Similarly, business service firms can be *carriers* of innovation, playing a role in transferring existing knowledge among or within organisations, industries or networks, so that it can be applied into a new context' (OECD, 2007).

Services – and in particular professional and business-related services – are therefore deemed as current, as well as future motor for growth and innovation in all sectors of the economy in Europe (Alajkääskö, 2006; Hirschfeld, 2007b). A highly dynamic and innovative service sector, is hence a *sine qua non* for Europe being able to reach the goal set in the Lisbon strategy of making the EU the most dynamic and innovative region worldwide by 2010. However, serious concerns have emerged in the last years regarding whether this goal can actually be achieved: today, most EU countries lag behind the US and Japan in terms of innovation and in particular with regard to 'input' indicators such as the amount of public and private R&D, the stock of science and technology researchers.

[1] As defined by the sections G to P of NACE Classification Rev.1.1 valid until 1 January 2008.

Even, - and maybe more important - 'market conditions and knowledge networks are key areas of EU weakness [and] European companies are not sufficiently encouraged to innovate' (Ilzkovitz et al., 2007).

Strengthening the sector of business and professional services as a motor of innovation for the whole economy remains therefore crucial. Apart from the above, several challenges have to be faced regarding productivity and competitiveness. There is still a labour productivity gap in the service sector between the EU and the US (apart from sectors such as telecommunications) (Ilzkovitz et al., 2007). Furthermore, as pointed out by Ilzkovitz et al., 'with the increased tradability of services, competition at world level has increased' – beyond the US being traditionally dominant in sectors with high knowledge content (the top three providers of IT and business services, IBM Global Services, Accenture and HP Services, are based in the US), new competitors have emerged particularly in Asia (e.g. India and China) – and 'improvements in the competitive performance of the European services sectors have become more urgent' in order for them to be able to keep pace with this increasing competition, as well as to enter new markets in developing and emerging countries. The Internal Market for services has an important role to play here: it is 'a necessary prerequisite for Europe to fully seize these opportunities because it contributes to create a business environment providing incentives for firms to improve efficiency and invest in innovation' (Ilzkovitz et al., 2007; see also Hirschfeld, 2007b).

However, whereas the Single Market appears to be already a reality in manufacturing industries, there is, regarding services, still a large gap between the vision of an integrated European economy and reality in service industries (Breuss et al., 2006). As pointed out by the European Commission in a report published in 2002, services are prone to more complex and detailed rules than goods - due for instance to their complex and intangible nature, as well as the importance of knowledge and qualifications required in the service sector (CEC, 2002a).

Today, many impediments still hamper the free movement of services in the EU (Breuss et al., 2006) and the European service sector 'remains fragmented into separate national markets' (Kok, 2004). In particular, different regulations – e.g. technical standards, insurances and financial guarantees, to cite but a few – in different Member States may lead to long and complex administrative procedures, hindering a service provider to provide its services cross-border (CEC, 2002a). Small and medium-sized Enterprises (SMEs) appear to be disproportionately affected by these burdens: for them, 'the bulk of service providers, entry barriers in new EU markets are often prohibitive' (Breuss et al., 2006). Since SMEs are predominant in the service sector, this is clearly a 'considerable hindrance' in the development of the Internal Market for services (Breuss et al., 2006; Web-EC, 2007a).

Removing the barriers to the cross-border trade and use of services, and especially of business and professional services, within the EU remains therefore an integral part of the Lisbon Strategy and will help in making Europe the most dynamic and innovative knowledge economy worldwide by 2010 (Breuss et al., 2006; Web-EC, 2007a; CEC, 2002a). The implementation of the recently adopted European Services Directive is expected to highly contribute to achieve this goal and to result in increased quality of the final services provided to users of services – whether these users are further service providers, manufacturers or end-users.

2. DEFINITIONS

Basically, three types of taxonomies have been used in the literature to define and classify services (Toivonen, 2004):

Taxonomies based on the type of demand, i.e. of service users;

Taxonomies based on the form of supply, i.e. of service providers;

Taxonomies based on the nature of the service process or on the content and function of services.

The definitions of professional and business services provided in the present study are using the service-user-based taxonomy of the service sector. They are based on the recent work by Toivonen and Kox et al. since these studies discuss in detail various definitions (Toivonen, 2004; Kox et al., 2007a).

According to a **service-user-taxonomy**, services can be divided into two main pillars:

1) **'consumer services'** that are 'services targeted to end-use' and

2) **'producer services'** (or 'intermediate services') that are 'services which business firms, non-profit organisations and governments provide and usually sell to the producer rather than to the consumer' (Toivonen, 2004). Producer services are therefore targeted to corporate consumers and organisations whilst consumer services are targeted to individuals and households (Toivonen, 2004).

Figure 2.1 illustrates these two main categories and the corresponding sub-categories.

Consumer services can be grouped into two sub-categories:

1) professional services to individuals and

2) other services to individuals.

Producer services can be grouped into three sub-categories:

1) business services,

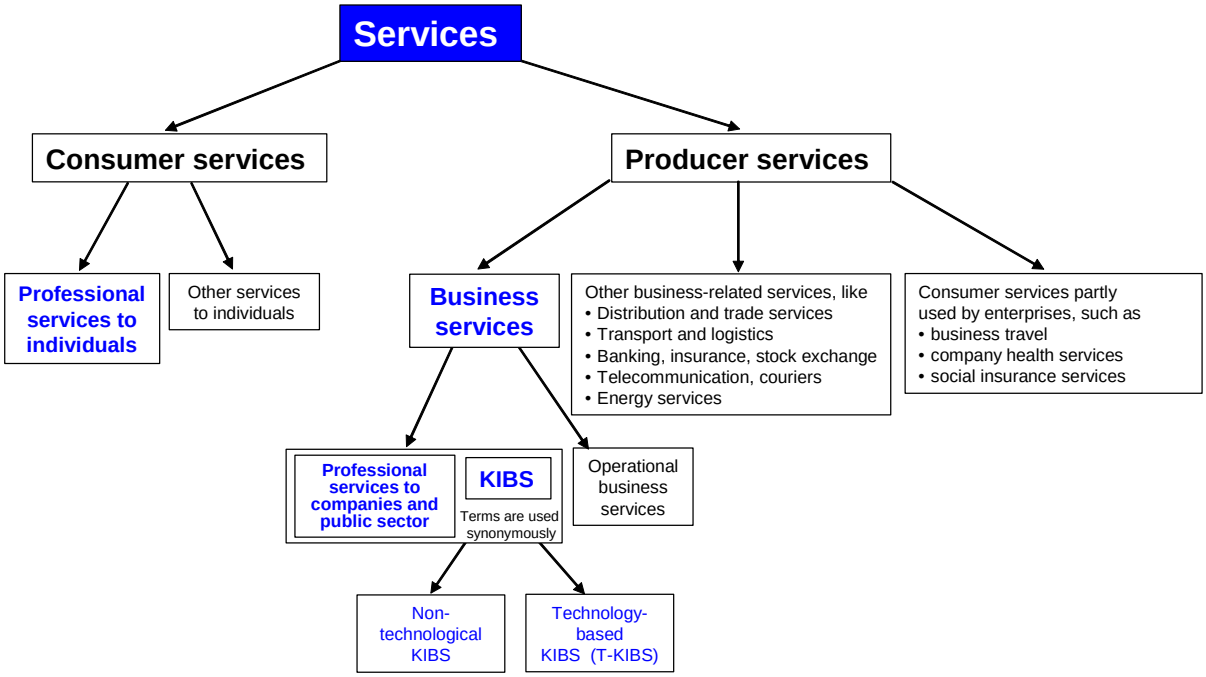
2) other business-related services (such as transport and logistics, distribution and trade services, etc.) and

3) consumer services which are partly used by companies.

The focus of this study lies on business services in particular on its sub-category knowledge-intensive business services (KIBS). KIBS are professional services to companies and can be further divided into technology-based KIBS (T-KIBS) and non-technological KIBS. The other sub-category of business services is operational business services.

The following sections define professional services, business services and KIBS in more detail.

Figure 2.1: Defining professional and business services using a service user based taxonomy.



Source: VDI TZ-ZTC – based on Toivonen, 2004; Kox et al., 2007a; OECD, 2007

2.1 Professional services

As defined by the European Commission, professional services, also known as liberal professions, are 'occupations requiring special training in the liberal arts or sciences, for example lawyers, notaries, engineers, architects, accountants and pharmacists' (CEC, 2004); they are therefore highly knowledge-based. Professional services are further specified by the European Directive on the recognition of professional qualifications as 'those practised on the basis of relevant professional qualifications in a personal, responsible and professionally independent capacity by those providing intellectual and conceptual services in the interest of the client and the public' (EC Directive 2005/36/EC).

Professional services are expected to contribute to improving the European competitiveness and fostering economic growth in Europe, and therefore to achieving the goal set by the Lisbon Strategy of making the European Union the most dynamic and competitive knowledge economy in the world by 2010 (CEC, 2004).

Based on the former European Classification of Economic Activities (NACE)[2], they already play a significant role in terms of employment, since employment in professional services is estimated to amount to a third of employment in 'other business services' as defined in the category 74 of the NACE classification. However, this is only a minimum figure due to the fact that not all professional services are listed in the NACE 74 category. The challenges related to using the NACE classification for delimiting professional services will be addressed in section 4.3.

[2] NACE Rev. 1.1 valid until 1 January 2008.

Furthermore, since competitive professional services have spillover effects on the whole economy, improving the quality of the professional services, as well as promoting innovation in this area is a necessity (CEC, 2004; CEC, 2005a; Web-EC, 2007b).

Professional services are usually provided to three types of user groups: (i) business, (ii) the public sector, and (iii) households (individuals) and therefore belong to consumer services as well as to business services, as displayed in figure 2.1.

Based on the service-user taxonomy presented above, those catering to the first and second group are KIBS. However, it should be mentioned that the literature often addresses the so-called 'KIBS sector'. The 'KIBS sector' encompasses thereby all firms providing professional services to businesses and the public sector, but also other firms (e.g. architects and lawyers, but also firms offering computer services) providing similar services – albeit their main clients are or can be end-consumers. Speaking of the 'KIBS sector' allows highlighting the specific knowledge-intensive character of the services provided, without differentiating whether these services are of intermediate nature or providing directly to the consumer.

Examples for KIBS or professional services to companies and the public sector are engineering services, IT consulting and marketing services. Other professional services, especially health-related services such as those supplied by pharmacists may be required only by private households. In addition, there are professional services such as real estate or tax consultancy services that may be provided to all three categories of users (CEC, 2005b; Miles, 2008).

2.2 Business services

Using a user-based taxonomy of services, business services are a subset of 'producer services' and can be defined as 'services that firms or organisations provide to other companies or organisations' of the private or public sector – which distinguishes them from services provided to end-users – and that 'are intermediate by nature, i.e. they are not targeted to end-use but are inputs in the manufacturing processes or in the production of other services' (Toivonen, 2004); they 'affect the quality and efficiency of the production activities, by complementing or substituting the in-house service functions' (Kox et al., 2007a).

However, as shown in figure 2.1, 'producer services', are a larger group of services including other services 'which rarely have been regarded as business services' (Toivonen, 2004), such as transportation, storage and trade, banking, insurance, telecommunication, energy services, etc. (Kox et al., 2007a) and often called 'business-related services' in many CEC publications[3]. Business services are therefore primarily intermediate inputs – often co-produced interactively with the client (Toivonen, 2004; Kox et al. 2007a).

Business services encompass a broad range of activities, including knowledge-intensive services requiring high professional skills such as:

[3] See, for instance, the CEC Communication on 'Competitiveness of business-related services and their contribution to the performance of European enterprises', where 'business-related services' are defined as encompassing 'business services, distributive trades, network services, and financial services'. *Source:* CEC, 'Competitiveness of business-related services and their contribution to the performance of European enterprises', where 'business-related services', Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, COM(2003) 747final, Brussels, 4 December 2003.

- highly advanced consultancy services, e.g. management consultancy or computer services;
- engineering and legal services;
- marketing services, e.g. advertising or fairs and exhibitions;
- labour intensive services, e.g. personnel services;

as well as operational services, e.g. cleaning and security services which are *per se* less knowledge-intensive (Web-EC, 2007d; OECD, 2007). However, operational services also include secretarial services (OECD, 2007), which are more ambiguous with regard to the level of (specific) knowledge needed to deliver them.

Activities ranging from software development to temporary-labour agencies, from equipment rental to legal consultancy, and from translation services to the management of complex engineering projects belong to business services (Kox et al. 2007a). Typically, business services are used at every stage of the supply chain, whether in the manufacturing or in the service sector (Nielsen, 2005).

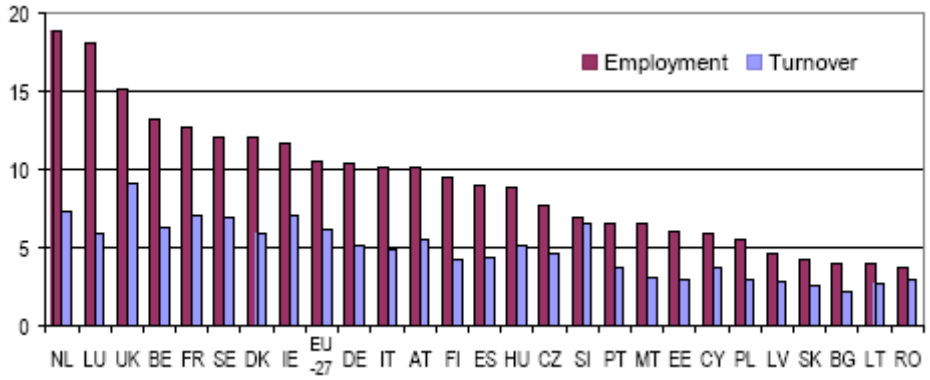
The importance of the sector of business services has rapidly grown in most OECD countries in the past 25-30 years. Long-time series for the evolution of the share of GDP of this sector are available at the OECD for five EU countries: since 1970, business services' share of GDP has more than doubled in Denmark and more than tripled in Germany; it has tripled in Austria and approximately doubled in Finland and France since 1980 (OECD, 2007). Business services therefore play an important role in the European economy today and are a major source of growth for the whole service sector (CEC, 2002b): providing business services was the main activity of more than 2.9 million enterprises in the EU-27 in 2004. Furthermore, business services are an important job provider and accounted for more than half of the employment growth in Europe in the last two decades: 13.1 million people were employed in the sector of business services in 2004 in the EU-27, generating a total gross turnover of EUR 1 178 billion, which is equivalent to 6.1% of total turnover respectively (Alajkääskö, 2007a). The sector of business services today is even greater than the entire industrial sector in some EU countries (Kox et al. 2007a).

Business services are expected to remain a driver of growth and development in the knowledge economy (Alajkääskö, 2007a; Web-EC, 2007d). In particular, as shown by an opinion poll among service providers in several EU Member States ('old' Member States as well as newly accessed countries[4]), IT services, advertising, market research and personnel related services will be increasingly needed in the future. Furthermore, due to their labour-intensive nature, business services have the high potential of leading to further job creation in the future (Alajkääskö, 2006; Alajkääskö, 2007a; Web-EC, 2007d).

Furthermore, since a recent study attested that purchasing external services is one of the factors supporting growth of SMEs (Anwar et al., 2007), it can be assumed that business services will help SMEs in Europe to realise their potential contribution to innovation and growth (Web-EC, 2007d). According to the opinion poll cited above, ensuring the access of SMEs to marketing and sales related services, renting and operational leasing services, as well as finance and insurance services, which are proportionally more often purchased by Medium-Sized enterprises than by larger ones, may be of particular importance (Alajkääskö, 2006).

[4] Service providers were asked in the following countries: Denmark, Germany (ex-GDR from 1991), Latvia, Lithuania, Poland, Slovenia, Finland and Sweden.

Figure 2.2: Specialisation in business services[5] in % on the non-financial business economy (NACE C to I and K)[6] – Stand: 2004.



Source: Alajkääskö, 2007a

2.3 Knowledge-intensive business services (KIBS)

Knowledge-intensive business services (KIBS) are professional services for companies and the public sector. KIBS rely heavily on professional knowledge, which may be scientific and technological knowledge, or more administrative and social. The difficulties in defining KIBS precisely relate, on the one hand, to the problems of defining and measuring largely intangible services in general and, on the other hand, to the specific problems related to the knowledge intensity of KIBS. However, although the importance of knowledge, and therefore the share of highly educated, has grown in all sectors of the economy, the KIBS sector can be characterized as employing a higher proportion of highly educated people – as well as displaying a higher grade of professionalisation (e.g. in terms of memberships of professional associations) – than most other industrial or service sectors (Toivonen, 2004; Kox et al., 2007a; Rijkers-Defrasne et al., 2007; EMCC, 2005).

Apart from the high education profile of their employees, KIBS can be differentiated from other business services through their service content and function (Toivonen, 2004; EMCC, 2005). 'KIBS offer information and knowledge to their clients' and for most of them – excluding, for instance, services provided by one-man service providers or related to facilities management – 'it is essential that they do not merely store or transfer information, but foster the development of knowledge through learning in networking' (Toivonen, 2004). KIBS provide therefore knowledge-intensive inputs to the business processes of organisations – be it private companies or public sector clients, as shown in figure 2.1 (Miles et al., 1995; Toivonen, 2004; EMCC, 2005).

Two main directions have been followed in the literature in order to define KIBS (Toivonen, 2004):

- based on the high proportion of expert labour in KIBS: according to this criterion, KIBS encompass computer and related activities; R&D services; professional services to businesses and legal, financial and management consultancies; advertising and marketing services; and technical services (see e.g. Strambach, 2001);

[5] NACE K72 and K74.1 to K74.5
[6] LU 2003, MT 2002, IE NACE C 2002, UK NACE G 2003, DE NACE E & G 2003, EL not available.

- based on the contributing role of KIBS in the knowledge formation of their clients; this criterion is particularly used in studies focusing on the relation between KIBS and innovation (see e.g. Gallouj, 2002).

In order to analyse the connection of KIBS to emerging technologies and innovation, KIBS are divided into two main groups: 1) technology-based KIBS (T-KIBS) and 2) non-technological KIBS. This allows analyses according to branches of industry (Toivonen, 2004). The table below presents an overview of technology-based and non-technological KIBS, as well as of KIBS combining both aspects (Bommakanti, 2005).

Table 2.1: Overview of the different types of KIBS broken down by the level of technology required for their delivery.

Technology-based KIBS	▪ Computer networks/telematics services (e.g. internet service providers, on-line databases); some telecommunications (especially new business services); ▪ Software; ▪ Other computer-related services - e.g. facilities management, web support services, disaster recovery and business continuity services; ▪ Training in new technologies; ▪ Design involving new technologies; ▪ Office services involving new office equipment); ▪ Those building services that involving new IT equipment such a building energy management systems; ▪ Management consultancy involving new technology; ▪ Technical engineering; ▪ Environmental services involving new technology; e.g. remediation; monitoring; ▪ Scientific/laboratory testing services; R&D consultancy.
Non-technological KIBS	▪ Marketing, market research, and advertising; ▪ Training (other than in new technologies); ▪ Specialized personnel pecruitment and headhunting; ▪ Design (other than that involving new technologies); ▪ Some financial services (e.g. securities and stock-market-related activities); office services (other than those involving new office equipment, and excluding 'physical' services like cleaning); ▪ Building services (e.g. architecture; surveying; construction engineering, but excluding services involving new IT equipment such as building energy management systems); ▪ Management consultancy (other than that involving new technology); ▪ Accounting and bookkeeping; ▪ Legal services; ▪ Environmental services (not involving new technology, e.g. environmental law; and not based on old technology e.g. elementary waste disposal services).
KIBS combining technological and non-technological aspects	▪ Architecture ▪ Design services

Source: Bommakanti, 2005

In practice, knowledge-intensive business services are often defined based on the European Classification of Economic Activities (NACE). Considering the NACE Classification Rev. 1.1, which was valid till 1 January 2008, KIBS used to be defined as involving most economic activities in the divisions 70-74 of the classification – as presented in the table below. Of course, some KIBS-related activities might also be found in other sectors – e.g. services related to manufacturing activities - but the definition based on the NACE sectors encompasses the main knowledge-intensive activities and underlines their knowledge character, e.g. through a high share of graduates employed (EMCC, 2005). The consequences of the revision of the NACE Classification on the definition of KIBS, as well as the limitations of using the NACE classification to describing the KIBS activities will be addressed in section 4.

Table 2.2: Main KIBS based on NACE Rev. 1.1.

NACE division 72: Computer and related activities
72.1: Hardware consultancy
72.2: Software consultancy and supply
72.3: Data processing
72.4: Database activities
72.5: Maintenance and repair of office, accounting and computing machinery
72.6: Other computer-related activities
NACE division 73: Research and experimental development
73.1: Research and experimental development on natural sciences and engineering
73.2: Research and experimental development on social science and humanities
NACE division 74: Other business activities
74.11: Legal activities
74.12: Accounting, book-keeping and auditing activities; tax consultancy
74.13: Market research and public opinion polling
74.14: Business and management consultancy activities
74.15: Management activities of holding companies
74.20: Architectural and engineering activities and related technical consultancy
74.3: Technical testing analysis
74.4: Advertising
74.5: Labour recruitment and provision of personnel
74.8: Miscellaneous business activities not elsewhere classified (nec)
74.81: Photographic activities
74.84: Other business activities nec
Note: The broad NACE divisions 70-74 include some sub-sectors that are not strictly KIBS, and thus have been omitted from this list: some parts of 74.6 (Investigation and security activities); 74.7 (Industrial cleaning); 74.82 (Packaging activities), 74.83 (Secretarial and translation activities). NACE 71, excluded from the list above, involves 'Renting of machinery and equipment without operator and of personal and household goods' which is often grouped together with these sectors. For purposes of statistical analysis, these sectors are often aggregated with 'real estate' and this group then, in turn, with 'financial intermediation'.

Source: EMCC, 2005

KIBS play an important role in Europe: they contributed in 2003 to approximately 7.6% of total economic output within EU countries (Hirschfeld, 2007b). Today, the KIBS sector employs about 15 million people in the EU (Hirschfeld, 2007a). Based on NACE Rev. 1.1, the main KIBS in Europe in terms of turnover, value added and persons employed are Computer services (K72.00); Legal, accounting and management services (K74.10); Architecture and engineering, technical testing (K74.20 & K74.30); Advertising (K74.40); Labour recruitment and provision of personnel (K74.50) (Alajkääskö, 2007a; Hirschfeld, 2007b).

By far, the most important sub-sector is legal, accounting and management services, as presented in the table below:

Table 2.3: EU-27 turnover, value added and employment in business services, by activity – Stand: 2004.

	Turnover		Value added		Persons employed	
	Million EUR	%	Million EUR	%	Thousands	%
Total business services (NACE K72 and K74.1 to K74.5)	**1 178306**	**100%**	**600 731**	**100%**	**13 144**	**100%**
Computer services (K72.00)	318 014	27%	157 107	26%	2 583	20%
Legal, accounting & management services (K74.10)	407 690	35%	224 177	37%	4 354	33%
Architecture & engineering, technical testing (K74.20 & K 74.30)	221 664	19%	109 495	18%	2 419	18%
Advertising (K74.40)	131 814	11%	33 967	6%	844 .	6%
Labour recruitment & provision of personnel (K74.50)	99 124	8%	76 045	13%	2 944	22%

Source: Alajkääskö, 2007a

Significant differences appear when considering the importance and make-up of the KIBS sector in individual EU Member States (Alajkääskö, 2007a; Hirschfeld, 2007b). More than 10% of all employees work in this sector in Luxembourg, the United Kingdom and the Netherlands, contrasting to only 2% of employees in this sector in Lithuania and Slovakia. Furthermore, the density of KIBS providers is particularly high in metropolitan areas, London being a typical example for metropolitan 'KIBS clusters'. This may be put down to the proximity of customers and suppliers, as well as educational institutions and the availability of highly qualified personnel ('knowledge workers') (Hirschfeld, 2007b; EMCC, 2006). Consequently, regional disparities may appear related to the availability of KIBS and companies settled in rural areas may have a more restricted access to KIBS and KIBS providers (EMCC, 2006).

The KIBS sector in Europe is characterised by a high share of small and micro companies, as well as a high share of start-ups compared to other economic sectors.

About 70% of the value created in business services in general in the former EU-25, and even more in areas such as law, accounting and management services and technology-related services, is due to micro, small and medium-sized enterprises. SMEs are even more productive – in terms of working productivity (defined as the ratio of added value to the number of employees) – than larger companies in some KIBS areas like advertising.

In terms of employment, about 70% of people working in the EU-25 in the business services sector are employees of micro-enterprises or SMEs. As pointed out by Hirschfeld, 'a "division of labour" has become established in many areas', large providers serving primarily large companies, also cross-border, whereas the clients of SMEs are mainly small firms located in the same country (Hirschfeld, 2007b; Eurostat, 2007b).

Start-ups account for nearly 11% of all firms providing business services (as much as 15% of companies delivering computer services) compared to only 8% of companies across all economic sectors.

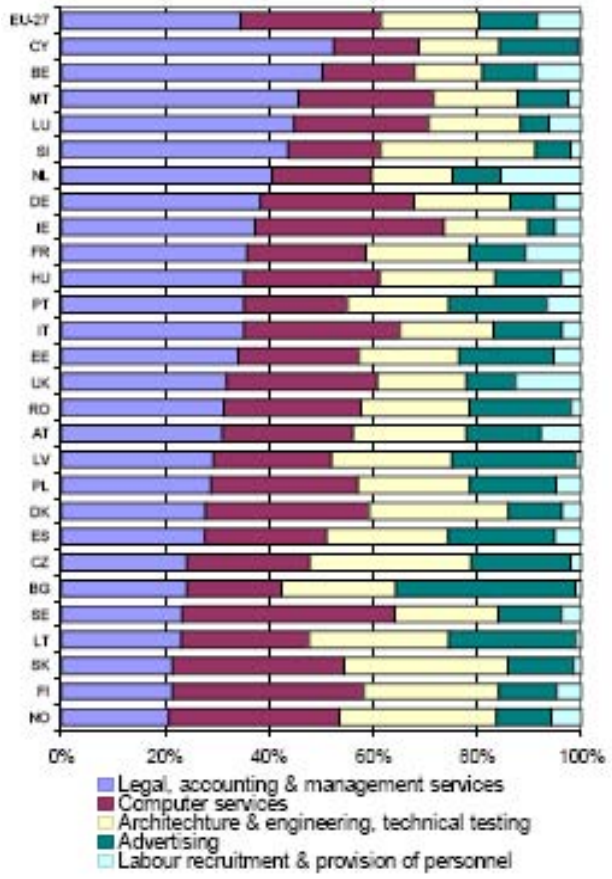
Several factors may explain the high share of start-ups in business services – ranging from the speed and spread of technological innovations, low formal hurdles to entry areas such as advertising and business consulting, the trend towards spin-outs (where a company splits off an own section as a separate business) and firms externalising part of their work by making employees subcontractors, etc.

However, it should be noted that more start-ups in business services do not survive the first two business years than is the case in the whole economy (Hirschfeld, 2007b; Miles 2008).

Distinguishing between the different types of KIBS, it can be pointed out that (Alajkääskö, 2007a):

- Legal, accounting and management services contributed to more than half of the total turnover in Cyprus and Belgium;
- 41% of Sweden's business service turnover is due to computer services;
- Whereas architecture, engineering and technical testing only make up an average of 19% of total turnover in the EU-27, this sector was a major contributor in Slovakia, the Czech Republic, Slovenia and Norway;
- Advertising was proportionally largest in Bulgaria;
- Labour recruitment and provision of personnel, which contributed on average to only 8% of turnover of business services, contributed to 15% of the sector total in the Netherlands, 13% in the United Kingdom and 11% in France.

Figure 2.3: KIBS turnover by activity (%) – Stand: 2004.



Source: Alajkääskö, 2007a

3. IDENTIFICATION OF EMERGING BUSINESS-RELATED SERVICES AND THEIR BUSINESS ENVIRONMENT

With the transition to the knowledge economy, the notion of 'service' extends to all sectors of the economy as an important management principle: the commercial and innovation strategies of all firms – whether they are actually providing raw materials, goods or intangible products – are oriented to responding to user requirements: providing services in combination with traditional products has become a key competitive advantage. The increasing presence of ICT applications and services embedded in many diverse types of products is a key illustration of this trend.

More attention is therefore increasingly being paid to service components of the client relationship (involvement of customers in product development, after-sales services, development of 'high-value integrated solutions' combining products and services tailored to the each customer's needs, etc.). Even more, firms in all sectors have recognised that their competitive advantage lies in the actual services they provide to their customers (e.g. maintenance, usage assistance, information provision, etc.) and not in the particular goods being sold.

In this sense, the manufacturing and the service sectors have converged and service occupations play an increasing role in the manufacturing sector too, leading to the increasing development of so-called customer-oriented services (CEC, 2002b; Rijkers-Defrasne et al., 2007; Pilat, 2006; EMCC, 2005; Kanerva, 2006; Nielsen, 2005; Montalvo et al., 2007; Idaka, 2006). For instance, the share of actual manufacturing activities in a computer fabrication plant, a semiconductor factory or an automobile assembly plant has amounted to only 10-20% of total activities whereas the main work actually relates to service activities (purchasing, human resources, supply chain, etc.).

Former manufacturing firms may even redefine themselves as service providers – IBM, the world's largest IT service organisation, may be the most prominent example: services sales exceeded the combined sales of software and hardware of IBM's sales in 2004 and accounted for more than 50% of all IBM's sales (Spohrer et al., 2005; Idaka, 2006). This trend is sometimes referred to as the 'servicisation' or 'servation' or 'tertiarisation' of the economy (EMCC, 2005). Even if these service occupations may be often carried out in-house, the demand for external services has also grown (EMCC, 2005). Even more, some former manufacturing companies, outsourcing their manufacturing part, turn themselves into services companies in terms of economic classifications of activities (Kanerva, 2006).

3.1 Liberalisation of international trade in services

During the last decades, international trade activities in services, encompassing the four types of deliveries as defined in the WTO General Agreement on Trade in Services (GATS) - namely cross-border trade of services, consumption abroad, establishment of a commercial presence abroad as well as the movement of natural persons when service providers dispatch their own staff members to other countries – has grown faster than trade in goods (Web-WTO, 2007; OECD, 2005).

Business services are no exception.

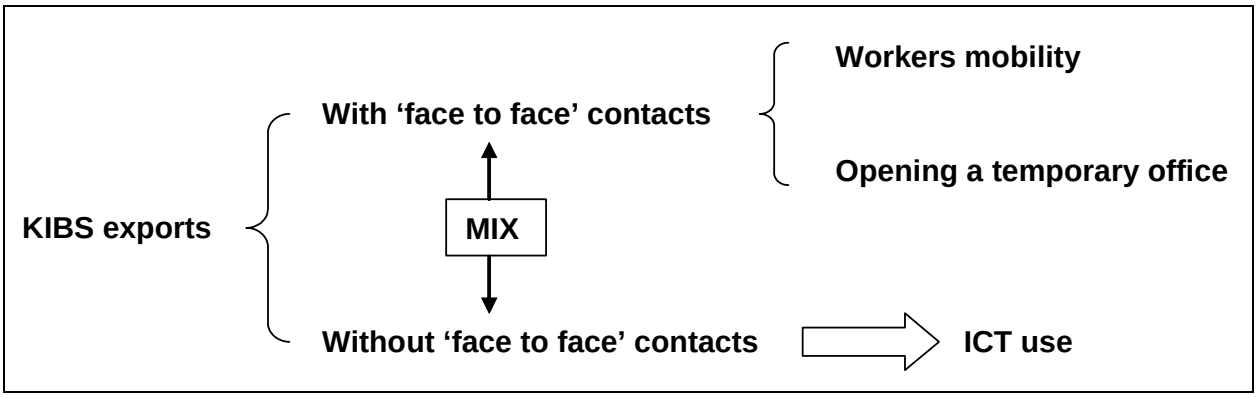
Based on the Structural Business Statistics data by Eurostat, a recent publication pointed out that the export of business services[7] in 12 countries of the EU-27 – including 7 old MS (Denmark, Germany, Greece, Spain, Finland, Sweden and the UK) as well as 5 new MS (Latvia, Lithuania, Romania, Slovenia, Slovakia) – plus Norway amount to 13% of the total turnover (EUR 79.4 billion in 2004).

Based on previous studies, González-López distinguishes three main ways of exporting KIBS that are not mutually exclusive and can be combined among one another (see Figure 3.1) (González-López, 2007):

- Telematics-based provision of services that do not require physical proximity, at least not on a permanent basis (e.g. delivery of computer services such as data treatment or operations control, or accounting consultancy activities);
- Service provision by own staff send out to the place of delivery in case the service provision requires only limited 'face-to-face' contact to the client (e.g. in service areas related to the certification of quality, environmental standards or to management and organisation consultancies);
- Service provision through the opening of a temporary office at the place of delivery in case the service delivery requires 'face-to-face' contact to the client over a longer period (e.g. technical assistance).

Other ways to export KIBS encompass, for instance, networking with an enterprise abroad, forming part of a joint venture with an enterprise abroad, or franchising contracts (Alajkääskö, 2007b; Miles, 2008).

Figure 3.1: KIBS exporting methods.



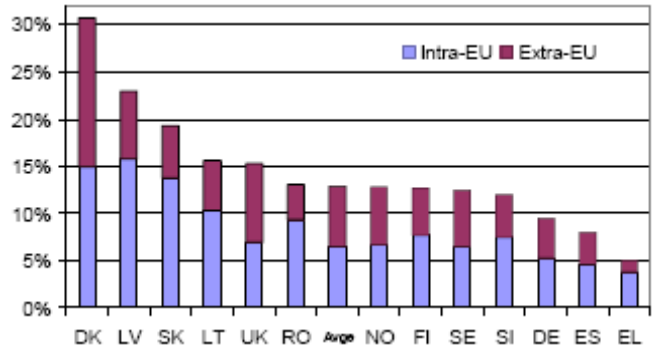
Source: González-López, 2007

The reasons for service providers engaging in export activities are very diverse, ranging from the services provided being a specialised niche on the targeted market to service providers belonging to multinational groups, the domestic market becoming too small, or the internet and outsourcing driving demand for services in more locations. On average, the share of exports intra-EU and extra-EU was approximately balanced; however, as illustrated by figure 3.2, there are sizeable differences in the export capacity of the different countries, as well as regarding whether exports are directed to other EU countries or to non-EU countries.

[7] In the study, business services encompassed the following categories of activities of the NACE classification Rev. 1.1: Computer and related activities (K72.00), Legal, accounting, bookkeeping and auditing activities, tax consultancy, market research and public opinion polling, business and management consultancy, holdings (K74.10), Architectural and engineering activities and related technical consultancy (K74.20), Technical testing and analysis (K74.30), Advertising (K74.40) and Labour recruitment and provision of personnel (K74.50).

More than 50% of business services exported from Denmark and the United Kingdom are directed to non-EU countries. In contrast, service providers in Germany, Spain and Greece are more focused on domestic markets. Furthermore it is worth noting that several relatively new MS like Latvia, Slovakia, Lithuania and Romania display a strong export capacity – higher than the average observed – which may be due to the comparative advantage of these countries with regard to the low wage levels (Alajkääskö, 2007b).

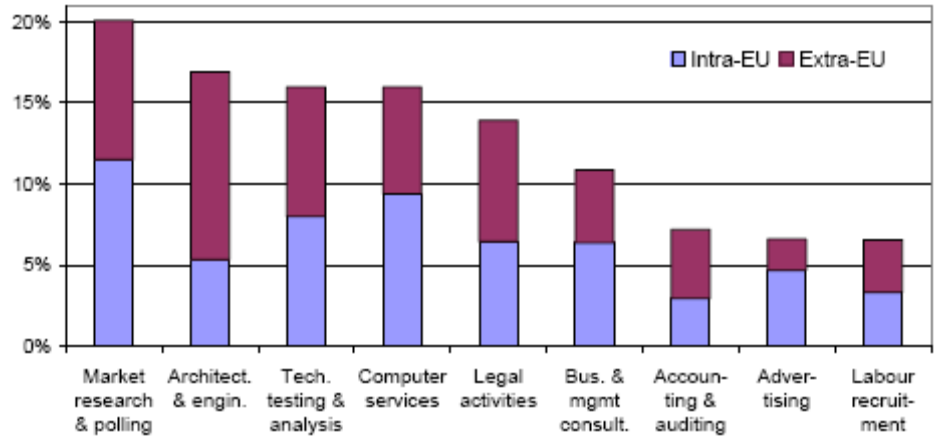
Figure 3.2: Business services exports as a share of total turnover (%)[8] – Stand: 2004.



Source: Alajkääskö, 2007b

Sizeable differences can also be observed when differentiating the type of business services exported, as well as the reasons why a given service is being exported (cf. figure 3.3 and figure 3.4). Market research and polling services, architectural and engineering activities, technical testing and analysis, as well as computer services, belong to the business services mostly exported – more than 15% of the total turnover is being exported – whereas accounting and auditing, and advertising, as well as labour recruitment services, are comparatively, obviously, less exported. This may be related to the fact that, for these activities, the proximity between service provider and consumer and the availability of specific knowledge – e.g. related to legislations and regulations in force – are important success factors (Alajkääskö, 2007b).

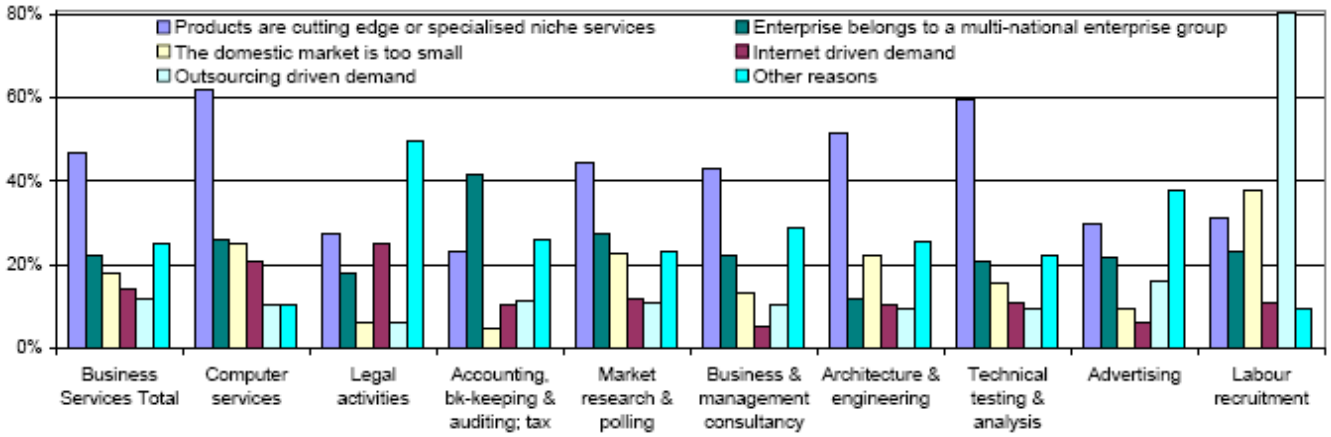
Figure 3.3: Business service exports as a share of total turnover, by activity (%) – Stand: 2004.



Source: Alajkääskö, 2007b

[8] The figure takes data from Denmark (DK), Latvia (LV), Slovakia (SK), Lithuania (LT), United Kingdom (UK), Romania (RO), Norway (NO), Finland (FI), Sweden (SE), Slovenia (SI), Germany (DE), Spain (ES) and Greece (EL) into account, and also displays the average (Avge) generated from these data.

Figure 3.4: Reasons for exporting reported for different types of business services as a share of exporting enterprises (multiple answers possible) – Stand: 2004.



Source: Alajkääskö, 2007b

International trade in services in general, and in business and professional services in particular, may be hampered by very diverse barriers (Annex 1 provides an overview of all kinds of barriers to trade in services). Among the barriers encountered by services providers are so-called internal barriers emerging, for example, from limited financial and staff resources that make it difficult for firms to internationalise their activities, or from the lack of an adequate internationalisation strategy. For 33% of the providers of business services in Europe, language barriers also play a role (Alajkääskö, 2007b). Besides internal barriers, so-called external barriers, related to different legislations and regulations – which will be highlighted in the next chapter – hinder services providers from internationalising their activities (Kandrova, 2007; CEC, 2007b).

As a consequence of international efforts – e.g. GATS negotiations of the WTO – and European efforts (e.g. related to the liberalisation of network industries, the recognition of qualifications, regulation improvements regarding services of general interest, e-commerce, audiovisual media services or professional services, services directive), the trade in services has increasingly become international (Alajkääskö, 2007b; CEC; 2007b).

Despite these liberalisation efforts, however, the share of services in world trade amounts to only 20% and does not reflect the importance of the service sector for world GDP. This also applies for Europe where the service sector, accounting for 70% of GDP, 68% of employment and 96% of the new jobs created, represents only 20% of intra-EU trade – even less than in the mid 90's (Kok, 2004).

This may be due to the specific character of services which are, by nature, often less tradable than goods and often have a local character. But even more significant is the fact that – unlike for trade in goods[9] – there is little difference between the trade of services between EU Member States and trade between the EU and other countries, suggesting that the European Single Market policies implemented so far in order to remove trade barriers within the EU, failed to achieve this goal in the service sector. Today, service trade barriers within the EU still remain and seem not to be lower than barriers affecting trade with non-EU countries. The export potential of services in general and of business services in particular seems, therefore, not to be fully exploited (Kandrova, 2007; Ilzkovitz et al. 2007).

[9] Trade for goods between EU25- Member States accounts for about 38% of European GDP, whereas trade of goods between the EU and third countries only accounts for 19% of European GDP. *Source:* Ilzkovitz et al, 2007.

Standards for services and especially international standards are expected to overcome part of these hurdles, as will be shown in section 5 (Kandrova, 2007; CEC, 2007a; Web-WTO, 2007; OECD, 2005).

Indeed, for 32% of the providers of business services in Europe, the lack of international standards for services is one of the barriers encountered when internationalising their activities; especially providers in Germany and Sweden consider this as a very important barrier. This lack of international standards seems to be particularly tricky as regards the exports in data processing, accounting and auditing (Alajkääskö, 2007b).

3.2 Business services: a highly regulated sector

The service sector has traditionally been a highly regulated economic sector and business services are no exception (Wölfl, 2005): business and professional services are both characterised by high levels of regulation. This regulation framework often includes national and European regulations (see section 3.3), as well as self-regulations and related practices (CEC, 2005a; CEC, 2004). The regulation of professional services is not *per se* negative; three main characteristics of the provision of professional services may even make some regulation necessary (OECD, 2007; CEC, 2004; Kox et al., 2007b):

Regulation may be efficient as well as useful when it helps overcome perceived market failure related to the asymmetry of information between providers of services and users. A typical feature of the provision of professional services is the fact that service providers display a high level of specific and/or technical knowledge that consumers do not have access to. Therefore, regulations concerning, for example, the qualifications needed to deliver a given service may provide a minimum assurance to users regarding the competence of the service providers and the quality of services that will be rendered (OECD, 2007; CEC, 2004).

Regulation makes sense when it helps to deal with so-called 'externalities', since the provision of given professional services may have an impact on third parties not involved in selling or buying the services (CEC, 2004). For instance, accountancy services purchased by a company (e.g. a financial audit) may have an indirect impact on shareholders and (potential) investors. Regulation is therefore useful to ensure that these parties the information they require on financial reporting and audit (IFAC, 2007).

Regulation may be in society's interest for professional services producing 'public goods' (e.g. legal services). For instance, regulation may aim to guarantying the correct administration of justice, the liability of technical systems and infrastructures or the development of high-quality urban environments (CEC, 2004; Kox et al., 2007a).

The EC Communication on 'Competition in professional services' identified five main categories of regulative 'restrictions', namely regulations related to

- price fixing;
- recommended prices;
- advertising regulations;
- entry requirements and reserved rights;
- regulations governing business structure and multi-disciplinary practices (CEC, 2004).

While such rules have mostly been designed to – and indeed, contribute at least to some extent – to ensure the quality of services provided and to protect the consumer from malpractice, many restrictions, however, are perceived as maintaining protectionism and being neither economically justified nor justified by the necessity of protecting clients' interests regarding the quality of services (Wölfl, 2005; CEC, 2005a; OECD, 2007; CEC, 2004). Other regulations may have become obsolete or may not have been adapted to the new information and communication technologies widely in use in business services (OECD, 2005).

Restrictive regulations can affect the development of the European business services sector in different ways:

- ***Fixed prices*** – although protecting consumers from excessive charges – may restrict competition and may have negative effects for consumers, since they tend to reduce the incentives for service providers to work cost-efficiently and provide competitive and high-quality services to the consumers (CEC, 2004; CEC, 2005a; OECD, 2007)
- ***Recommended prices*** may also lead to distortion of competition since they can facilitate the coordination of prices between service providers (CEC, 2004).
- ***Advertising restrictions*** – in particular if prohibiting comparative advertising – reduce the possibility for consumers to gather information about the different services provided on the market and therefore to make the best informed purchasing decisions (CEC, 2004).
- ***Entry restrictions*** (e.g. related to qualifications or the amount of professional experience needed to offer a given service) ensure that only professionals with adequate skills deliver professional services. However, such restrictions may reduce the number of providers in the market, which also leads to a distortion of competition and a reduced access for consumers to professional services (CEC, 2004; OECD, 2007). Furthermore, high restrictions might reduce cross-border trade of services when discriminating between domestic and foreign service providers, for instance when accessing the market of a given country requires being located there or when labour market regulations (e.g. regarding qualifications) are different in the country of origin of a services provider and in the country where they want to expand business activities (Web-WTO, 2007; OECD, 2005).
- ***Regulations governing business structure*** (e.g. related to ownership) ***and multidisciplinary practices*** may reduce the innovation capacity in the sector, since they can hinder the creation of new, innovative services, limit the accessibility to venture capital or the ability of service firms to identify market niches able to support economic growth and promote the creation of new jobs (Wölfl, 2005; OECD, 2005; CEC, 2005a; CEC, 2004; EMCC, 2005).

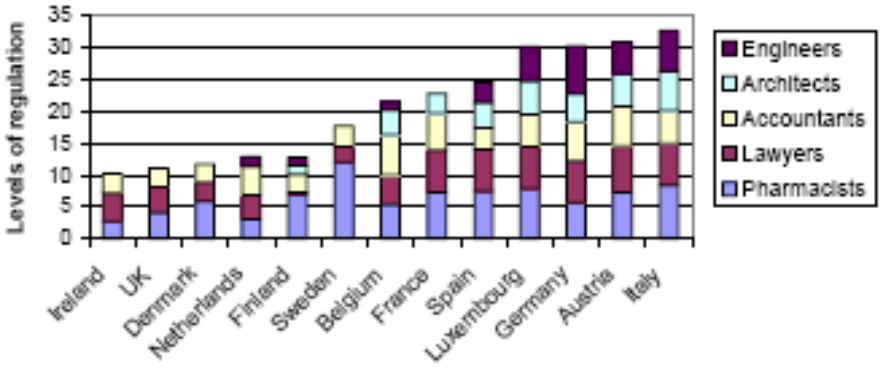
Based on data from 2003, the OECD pointed out that there are considerable differences between OECD countries regarding the restrictiveness of regulations affecting KIBS, as well as between different kinds of KIBS (OECD, 2007). A similar analysis addressing regulation for engineers, architects, accountants, lawyers and pharmacists was performed at European level and published in 2003 – cf. figure 3.5 (Paterson et al., 2003). According to this study, professional services are the most regulated in Luxembourg, Germany, Austria and Italy and the least so in Ireland, the United Kingdom, Denmark, the Netherlands and Finland (CEC, 2004). Looking at the level of regulation for different types of professional services, important differences between Member States can be noticed (cf. figure 3.5) to name but a few (CEC, 2004):

Professional services provided by lawyers are particularly highly regulated in France, Spain, Luxembourg, Germany, Austria and Italy, whereas the level of regulation in Finland, Sweden, Denmark and the Netherlands is particularly low;

There is no regulation for services provided by architects in the United Kingdom, whereas regulation in this domain is quite high in Italy;

Regulation for engineers is much higher in Spain, Luxembourg, Germany, Austria and Italy than in the other countries of the EU-15.

Figure 3.5: Index of Level of Regulation in EU Member States – Stand: 2003.



Source: CEC, 2004

These differences suggest that regulation often goes far beyond just protecting clients' interests (OECD, 2007; CEC, 2004). Indeed, at EU level, no indication could be found for malfunctioning markets in countries with low regulation, suggesting that removing restrictive regulations will lead to more wealth creation without having negative impacts on the consumer (CEC, 2004; Paterson et al., 2003). Furthermore, such differences in regulation between countries' regulations often limit competition and cross-border service trade and provision (OECD, 2007; Wölfl, 2005). For instance, since many services require the presence of the service provider in both its country of origin as well as in the country of service delivery, service providers may be confronted with the duplication of regulations to fulfil – regarding, for example, national security schemes for employees, qualifications required for employees, administrative and tax procedures, etc.) – leading to increased costs and possible fines in case of infringement.

Which regulations for services have to be fulfilled in a given country seem often to remain unclear, leading to uncertainty for foreign service providers (Ilzkovitz et al., 2007; OECD, 2007; Wölfl, 2005). Considering that many such regulatory barriers to trade or market entry still exist, it has been argued that growth in business services – though already impressive – could be even faster if these barriers could be overcome (CEC, 2005a; Eurostat, 2007b; EMCC, 2006).

Indeed, the negative correlation between restrictive regulations and productivity growth in business services has been highlighted in a recent OECD study (OECD, 2007). Asked if removing trade barriers will meet the needs of European service providers, recent surveys showed that 59% of company executives in the EU-15 and 73% in the 10 new Member States supported the prioritisation of removing technical barriers to trade in services (EC, 2006a; EC, 2006b). Particularly interesting is the fact that company executives of the EU-15 intending to export in the new MS within the coming three years are particularly interesting in the removal of these barriers (EC, 2006a).

Against this background, recent activities of the European Commission in this field have aimed at assessing the need for reforms of the regulatory framework for professional services as well as improving regulations in order to promote the Single Market for services and thus increase the competitiveness of European providers of business services.

The report on 'Competition in professional services', published by the European Commission in 2004, highlighting differences in regulation and restrictiveness between the Members of the EU-15 for six categories of professional services (lawyers, notaries, engineers, architects, pharmacists and accountancy) called for 'all involved to make a joint effort to reform or eliminate those rules which are unjustified' (CEC, 2004).

This analysis has been extended to Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia after their accession to the EU (CEC, 2004a). Progress in reviewing and removing 'unjustified restrictions', as well as the scope for more reform were presented in two papers published by the European Commission in 2005 (see CEC, 2005a and CEC, 2005b). By way of example, Annex 2 and Annex 3 display differences in regulations regarding, on the one hand, fixed prices, minimum and maximum prices and, on the other hand, advertising restrictions, as they existed in 2004, as well as reforms carried out or planned at national level in this domain.

3.3 EU policies and legislation

This section introduces EU policies and legislation (Service Directive, Codes of Conduct and Recognition of Professional Qualifications) and - as far as possible - the impact of the implementation of these policies and legislation, in particular on the building on a Single Market for services. Aspects of the impact are discussed in various sections to follow.

All this legislation is part of the overall EC strategy 'A single market for 21st century Europe'. Most of this legislation is new, either in its transposition phase or the transposition phase just ended. Therefore, no real impact assessments on these new Directives took place so far. There are a number of studies which address expected impacts. These studies use mostly economic models to assess the economic impact of the Directives or surveys in which people are asked for their opinions.

In a public consultation launched by the European Commission to the Single Market, stakeholders broadly agree that the EU policies and legislation fostering a Single Market has brought many benefits – supporting for instance economic growth in Europe and the emergence and consolidation of an integrated market for products –, although some (e.g. consumer organisations, SMEs) question whether it has actually brought direct advantages for consumers and small businesses. Although respondents express overall support for the Single Market, many, in particular businesses, point out that the Single Market is not yet complete and that 'gaps' need to be addressed. This applies to services, retail financial services, insurance, transport, energy taxation, free movement of workers and intellectual property. Many of the respondents note problems with implementation and enforcement, and some point out the need to develop the 'social dimension' of the Single Market (CEC, 2006).

3.3.1 Services Directive

The Services Directive 2006/123/EC was adopted by the European Parliament and the Council after several drafts and hearings in December 2006 and is due to be fully implemented by Member States by the end of 2009.

It seeks to facilitate the operation of a single market for services by establishing common rules for the establishment of service providers and the cross-border provision of services, while taking the specific nature of certain activities or professions into account (CEC, 2007a). Its implementation is expected to further encourage cross-border trade of services within Europe (Alajkääskö, 2007b).

The Services Directive establishes new rules which relate in particular to (CEC, 2007a; CEC, 2007b):

- ***Administrative simplification***: simplification of procedures and formalities applicable to services providers necessary to access a service activity and to its exercise; establishment of points of single contact through which a provider may complete all the necessary formalities; information and assistance through the points of single contacts as well as the scope of the obligation to provide for electronic procedures and its implementation.
- ***Freedom of establishment***: removal of legal and administrative barriers to the establishment and development of service activities; obligation to evaluate the compatibility of the authorisation schemes and procedures; prohibited establishment requirements as well as requirements subject to evaluation.
- ***Free movements of services***: greater freedom to provide temporary cross-border services which includes the freedom of access to the service activity and the freedom to exercise such activity throughout a Member State's territory should be guaranteed with a number of derogations applying, for example, to professional qualifications, posting of workers and services of general economic interest; a Member State may maintain its own requirements in as much as these are non-discriminatory, proportional and justified for reasons of public order, public safety, public health or environmental protection.
- ***Quality of services***: strengthening the rights of consumers as service users which includes the right of recipients to use the services by providers from other Member States and to receive relevant information, right of recipients not to be discriminated on grounds of nationality or residence as well as ensuring service quality (encouraging, for example, voluntary certification of activities or drawing up quality charters and European codes of conduct.
- ***Administrative cooperation***: establishing effective administrative cooperation among the Member States which includes the obligation to cooperate with the relevant authorities of other Member States in order to ensure efficient control of service activities; setting-up of an alert mechanism between Member States; development of an electronic system for the exchange of information between Member States.

Not all services are covered by the Services Directive. Excluded are:

- Non-economic services of general interest
- Financial services
- Electronic communication services and networks
- Services in the field of transport
- Services of temporary work agencies
- Healthcare
- Audiovisual and radio broadcasting services
- Gambling activities
- Activities which are connected with the exercise of official authority

- Social services relating to social housing, childcare and support of families and persons permanently or temporarily in need
- Private security services
- Services provided by notaries and bailiffs, who are appointed by an official act of government

A number of studies discuss the **quantification of the macroeconomic impact** of the implementation of the service directive (Ilzkovitz et al., 2007; Kox et al., 2006).

As already stated at the beginning, these quantifications are based on economic models and in the case of the Services Directive on former drafts of it. However, box 3.1 introduces two studies addressing the quantification of the economic impact of the Service Directive.

Box 3.1: Quantifying the macroeconomic impact of the liberalisation of services:

The available studies show that the implementation of the European Services Directive will generate more intra-EU trade, more foreign investment in services sectors and lower prices of services. GDP could go up by 0.5% to around 1% on average in Europe:

Copenhagen Economics quantified the impact of the Services Directive as it was when first submitted by the Commission to European Parliament. The results found pointed to an increase in aggregate employment of 0.3% (in the services industries employment would increase by 0.5%) and 1.1% in value added. Copenhagen Economics also considered the effect of the exclusion of the country of origin principle (CoOP) from the service directive in a study commissioned by the UK Department of Trade and Industry. The study found that the provisions relating to the CoOP account for around 10% of the total welfare gains (€2-4 billion per annum) from the service directive. This figure should however be viewed as the lower bound of the potential impact of withdrawing the CoOP.

Kox and Lejour (2006), find a similar result. They estimate that the trade and FDI effects of the EU services market liberalisation could lead to an increase in GDP by 0.5 to 1.5%. The CoOP would account for about one-third of these effects. However, these estimates do not take into account the dynamic effects of this liberalisation. Improved market access could stimulate competitive selection and productivity growth. In addition, through trade and investment, knowledge spillovers could increase and innovation could be fostered. These dynamic effects are harder to estimate. Back on the envelope calculations based on the relation between trade openness and growth suggest a further GDP increase by 2 to 5 % if the analysis incorporates these dynamic effects.

Source: Ilzkovitz et al., 2007

3.3.2 Codes of conduct

'Internal Market and Services Commissioner Charlie McCreevy said: 'Codes of conduct are crucial to improving quality of service and are an essential part of the Services Directive. I encourage all interested stakeholders to take part and give us their views on how best to develop them at European level' (Web-EC, 2008b). The European Commission asked professional associations in the EU to provide information on their codes of conduct, either existing or in preparation, and to give their opinions on how best to develop codes of conduct at European level. A press release was launched on 4 June 2007. Encouraging the development of such codes of conduct could contribute to the improvement of quality of service, which is an important aspect of the Services Directive. The consultation, which is in the form of an online questionnaire, was open until 30 July 2007 (Web-EC, 2008b).

In this context the Commission published a working document on 'Quality of services – the role of European codes of conduct'. The purpose of this paper is not to lay down a European model code or to oblige professional organisations to engage in self-regulation.

The purpose is rather to provide a technical overview of existing European codes and to constitute a source of information and of inspiration for those professional organisations wishing to draw up such codes, notably by disseminating information on the form and content of the existing codes (Web-EC, 2008c).

Acknowledging the need for harmonisation at EU level of the codes of conduct for liberal professions that are applied in different MS, the European Council of the Liberal Professions (CEPLIS) circulated a questionnaire to Interprofessional Groups in MS and to Professional organisations at EU level in order to identify specific values that all liberal professions should exhibit. Such harmonization of codes of conduct is expected to promote cross-border provision of services while, at the same time, ensuring consumer protection and safety. On 20 June 2007, CEPLIS agreed on a set of issues which should be covered by Codes of Conduct for Liberal Professions at EU level; these issues are presented in Box 3.2.

Box 3.2: Proposal for Codes of Conduct for liberal professions at EU level by the European Council of the Liberal Professions (CEPLIS), as adopted on 20 June 2007.

Codes of Conduct for Liberal Professions at EU level should entail provisions related to the following issues:

Confidentiality of information acquired during the provision of professional services, as the cornerstone for trust building between professional and clients.

Participation of practitioners in continuous professional development in order for them to keep their knowledge and competencies up to date and adapt to new demand.

Independence and impartiality of professional services provided without any pressure from external sources and without conflicts of interest.

Honesty and integrity to ensure that the first priority in providing professional services lies in the respect of the client's interests: users of professional services 'have the right to expect to be treated with courtesy and respect and [...] to receive sound professional advice in terms they will understand, as well as information before and during the provisions of services, both on the procedure it is intended to pursue to achieve the desired objective and on the fees involved'.

Supervision of support staff, meaning that users 'have the right to be confident that tasks will be delegated only to members of support staff who have the necessary knowledge and competencies'.

Compliance with codes of conduct and practice, ensuring high quality through strict compliance with all relevant legislation and codes of practice.

Professional liability insurance: users of professional services 'have the right to expect adequate information from the provider, on the insurance held, or other form of guarantee which is equivalent or comparable, to cover liabilities in the event of adverse effects resulting from errors or omissions made in the provision of a service. [...] The insurance may be provided through a national arrangement in the case of services provided by the state, by an employer, through membership of a professional association, or by the individual practitioner. Exceptionally, and by formal prior arrangement, the risk may be borne by the recipient of the service, in Member States where legislation permits such an arrangement'.

Conflict with moral or religious beliefs: users of a professional service 'should not have access to that service barred due to the moral or religious beliefs of the individual professional from whom that service is initially sought'. In particular, in case a given practitioner is reluctant to provide a specific service, he has 'an obligation to provide information on where the service requested can most conveniently be obtained from a professional colleague, or details of the order or professional organisation from which that information can be obtained'.

Source: CEPLIS, 2007

3.3.3 Recognition of professional qualifications

In the 1990s a number of directives were introduced to allow holders of certain professional qualifications to gain access in host Member States to the professions in which they are qualified, and to practice under the same conditions as nationals of that Member State in cases where these professions are regulated. In 2005, the Commission adopted on 7 September 2005 the Directive 2005/36/EC, which consolidates and modernises the rules currently regulating the recognition of professional qualifications and embarked upon a reform of the system in order to encourage more automatic recognition of qualifications and simplify administrative procedures. The transposition period ended on 20 October 2007.

The Directive has replaced fifteen existing Directives in the field of the recognition of professional qualifications including twelve sectoral directives - covering the professions of doctor, nurse responsible for general care, dentist, veterinary surgeon, midwife, pharmacist and architect - and three directives setting up a general system for the recognition of professional qualifications and covering most other regulated professions (CEC, 2007a; Web-EC, 2008a).

'A number of changes have been introduced compared with the existing rules, including greater liberalisation of the provision of services, more automatic recognition of qualifications and increased flexibility in the procedures for updating the Directive. The Commission also proposes to develop its cooperation with the Member States in order to keep citizens better informed about their rights and give them more help in getting their qualifications recognised' (Web-EC, 2008a).

The Directive introduces a new general system which is based on the principle of mutual recognition: formal professional qualifications are grouped into a five-level system (Directive 2005/36/EC, Art. 11) and recognition is based on formal qualifications in the home MS attesting 'a level of professional qualification at least equivalent to the level immediately prior to that which is required in the host Member State' (Directive 2005/36/EC, Art. 13).

However, this recognition takes place without prejudice to the application of compensatory measures if there are substantial differences between the training acquired by the migrant and the training required in the host Member State. The compensatory measure could take the form of an adaptation period or an aptitude test, and the choice between one or the other is up to the individual migrant unless specific derogations exist.

Therefore, 'the recognition of professional qualifications by the host Member State allows the beneficiary to gain access in that Member State to the same profession as that for which he is qualified in the home Member State and to pursue it in the host Member State under the same conditions as its nationals' (Directive 2005/36/EC, Art. 4).

As such, the implementation of the Directive is expected to overcome part of the former regulatory barriers to workers' mobility such as that pointed out by the the British Royal Institution of Chartered Surveyors in Spring 2005: 'an RICS building surveyor in the UK and Ireland can design buildings, whereas in many other Member States the same function would need to be carried out by a professional qualified as an architect. In Greece 80% of roads are built by appropriately qualified surveyors, whereas in most other Member States a road builder would be expected to be qualified as a civil engineer'(RICS, 2005).

Since the implementation period just ended, comprehensive impact assessment of this Directive is not possible at the moment and should be carried out at a later time.

The mobility of workers and learners for non-regulated professions should also benefit in future from the new European Qualifications Framework for Lifelong Learning (EQF). The EQF, which was formally adopted by the end of 2007, is a voluntary reference instrument which will link together countries' qualifications systems and act as a translation device making other countries' qualifications more readable to employers and education institutions (CEC, 2007a).

3.3.4 Public procurement

Public procurement is an important economic factor accounting for about 16 % of GDP. Given this size any improvement in competition has significant implications for the entire economy. In 2004, a package of Directives simplifying and modernising rules applicable was adopted by the EU legislation. These Directives allow the recourse to e-procurement systems and provides for more possibilities to integrate various policy objectives in the purchasing process. In the area of European defence procurement, the Commission presented an interpretative Communication in December 2006. Further steps are expected to be launched soon. In the area of public-private partnerships (PPPs), the Commission has launched a process of clarification, including guidance and possibly legislation, in respect to the application of EC rules to the different forms of PPPs (CEC, 2007a).

The opening up of public procurement within the Internal Market has increased cross-border competition. Nevertheless, direct cross-border procurement remains very low, accounting for only 3% of the total number of bids. However, the rate of indirect public procurement made by foreign firms' local subsidiaries is significantly higher (30%). Not all public procurement is subject to the obligations established by EU directives. There are activities, notably in the defence sector that are subject to special rules. Only about 22% of all public procurement is published and thus open to competition (Ilzkovitz et al., 2007). The further opening of the public procurement could contribute to the Single Market strategy. The development of adequate standards could play a role there, as will be discussed in section 5.4.

3.3.5 Further reforms still needed

The implementation of the EC directive on the 'Recognition of professional qualifications', as well as of the Services Directive, is expected to highly contribute to overcoming regulatory barriers to European trade in services. However, despite these activities, the Communication on 'A Single Market for 21st century Europe', adopted in November 2007 by the European Commission still pointed out the need for MS to further reform all highly restrictive regulations for professional services like lawyers, notaries, accountants, architects, engineers and pharmacists (CEC, 2007a). Future reforms should be geared at fulfilling the principles for high-quality regulation of professional services as presented in a recent OECD study and highlighted in an EC working document in 2003 on regulation in liberal professions – see box 3.3 – (EC, 2003).

Box 3.3: Principles for high-quality regulation of professional services:

- Exclusive rights should not be granted where other mechanisms exist to address market failure directly and/or with less restriction on competition.
- Entrance requirements into a profession should not be disproportionate to what is required to perform the service competently.
- Regulation should focus on the need to protect small consumers. Sophisticated commercial purchasers of professional services are in a better position to assess their own needs and to assess the quality of the services they purchase and should not necessarily be required to use the services of a licensed professional.
- Restrictions on competition between members of a profession should be eliminated. These include agreements to restrict price, to divide markets, to raise entrance requirements, or to limit truthful advertising. Citizenship and residence requirements should be eliminated.
- Professional associations should not be granted exclusive jurisdiction and be subject to independent scrutiny in making decisions about entrance requirements, mutual recognition, or the boundary of their exclusive rights.
- Competition between professional associations should be encouraged.

Source: OECD, 2007

3.4 Drivers of development of new business and professional services

3.4.1 Outsourcing and international sourcing ('offshoring')

Firms have increasingly contracted out services which were originally internal operations ('outsourcing'). This reflects various types of motivation, one of the most prominent being the will to focus on core business competences. Using external business services is therefore expected to allow economies of scale and to profit from the efficiency and effectiveness that external service providers gain from working for different clients.

Furthermore, the competition between external service providers is expected to increase the quality and competitiveness of services provided to firms that outsource specific activities. Following from the outsourcing trend, the number of KIBS providers and/or the volume of KIBS purchased in Europe may increase; this trend may explain in particular the development and high increase of computer services as experienced in Europe in the last years (cf. section 3.3.1).

It can also be noticed that R&D activities, which traditionally used to be carried out in-house, have been increasingly outsourced (EMCC, 2005). However, the costs of outsourcing for the clients, for example management costs related to using the services of an external provider, as well as the costs raised by the necessity to integrate the services provided in their own business chain, may slow down outsourcing. In particular, SMEs may not be able to afford KIBS externally (EMCC, 2005).

In order to make the best from outsourcing, many companies combine both business services activities provided in-house and purchased from external providers. In this way, they ensure that they have the adequate knowledge and skills in-house to best integrate services provided externally in their business chain (Kox et al. 2007a).

As a consequence of trade liberalisation and the availability of new and affordable information and communication technologies, as well as the increasing skills level of the workforce in developing countries, some outsourced services have also increasingly been supplied from outside the client's country ('offshoring') and this trend is expected to hold during the next years.

Provided the necessary IT infrastructure is available, huge amounts of digitalised information can instantaneously and cheaply be exchanged anywhere around the globe, allowing the fragmentation of production processes and detailed interaction and coordination of virtual teams scattered around the world (Graz et al., 2007; OECD, 2005; Ilzkovitz et al., 2007; EMCC, 2006a). Relatively unskilled office work and call centre activities may therefore be relocated to low-wage countries particularly in Asia (e.g. in India) but also more knowledge-intensive work such as software development, professional or medical advice, computer services like data treatment or operations control, etc. (EMCC, 2005; Rijkers-Defrasne et al., 2007; Eurostat, 2007b; Kox et al. 2007; González-López, 2007).

In Bangalore for instance, the company Teleradiology Solutions employs some 20 radiologists to analyse and report on a continuous flow of X-ray images sent over the Internet by night shift technicians from some 50 US hospitals (Graz et al., 2007). Whilst reducing costs and increasing productivity may be the most important rationale for offshoring business services, other factors include the proximity to potential new clients in offshore destinations and the opportunity to adapt business process and products to their cultural environment, as well as the opportunity for engaging in joint ventures with overseas businesses – to name but a few (EMCC, 2006a).

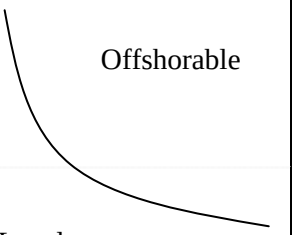
It goes without saying that offshoring of (business) services raises fears of growing unemployment in European countries; estimations assume that up to 20% of occupations in OECD countries may be potentially affected by offshoring (OECD, 2005; Hirschfeld, 2007a). For the United Kingdom alone, estimations expect up to 191000 jobs in the KIBS sector to be offshored during the period 2001-2010, most of them in the domains business process outsourcing (including accounts, data collection, HR, contact centres, IT and software development, as well as financial services (EMCC, 2006a).

However, not all types of business services are suitable for offshoring (cf. Table 3.1): most operational services for instance have to be provided onsite. Likewise, some knowledge-intensive business services requiring face-to-face interaction between supplier and client as well as an in-depth knowledge of local cultural, organisational and regulatory issues have to be provided by a local supplier.

Furthermore, some more strategic KIBS activities – related for example to R&D activities – may require geographical proximity between service provider and client, and, which is even more critical, a high level of trust (e.g. related to IT applications) – making these activities less likely to be offshored (EMCC, 2006). Moreover, even if specific KIBS activities could, in principle, be offshored, services providers may decide not to do it in order not to jeopardize clients' confidence: this may particularly apply when supplying services to small size companies or family-owned companies that are used to 'face-to-face' contacts with their business partners (González-López, 2007).

However, offshoring – when and if it is taking place – may also have indirect benefits for purchasers of services in Europe in terms of lower costs and increased productivity. It is also worth noting some OECD economies like Ireland and the Czech Republic which have become highly competitive in business services have profited from the trend towards international sourcing and offshoring of services (OECD, 2005; EMCC, 2005; OECD, 2007).

Table 3.1: Globalisation in the business services sector.

	ISIC rev. 3	Knowledge intensity	Globalisation
Business services	Computer and related services (72)	Knowledge-intensive business services	
	Research and development (73)		
	Other business services (74)	Operational business services	Local

Source: OECD, 2007

Table 3.2: Internal service functions and externally delivered producer services.

Major functions in enterprises	***Corresponding external producer services***
1.Strategy and new markets	Management consultancy, market research, organising fairs and exhibitions
2. Information management (IT services and infrastructure)	Computer services, consultancy on information technologies, telecommunication services
3. Personnel	Selection and provision of personnel, professional training
4. Production and technical function	Engineering and technical services, tests and quality control, maintenance service and repair of equipment
5. Design function	Research and development, industrial design
6. Marketing	Advertising, direct marketing, public relations
7. Purchase and sales	Distributive trades (incl. after sales service)
8. Financial resources	Banking, insurance, renting and leasing
9. Administration and accounting	Accounting and auditing, legal services, tax advise
10. Transport and logistics	Logistics, transport services (persons), transport services (merchandises), express couriers, real estate
11. Facility management services	Security services, building maintenance, cleaning services, catering, environmental services / waste disposal, energy and water services

Source: Kox et al. 2007

3.4.2 The increasing demand for specialised knowledge

An important driver for the development of the business services sector and in particular of the KIBS sector relates to the increasing knowledge requirements emerging from the transition to the knowledge-based society and economy. Whereas there are hardly any definitions able to capture all aspects of the knowledge-based society and economy (see in particular Brinkley, 2006; Rijkers-Defrasne et al., 2007 and included references), consensus exists on the fact that the amount of knowledge, as well as its complexity, that individuals and societies as a whole have to deal with in modern knowledge societies, have increased during the last years and will further increase in the future. In businesses, ever increasing complex knowledge is needed to deal with changing environments in general – including regulatory aspects (e.g. frequent changes in accountancy, labour law and tax regimes), environmental aspects (e.g. climate change), as well as economic and geopolitical issues such as the impact on economy and competition of globalisation and global threats like pandemics or terrorism.

This leads to businesses and organisations increasingly becoming 'learning organisations' and raises new challenges in terms of knowledge acquisition and management for which KIBS providers such as consultants, accountants, etc. may provide an answer (Amanatidou, 2007; Miles, 2008; Rijkers-Defrasne et al., 2007).

Furthermore, with innovation tending to becoming increasingly complex, as well as taking place at an increasingly rapid pace, a wide set of skills is an ever more crucial element of success. For instance, the development of a new type of printing paper requires a broad range of specific skills from different disciplines like fibre research, chemistry, electronics, engineering, software development, printing technology, etc.

Innovation has therefore become multidimensional by nature and the range of knowledge needed to develop new products as well as new services has increased. To the extent European economies are increasingly dependent on a widening range of technological and specialised knowledge, firms and organisations increasingly face the challenge of keeping pace with technological developments and being able to make the best use of them.

Furthermore, other skills like market analysis, logistics and behavioural sciences also play an increasing role. Since it has become increasingly difficult for firms to develop high skills in all aspects related to the development of new products and services, the demand for specific business services providers has grown (EMCC, 2005; OECD, 2006a). The 'key role played by knowledge as a source of competitive advantages' is therefore an important driver of the development of the KIBS sector (Hirschfeld, 2007a). Therefore, KIBS providers, in particular providers of technology-based KIBS, contribute towards increasing their clients' knowledge base, which may have positive effects on their innovation capacity and therefore on the competitiveness of the whole economy (Camacho et al., 2005; Hirschfeld, 2007b).

3.5 New professional and business-related services and development trends

3.5.1 Technology-based business services

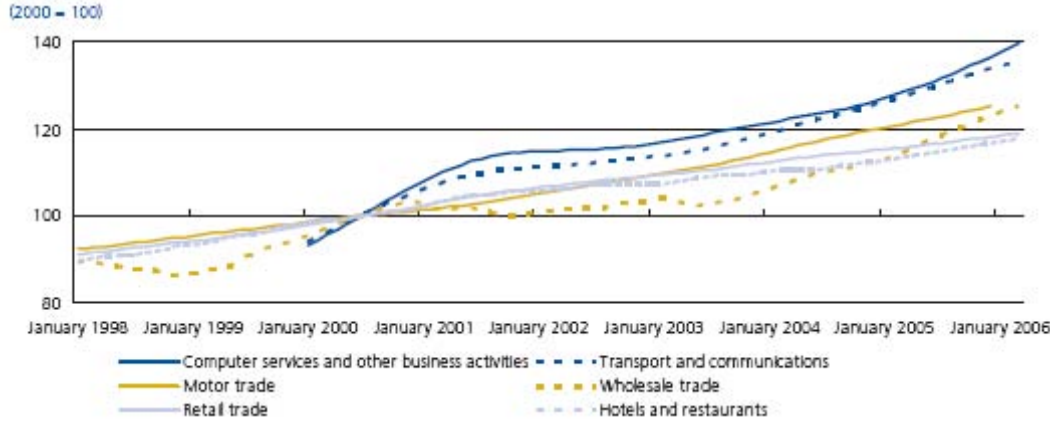
Managing rapid and complex technological-driven change is an increasingly important challenge for today's businesses and this will remain so in the future. Against this background, many KIBS have emerged to help clients cope with increasing knowledge and technological requirements, as well as new technologies. These services are developing, combining and applying various types of generic knowledge about technologies and applications to match their clients' local and very specific problems, issues and contexts. In order to fuse generic and local knowledge together, substantial negotiations between the service provider and the client might be necessary to reach a shared understanding of the problem (EMCC, 2005).

Computer and information technology services[10] are the most prominent example of such new technology-related KIBS: their increase has been a major driver of expansion in the whole sector of knowledge-intensive business services (see figure 3.1). Many organisations and firms wanting to keep pace with rapid advances of IT performance and the increasing diversity of IT applications rely – despite on internal IT capabilities – on external IT services as an alternative source of knowledge.

[10] As defined by the former NACE Rev. 1.1 Classification, Division 72: Computer and related activities, including hardware consultancy (72.1); Software consultancy and supply (72.2); Data processing (72.3); Database activities (72.4); Maintenance and repair of office, accounting and computing machinery (72.5); Other computer related activities (72.6).

Such IT services can be very diverse, including sourcing and configuring complex technology set-ups required for clients' specific IT applications (systems integrators); writing software or designing web pages; giving advice on IT strategy; or implementing and running facilities for clients (facilities management).

Figure 3.6: Index of turnover, selected service activities, EU-25.



Source: Eurostat, 2007b

Other new, technology-related KIBS have emerged related to mechanical engineering, biotechnology, nanotechnology, etc. while others are more focused on specific problems – most notably environmental problems and the technologies can be used to cope with them. New services as diverse as waste disposal, emissions and discharge monitoring, remediation and 'clean-up', environmental auditing, environmental impact assessment and eco-design have emerged in the last years (EMCC, 2005).

The rising convergence of technologies, especially of ICT, biotechnology and nanotechnology – which is expected to play an important role in shaping the future economy – will raise new challenges for businesses and organisations. Companies which used to work in different sectors (e.g. manufacturing or biotechnological companies) will need to acquire, manage and apply knowledge beyond the scope of their traditional business – including knowledge regarding the future development of technologies, as well as potential risks related to their use.

Exploiting the full potential of technological convergence may require for them to develop partnerships with organisations and businesses in other technology sectors, establish research linkages with universities or purchase the consultancy services of external service providers (Canton, 2002; Miles, 2008; NBIC, 2002).

3.5.2 Emergence of new KIBS helping to cope with regulations

Regulations may generally be deemed as hindering the free movements of services. However, they have also driven the development many professional and business services. Besides specialised services to support legal and accountancy frameworks which have existed for a long time, regulations have led more recently to the emergence of new business services and professional services.

Indeed, increasing regulation in terms of environmental requirements, diversity, corporate social responsibility, accountancy frameworks, health and safety standards, labour and trade have led to the development of new markets for KIBS (EMCC, 2006; EMCC, 2005; Hirschfeld, 2007a).

Such increasingly complex and diverse areas of regulation require specialist knowledge and expertise, and most companies will likely not be able, for instance, to employ suitable internal staff to 'cover the entire range of legal knowledge from patent law or tax regulations to emission regulations' (Hirschfeld, 2007b).

Furthermore, complying with regulations is particularly challenging for companies working across countries with different traditions. Many firms therefore hire solutions from specialised KIBS providers since limited resources do not allow for coping with this increased regulation burden in-house. The services provided range from basic information, advice and intermediation services to helping in training client staff (EMCC, 2006; EMCC, 2005).

3.5.3 Emergence of new environmental KIBS

Environmental regulations and the increasing public awareness of environmental issues have led to the growth of environmental services in general, such as waste disposal as well as specific KIBS dealing with 'clean' technologies and environmental law. In particular, the demand for consulting services in areas related to energy savings and energy efficiency, as well as emissions trading, such as 'Clean Development Mechanisms' and 'Joint Implementation' projects[11], is expected to increase in the next years (EMCC, 2005; Heymann, 2007). A

ccording to a recent British study, the market for environmental consulting services in the United Kingdom, including environmental audits, assistance with environmental management systems and training, life cycle assessment, environmental impact assessment, as well as advice on environmental regulations and environmental institution building, is expected to grown from £1.23 billion in 2005 to £2 billion by 2015 (Selwyn et al., 2006).

Environmental issues may also lead to the improvement of KIBS, making them for instance less energy-intensive. This may be the case for example in transport services and for services that require large office infrastructures (EMCC, 2005).

Based on the US Standard Industry Classification, the Environmental Business Journal classifies environmental services into six divisions – as shown in table 3.3: Environmental testing and analytical services; Wastewater treatment works; Solid waste management; Hazardous waste management; Remediation / Industrial services; Environmental consulting and engineering (Web-EBJ, 2007).

Even if some knowledge-intensive service activities might be also found in the other categories, the main environmental KIBS are regrouped under the heading 'Environmental consulting and engineering services'.

[11] The 'Clean Development Mechanisms' and 'Joint Implementation' are two mechanisms of the Kyoto Protocol set up in order to contribute to reduce greenhouse gases emissions: 'The CDM allows countries with emission targets to buy emission credits from projects in countries without targets. It also has the goal to further sustainable development in the latter. [...] The term 'Joint Implementation' has got a narrow meaning through the Kyoto Protocol; formerly it was the umbrella term for all project-based reductions abroad. It now only applies to projects that take place in [...] countries that are, according to the Kyoto Protocol, countries with binding targets.' *Source:* Michaelowa, A., Krey, M. and Butzengeiger, S., *Clean Development Mechanism and Joint Implementation - New Instruments for Financing Renewable Energy Technologies*, prepared for the International Conference for Renewable Energies, Bonn, 2004.

Table 3.3: Types of environmental KIBS.

Segment	Description	Examples of Clients
Environmental testing & analytical aervices	Provide testing of 'environmental samples' (soil, water, air and some biological tissues)	Regulated industries, government, environmental consultants hazardous waste and remediation contractors
Wastewater Treatment Works	Collection and treatment of residential, commercial and industrial wastewaters. Facilities are commonly known as POTWs or publicly-owned treatment works.	Municipalities, commercial establishments & all industries
Solid Waste Management	Collection, processing and disposal of solid waste	Municipalities & all industries
Hazardous Waste Management	Manage ongoing hazardous waste streams, medical waste, nuclear waste handling	Chemical companies, petroleum companies, government agencies
Remediation/Industrial Services	Physical clean-up of contaminated sites, buildings and cleaning up of soil, groundwater or operating facilities	Government agencies, property owners, Industry
Environmental Consulting & Engineering (C&E)	Engineering, consulting, design, assessment, permitting, project management, O&M, monitoring, etc.	Industry, Government municipalities, waste Management companies, POTWs

Source: Web-EBJ, 2007

3.5.4 Emergence of KIBS helping to cope with complex markets and societies

New KIBS have emerged that aim at providing clients with information and knowledge on markets and cultures, consumers and other stakeholders they deal with (EMCC, 2005; Hirschfeld, 2007a). Prominent examples for such KIBS are market research, marketing and services related to public relations. Due to the proliferation of products, as well as the diversification of consumer demand ('mass customization'), the demand for such KIBS has increased to a large extent. Firms operating in international environments or in multicultural societies may be particularly dependent on such KIBS (EMCC, 2005).

3.5.5 Future development trends for KIBS

This chapter is mainly based on the studies on business services and particularly on KIBS carried out by the European Monitoring Centre on Change (see EMCC, 2005; EMCC, 2006; EMCC, 2006a), as well as on the work by Toivonen (see Toivonen, 2004).

Several development trends for the KIBS sector were identified in these studies. The first of these relates to the nature of the relationship between service providers and their clients: Companies purchasing KIBS may expect in the future the service provider to broaden services provided by supporting the whole company's business strategy.

This means that service suppliers may not only provide a given service, but will also help to integrate this service in the client's strategy, as well as to identify problems – and provide solutions to them – in the whole client's production chain.

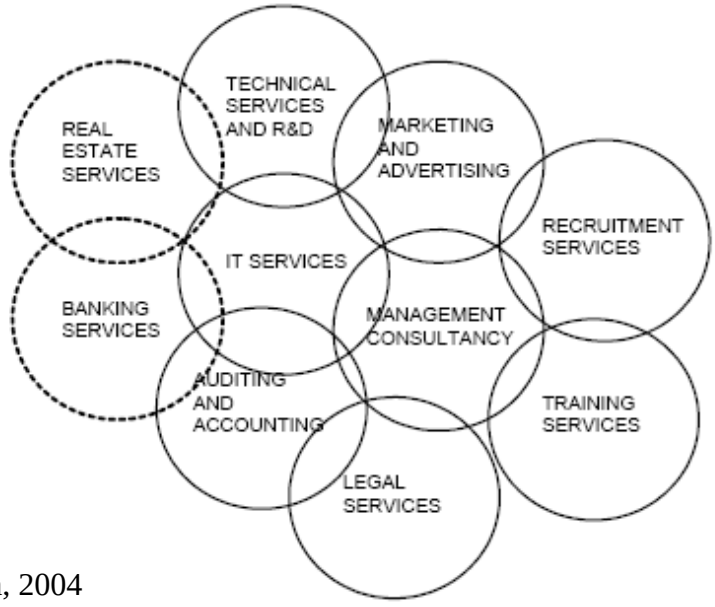
This will raise new challenges for service providers related to the knowledge they have to possess: understanding the client's business, in addition to their own professions, will become necessary. This trend is expected to be accompanied by a shift towards longer-term relationships between service providers and their clients. It may lead to the emergence of a two-layered structure in the KIBS sector consisting of KIBS providers focusing on specific problems and other providers integrating solutions into an overall strategy for the client (EMCC, 2005; Toivonen, 2004).

Partly driven by these changing expectations of the clients of business services, KIBS are expected to increasingly converge (EMCC, 2005; Toivonen, 2004). For instance, services provided may combine accounting, as well as legal aspects which traditionally used to be provided separately. Convergence is also expected between the KIBS sector and other sectors of the economy. Manufacturing industries, for instance, are expected to increasingly provide service components, in addition to their actual 'product', leading to the development of so-called 'consumer solutions'. Indeed, companies like IBM, HP, Siemens and Dell have shifted from only providing electronic products to delivering services and consulting advice (Hirschfeld, 2007b; Toivonen, 2004).

According to Toivonen, the diffusion of ICT applications in all economic sectors is the main reason for these convergence phenomena: IT service providers, for instance, may work together with accountants to provide accounting services electronically (Toivonen, 2004). Figure 3.7 shows to what extent convergence phenomena are expected in the KIBS sector, as well as between the KIBS sector and others.

It should be noticed that this convergence trend might be slowed down by regulatory problems, e.g. regarding market entry restrictions. Therefore, it can be assumed that increasing convergence of business services will, in the future, require regulatory improvements and changes, comparable to those that the development of mobile services - for instance mobile banking and financial services - has made necessary (see for instance Mortimer-Schutts, 2007).

Figure 3.7: Convergence among the KIBS sub-sectors and between KIBS and the neighbouring sectors.



Source: Toivonen, 2004

Experts furthermore expect an increasing concentration in some areas of the KIBS sector which are currently dominated by SMEs, as well as an increase in the internationalisation of KIBS providers.

Internationalisation and globalisation have not only increased client demands for KIBS providing them with the necessary expertise to work in different environments and cultures.

They may also affect the development of KIBS directly and stimulate KIBS providers to internationalise their activities, for instance in order to follow their clients into new environments or to explore new markets – reacting in particular to the increasing competition due to KIBS coming from low-wage countries and entering the European markets. However, concentration, as well as internationalisation, may be slowed down due to the high specialisation required in some KIBS-like engineering services, as well as due to the high burden caused by regulations which may be different in the country of origin to the country in which service providers want to expand (EMCC, 2005).

On a global scale, most experts anticipate future growth in the KIBS sector; until at least 2010, the growth in IT-related and professional services in the EU is expected to be higher than growth in other economic areas. The US consulting industry is even expected to experience 60% growth by 2014 (Ilzkovitz, 2007b).

The development of the European KIBS sector will, however, highly depend on whether the offshoring trend will last. In the short term, offshoring KIBS activities from Europe to low-wage destinations, mainly in Asia but also within Europe from high to low-wage countries, is expected to increase. Within the EU, the United Kingdom is expected to be the biggest market for the offshoring of services (most of them being offshored to India), followed by Germany and France which increasingly offshore services to Spain, the Czech Republic, Russia, and also Tunisia. Eastern Europe is expected to remain an attractive offshoring destination for KIBS (e.g. consultancy services) due to the lower wage level than in the rest of the EU, combined with the availability of a high-skilled workforce and a closer proximity to purchasers. However, this trend might be reversed due to labour migration of high-skilled workers moving within Europe from low to high-wage countries (EMCC, 2006a; EMCC, 2006).

Whilst offshoring is expected to allow cost reductions and therefore improve the competitiveness at global level of those European companies that offshore part of their KIBS activities, a persistent increase of offshoring also may have negative effects on European economies and societies. Indeed, offshoring the lower value-added jobs and concentrating, within the EU, on higher value-added activities may lead to greater social disparities (including income disparities, etc.) between high-skilled people and those who do not have the skills required. Education and training policies, at European and national level in Europe, could help in reducing these disparities (EMCC, 2006; EMCC, 2006a).

Despite the expected increase of offshoring activities in the KIBS sector, there seem to be some limits to offshoring and outsourcing in general. Some of them – related for example to so-called 'hidden costs' like improved management costs, or the client's absorption capacity, as well as the high level of trust required – have already been listed in sections 3.3.1, 3.1.2 and 3.2.1. Further possible reasons for companies abstaining from offshoring KIBS activities might relate to increased travel costs (when face-to-face contacts are necessary), difficulties related to managing teams working in different time zones and cultural environments, and such problems as those related to e.g. quality problems with the services provided, lack of reliability of service providers, etc. For instance, control over staff activities is difficult if they are relocated to offshore destinations.

In this regard, regulations promoting transparency and reliability (e.g. quality standards, regulations regarding professional qualifications, etc.) might contribute to overcoming these problems. Furthermore, client firms may fear losing important aspects of organisational and strategic knowledge when outsourcing part of their activities (EMCC, 2005; EMCC, 2006; EMCC, 2006a; EFBRS, 2005).

There is thus considerable debate as to whether more offshoring of European KIBS activities can be expected to hold in the long term, or whether we will see outsourcing moving back to domestic markets ('retrenchment'). In addition to those presented above, two main reasons, linked to the economic development of developing countries, may also explain this retrenchment: the expected convergence of wages between European countries and offshoring destinations on the one hand, and the expected bottlenecks in the labour market of offshore destinations on the other hand. (This last reason may relate to (a) improvements in the education system of offshore destinations failing to keep pace with the increased demand for high-skilled people there, and (b) to the increasing pressure on their labour markets to satisfy increasing domestic demand for KIBS). Retrenchment from offshoring may, in turn, lead to an increased pressure on European labour markets (in terms of wages level, availability of the workforce, etc.) and thus more challenges for European policies (EMCC, 2006a).

Further important aspects shaping the future of the KIBS sector relate to the management of knowledge within KIBS companies (the success of KIBS providers will depend on their ability to manage information and knowledge and to make the best use of intellectual assets, in particular those 'embedded' in individuals), as well as to the availability of a high-skilled workforce. Policies aiming at improving education levels and skills (including training and life-long-learning policies) will contribute to supporting the KIBS sector (EMCC, 2006a).

Taking these possible development trends into account, the EMCC derived three possible scenarios for the future of the KIBS sector within the EU. These scenarios differ in the number of KIBS activities provided from external suppliers, the qualitative role played by KIBS providers for their users, the competition situation on the KIBS market, as well as the availability of KIBS-related knowledge.

The first scenario, called 'KIBS leadership', displays continuing rapid growth in KIBS; the second scenario, 'KIBS plateau', assumes a relative decline of KIBS as a consequence of offshoring, as well as the increase of KIBS provision from non-KIBS companies; the last scenario, 'Two-tier KIBS' displays a differentiation of the KIBS sector between highly specialised KIBS and other providers coordinating their inputs. Of course, policies and regulations may influence on these developments and the future European KIBS sector may be a mix of them, displaying features from all scenarios.

It is also possible that one scenario applies to particular KIBS sub-sectors whereas the others would be better described through other scenarios (EMCC, 2005). Table 3.4 summarises the main findings of the EMCC studies related to the possible developments of the KIBS sector in the EU (EMCC, 2005; EMCC, 2006a).

Table 3.4.: Characteristics of the scenarios for possible development of the KIBS sector in the EU, as derived by the EMCC.

Scenario A - 'KIBS leadership'	**Rapid growth of the KIBS sector in terms of value added and jobs creation.** - Increased demand for KIBS due to increased use of ICT applications, changing strategy approaches in client's industries, changing operating environments and regulations, new challenges related to increased service trade, etc. - KIBS increasingly involved in the whole client's business strategy. - Increase of KIBS trade due to trade liberalisation and therefore increase of competition, as well as potential for European KIBS providers to access new markets outside the EU. - KIBS 'forging a second knowledge infrastructure' besides public knowledge infrastructure (including universities, etc.). How to deal with this private knowledge and whether it has to be made public is becoming an important issue.
Scenario B - 'KIBS plateau'	**Growth of the KIBS sector slowed down** ('maturation' of the KIBS sector) by the 'shift to in-house provision of services by users, supported by technological and managerial changes', as well as the increasing competition coming from the public sector (universities, etc.) and from non-KIBS companies ('clients becoming competitors'), both also providing KIBS to businesses. - Decreasing demand for KIBS due to users' wish to retain strategic functions in-house, the availability of adequate workforce allowing businesses to perform KIBS activities in-house, reduced demand for specific KIBS activities (e.g. for services related to consultancy on regulations in case of regulatory harmonisation, or the other way around in case of decrease of international activities). - Increased offshoring of KIBS activities to locations outside the EU. - KIBS providers become suppliers of 'powerful in-house departments' carrying out KIBS activities. - Increasing concentration of the KIBS market due to increasing pressure on the labour market and higher competition. - Knowledge may remain private due to many KIBS provided in-house.
Scenario C - 'Two-tier KIBS'	**Development of a two-tier KIBS market structure:** many KIBS providers are highly specialised on services tailored to particular sectors. Other providers have more of a coordinating function, fitting the inputs of specialised KIBS providers into the client's business and strategy. - Emergence of large cross-sectoral KIBS providers acting as integrators and increased competition at global scale related to these integration activities (high demand for 'complex IT-based management and network systems'). - Increased disparities (related to wages, working conditions) between specialised KIBS providers and integrators. - Increasing standardisation efforts for large management projects and increasing diffusion of knowledge related to these standardised processes – whereas 'knowledge about integrating services' remains mostly tacit.

Source: VDI TZ-ZTC compilation - based on EMCC, 2005; EMCC, 2006a

4. OVERVIEW OF EXISTING CLASSIFICATIONS AND DEFINITIONS

4.1 The integrated system of economic classifications

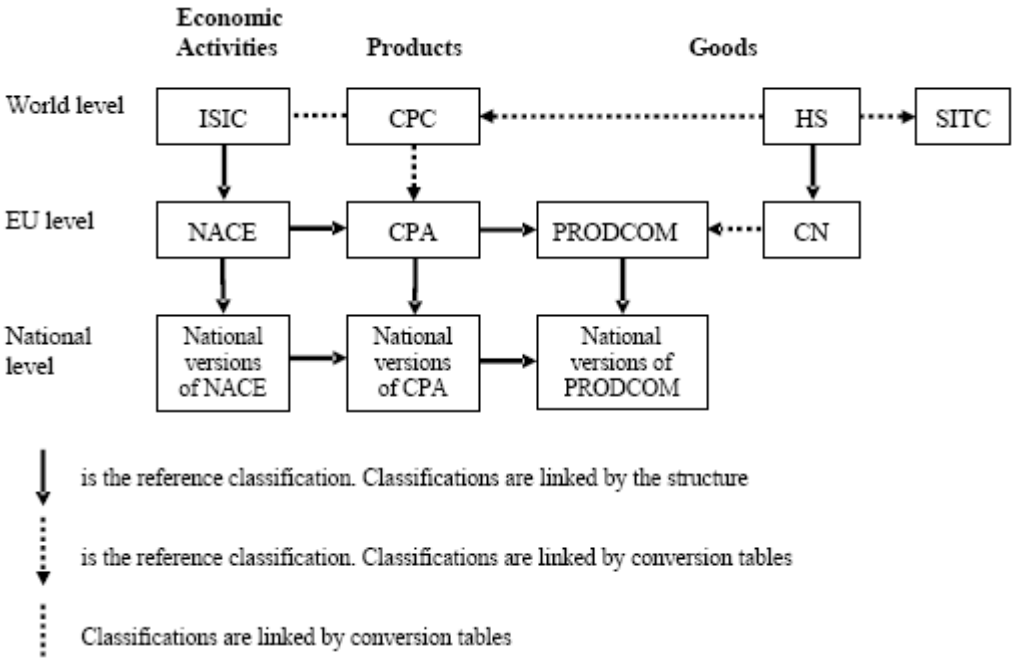
All phenomena that are to be described in terms of statistics require systematic classification. A statistical classification can be defined as a 'classification having a set of discrete categories, which may be assigned to a specific variable registered in a statistical survey or in an administrative file, and used in the production and presentation of statistics' (Hoffmann, 1999). Statistical classifications are characterised by:

- exhaustive coverage of the observed universe;
- mutually exclusive categories: each element should be classified in only one category of the classification;
- methodological principles which allow the consistent allocation of the elements to the various categories of the classification.

Constructing a classification scheme therefore implies creating an exhaustive and structured set of mutually exclusive and well-described categories. Classifications help to describe social, economic or natural phenomena, to implement regulatory policies and to standardise concepts of public services (Hoffmann, 1999; Eurostat, 2007a).

The international family of economic and social classifications encompass all *reference classifications* that have been registered into the UN Inventory of Classifications and approved as guidelines by the UN Statistical Commission or another competent intergovernmental board on such matters as economics, demographics, labour, health, education, social welfare, geography, environment and tourism. Classifications used for regional or national purposes that are *derived classifications* – i.e. based upon reference classifications – or *related* to the international classifications – i.e. that partially refer to reference classifications – also belong to this family (UN, 1999). In this sense, economic classifications used at European level, as well as at national level within Europe, are part of this integrated system which can be represented from the European perspective as shown below (Eurostat, 2007a):

Figure 4.1: Integrated system of economic classifications from the European perspective.



At international level:
- ISIC is the United Nations' International Standard Industrial Classification of all Economic Activities;
- CPC is the United Nations' Central Product Classification;
- HS is the Harmonized Commodity Description and Coding System, managed by the World Customs Organisation.

At European level:
- NACE - the European Classification of Economic Activities is the European reference framework for the production and the dissemination of statistics related to economic activities (e.g. production, employment, national accounts);
- CPA is the European Classification of Products by Activity;
- Prodcom is the classification of goods used for statistics on industrial production in the EU;
- CN stands for the Combined Nomenclature, a European classification of goods used for foreign trade statistics.

Source: Eurostat, 2007a

The European Classification of Economic Activities (NACE) – which is of interest in the present report – is derived from the United Nations' International Standard Industrial Classification of all Economic Activities. This allows the comparability at world level of statistics produced on the basis of NACE (Eurostat, 2007a).

'Operation 2007'

Changes in economic structures and organisations, as well as technological developments, give rise to new activities and products, which may supersede existing activities and products implying constant challenges for the compilation of statistical classifications. The term 'Operation 2007' refers to the just finalised major revision of international and European economic classifications that started in 2000. 'Operation 2007' encompassed the revision of all classifications of the integrated system of economic classifications as presented above. This revision process aimed at modifying existing classifications in order to reflect the technological development and structural changes of the economy. The revision was driven by the following criteria (Langkjaer-Ohlenschlaeger, 2002; EC Regulation 1893/2006; Eurostat, 2007a):

- relevance to the actual world economy;
- better comparability with other national and international classifications;
- continuity with their previous versions.

In particular, the ISIC Classification ISIC Rev. 3 and the NACE Classification NACE Rev. 1.1, currently used for statistics on economic activities, were revised.

4.2 Classifications of economic activities

4.2.1 Revised UN and European classifications: ISIC Rev. 4 and NACE Rev. 2

The revised ISIC, ISIC Rev. 4, was adopted by the UN Statistical Commission in March 2006. Consequently, the revised NACE Classification, NACE Rev. 2, was adopted in December 2006. Both revised classifications will enter in to force on 1 January 2008. At European level, NACE Rev. 2 is to be used, in general, for statistics referring to economic activities performed from 1 January 2008 onwards (Eurostat, 2007a; EC Regulation 1893/2006).

Both classifications are based on a hierarchical structure:

(a) The first level consists of headings identified by an alphabetical code (sections);

(b) The second level consists of headings identified by a two-digit numerical code (divisions);

(c) The third level consists of headings identified by a three-digit numerical code (groups);

(d) The fourth level consists of headings identified by a four-digit numerical code (classes).

NACE being a derived classification of ISIC, categories at all levels of NACE are defined either to be identical to, or to form subsets of, single ISIC categories:

The first and the second level of ISIC Rev. 4 (sections and divisions) are identical to sections and divisions of NACE Rev. 2.

The third and fourth levels (groups and classes) of ISIC Rev. 4 are subdivided in NACE Rev. 2 according to European requirements. However, it is possible either to directly convert the NACE classes to the ISIC classes or to aggregate groups and classes of NACE Rev. 2 into the groups and classes of ISIC Rev. 4 from which they were derived. For instance, the ISIC class 8521 'General secondary education' is identical with the NACE class 85.31 'General secondary education', whilst the combination of the NACE classes 58.13 'Publishing of newspapers' and 58.14 'Publishing of journals and periodicals' corresponds to the ISIC class 5813 'Publishing of newspapers, journals and periodicals'. The aim of the further breakdowns in NACE Rev. 2, compared with ISIC Rev. 4, was to construct a classification more adapted to structure and specificities of the European economies (Eurostat, 2007a; UK-SIC, 2007).

The code for the section level is not integrated in the ISIC and NACE codes that identify the division, the group and the class describing a specific activity. As an example, the activity 'Manufacture of glues' is identified in NACE Rev. 2 by the code 20.52, where 20 is the code for the division, 20.5 is the code for the group and 20.52 is the code of the class; section C, to which this class belongs, does not appear in the code itself (Eurostat, 2007a).

The coding systems used in ISIC and NACE are, as far as possible, the same; NACE Rev. 2, however, can be differentiated from ISIC Rev. 4 through the dot placed between the first two digits (division level) and the last two (groups and classes). Since some groups and classes in ISIC Rev. 4 are disaggregated into NACE groups and classes, without additional hierarchical levels, some ISIC codes differ from the corresponding NACE codes: the numerical code of a specific activity at group or class level may therefore be different in NACE Rev. 2 and in ISIC Rev. 4 (Eurostat, 2007a; EC Regulation 1893/2006).

By way of example, as presented in the table below:

The numerical code for the activity 'Support activities for crop production' is the same in ISIC Rev. 4 and NACE Rev. 2, though differentiated by the dot between the first two and the last two digits;

By contrast, the numerical codes for the activity 'Raising of horses and other equines' in ISIC Rev. 4 and NACE Rev. 2 only differs by the last digit (class level);

The numerical codes for the activity 'Manufacture of cordage, rope, twine and netting' in ISIC Rev. 4 and NACE Rev. 2 differ by the last two digits (group and class level).

In all cases, the first two digits are the same in ISIC Rev. 4 and NACE Rev. 2 (Web-EU, 2007a).

Activity	**ISIC Rev. 4**	**NACE Rev. 2**
Support activities for crop production	0161	01.61
Raising of horses and other equines	0142	01.43
Manufacture of cordage, rope, twine and netting	1324	13.44

A set of criteria was defined to delineate the different classification categories, as well as to identify which code should be allocated to which economic activity. These criteria depend upon several factors, such as the potential use of the classification, the availability of data, the consistency of the classification, etc.

For the definition of classes, ISIC Rev. 4, as well as NACE Rev. 2 gives more importance to the actual production process than was the case in earlier classifications, meaning that all activities of a given class share a common process for the production of goods or services and use similar technologies. By contrast, the major criteria used for defining groups and divisions of NACE Rev. 2 do not refer to the production process as such, but to the character of goods and services produced (e.g. physical composition, stage of fabrication, etc.), their use as well as the inputs, process and technology of production. This criterion allows us therefore to define and regroup production units according to the raw materials used in the production process, as well as the demand and markets of the outputs.

Further criteria were defined to allocate numerical codes to units performing one or more activities as defined in NACE Rev. 2 (so-called *principal*, *secondary* and *ancillary* activities, to units where a considerable proportion of activities performed are included in different classes of NACE Rev. 2 (so-called *multiple* and *integrated* activities), as well as to activities performed on a fee basis or as outsourced activities (distinguishing between whether these activities are outsourced on a permanent or on a temporary basis) (Eurostat, 2007a).

Despite the revision of definition criteria for the classification, the main features of NACE have remained unchanged. However, new detail levels have been created to reflect different forms of production as well as emerging industries and services: NACE Rev. 1.1 had 17 sections and 62 divisions; NACE Rev. 2 has 21 sections and 88 divisions (Eurostat, 2007a). Annex 4 shows a table pointing out the correspondence between ISIC Rev.3 – NACE Rev. 1 and ISIC Rev. 4 – NACE Rev. 2 at the level of sections:

The detail of the classification has particularly increased for service-related activities, reflecting the growing importance of services in the economy and their increasing complexity: The number of sections related to services has increased from 8 to 13, the number of divisions from 22 to 44 and the number of classes from 100 to 166. In particular, separate sections have been introduced for (Eurostat, 2006a; Eurostat, 2007a):

- Electricity, gas, steam and air conditioning supply (Section D);
- Water supply, sewerage, waste management and remediation activities (Section E);
- Transportation and storage (Section H);
- Information and communication (Section J) (including activities involving production and distribution of information and cultural products, provision of the means to transmit or distribute these products, as well as data or communications, information technology activities and the processing of data and other information service activities);

- Real Estate (Section L);
- Professional, scientific and technical activities (Section M);
- Administrative and support service activities (Section N);
- Arts, entertainment and recreation (Section R);
- Other service activities (Section S);

The service sections which already existed in the previous NACE version have been restructured as follows (Eurostat, 2006a; Eurostat, 2007a):

- Hotels and restaurants, now called 'Accommodation and food service activities' (Section I);
- Financial intermediation, now called 'Financial and insurance activities' (Section K);
- Education (Section P) (no change);
- Health and social work, now called 'Human health and social work activities' (Section Q).

In NACE Rev. 1.1 business services were defined as encompassing the NACE Classes 70 to 74 of the section in section K 'Real estate, renting and business activities'. They include, on the one hand, *knowledge-intensive business services* (KIBS), i.e. professional services, such as IT-consulting, management consulting, R&D services, and advertising; on the other hand, so-called *operational services*, where services like industrial cleaning, security services and secretarial services were also included (Nielsen, 2004). It should be, however, noted that some KIBS activities can also be found in other NACE classes, as will be highlighted in section 4.3. The table below presents the main KIBS sectors based on the previous NACE Classification Rev. 1.1 (EMCC, 2005).

Correspondence tables available at the homepage of the European Communication and Information Resource Centre Administrator (CIRCA) allow us to translate the classes of NACE Rev. 1.1 referring to business and professional services into the corresponding classes of NACE Rev. 2 (Web-EU, 2007b). This correspondence is given in Annex 5.

Table 4.2: Main KIBS based on NACE Rev. 1.1.

NACE division 72: Computer and related activities
72.7: Hardware consultancy
72.8: Software consultancy and supply
72.9: Data processing
72.10: Database activities
72.11: Maintenance and repair of office, accounting and computing machinery
72.12: Other computer related activities
NACE division 73: Research and experimental development
73.3: Research and experimental development on natural sciences and engineering
73.4: Research and experimental development on social science and humanities
NACE division 74: Other business activities
74.16: Legal activities
74.17: Accounting, book-keeping and auditing activities; tax consultancy
74.18: Market research and public opinion polling
74.19: Business and management consultancy activities
74.110: Management activities of holding companies
74.21: Architectural and engineering activities and related technical consultancy
74.6: Technical testing analysis
74.7: Advertising
74.8: Labour recruitment and provision of personnel
74.9: Miscellaneous business activities nec
74.82: Photographic activities
74.85: Other business activities nec
Note: The broad NACE divisions 70-74 include some sub-sectors that are not strictly KIBS, and thus have been omitted from this list: some parts of 74.6 (Investigation and security activities); 74.7 (Industrial cleaning); 74.82 (Packaging activities), 74.83 (Secretarial and translation activities). NACE 71, excluded from the list above, involves 'Renting of machinery and equipment without operator and of personal and household goods' which is often grouped together with these sectors. For purposes of statistical analysis, these sectors are often aggregated with 'real estate' and this group then, in turn, with 'financial intermediation'.

Source: EMCC, 2005

The implementation plan for the NACE Rev. 2 is summarised in the table below:

Table 4.3: Implementation plan of NACE Rev. 2.

Implementation plan for NACE Rev. 2 – October 2006	
1 January 2008	Statistical units in Business Registers referring to this date shall be classified according to NACE Rev. 2
1 January 2008	Economic activities performed from this date onward shall be classified according to NACE Rev. 2. 2008 will be the first reference year for all community statistics in accordance to NACE Rev. 2, with the exclusion of STS (Short Term Statistics), LCI (Labour Cost Index), National Accounts, Balance of Payments and Economic Accounts for Agriculture.
1 January 2009	Start of the reference period for the production of STS and LCI indices produced according to NACE Rev. 2. For these domains, Member States will also provide back-cast series.
October 2009	Preliminary Structural Business Statistics (SBS) data referring to 2008 will be sent to Eurostat according to NACE Rev. 2.
June 2010	Definitive SBS data referring to 2008 will be sent to Eurostat according to both NACE Rev. 2 and NACE Rev. 1.1.
September 2011	Implementation of NACE Rev.2 in the national accounts and balance of payments.
2011	Implementation in agricultural statistics.
2012	All community statistics will be produced according to NACE Rev. 2.

Source: Eurostat, 2006a

4.2.2 European Member States level

The use of NACE is mandatory in the EU. Member States are allowed to use a national version for meeting specific national purposes; however, for the sake of international comparability of economic statistics, the national classifications of economic activities should be derived from NACE and must fit into the structural and hierarchical framework of NACE. Therefore, most national versions derived by Member States base on NACE, usually add a fifth digit for national purposes (Eurostat, 2007a; EC Regulation 1893/2006). For instance, the revised French Industry Classification NAF Rev. 2 (or 'NAF 2008') which became effective on 1 January 2008, is derived from the new European classification NACE Rev. 2 and is based on a five-digit code. The first four digits correspond to the NACE code Rev. 2; the fifth and last digit is a letter added in order to take into account national purposes (Web-INSEE, 2008). Statistics referring to economic activities should be performed from 1 January 2008 onwards and shall be produced by Member States using NACE Rev. 2 or with a national classification derived there from. (EC Regulation 1893/2006). The adoption of the new NACE Classification at European level – NACE Rev. 2 – therefore requires the revision of national classifications in Member States. Annex 6 will provide an overview of the planed revision of national classifications in the MS.

4.2.3 Further classifications at international and national levels

North American Industry Classification System (NAICS)

The North American Industry Classification System was developed in the mid-1990s with the aim to provide common industry definitions for Canada, Mexico and the United States and to facilitate economic analyses of these economies. NAICS is based on a production-oriented conceptual framework, classifying units not activities. Consequently, the structures of ISIC and NAICS are substantially different. However, it is possible to aggregate statistical data collected according to NAICS into the two-digit divisions of ISIC Rev. 4/NACE Rev. 2, ensuring comparability of data (Eurostat, 2007a).

Australian and New Zealand Standard Industrial Classification (ANZSIC)

The Australian and New Zealand Standard Industrial Classification (ANZSIC) was developed for use in both countries, allowing the production and analysis of industry statistics. Great emphasis has been placed in the development phase on alignment with international standards and ISIC Rev. 3 had been used as the international standard for reference purposes. ANZSIC is therefore much closer to ISIC/NACE than NAICS: its structure broadly follows ISIC, and categories at the division and more detailed levels can be aggregated into the two-digit categories of ISIC (Eurostat, 2007a).

National classifications derived from NACE

Norway and Switzerland are committed to using a national version derived from NACE. In addition to these two countries, about ten other countries outside the EU, or candidate countries like Croatia and Turkey, refer to NACE in their national classification of economic activities. Overall, more than 150 countries worldwide are using classifications of economic activities based on either NACE or ISIC (Eurostat, 2007a).

Japan's Standard Industrial Classification (JSIC)

The 12th revision of Japan's Standard Industrial Classification was planned to be finished by the end of 2007 (Ueda, 2007). As for other classifications presented above, this revision is motivated on the one hand by the need to adapt to the changes in the world economy and in particular, the need to reflect the growing importance of service activities (leading to the definition, in the new classification, of more specific categories of service activities) and on the other hand, by the will of increasing comparability between the Japanese classification and the UN classification (Ueda, 2007).

4.3 Challenges and recommendations

The transition from NACE Rev. 1.1 to NACE Rev. 2 will have different consequences for different types of statistical studies and surveys (Eurostat, 2005):

- Business surveys, using NACE for the sampling design (e.g. Structural Business Statistics), will be the most affected by the transition to NACE Rev. 2;
- Other statistics capturing variable 'activity' but not using it in the sampling design (e.g. Labour Force Surveys) will be easier to implement;
- As regards other administrative sources and national statistics that are not transmitted to Eurostat, there is no legal obligation to move to NACE Rev. 2 although it is desirable and even necessary if they are indirectly used by other sources like Short-term Business Statistics, national accounts, etc).

In 2008 all business registers shall be operative under NACE Rev.2. Double coding NACE 2-NACE 1 will be maintained for some time although survey-sampling designs will be based on NACE 2. All surveys will use NACE Rev. 2 from 1 January 2008, except short-term statistics and the labour cost index (Eurostat, 2005).

As the replies to a questionnaire in June and October 2005 have already indicated, Member States' positions on the implementation of NACE Rev. 2 show a large spread. Whilst countries such as France, the United Kingdom or the Czech Republic indicated 2010 as the earliest possible implementation date, most EU countries assume 2011 or 2012 to be the earliest possible implementation date of the new NACE code. Portugal even preferred 2012. This broad range of answers reflects the countries' different institutional set-ups and the particularities of their national accounts compilation processes, as well as the wish to reduce the implementation's costs and inconvenience for the users (Eurostat, 2005). The year 2011 appears to be the most likely year for the application of the new NACE Classification in national accounts (Aspden, 2006).

With the NACE Rev. 2 implementation Member States have to cope with a trade-off between the convenience (and risks) of combining big revisions and the feasibility of achieving all the revisions by 2012. The main arguments for the MS in line with the implementation schedule are (Eurostat, 2005):

- the costs of transition: e.g. maintaining double classification NACE Rev. 1.1 and NACE Rev. 2;
- the inconvenience for users acceding to statistics with two different NACE versions.

The main arguments for countries behind schedule are (Eurostat, 2005):

- a simultaneous implementation of NACE Rev.2 and the revised ESA 95[12];
- the need for two definitive years of SBS for the calculation of the back series[13];
- the required time to prepare for and implement NACE in administrative sources.

In January 2008, it can be observed that some countries are using double coding in the business register, (hence, units in the register are classified according to both NACE Rev. 1.1 and NACE Rev. 2) in order to produce a double series in Structural Business Statistics (SBS), Short-term Statistics (STS), national accounts, etc. Other countries are using double recording in surveys, (hence, units in the survey sample must report twice, once according to NACE Rev. 1.1 and once according to NACE 2.). This is combined with double coding in the register to gross up sample results to population. In the case of STS, double weighting is also necessary. This is the ideal method, but hardly any country finds it feasible for more than one year. Some countries cannot maintain double reporting and will individually convert source data according to NACE Rev. 1.1 for their needs (Eurostat, 2005). Of course, double coding will require extra resources (Eurostat, 2006b). However, as shown by the table displayed in Annex 6, which presents an overview of the implementation at national level of the revision NACE classification, countries are still in the process of internal discussion. Some country replies are very provisional, others have not decided yet.

Limitations of using the NACE classification to describing business-related services

Kox et al. pointed out recently that, due to the newness of the sector of business services, the rapid and continuous development of new activities and the lack of statistical criteria for studying this sector, 'statistical classification problems for business services are much greater than for services as a whole, or for some traditional services like banking, trade, transport or tourism' (Kox et al., 2007a). This is exemplified in the way business services were listed in the former NACE Rev. 1.1 classification, which was in force until 1 January 2008. In contrast to the importance of the sector of business services, employing millions of people in Europe, *most* business services were allocated to the residual category '*Other business services*' (NACE 74) using a negative approach based on a residual criterion '*what is not in ..., not elsewhere classified'* (Kox et al., 2007a). The last 3-digit level in NACE 74, NACE 74.8 '*Miscellaneous business activities n.e.c.*', as well as the last 4-digit level, NACE 74.87 '*Other business activities n.e.c*', also use a residual criterion. However, the use of the revised NACE Rev. 2, which came into force on 1 January 2008 and allows a greater specification of the business services sector might – at least in the long run after a transition period – help to partly overcome these statistical difficulties: indeed, the class 74.87 '*Other business services*' of NACE Rev. 1.1 has been more specified in NACE Rev. 2 and split into eight different classes (Web-EU, 2007b).

[12] The ESA 95 is the European System of National and Regional Accounts aiming at providing the Community institutions, governments and economic and social operators with a set of harmonised and reliable statistics on which to base their decisions. In particular, it defines the precision and the accuracy of which have to be applied in order to arrive at a consistent, reliable and comparable quantitative description of the economies of the Member States. The ESA 95 has been revised recently and the current plan is for adoption of the revised ESA 95 in 2011 and the implementation of the ESA methods and data transmission to occur in 2014. *Source:* www.circa.europa.eu; Information note for members of the OECD Committee on Statistics, No. 7, November 2007.

[13] Availability of SBS data for annual accounts: 2012 countries see the need for two definitive years from SBS according NACE Rev. 2 before the changeover is done. This is particularly necessary to reconstruct the NACE Rev. 2 series backwards. These SBS data won't be available for some countries before 2012.

Nevertheless, two main limitations of using the NACE classification to describing business-related and professional services (e.g. with the aim to assess the number of employees carrying out business service activities within a country) should be highlighted.

Firstly, whilst *most* business and professional services are, indeed, included in the NACE divisions 72-74 often used to define these services, some of them, for instance, health-related services, belong to others: hospital activities, for example correspond, in the former NACE classification, to the NACE code 85.11 (NACE Rev. 2: 86.10) and dental practice activities to the NACE code 85.13 (NACE Rev. 2: 86.23). Furthermore, some KIBS-like entities can also be found in the NACE 90s, for instance related to design activities, audiovisual media, specialist libraries, waste disposal, etc. KIBS activities related to staff training, in turn, would be found in the NACE 80s. It can also be assumed that some publishers or firms offering reproduction of media provide some kind of knowledge-intensive business services (Miles, 2008).

The second limitation of the NACE classification for studying business and professional services relates to the fact that the code allocated to a given industry or a given unit within a specific industry might not reflect the whole range of activities carried out by this industry or unit. In case of so-called 'multiple and integrated activities', the unit is being allocated the code either corresponding to its main activity (if accounting for more than 50% of the value-added) or determined by using the 'top-down method' (if no activity of the unit is accounting for more than 50% of the value-added) (Eurostat, 2007a). Clearly, some business-related service activities, when carried out within a unit classified, e.g. in a manufacturing category, would not be adequately taken into account. This is particularly relevant since about 40% of all persons employed in the manufacturing sector work in occupations that are more or less (business)service-related (Kox et al., 2007a) and, as mentioned earlier, this share is expected to increase in the future (see section 3.5).

Likewise, a recent study on the 'creative sector' in the United Kingdom highlighted that about 35% of the 'creative workers' (i.e. – as defined in the study – people carrying out activities related to advertising and marketing; architecture, visual arts and design; film, TV, radio and photography; music and performing arts; publishing; and software, computer games and electronic publishing), many of them being KIBS workers, work outside of the creative industries and are 'embedded' in other industries – for instance, in the manufacturing or real estate industry (Higgs et al., 2008; Miles, 2008). In order to better map the creative sector, this study developed the model of a 'creative trident' bringing 'together those working in the creative industries and those working in specialist creative jobs in other firms and organisations' (Higgs et al., 2008). This model makes the distinction between three types of employment: creative individuals working in creative industries; 'support' staff in those industries (such as, for instance, those providing secretarial, administrative or accountancy back-up) and creative individuals 'embedded' in 'other industries not defined as 'creative'' (Higgs et al., 2008). It might be fruitful to think of a similar model to describe the workforce and activities related to business-related services in general, and KIBS in particular.

5. STANDARDISATION AND CERTIFICATION

The service sector constitutes the main source of economic growth in Europe. However, barriers within the Internal Market still reduce the freedom for providing commercial services EU-wide, thus hampering the potential for growth in this sector. European standards for services are expected to provide momentum within the Single Market as European standards for the manufacturing sector did. Standards are deemed particularly crucial in the field of business services, and in particular in information and communication technologies, which are being increasingly used in modern business services (CEN, 2005a; OECD, 2007; Micklitz, 2007). 'It is precisely because of the intangible nature of services and the information asymmetries thus caused between management and service provider, [that] the need to introduce quality standards for each stage of the service production is especially high'(Graz et al., 2007).

This intangibility as well as the specific character of the relation between service providers and consumers may be the reason why standardisation for services is particularly challenging and very few standards for services particularly when compared to other economic sectors have been developed so far by official international standardisation bodies – apart from specific areas like ICT, finance and some service infrastructures. As pointed out by Micklitz, 'standardisation of services is still in its infancy' (Micklitz, 2007). Indeed, the amount of voluntary standards for services lags behind the economic importance of the service sector and most of the 10 000 standards that were available at European level in 2005 covered products and methods of measurement (Graz et al., 2007; CEN, 2005a; EFBRS, 2005). Increased standardisation activities are therefore needed in the field of services in order to be able to meet the goals of the Lisbon Strategy.

A detailed list of different typologies for standards for services in general, as derived in the literature, was given by Blind (Blind, 2003). These typologies are based on the different characteristics of services and of the delivery processes (e.g. service provider, service employees involved in service delivery, service results, communication between customer and service provider, etc.). Considering business services, three broad types of standardisation can be defined (OECD, 2007):

Standardisation of the service output, i.e. the output itself, product-specific processes and the means of delivery. Quality management standards can for instance help to standardise the service-providing process. Specific aspects of the delivery of business services, however, – e.g. the fact that the consumers are often involved in the service production – can make it difficult to define standards for service quality.

Standardisation of the performance capacity, i.e. aspects such as quality measurement of organisational and managerial capacity, financial soundness, human resources, firm-specific general process of services production. Standardisation in this domain is expected to display similarities with standard setting frameworks developed for other economic sectors.

Standardisation of the communication/interface, including aspects such as the communication between service providers and clients, as well as between providers and suppliers. This type of standardisation mainly addresses aspects related to ICT applications (semantics, syntax, protocols, specification of ICT in use, etc.) but also extends to codes of conduct, customer complaints and ombudsman systems, as well as approachability. Interoperable and compatible standards regarding these issues are often expected to increase competition and market efficiency.

5.1 International standardisation activities at ISO

The International Organisation for Standardisation (ISO) is the world' s largest developer and publisher of international standards with a membership of 155 private and public national standardisation bodies. ISO activities aim at developing standards in various service areas such as tourism, banking and insurance, engineering consultancy, etc. and started in the mid 1990s. However, as the Secretary General of the ISO pointed out in June 2007, developing standards for the service sector still remains 'one of [the] biggest challenges' for the ISO. A new working group was established in 2001 with the aim of drafting a guide on the use and development of service standards from a consumers' perspective. This guide is expected to be approved by the end of 2007 (Graz, 2003).

So far, 12 new technical committees or project committees, addressing a wide range of service activities, have been established to develop service standards at the ISO (see table 5.1). In addition to these, standards for the financial sector are addressed by the Committee on Financial Services (Graz et al., 2007).

Table 5.1: New ISO committees specifically focusing on service standards.

ISO committee	Area of activities
ISO/TC 222	Personal Financial Planning
ISO/TC 223	Societal Security
ISO/TC 224	Service activities relating to drinking-water supply systems and wastewater systems
ISO/TC 225	Market, opinion and social research
ISO/TC 228	Tourism and related services
ISO/TC 230	Project Committee: Psychological assessment
ISO/TC 231	Project Committee: Brand valuation
ISO/TC 232	Educational services
ISO/TC 233	Project Committee: Cleaning services
ISO/TC 236	Project Committee: Project management
ISO/TC 236	Project Committee: Rating services
ISO/TC 237	Project Committee: Exhibition terminology

Source: adapted from Graz et al., 2007

So far, the most notable standard outputs have concerned the personal financial planning process (ISO 22222:2005); in the vocabulary and service requirements for market, opinion and social research (ISO 20252:2006); safety related minimum requirements for the training of recreational scuba diving services (ISO 24801-1:2007); and a first attempt at developing a common terminology for defining hotels and other types of tourism accommodation (ISO 18513:2003) (Graz, 2003). As pointed out by Graz, 'so far maturity in service standardisation remains far ahead within the ISO environment' (Graz et al., 2007).

5.2 Standardisation activities at European level

At European level, new emphasis on service standards occurred following the 2005 mid-term review of the Lisbon Agenda. In particular, the Services Directive 2006/123/EC foresees the harmonisation of different regulations at the European level in order to minimise limits to the free movement of services and to overcome discrimination of service providers based on nationality or local residence (Graz et al., 2007).

Overview and progress status of work currently ongoing under CEN

CEN, the European Committee for Standardization, is contributing to the objectives of the European Union and the European Economic Area with voluntary technical standards which promote free trade, the safety of workers and consumers, interoperability of networks, environmental protection, exploitation of research and development programmes, and public procurement (Web-CEN, 2007). The European Commission supports service standardisation by issuing mandates (a request to develop specific standards or to propose a standardisation programme) to CEN in this area.

In October 2003, DG Enterprise and Industry of the European Commission addressed a first Programming Mandate (M/340) to CEN in the field of services, in order to identify priority sectors where intra-community trade in services is already occurring or likely to surge. Several events were organised by CEN in 2004 to address issues related to horizontal cross-sectoral generic standards as well as vertical sector-specific standards, service providers and end-users. The final report on the EC Programming Mandate M/340, published in 2005, counted about 30 available standards in the service sector up to that date, broken down in the categories

- Maintenance services,
- Transport – logistics and services,
- Cleaning Services,
- Postal Services,
- Healthcare Services,
- Support Services to SMEs and
- Call centre Services.

These standards refer to terminology, guidelines for contract drafting, quality of services, measurement systems and risk management. Most of them have been developed for the specific area of 'Postal Services' (CEN, 2005a).

In July 2005, a second Programming Mandate (M 371) was addressed to CEN by DG Internal Market and Services of the European Commission. In response to this second mandate, 11 projects have been developed in 2007 across half-a-dozen European standardisation bodies (Graz et al., 2007). The CEN Horizontal European Service Standardization Strategy (CHESSS) is the largest of these 11 projects, involving national standards bodies in the United Kingdom, Spain, Germany, Denmark, Estonia and the Netherlands. The aim of the project is to explore the feasibility of a generic approach to European service standardisation and its benefits compared to following a sector-specific approach. The outputs of the project should help to define underlying principles for a programme of European service standardisation leading to an easier cross-border delivery of services in Europe. The other ten projects address the ability of horizontal generic standards to look at the specificities of distinct service markets.

In particular, the needs and benefits of standardisation in different service fields should be assessed, as well as whether generic standards in services may become too burdensome and if a more sector-specific approach may be more promising (Graz et al., 2007; Web-CEN, 2007). Among these ten projects, six focus on business related services, namely on: Consultancy engineering services; Welcome / reception services; Recruitment services; Trade, maintenance and location of sailing and motor boats; IT-Outsourcing; Outsourcing. These projects will run until the end of 2008 (Web-CEN, 2007).

By now, CEN has developed – or is currently developing – standards in the areas of postal services, maintenance, facility management, cleaning services, funeral services, tourism, translation services, real estate services, print media analysis, business support services, customer contact centres, security services and services of hearing-aid specialists in the following Technical Committees and Task Forces (Web-CEN, 2007):

Table 5.2: CEN Technical Committees and Task Forces.

CEN/TC 319 Maintenance
CEN/TC 320 Transport – Logistics and services
CEN/TC 328 Standard measuring system for cleaning performance
CEN/TC 329 Tourism services
CEN/TC 330 Qualification of construction enterprises (dormant)
CEN/TC 331 Postal services
CEN/TC 348 Facility management
BT/TF 138 Translation services (disbanded)
BT/TF 139 Funeral services (disbanded)
CEN/SS H011 Security services (BT/TF 167)
CEN/SS H01 Cinematographic works (BT/TF 179)
CEN/SS A10 Services of real estate agents (BT/TF 180)
CEN/SS A99 Business support services to SMEs (BT/TF 181)
CEN/SS A99 Print media analyses (BT/TF 186)
CEN/SS A99 Customer contact centres (BT/TF 182)
Supply chain security (BT/TF 199)
Hearing-aid specialist services (BT/TF 200)

Source: Web-CEN, 2007

The last two Task Forces on Supply chain security (BT/TF 199) and Hearing-aid specialist services (BT/TF 200), have just been established in December and October 2007 respectively and aim for the former one to develop a standard on operational supply chain security management and, for the last one, to specify service commitments for services of hearing-aid specialists in relation to patient welcoming and information, patient follow-up, requirements on the premises and on professional equipment, complementary services, patient satisfaction assessment, etc. (Web-CEN, 2007).

In addition to these sector-specific activities, two CEN Technical Board Working Groups are working on horizontal topics related to service standardisation (Web-CEN, 2007):

The Working Group BT/WG 163 'Service Standardization', created in February 2004, is a discussion platform for new initiatives which also aims at programming, planning and coordinating future European standardisation activities, in particular for the identification of areas where new standards are needed.

The Working Group BT/WG 192 'Qualification of personnel' was created in October 2006 and addresses the issue of personnel qualification. This working group is identifying existing EU directives and national legislation linked to qualification, listing existing standards on professional / personnel qualifications at national and international level (CEN and ISO standards) and defining the means to take personnel qualification into account in process and service standards.

In the particular field of business support services to SMEs, standards are currently under development with regard to terminology, quality and performance requirements of support services provided to micro and small enterprises; to vocabulary and service requirements of print media analyses; and to customer contact centres (Web-CEN, 2007). Furthermore, CEN calls for further standardisation activities, either in the existing or in new CEN working structures, in the following areas (CEN, 2005a):

Cleaning services: since further standards are needed, in addition to the European standard 'Cleaning services – Basic requirements and recommendations for quality measurement systems' published by CEN in 2001 (EN 13549:2001), the need for European standards on the qualification of personnel and on code of practice or contract drafting should be explored.

Logistics services: the available CEN reports on occupational profiles for practitioners in logistics and logistics performance measurements (CR 13156:1998 and CR 13908:2000) do not sufficiently describe the reality of today's logistic markets and the increasing importance of efficient logistics services for minimising costs. New standards should enable the portability of logistics skills and competencies throughout Europe. The CEN recommends developing such standards in cooperation with the European Logistics Association, which was involved in the Technological Committee on the supply chain concepts, the management skills of logistics professionals, inventory management, production planning, and sourcing and procurement (CEN/TC 273).

5.3 Standardisation activities at national level in Europe

European standards are systematically transposed, without any modification, into national standards in all of the countries of the European Economic Area, with compulsory withdrawal of the conflicting national standards. The European standards, intended – in case of conflict between national and European regulation – to replace the national standards, constitute the joint reference for defining technical requirements within the framework of commercial transactions, and in particular for all public procurement contracts (Web-AFNOR, 2007). The next sub-sections will provide an overview of standardisation in France, as well as in Germany. Both countries belong – with the United Kingdom – to the most active countries in the EU with regard to service standardisation (Mörschel, 2003, Blind, 2007).

5.3.1 Standardisation and certification activities in France

In spring 2005, the French Standards Association (AFNOR) launched a large enquiry in order to develop its French standardisation strategy for 2010. It consisted of a survey carried out with 20 000 French companies of all sizes and sectors identifying challenges, as well as needs and expectations related to standardisation from the point of view of enterprises (AFNOR, 2005b). Other enquiries (such as workshops) and involvement with local parties and governments supplemented this study. Based on the results of these actions, the French standardisation strategy 2006-2010 was defined around four major axes:

- Accompanying globalisation and ensuring that the standards governing markets are assets for French businesses, and promoting a French standardisation policy defined within a global framework.

- Contributing to sustainable development: Standardisation is expected to help any given company to reach its triple bottom line result: assessment of financial, social and environmental performances.

- Repositioning standards within the reference documents: While doing business, companies use the reference document tools: proprietary sector schemes, open standards, incentives or mandatory regulation. A standard needs to define its position among these documents and emphasize its voluntary nature.

- Making standards systems and their products more acceptable: Standards do not fulfil their purpose if they are not known, understood, acknowledged and fully used. The improvement of readability and accessibility to the standardisation process and its related products is key to restoring confidence in standardisation. Developing feedback from different players who apply standards will lead to a better evolution and interpretation of standards (AFNOR, 2005b).

The technical work on standards at AFNOR is being conducted within major standardisation programmes in the following areas: construction; energy; electrical engineering and electronics; gas; petroleum industry; environment; food industry; health; health and safety at work; industrial engineering, equipment, materials; information and communication; management and services; sport, leisure, consumer goods and services; transport and logistics; water – environments and uses (Web-AFNOR, 2007).

AFAQ AFNOR Certification, a subsidiary of the AFNOR Group, is the leading body for the certification and evaluation of products, services, systems and competences in France and one of the foremost at international level (Web-AFNOR, 2007). It offers a wide range of service certifications:

The *NF Service mark* is a voluntary certification mark allowing service providers to define and prove the quality of the services they provide to customers, to highlight their professionalism and expertise, giving them a competitive advantage. The NF Service mark is based on quality, safety, reliability and performance requirements that are described in French, European and international standards which are produced in collaboration with service providers, consumer associations and public authorities. NF Service marks exist for professional training, activities of business incubators, advice and support services and service applications, etc.

The *Service mark* is a collective 'CE mark'[14] which is an integral part of the NF Service mark allowing its holders to communicate their commitment across national boundaries, using a special logo.

The AFAQ *Engagement de service* (AFAQ commitment to service) mark is a tailor-made reference system which highlights competitive assets. As an alternative or a complement to ISO 9000 certification, this certification helps build customer loyalty and develops the customer base. This approach is particularly suitable for companies within a single organisation (franchises, agencies, branches, etc.) in the service sector, particularly those providing services to individuals: catering, distribution, banking, insurance, transport, health, public services, etc.

The AFAQ *Service Confiance* reference systems (AFAQ Service Confidence) is specifically designed for professional organisations (federations, trade unions, etc.), providing them with a means of recognising their members' knowledge by uniting them in the pursuit of quality of service, enhancing the brand image of their profession and giving them a competitive advantage (Web-AFNOR, 2007).

5.3.2 Standardisation activities in Germany

Germany is an interesting example in relation to standardisation. Firstly, in Germany there is the distinction between 'Normung' covering the development process of full-consensus standards ('Normen') and 'Standardisierung' covering the development process of documents with a limited consensus by standards bodies ('Standards'). In this text only the term standards is used for both cases. However, when it is necessary to distinguish explicitly between the German terms 'Norm' and 'Standard', 'Norm' is rendered by 'full-consensus standard' and 'Standard' by the term 'specification' (Web-DIN, 2008). Secondly, in Germany there are about 180 professional and trade associations that provide specific standards to their members (Wanduch, 2007).

Table: 5.3 Different types of standards (up to national level) from their scope and the goals of those involved in their development.

Standards provided by	Type of standard	Who is involved?	Level of consensus	Development time
National standards bodies (e.g. DIN)	National standards, full-consensus standard (e.g. 'DIN Norm')	open expert group	full consensus	medium to long
DIN	Public Available Specifications (PAS)	open expert group	relatively high level	short to medium
Professional or trade associations	Association standards (e.g. VDI Guidelines)	open expert group	relatively high level	short to medium
Business consortia	Industrial standards	closed expert group	medium level	relatively short
Individual companies	Company standards	closed expert group	low level	relatively short

Source: VDI TZ-ZTC compilation - based on Mörschel, 2004; Marquardt, 2007

The German Institute for Standardization's (DIN) primary task is to work closely with its stakeholders to develop consensus-based standards that meet market requirements. Some 26,000 experts contribute their skills and experience to the standardisation process (Web-DIN, 2008). The overall strategy of Din is: full-consensus standards and specifications in Germany help business and society strengthen, develop and open up regional and global markets.

[14] As defined in the European Directive 93/68/EEC.

The five goals of standardisation in Germany as summarised in the 'German Standardisation Strategy' drawn up in 2004 are as follows (Web-DIN, 2008):

Goal 1: Standardization secures Germany's position as a leading industrial nation
Goal 2: Standardization as a strategic instrument supports a successful society and economy
Goal 3: Standardization is an instrument of deregulation
Goal 4: Standardization and standards bodies promote technological convergence
Goal 5: Standards bodies provide efficient procedures and tools

Although the service sector makes up for 70 % of GDP in Germany which demonstrate its importance, standardisation in the service sector is still underrepresented: Although there exist about 13,000 standards and regulations under the classification 'services' this accounts only for 3 % of all standards and regulations (DIN, 2002).

Box 5.1: Examples of full consensus standards and Public Available Specifications (PAS) in relation to services.

DIN 77200 Static guarding and mobile patrol services – Requirements (2002)

DIN 31051: Fundamentals of maintenance (2003)

DIN EN 13876 Transport – Logistics and services; Goods transport chains (2003)

DIN ISO 20252 Market, opinion and social research – Vocabulary and service requirements (2006)

DIN EN 15341: Maintenance - Maintenance Key Performance Indicators (2007)

DIN CEN/TS Building management – Terminology and scope of services (2007)

PAS 1014 Procedural model for the Benchmarking of services (2001)

PAS 1018 Essential structure for the description of services in the procurement stage (2002)

PAS 1019 Structured model and criteria for the selection and evaluation of services (2002)

PAS 1020 Design guidelines and formulation standards for eGovernment applications (2003)

PAS 1021 Procedural model for organizing business processes in the administration - Change from the functional to the process orientated administration (2003)

PAS 1047 Reference model for the delivery of industrial services - Corrective maintenance (2005)

PAS 1059 Processing plant design - Procedural model and terminology (2006)

PAS 1062 Implementing knowledge management in small to medium-sized enterprises (2006)

PAS 1063 Implementing knowledge management in small to medium-sized business networks (2006)

Source: Web-DIN, 2008

DIN's Performance Capability and Services Standards Committee (NAGD) is at national, European and international level in charge of standardisation of fitness for purpose requirements for various consumer goods as well as for standardisation of consumer and industry related services. NAGD recent standards draft related to services is: DIN ISO 26362: *Access panels in market, opinion and social research - Vocabulary and service requirements* (Web-NAGD, 2008).

One example for a professional association involved in standardisation is VDI - The Association of German Engineers which is today one of the largest engineering associations in Western Europe with about 132,000 members. VDI has systematically built up a set of technical regulations, which presently contains more than 1,700 valid VDI guidelines extensively covering the broad field of technology. The development procedure of guidelines follows a limited consensus-oriented approach similar to DIN standardisation process. About 8% of these guidelines address issues of the service sector (Glauner et. al., 2004).

Similar to DIN standards, VDI guidelines have particular legal importance at the national level, for example by their inclusion in acts, ordinances, decrees or regulations.

VDI guidelines also constitute a practical supplement to European and international rules or serve as national position during the development of these regulations (Web-VDI, 2008).

Box 5.2: Examples of VDI guidelines related to services.

Only a few VDI guidelines do have the term services directly in the title, for instance:
VDI 4680: Combined heat and power systems (CHPS) - Principles for the drafting of service contracts (2003)
VDI 4510: Engineering services and requirements to engineering service providers (2006)
Issues of the service sector that are mostly addressed by VDI guidelines are:

- Construction (30 VDI guidelines)
- Instruction for testing (30 VDI guidelines)
- Maintenance (25 VDI guidelines)
- Logistic (18 VDI guidelines)

Source: Glauner et. al., 2004

The above named examples show that there is need to intensify the work on services standardisation since the number of standards does not reflect the importance of the services sector. In order to improve this situation, one course for action under goal 1 (see above) of DIN's 'German Standardisation Strategy' is to implement R&D phase standardisation which is the integration of standardisation in research projects and in R&D activities. The aim of R&D phase standardisation is to encourage and accelerate the transfer of knowledge and technology in highly innovative sectors and to accompany the entire R&D phase to enable the introduction of future-oriented solutions at the earliest possible stage (Weiler, 2006).

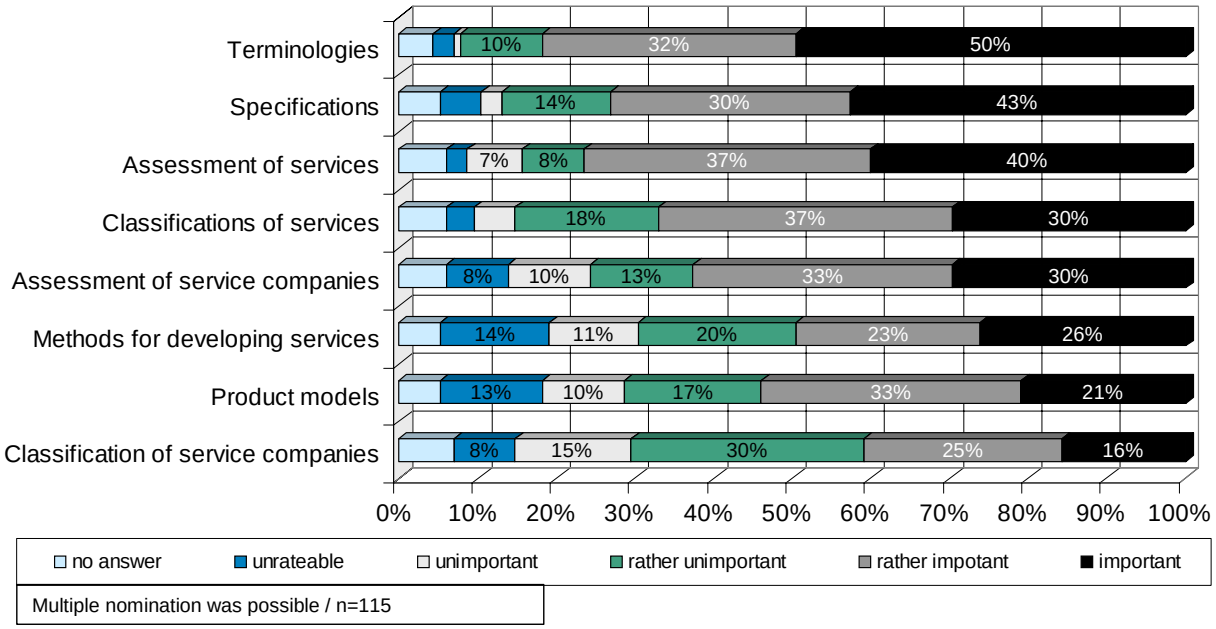
An interesting standardisation activity relates to the context of the services directive and its national transposition. The Federal Ministry of Economics and Technology (BMWi) commissioned an expert report on the 'quality assessment and standardisation of services: survey and recommendations for the business sectors covered by the EU Services Directive'. The report is expected to be finalised in spring 2008. The aim of the report will be to analyse the exact content and the interplay between the instruments for quality assurance and transparency named in the Services Directive. First results of the report were publicly introduced and discussed at an expert workshop with various stakeholders which took place at the 12th December 2007 in Berlin (Web-BMWi, 2008).

5.4 Standardisation needs

As part of the research programme 'Services for the 21st century', the project 'Service standards for global markets', funded by the German Federal Ministry for Education and Research, was carried out from 2000 to 2004 was aimed *inter alia* at analysing the potential for standardisation in services (Fähnrich, 2004). According to a survey carried out for the project, the aspects 'terminology of services', 'assessment of services', service 'specifications' and 'classification of services' were identified as areas where standardisation would be beneficial (endorsed as important or rather important by, respectively, about 82%, 76%, 73% and 67% of the respondents) as illustrated in Figure 5.3 (Fähnrich, 2004; Anthony, 2006). A further important aspect of service provision – in particular for business-related services – where standards may be positive and should be developed relates to the qualification of all individuals involved in the delivery process (Anthony, 2006; EFBRS, 2005). Standardisation could also bring clarification concerning 'resources and facilities on which proper performance depends, the organizational procedures and processes underpinning performance and methods enabling performance and/or required minimum levels of quality to be measured and thus compared' (Anthony, 2006).

From the consumer's point of view, priority should be given to the elaboration of standards related to systems of registration, licensing, supervision, insolvency guarantees, complaints-handling procedures, the provision of key information concerning the service provider, conditions of sale, total price, options available, advice services, service delivery and after-sales service. Furthermore, adequate measures (including sanctions) should be developed to ensure compliance and consumer confidence (*Which*?, 2006).

Figure 5.1: Importance of standardisation for different service aspects.



Source: Fähnrich, 2004.

In the scope of the review of the Single Market carried out in 2006-2007, the European Commission asked as to which specific service sectors needed standardisation. Since the public consultation did not focus specifically on business and professional services, respondents ask for standardisation in sectors as diverse as the health sector, social services and education, sanitary services, leisure, construction, etc. Looking at business services in particular, respondents emphasized that standards for consulting services would run the risk of hindering service providers seeking to develop a unique selling proposition (CEC, 2006); standards in this domain may therefore not find broad acceptance among providers of consultancy services. Concerning areas like engineering and law, Rubalcaba recommends the harmonisation of professional standards a means to strengthening the Internal Market (Hirschfeld, 2007a).

However, according to the EC consultation, the questions on whether standardisation for professional services is useful and needed in order to promote further liberalisation, as well as whether it provides advantages over codes of conduct seem, among representatives of liberal professions, to remain controversial (CEC, 2006). Indeed, as regards pharmacist organisations, it was argued that professional codes of conduct will deliver better results than voluntary standards (CEC, 2006).

Last but not least, there might be a need for standardisation regarding public procurement. Whilst the public sector is an important purchaser of business services, direct cross-border procurement within the EU remains quite low and accounts for only 3% of the total of bids (Ilzkovitz et al., 2007).

According to a recent study, 58 % of the service companies in the new Member States highlighted further opening up public procurement markets as an important aspect of future Single Market policy (EC, 2006b).

There might therefore be a need for standards, for example regarding specifications, helping to compare offers and allowing service providers to better demonstrate the competitiveness of their bid (EFBRS, 2005). This may contribute to overcome protectionism in public procurement, allow governments to have access to the best offer and therefore 'result in important savings for the national budgets'. Furthermore, due to the impressive purchasing power of public bodies – public procurement accounts for one-sixth of European GDP – standards promoting innovation in this domain (e.g. promoting the development and implementation of new technologies – may have positive impacts on the whole European economy (Ilzkovitz et al., 2007). Companies belonging to the European Forum of Business Services signalled readiness to participate in such a standardisation process for public procurement (EFBRS, 2005).

5.5 Impacts of the standardisation and certification processes

5.5.1 Expected impacts on the service provider

This chapter summarizes the major benefits which service providers can expect from standardisation in services, and is mainly based on the following studies carried out respectively at European level, as well as at national level in France and Germany. Most of study assertions are done on the basis of economic theory or surveys asking people for their opinions or expectations, rather than real empirical evidence of actual impacts.

Firstly, the study by Blind on 'Standards in the Services Sector', carried out in 2002-2003 on behalf of the EC, which aimed at exploring the role of standards in the service sector, identifying future needs for service standards and drawing policy recommendations for future standardisation activities (Blind, 2003);

Secondly, the report published by the European Forum on Business Related Services (EFBRS) in 2005 and summariseing the activities of the forum. The EFBRS is composed of representatives of professional organisations, workers organisations, R&D organisations and other enterprise-related stakeholders, as well as experts on Business services from Member States. It was set up on 1st April 2004 as a follow-up to the EC Communication on 'The competitiveness of business-related services and their contribution to the performance of European enterprises' and aimed to assist the Commission in drafting an Action plan in this domain. The need for standards for business services was one of the issues addressed by the EFBRS (EFBRS, 2005);

Thirdly, a French survey, carried out in 2005 by the French standards association (AFNOR) among French company executives (of both the industry and the services sector). The study identified the main challenges related to standardisation, as well as the expected advantages and disadvantages coming from standardisation from the point of view of enterprises. About 500 company executives participated in the study, 40% coming from the services sector (AFNOR, 2005b). The main results of the study will be taken into account in the following analysis. Additionally, Annex 7 displays its main figures;

Finally, a German study carried out in 2007 and focusing on the role of standards in the internationalisation of the activities of providers of 5 specific types of (knowledge-intensive) business services, namely financial services, engineering services, temporary work services, exhibition services and corporate consultancy services.

The study was based on interviews carried out with CEOs and experts of firms active in these domains, as well as with representatives from professional associations. Although this study was only based on 16 interviews and therefore cannot be considered as representative in a quantitative sense, it allows us to highlight some qualitative issues which will be taken into the account in the following analysis (Kandrova, 2007).

The main challenges to be faced in the next five years in the services sector are the increased demands on the part of customers concerning the characteristics of services provided; the preservation of the company's image and reputation; the increased demands regarding safety; the increase of legal risks in economic relations and the development of partnerships with suppliers (AFNOR, 2005b). To a minor extent, the multiplication of company assessment criteria (other than financial), cooperation between competitors as well as the ability to demonstrate expertise at international level will also play a role. An overwhelming proportion of CEOs in France stated that standardisation plays a legitimate and significant role in responding to these challenges. In particular, about 90% of them consider that standardisation has a very or rather important role to play in better managing issues linked to the company's external perception, meeting the increased demands regarding safety, as well as limiting the increase in legal risks in economic relations and developing reliable partnerships with suppliers (AFNOR, 2005b).

Indeed, standardisation in services is expected to allow service providers to increase their productivity since the coordination between different phases of the service-providing process and the value chain can be optimised. This leads to economies of scale and to a competitive advantage compared to competitors not using standards in their service-providing process (EFBRS, 2005; Kandrova, 2007; see also EMCC, 2005). In the absence of trusted standards, price may be the main criterion for purchasing specific services or not. Standards in services therefore enable competition to focus more on efficiency in providing standardised aspects, leading to an increased service quality, performance and safety, and to an intensified price competition. Service providers that have implemented quality standards are furthermore in a good position to negotiate with customers or suppliers (EFBRS, 2005). Moreover, many respondents to the EC consultation on the future of the Single Market Policy pointed out standards as a means to provide guidelines fostering innovation in the service sector (CEC, 2006)

Since standards are expected to increase transparency and quality of services offered, they would be expected to contribute to reduce the risks for potential clients, especially SMEs, of purchasing service activities which were formerly performed in-house from external providers (EFBRS, 2005; Kandrova, 2007). Hence, standards may stimulate the demand for business services and allow service providers to develop and broaden their clientele. This is particularly important as potential clients may be more willing to pay for services when their quality or their innovative character is documented by standards (EFBRS, 2005; Kandrova, 2007). The legitimacy of standardisation regarding the company's external perception among stakeholders, the interaction of the company with stakeholders, the preservation of the company's image and reputation, the increased demands of customers and the multiplication of company assessment criteria (other than financial) was particularly underlined by the top management functions of companies operating within the national or European perimeter (AFNOR, 2005b).

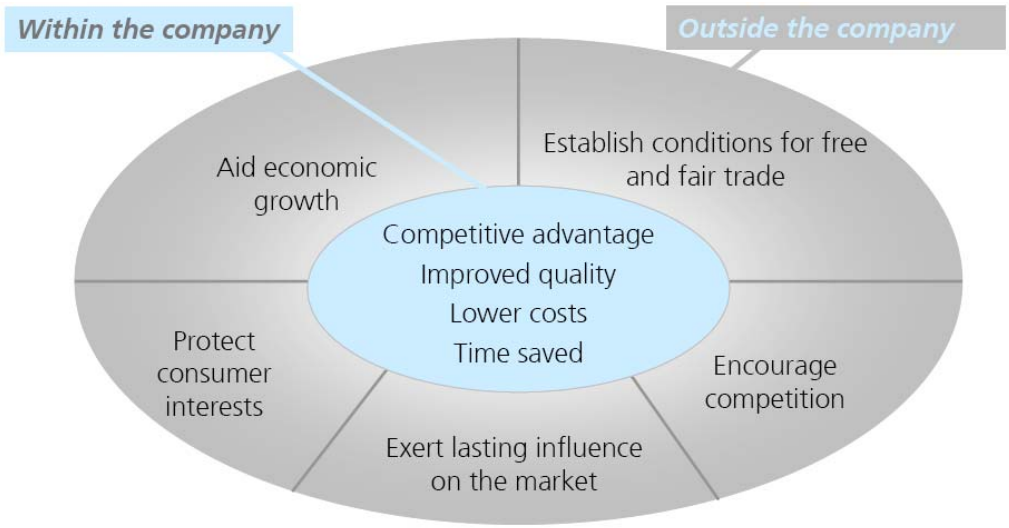
Furthermore, given the new work and trade models in the knowledge economy (e.g. based on virtual and international networks), using standards allowing and realising compatibility and interoperability to international networks is an asset. The importance of interoperability standards for services is underlined by the fact that services are often provided as complete packages, by not only a single but also a consortium of suppliers (Kandrova, 2007).

Furthermore, in both the French and German studies, service companies working at international level particularly highlighted the role of standardisation on issues connected with international trading (development of worldwide regulations, ability to demonstrate technical knowledge at international level, increased competition from emerging countries) (AFNOR, 2005b; Kandrova, 2007).

Whilst the anticipated benefits of standardisation presented above mainly concern the service delivery process, as well as the interface between service providers and clients and that between providers and their suppliers, the French study also identified corporate practices which will undergo a marked development in the next five years. Of particular importance for the service sector will be the changes in practices related to innovation, occupational safety, quality, capitalisation of knowledge and good practices, skills management, valorisation of products/services and customer focus. The legitimacy of standardisation with respect to these practices was acknowledged by the majority of respondents. In particular, standardisation is expected to contribute greatly towards improving practices related to occupational safety, the valorisation of products/services and to customer focus. Furthermore, due to the important role played by small companies in the services sector, attention should be paid to the fact that their CEOs highlighted standardisation regarding corporate practices as being of particular importance for them (AFNOR, 2005b).

All in all, according to both recent studies in France and Germany, the advantage of the standardisation system concerns mainly customer/supplier relations (improvement in quality and creation of a common language, improvement in customer/supplier relations), risk management and safety, and facilitation of the application of regulations (AFNOR, 2005b; Kandrova, 2007). For companies operating at international level, standardisation is perceived to be particularly important for facilitating international trade and interoperability – i.e. ensuring the compatibility of products and systems, facilitating outsourcing, allowing the quality of imported products to be assessed and facilitating the export of products (AFNOR, 2005b; Kandrova, 2007). Standardisation also allows good practices to be made visible and a competitive advantage to be acquired (AFNOR, 2005b). The main benefits of standardisation for services providers are shown in figure 5.2.

Figure 5.2: Main benefits of standardisation for service providers.



Source: Mörschel, 2003

Based on the expected benefits of standards for companies, standards in services may contribute to increasing the gross value added and total welfare on the macro-level (Blind, 2003). According to a recent British study, the annual contribution of standards to the economy of the United Kingdom can be estimated at € 3.6 thousand million and 13% of the growth in work productivity can be attributed to standards. A German study assesses the profits from standardization at 1% growth. Standards furthermore support government policies related to competitiveness, innovation, the reduction of trade barriers, the protection of consumer interests, etc. (Blind, 2003; AFNOR, 2005a).

However, despite these expected positive benefits from standardisation, caution should be taken so as not to design service standards too narrowly and thus jeopardize innovation. The main pitfalls of standardisation will be addressed in the next section.

5.5.2 Pitfalls of standardisation

Despite the potential positive benefits of standardisation for service providers, some rather negative aspects of standardisation should also be taken into consideration. Indeed, for standardisation processes to be successful, the particular standards have to gain broad acceptance among service providers to adopt them and to comply with them. Given the intangibility of business and professional services, comprehensible standardisation might be difficult to achieve. Furthermore, standards are often perceived as negative when they result in increased costs as well as less flexibility or innovation capacity (Kandrova, 2007):

Too rigid standards might make it difficult for service suppliers to customise their products and also involve their clients in the development process in order to provide them with business services tailored to their specific needs. This negative effect may be particularly important for service suppliers active beyond national borders since standards might make it difficult for them to adapt to cultural differences (regarding for example language, negotiation culture, habits, unwritten laws, etc.) as well as economic differences (regarding pricing, labour costs, etc.) (Kandrova, 2007).

The use of standards may hinder the quick adaptation of service providers to new customers' preferences and the needs of other actors in the supply chain since there is some lag between the identification of new customers' expectations and the development and implementation of new standards. For the same reason, it may be difficult to quickly implement new business and work processes. Furthermore, over-early standardisation in a rapidly developing service sector may distort competition since it can hinder service providers to keep pace with technological innovation, carry out alternative innovative activities which may be more promising in the long term, or develop a unique selling proposition allowing service providers to offer services different from those offered by their competitors (Blind, 2003; Kandrova, 2007; CEC, 2006).

Particularly with regard to the very fast changing KIBS sector, common standards, for instance for professional qualifications or service quality, might be 'problematic' and potentially 'detrimental' (EMCC, 2005) if they are developed in a rigid manner and therefore reduce the opportunities for new professions and new types of KIBS responding to business needs to emerge. Therefore the drafting of standards should take into account the complexity and diversity of the KIBS sector (EMCC, 2005).

Furthermore, since the use of standards increases the intensity of competition, individual or smaller companies may experience lower profits and difficulties surviving in the market (Blind, 2003). In particular, standards may reduce the potential for service providers to find specific market niches improving their competitiveness (Kandrova, 2007).

Standards aim at making specifications transparent and usable for all service providers. However, companies often do not use enough of the information available on the standardisation system, which could benefit them. Furthermore, standards – although addressing all services – may be defined by a small number of interested parties. Since small companies are in the majority in the services, but may be reluctant to participate in the standardisation process – often considered as being too time-consuming – there is a risk that the preferences of SMEs are not adequately taken into account and reflected in the standards (Blind, 2003; AFNOR, 2005b).

As long as standards are internationally used and identical in different countries, they should contribute to reducing trade barriers. However, heterogeneous standards and compliance systems may further increase trade barriers in the service sector (Blind, 2003). In this regard, given the importance of SMEs in the business service sector, the results of a recent survey are quite interesting: most SMEs in the EU-27 that provide services related to real estate, renting and business activities (NACE division K[15]) and are currently engaged or interested in engaging in cross-border trade within the EU, consider harmonised legislation, including harmonised technical standards, as useful. This is, however, hardly surprising since companies already engaged in cross-border trade benefit from European standards in their daily business. However, looking at the whole SME sector in the EU-27, and hence also at such SMEs that do not provide service cross-border yet nor intend to do it in the next future, the usefulness of European harmonisation of technical standards seems to be insufficiently recognised. Indeed, according to a recent survey, 53% of all SMEs in the EU-27 don't expect any benefit for their business from harmonised standardisation (EC, 2007). This figure has to be taken very carefully, since it encompasses more services than only KIBS. Nevertheless, it suggests that the usefulness of harmonised standards still needs to be communicated if standardisation is to be successfully implemented in the whole business services and KIBS sector. Furthermore, SMEs with limited resources might need financial support to be able to participate in the standardisation process, deemed by many of them as very time and resources consuming (Blind, 2003).

5.5.3 Impacts of standardisation on the consumer

The expected impact on consumers from standards in services is highly controversial and for consumers to benefit from future standards particular attention should be paid to the standardisation process itself and the way the standards are developed (CEC, 2006).

Positive effects of a successful standardisation can be expected with regard to the quality of the relation between service providers and consumers, as well as regarding price and quality of services and consumers' autonomy. Indeed, standardisation in services can contribute to building and strengthening consumer confidence in the services provided, as well as reducing misunderstanding between service providers and consumers. Since standards increase transparency in the (quality of) services provided, they may contribute to promoting the diffusion of knowledge and best practices among customers, as well as reducing information and transaction costs for potential customers (e.g. reducing the time traditionally spent to explain the services offered), which are especially high for services compared to physical products. Standards are therefore expected at least to partly overcome some negative aspects related to the inherent intangibility of services. Based on standardised criteria by which service providers may be assessed, consumers are enabled to encourage acceptable levels of service provision and to compare products and prices, which enforce competition and efficiency.

[15] NACE Rev. 1.1

Furthermore, standards should allow the provision of services at reproducible levels of quality, limiting the risks for customers that services will fall short of expectations. Hence, purchasers of services can switch from one supplier to another without incurring high risks. Provided the availability of standardised and modularised service solutions to common problems can be guaranteed by external providers, companies can reduce their in-house service costs and leave their own staff working on core business challenges in order to create or consolidate competitive advantages in their core business (Blind, 2003; CEN, 2005a; Korte, S. et al., 2003; AFNOR, 2007; EFBRS, 2005; Hübbers et al., 2006; EMCC, 2005).

The availability of standards for services would furthermore contribute in principle to removing trade barriers within the EU, increasing therefore the willingness of consumers to purchase cross-border and strengthening the Single Market. Indeed, 33% of business users of services stated in 2005 that their company would increase purchase across the EU if such barriers were removed (CEN, 2005a).

Despite these potential benefits, several concerns still remain. In the scope of the review of the Single Market conducted by the European Commission in 2006-2007, consumer organisations have been invited to assess the state of the art of the Single Market and to express their expectations regarding future steps to be taken in order to improve and strengthen the European Single Market.

As for standardisation of services, the main concerns expressed by consumer representatives refer to the composition of standardisation bodies. Consumer associations in France and the United Kingdom underline the importance of involving all interested parties in the development of standards and certifications (AFNOR, 2007; *Which*?, 2006). In addition to the point of view of services providers, as well as their representative organisations, which are traditionally well represented in standardisation bodies, user and consumer expectations, for example regarding quality of services provided, should be taken into account in order to achieve balanced representation and equal chances for all stakeholders to influence the standardisation process (*Which*?, 2006; ANEC, 2007a). The 'European consumer voice in standardisation', ANEC, insisted in its recent position paper on standardisation that 'before standardisation may be used further as a tool to address the safety and quality aspects of European services, consumer organisations must be granted stronger rights and duties in standards bodies, and should benefit from more adequate funding' (ANEC, 2007a). Participation of consumer organisations in the standardisation process should be reflected in the statutes of standardisation bodies (ANEC, 2007a). More precisely, the British consumer organisation *Which?* calls for the European Commission to financially support consumer organisations in developing expertise in standardisation (*Which*?, 2006). Generally, the standards-making process should be made more transparent, inclusive and democratic: draft standards, for instance, should be accessible for review and feedback on the Internet and a monitoring process should ensure the quality of service standards developed by standardisation bodies (ANEC, 2007a).

Future standardisation and certification processes may even be considered by professionals as a way of meeting consumers' expectations (AFNOR, 2007; EFBRS, 2005). This may be a particularly promising approach to future activities given the fact that standardisation, as carried out up to now, has not always been positive for consumers, as put by one representative of a consumer organisation: 'from our experience, voluntary standards in the services sector have so far not improved transparency, service quality and price effectiveness' (CEC, 2006).

Furthermore, consumer organisations stress that a standardisation process cannot replace proper regulation for the services sector, and that it should complement general EU legislation safeguarding consumers' interests regarding, for example, the safety or quality of services provided or the liability of providers (CEC, 2006; ANEC, 2007a). Therefore, since standardisation and regulation of services cannot be kept apart, ANEC questions the choice of the European Commission to shift responsibility in standardisation to European standards bodies and rather recommends that standardisation takes place simultaneously with the development, at European level, of an 'overarching legislative framework for the safety, quality and liability of services' (ANEC, 2007a; Micklitz, 2007).

The British consumer organisation *Which?* – the largest consumer organisation in Europe – underlines that, given the relative lack of experience in developing standards for services and in absence of strong incentives comparable to the General Product Safety Directive or the Product Liability Directive and of the related penalties for suppliers in case of infringement, the standardisation process could lead to the development of vague and ineffective standards (*Which*?, 2006).

Even worse, the risk of 'overstandardisation' should not be overlooked. Yves Huguet, federal delegate of the French Association for Consumer Protection Léo Lagrange, points out that 'too many labels spoil certification' (AFNOR, 2007). Future standardisation and certification activities should therefore be thought through; the next section will present possible approaches and recommendations that can be followed when developing standards for services.

5.6 Challenges and recommendations

The following challenges and recommendations refer to services standardisation in general and are mostly based on reactions and comments to the Review of the Single Market carried out by the European Commission in 2006-2007. For the most part, they are not specific to business and professional services, since only very few studies and opinions could be found addressing specifically business and professional services. In the following analysis, elements related more specifically to the challenges of standardisation of business and professional services will be underlined.

5.6.1 A 'new approach' for service standardisation?

The 'new approach' to technical harmonisation and standardisation, which was laid down in 1985 (Council Resolution (85/C 136/01)), as well as the related directives set the framework for products standardisation define the 'essential requirements' to be fulfilled by goods when they are placed on the market and characterise how the standardisation process should be carried out. In particular, the 'new approach' introduces, among other things, a clear separation of responsibilities between the EC legislator and the European standards bodies CEN, CENELEC and ETSI in the legal framework allowing for the free movement of goods: 'The European standards bodies have the task of drawing up the corresponding technical specifications meeting the essential requirements of the directives, compliance with which will provide a presumption of conformity with the essential requirements. Such specifications are referred to as 'harmonised standards' (Web-EC, 2008d).

However, unlike the situation for products standardisation, there is, to date, no horizontal framework guiding standardisation for services (in particular, there is no common European approach for ensuring the safety and quality of services) (ANEC, 2007a; *Which*?, 2006).

Furthermore, from the point of view of the consumer organisation *Which?* standardisation approaches within the European Commission are still too fragmented – 'with DG SANCO looking at safety, DG Enterprise looking at standards in general, and DG MARKT looking at the potential for standards to assist in the removal of barriers to trade in services' (*Which*?, 2006).

Standardisation bodies, as well as all stakeholders involved in the standardisation process, have little experience with service standardisation and strong incentives for service suppliers to comply with existing legislation – as it is the case for products standardisation regulated, for example, in the General Product Safety Directive or the Product Liability Directive – are still missing (ANEC, 2007a; *Which*?, 2006).

The consumer organisation ANEC, as well as many respondents to the public consultation on the future Single Market policy carried out by the European Commission in 2006-2007, therefore argues in favour of developing a 'new approach' for services, defining a horizontal legislative framework at European level for safety, quality and liability of services, as well as consumer protection. Corresponding to the legislation for products, a 'General Services Safety Directive' or a 'Services Liability Directive' could, for instance, be developed (CEC, 2006; ANEC, 2007a; Micklitz, 2007).

Furthermore, the ANEC calls for the European Commission to develop a framework directive governing the quality of services. According to the consumer organisation, further standardisation activities aiming at defining detailed specifications should only be promoted *after* having set this overarching legislative framework (ANEC, 2007a). According to the ANEC, a new approach for services should also – in contrast to the new approach for products standards – make use of the regulatory framework used in the eco-design of energy-using products (Directive 2005/32/EC) allowing for flexibility, increased transparency and stakeholder involvement, in particular with regard to the implementation of EU directives (ANEC, 2007a).

Regarding standardisation content, it can also not be assumed that standards for services could and should be developed using the same structures and procedures as for product standardisation, although some similarities between standardisation of products and of product-bound services may appear (EFBRS, 2005; Micklitz, 2007; Hirschfeld, 2007a). Whereas issues related to health, safety, the environment or interoperability may play the main role in standardising goods, standards for services may rather refer to competence, capacity to deliver and quality of the service provided, as well as the right and duties of all parties involved (Graz et al., 2007; Micklitz, 2007). Attention should be paid, for instance, to the fact that standardisation of intangible business services, in particular with regard to issues like the making and content of the contract, its execution of the contract and legal redress under the contract might also affect contract law (Micklitz, 2007).

Among the respondents to the public consultation of the future of the European Single Market policy carried out by the European Commission in 2006-2007, there is some doubt as to whether current standardisation bodies – which are specialised in standardisation for products – are also competent for services; in particular, it has been questioned whether they are representative of all stakeholders concerned by service standardisation.

Therefore, the fact that standardisation bodies like the CEN have already been given standardisation mandates by the European Commission *before* ensuring that they are competent and representative has been mentioned as problematic by some respondents to the EC consultation (CEC, 2006).

As mentioned above, future standardisation activities should involve the democratic participation of all stakeholders from the outset: service providers and their representative organisations, as well as – not surprisingly, as particularly underlined by national and supranational consumer organisations at European level – consumer organisations (*Which*?, 2006; ANEC, 2007a; AFNOR, 2007; Micklitz, 2007). Furthermore, given the fact that the service sector is dominated by SMEs which may not be able to apply financial and human resources to participate in the standardisation process, support schemes adapted for SMEs should be established to help them join standardisation activities (Blind, 2003). With regard to business services in particular, the European Forum on Business-related Services pointed out that, besides national standards bodies, trade unions, consumer and environmental organisations and associations representing various industry sectors, CEN's membership should also include an association representing the interests of business-related services (EFBRS, 2005).

5.6.2 Should standards be compulsory or voluntary?

Standards for services are expected to make some service markets more innovation-friendly and have been asked for by companies as demonstrated in the German research project 'Service Standards for Global Markets'. However, unlike product standardisation, standardisation for services should not follow a top-down approach but should be market-driven as well as defined on a case-by-case basis particularly once the added-value of standards (e.g. for cross-border service provision) has been proven (CEC, 2006; Mörschel, 2003). Indeed, as shown by a French study carried out in 2005 among French company executives from both the industry and services sector, company executives expect standardisation systems to be highly reactive to market needs and allow coherence with other reference documents and in-house specifications and regulations (AFNOR, 2005b).

Whether it is up to the European Commission to organise standards has been questioned in the scope of the Review of the Single Market by the EC and some respondents to the EC consultation argue that standards should be truly voluntary and drawn up by stakeholders themselves (CEC, 2006). In this regard, particular attention has to be paid where industry products standards have been developed by consortia outside the framework of standardisation bodies and whether this process can be adapted to the specific needs of standards for business-related services (EFBRS, 2005).

Self-regulations hold the promise of allowing more flexibility and quicker adaptation to changing market conditions. However, as strengthened by the British consumer organisation *Which?* self-regulation can only contribute to protect consumers if 'well-devised and effectively enforced', meaning that self-regulation schemes should ensure a good coverage of the relevant market, mandatory compliance with agreed rules, the involvement of stakeholders in drawing up self-regulations, as well as mechanisms to monitor the effective enforcement of self-regulations (*Which*?, 2006).

In order to ensure that self-regulations fulfil the expectations of all stakeholders, and particularly of service consumers, *Which*? recommends that either the European Commission sets out some codes of practice to raise the performance and effectiveness of EU-wide self-regulation or CEN develops a standard for self-regulation. In both cases, issues such as 'openness, independence, accountability, clear information requirements, adequate monitoring and enforcement provisions, adequate complaints-handling mechanisms, mechanisms for redress, procedures for regular revision of the codes and, most importantly, the involvement of stakeholders in the preparation of codes' should be taken into account (*Which*?, 2006).

Whether they have been developed on a self-regulation basis or are compulsory, standards and certifications for services should allow transparency, meaning that the reference systems derived should be identical for all players in a specific sector. Furthermore, information on standards and certifications should be easily accessible to consumers hence in the case of business services to companies. In particular, the legal consequences of standards should be made known and companies applying standards valorised. Overcoming the lack of knowledge related to available standards and standardisation remains a challenge for service providers – particularly SMEs which might not have been included in the development process of standards and certifications (AFNOR, 2005b; AFNOR, 2007).

As an important means of ensuring transparency of the standardisation process, consumer organisations insist therefore on the fact that the process itself should be independently monitored: according to the ANEC, a 'quality monitoring system [should] be implemented in standards bodies to assess the quality of service standards, and to match that assessment with data on balanced representation' (ANEC, 2007a; *Which*? 2006). Furthermore, when it comes to implementation, strong market surveillance mechanisms and provisions on stricter enforcement of legislation should be developed in order to ensure compliance with legislation and standards (ANEC, 2007a).

5.6.3 *Horizontal vs. vertical approach* for service standardisation

Given the intangibility of services, the broad range of existing business and professional services, and in particular the important role played by human factors (involvement of consumers in the 'production' process of services, interaction between consumer and service provider) – which are *per se* more difficult to assess and measure – in business and professional services, just one standardisation is hard to find and may even not exist. Further typical characteristics for services which inhibit the development of standards are their perishability (since services cannot be stocked), the inseparability of services referring to the simultaneous production and consumption of services, and their heterogeneity or variability (since service quality is situation-specific) (Mörschel, 2003).

Starting from the different aspects of the service provision process, several models have been used in the literature to define classifications of potential standards for services (see for example Blind, 2003; Mörschel et al., 2004; Mörschel, 2003). Basically, standards can be derived following a horizontal approach, meaning that a given standard is valid across different service sectors, or a vertical approach when specific standards are only valid within a given service sector. Given the specificity of services, as well as the great diversity of service sectors, the strategy for standardisation of business-related services can base on both, horizontal and sectoral (vertical) standardisation activities, as well as generic management system standards and quality standards. In particular, horizontal standards may provide the ground on which specific standard specifications tailored to the needs of specific sectors can be developed (EFBRS, 2005). However, and although horizontal standards tend to reduce potential inconsistencies between different vertical standardisation approaches, stakeholders involved in standardisation should bear in mind that, in order to capture all specificities, horizontal standards may need to be drafted so widely that they may lose their meaning (ANEC, 2007a). Currently, the benefits that can be expected for the consumers from cross-sectoral safety standards are being addressed in survey carried out in the scope of the CEN Horizontal Service Standardisation Strategy. The results of this survey will help to establish a uniform and transparent standardisation of services activities in the European market (Web-CEN, 2007).

Given that practicable and significant horizontal standards may be lacking and in order to, nevertheless, avoid inconsistencies in vertical standards and take consumer expectations into account, the consumer organisation ANEC recommends basing vertical standards on a common set of core elements. Their definition can be based on the ISO/IEC Guide 'Development of service standards – Recommendations for addressing consumer issues' and should include the following issues: core competences needed by the service providers (education and skills); equipment and premises required for the provision of services; pre-contractual stage and contract conclusion; content of contract; post-contractual stage; monitoring and inspection (ANEC, 2007a; Micklitz, 2007). Additionally, Micklitz recommends ensuring democratic accountability of rule-making (Micklitz, 2007). To fulfil consumer expectations, standards should also refer to quality outcomes for consumers rather than to the process: for instance, 'initial standards on complaint-handlings [...] set out how their complaints are to be handled inside the business, and not how the consumer is treated' (*Which*?, 2006).

Furthermore, given the difficulty of drawing standards that are valid for different services and in order to avoid misuse of standards in competition, each single standardisation should lead to specified requirements in terms of performance rather than design (Blind, 2003). With regard to business-related services and KIBS in particular, concrete standards should derive from an analysis of the service value chain and of the specificities of KIBS and should not be too rigid, in order to allow taking pace with the rapid evolution of the KIBS sector. Different standards may for instance refer to the outcome of the service delivery and to the delivery process itself (EFBRS, 2005; EMCC, 2005).

5.6.4 Which role should the EU play in *international* standardisation activities?

Attention should be paid to the fact that European standardisation activities should neither compromise the export capacity of European firms nor limit the entry of imports into the European market. In particular, setting internal EU standards for services should promote the diffusion and development of innovative services without slowing down the improvement of existing standards and the development of more efficient and promising alternatives. Therefore, in the ideal case, service standards issued in Europe should be either used beyond the EU borders – for instance when the EU succeeds in promoting a 'new approach' for service standardisation worldwide – or be compatible with other international standards in order not to hinder cross-border trade of services (Ilzkovitz, 2007; CEC, 2006; Blind, 2003; Graz et al., 2007). According to a French study carried out in 2005 among French company executives from both the industry and services sector, the application of international standards throughout the world should be encouraged (considered as very important or rather important by 78% of the respondents) and the use of European standards beyond Europe should be promoted (93% of the respondents) (AFNOR, 2005b). However, the opinion has been sometimes expressed during the EC consultation on the future of the Single Market that the EU should move away from developing its own standards for services when (better) international standards already exist (CEC, 2006).

There seems to be, however, little consensus on the role the EU should play in international standardisation activities and whether the EU as such should be present in international standards bodies: a heavier presence of the European Commission may bear the risk of reducing the diversity of discussions – if the EU speaks with one voice – and the level of commitment of individual Member States. As for standardisation content, case-by-case decisions in this regard appear to be more promising (CEC, 2006).

All in all, the responses to the EC public consultation on the future of the Single Market stress the fact that the EU must strive for more convergence with the main European trading partners – in particular with the USA, India, China, Japan, Argentina, Brazil and Russia – regarding regulations and standardisation activities (CEC, 2006). Not surprisingly, the consumer organisation *Which?* calls for more convergence related to typical issues of high importance for consumers, namely regulatory convergence between Member States as well as between the EU and the US in the areas of 'e-commerce and best practices in enforcement in the supply of online goods and services, and enforcement of legislation concerning privacy in electronic communications and unsolicited commercial communications via email [...] and mobile SMS' (*Which*?, 2006).

5.6.5 Funding standardisation

How should service standardisation be funded? According to the European Forum on Business-related Services, standardisation activities should generally be funded by the industrial organisations which are likely to profit from standards development. However, this hampers cross-sectoral and horizontal standards development. Furthermore, in order to ensure that, besides striving for practicable service standards, fundamental methodological issues are also addressed, it could be promising that research organisations are also involved in financing standardisation activities as it has been done in Germany (EFBRS, 2005). Last but not least, in order to ensure a balanced representation and active participation of all stakeholders in the standardisation process, funding schemes might have to be developed to support participation in the standardisation process of SMEs, as well as consumers (Blind, 2003; ANEC, 2007a; Which, 2006). In this regard, consumer organisations call for financial support by public authorities and in particular by the European Commission (ANEC, 2007a; Which, 2006).

SOURCES AND BIBLIOGRAPHY

AFNOR, *The French standardization strategy 2006-2010*, Association Française de Normalisation, AFNOR, La Plaine Saint-Denis, 2005. (AFNOR, 2005a)

AFNOR, *Standardization at the service of enterprises*, survey conducted among French company executives, Association Française de Normalisation, AFNOR, La Plaine Saint-Denis, 2005. (AFNOR, 2005b)

AFNOR, 'Service certification', *Action & Performance*, AFAQ AFNOR Certification Magazine, 02, Bagneux, 2007. (AFNOR, 2007)

Alajkääskö, P., 'The demand for services: external but local provision', *Statistics in Focus - Industry, Trade and Services*, 26/2006, Eurostat, Luxembourg, 2006. Available from: http://epp.Eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-NP-06-026/EN/KS-NP-06-026-EN.PDF

Alajkääskö, P., 'EU-27 business services: thriving in the wake of outsourcing and liberalisation', *Statistics in Focus - Industry, Trade and Services*, 76/2007, Eurostat, Luxembourg, 2007. Available from: http://epp.Eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-SF-07-076/EN/KS-SF-07-076-EN.PDF (Alajkääskö, 2007a)

Alajkääskö, P., 'Exports of business services', *Statistics in Focus - Industry, Trade and Services*, 74/2007, Eurostat, Luxembourg, 2007. Available from: http://epp.Eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-SF-07-074/EN/KS-SF-07-074-EN.PDF (Alajkääskö, 2007b)

Amanatidou, E., *Assessing the contribution of foresight towards a more participatory knowledge society*, PhD Thesis, 2007, work in progress.

ANEC, 'ANEC position on services standardisation', Association Européenne pour la coordination de la représentation des consommateurs dans la normalisation, ANEC-SERV-2007-G-061final, 8 October 2007. (ANEC, 2007a)

Anthony, P., 'After slow start, pace picks up in Germany', in *ISO Management Systems*, May-June 2006.

Anwar, S. F. and Andaleeb, S. S., 'Factors contributing to small and medium enterprise (SME) growth: A theoretical perspective', *International Review of Business Research Papers*, Vol. 3, No. 5, November 2007, p. 44-53.

Aspden, C., *Timing of the introduction of the updated SNA and the revised ISIC in the national accounts of OECD member countries*, Working Party on National Accounts, OECD Statistics Directorate Committee on Statistics, STD/CSTAT/WPNA(2006)5, Paris, 2006.

Blind, K., *Standardisation and the service sectors – An explorative study,* European Commission, Enterprise Directorate-General, 2003, pp. 9-15.

Blind, K., 'Qualitätssicherung im Kontext der Umsetzung der Dienstleistungsrichtlinie - Bestandsaufnahme: Qualitätssicherungsinstrumente: Qualitätsstandards und Qualitätssiegel', presentation prepared for the BMWI-Workshop Qualitätsbewertung und Standardisierung von Dienstleistungen, Berlin, 12.12.2007. Available from: http://www.bmwi.de/BMWi/Navigation/Europa/Wirtschaftsraum-Europa/dienstleistungsrichtlinie,did=230196.html

BMBF, *Exportability and internationalisation of services*, brochure on the focus group meeting on 27 November 2006, Stuttgart, 2006 (BMBF, 2006).

Bommakanti, V. K., *Global competitiveness and knowledge intensive business services*, paper prepared for the 18th European Advanced Studies Institute in Regional Sciences on New Members – New Challenges for the European regional development policy, Lodz-Cracow, 2005.

Breuss, F. and Badinger, H., 'The European Single Market for services in the context of the Lisbon Agenda: Macroeconomic effects of the Services Directive', published in: *Deepening the Lisbon Agenda: Studies on productivity, services and technologies*, Bundesministerium für Wirtschaft und Arbeit (BMWA), Wien, 2006, S. 79-108.

Brinkley, I., *Defining the Knowledge Economy*, Knowledge Economy Programme, Work Foundation, London, 2006.

Camacho, J. A. and Rodríguez, M., *Embodied knowledge flows and services: an analysis for six European countries*, Working Papers Services, Space, Society No. 16, University of Birmingham, 2005.

Canton, J., 'The impact of convergent technologies and the future of business and the economy', in: Converging technologies for improving human performance: Nanotechnology, biotechnology, information technology and cognitive science, ed. by Roco, M. C. and Bainbridge, W. S., National Science Foundation, Airlington, 2002.

CEC, 'The state of the Internal Market for services', report from the Commission to the Council and the European Parliament, COM(2002) 441 final, Brussels, 30 July 2002. (CEC, 2002a)

CEC, 'Innovation tomorrow – Innovation policy and the regulatory framework: Making innovation an integral part of the broader structural agenda', European Commission, DG Enterprise, Innovation Papers No. 28, Office for Official Publications of the European Communities, Luxembourg, 2002, pp. 32-52. (CEC, 2002b)

CEC, 'The competitiveness of business-related services and their contribution to the performance of European enterprises', Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, COM(2003) 747 final, Brussels, 4 December 2003. (CEC, 2003)

CEC, 'Report on competition in professional services', Communication from the Commission, COM (2004) 83 final, Brussels, 9 February 2004. (CEC, 2004)

CEC, 'Overview of regulation in the New EU Member States', stocktaking exercise on regulation of professional services, European Commission, COMP/D3/MK/D(2004), Brussels, 2004. (CEC, 2004a)

CEC, 'Professional Services – Scope for more reform, Follow-up to the report on competition in professional services, COM(2004) 83 of 9 February 2004', Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, COM(2005) 405 final, Brussels, 5 September 2005. (CEC, 2005a)

CEC, 'Progress by Member States in reviewing and eliminating restrictions to competition in the area of professional services', Commission Staff Working Document, SEC (2005) 1064, Brussels, 5 September 2005. (CEC, 2005b)

CEC, 'Public Consultation on a future Single Market Policy – Summary of responses', Commission Staff Working Document, SEC (2006) 1215/2, Brussels, 30 October 2006. (CEC, 2006)

CEC, *Employment in Europe 2007*, Office for Official Publications of the European Communities, Luxembourg, 2007. (CEC, 2007)

CEC, 'The Single Market: review of achievements', Commission Staff Working Document, accompanying document to the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, 'A Single Market for 21st century Europe', SEC(2007) 1521, Brussels, 20 November 2007. (CEC, 2007a)

CEN, Implementation of the CEN strategy on service standardisation, 2005. (CEN, 2005)

CEN, Final Report on the European Commission Programming Mandate M/340 in the Field of Services, 2005. (CEN, 2005a)

CEPLIS, *Common values of the liberal professions in the European Union*, statement of the European Council of the Liberal Professions (CEPLIS), Brussels, 2007. Available from www.ceplis.org (CEPLIS, 2007)

Conway, P. and Nicoletti, G., *Product market regulation in the non-manufacturing sectors of OECD countries: Measurements and highlights*, OECD, Economics Department Working Papers No. 530, ECO/WKP(2006)58, Paris, 2006.

DIN, Standardization in the German service industries - Potentials and need for action, DIN Technical Report 116, 2002.

EC, 'Regulation in Liberal Professions and its Effects', Commission Services Working Document, European Commission, Competition DG, Brussels, 27 March 2003.

EC, 'Internal Market, opinions and experiences of businesses in EU-15', European Commission, Flash Eurobarometer 180, TNS Sofres – EOS Gallup Europe, 2006. (EC, 2006a)

EC, 'Internal Market, opinions and experiences of businesses in the 10 new Member States', European Commission, Flash Eurobarometer 190, TNS Sofres – EOS Gallup Europe, 2006. (EC, 2006b)

EC, 'Observatory of European SMEs', Analytical Report, European Commission, Flash Eurobarometer 196, TNS Sofres – EOS Gallup Europe, 2007. (EC, 2007)

EC Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications, *Official Journal of the European Union*, L255/22, 2005. (EC Directive 2005/36/EC)

EC Directive 2006/123/EC of the European Parliament and of the Council of 12 December 2006 on services in the Internal Market, *Official Journal of the European Union*, L376/36, 2006. (EC Directive 2006/123/EC)

EC Regulation (EC) No 1893/2006 of the European Parliament and of the Council of 20 December 2006 establishing the statistical classification of economic activities NACE Revision 2 and amending Council Regulation (EEC) No. 3037/90 as well as certain EC Regulations on specific statistical domains, *Official Journal of the European Union*, L393/1, 2006. (EC Regulation 1893/2006)

EFBRS, 'European Forum on Business Related Services, 2005 Report', 2005. (EFBRS, 2005)

EMCC, 'The knowledge-intensive business services sector', *Sector Futures*, European Monitoring Centre on Change, European Foundation for the Improvement of Living and Working Conditions, Dublin, 2005. (EMCC, 2005)

EMCC, 'Trends and drivers of change in the European knowledge-intensive business services sector: Mapping report', *Sector Futures*, European Monitoring Centre on Change, European Foundation for the Improvement of Living and Working Conditions, Dublin, 2006. (EMCC, 2006)

EMCC, 'Trends and drivers of change in the European knowledge-intensive business services sector: Four scenarios', *Sector Futures*, European Monitoring Centre on Change, European Foundation for the Improvement of Living and Working Conditions, Dublin, 2006. (EMCC, 2006a)

Eurostat, *NACE REV. 2 Implementation in national accounts*, Eurostat C2/CN 588a/en, Meeting of the Working Group on National Accounts, Luxembourg, 22 November 2005. (Eurostat, 2005)

Eurostat, *The revised classification of economic activities NACE Rev. 2 and its implication for business surveys*, paper prepared for the EU workshop on recent developments in business and consumer surveys, Brussels, 20-21 November 2006. (Eurostat, 2006a)

Eurostat, Implementation of NACE Rev. 2 in business registers, 2006. (Eurostat, 2006b)

Eurostat, *NACE Rev 2 Introductory guidelines*, 2007. Available from: http://circa.europa.eu/irc/dsis/nacecpacon/info/data/en/index.htm. (Eurostat, 2007a)

Eurostat, *Europe in figures - Eurostat yearbook 2006-2007*, Office for Official Publications of the European Communities, Luxembourg, 2007. (Eurostat, 2007b)

Fähnrich, K.-P., *Standardisation for global services: Are there differences to standardisation in the goods sector?*, presentation prepared for the Workshop on European Standardisation for Services, Brussels, 9 March 2004.

Gallouj F., 'Knowledge-intensive business services: processing knowledge and producing innovation', in: *Productivity, innovation and knowledge in services. New economic and socio-economic approaches*, ed. by Gadrey J. and Gallouj F., Edward Elgar, Cheltenham and Northampton, 2002.

Glauner, C. et al., Monitoring technisch-wissenschaftlicher und sozioökonomischer Trends für den VDI: Bestandsaufnahme der VDI Aktivitäten im Bereich 'Dienstleistungen und Technologie', Zukünftige Technologien Consulting der VDI Technologiezentrum GmbH, Dusseldorf, 2004.

González-López, M., *KIBS provision, proximity and exportability*, paper prepared for the XVII International RESER Conference, Tampere, 13-15 September 2007.

Graz, J.-C., *Standards and international relations: devolution of power in the global political economy*, paper prepared for the EASST 2006, European Association for the Study of Science and Technology, Lausanne, 2006.

Graz, J.-C., et al., *The emerging power of services standards in the global political economy*, paper presented at the ECPR Standing Group on International Relations, 6th Pan-European Conference on International Relations, Turin, 12-15 September 2007.

Heymann, E., 'Klimawandel und Branchen: Manche mögen es heiss!', *Energie und Klimawandel, Aktuelle Themen 388*, Deutsche Bank Research, Frankfurt, 2007.

Higgs, P. et al., 'Beyond the creative industries: Mapping the creative economy in the United Kingdom', NESTA, London, 2008.

Hirschfeld, K., *Advancing into the knowledge-based services sector - The IBITS growth agenda*, Conference Report, 2nd UNI-Europa IBITS Conference, Nyon, 12-13 June 2007. (Hirschfeld, 2007a)

Hirschfeld, K., *Expertise in demand - Knowledge-intensive business services (KIBS)*, Union-Network, Berlin, 2007. (Hirschfeld, 2007b)

Hoffmann, E. and Chamie, M., *Standard Statistical Classifications: Basic Principles*, United Nations, Statistical Commission, New York, 1999.

Hübbers, M., Rühmann, N. and Bömmels, Y., *Status Quo der Dienstleistungs-standardisierung*, Standards: IS Project, Aachen, 2006.

Huws, U., Dahlmann, S. and Flecker, J., *Outsourcing of ICT and related services in the EU: A status report*, European Foundation for the Improvement of Living and Working Conditions, Office for Official Publications of the European Communities, Luxembourg, 2004.

Hidaka, K., *Trends in Services Sciences in Japan and abroad*, Science and Technology Trends, Quarterly Review No. 19, April 2006.

IFAC, *Regulation of the accountancy profession*, Policy Position, International Federation of Accountants, New York, December 2007.

Ilzkovitz, F., et al., Steps towards a deeper economic integration: the Internal Market in the 21st century – A contribution to the Single Market Review, European Commission, DG Economic and Financial Affairs, Economic Papers, Brussels, 2007.

Kandrova, D., 'Rolle von Standards bei der Internationalisierung von Dienstleistungsunternehmen', Kurzstudie des Lehrstuhls für Internationales Management, RWTH Aachen, 2007.

Kanerva, M., Hollanders, H. and Arundel, A., *2006 Trend Chart report: Can we measure and compare innovation in services?*, European Trend Chart on Innovation, 2006.

Kok, W., *Facing the challenge - The Lisbon Strategy for growth and employment*, Report from the High Level Group chaired by Wim Kok, Office for Official Publications of the European Communities, Luxembourg, 2004.

Korte, S. and Glauner, C., ‚Ingenieur-Dienstleistungen', ed. by VDI Technologiezentrum GmbH (Zukünftige Technologien Band 47), Dusseldorf, 2003.

Kox, H. and Lejour, A., 'Dynamic effects of European services liberalisation: more to be gained', paper contributing to the project 'Globalisation Challenges for Europe and Finland' organised by the Secretariat of the Economic Council of Finland, 2006.

Kox, H. L. M. and Rubalcaba, L., *Analysing the contribution of business services to European economic growth*, Bruges European Economic Research Papers, BEER Paper No. 9, College of Europe, February 2007. (Kox et al., 2007a)

Kox, H. L. M. and Rubalcaba, L., *Business services and the changing structure of European economic growth*, CPB Netherlands Bureau for Economic Policy Analysis, 2007. (Kox et al., 2007b)

Langkjaer-Ohlenschlaeger, N., *Operation 2007 - The process*, prepared for the 17th Annual Meeting of the Voorburg Group on Service Statistics, Nantes, 23-27 September 2002.

Marquardt, R., *Standards – Success factor for innovations in the services sector*, Proceedings of the 10th Aachener Dienstleistungsforum, 2007.

Micklitz, Hans-W., 'Services standards: Defining the core consumer elements and their minimum requirements', Bamberg, 2007.

Miles I., et al., 'Knowledge-intensive business services: Users, carriers and sources of innovation', *European Innovation Monitoring System (EIMS)*, EIMS Publication No. 15, Luxembourg, 1995.

Miles, private communication, 2008.

Montalvo, C., et al., *Driving factors and challenges for EU industry and the role of R&D innovation*, European Techno-Economic Policy Support Network (ETEPS AISBL), Brussels, 2006.

Mörschel, I. C., *Approach for designing and distributing services through standardization*, prepared for the conference on 'Human Factors in Organizational Design and Management', 1-2 October 2003, Aachen.

Mörschel, I. C., *Approach for designing and distributing services through standardization*, prepared for the International conference on computers and industrial engineering, Paper CIE207, 2004.

Mörschel, I. C. and Beyer, L., Dienstleistungs-Check auf Standardisierbarkeit – Herleitung von Kriterien zur Bewertung der Standardisierbarkeit einer Dienstleistung, prepared in the scope of the BMBF project 'Services standards for global markets', Stuttgart, 2004.

Mortimer-Schutts, The Regulatory Implications of Mobile and Financial Services Convergence, AEI Center for Regulatory and Market Studies 2007. Available from: www.aei-brookings.org/admin/authorpdfs/page.php?id=1421

NBIC, Converging technologies for improving human performance: Nanotechnology, biotechnology, information technology and cognitive science, ed. by Roco, M. C. and Bainbridge, W. S., National Science Foundation, Airlington, 2002. (NBIC, 2002)

Nielsen, P. B., Towards *a strategy for improving European services sector statistics*, paper prepared for the 19th Voorburg Group Meeting on Services Statistics, Ottawa, 29 September-1 October 2004.

Nielsen, P. B., *Development of services sector statistics - at a crossroad?*, paper prepared for the 20th Voorburg Group Meeting on Services Statistics, Helsinki, 26-29 September, 2005.

OECD, *Growth in Services - Fostering employment, productivity and innovation*, Meeting of the OECD Council at Ministerial Level, Paris, 2005. (OECD, 2005)

OECD, Innovation and knowledge-intensive service activities, Paris, 2006. (OECD, 2006a)

OECD, *Summary report of the study on globalisation and innovation in the business services sector*, Globalisation and Structural Adjustment, 2007. Available from: http://www.oecd.org/dataoecd/18/55/38619867.pdf (OECD, 2007)

Paterson, I., Fink, M. and Ogus, A., Economic impact of regulation in the field of liberal professions in different Member States - Regulation of professional services, Institute for Advanced Studies, Vienna, 2003.

Paulson, L. D., 'Services science: A new field for today's economy', IEEE Computer, August 2006, p. 18-21.

Pilat, D. et al., *The changing nature of manufacturing in OECD economies*, OECD STI Working Paper 2006/9, DSTI/DOC(2006)9, Paris, 2006.

RICS, Proposal for a directive of the European Parliament and of the Council on services in the Internal Market, Royal Institution of Chartered Surveyors, Position paper, March 2005. (RICS, 2005)

Rijkers-Defrasne, S. et al., *Emerging knowledge-based economy and society*, EFMN Issue Analysis 2007 Final Report, European Foresight Monitoring Network, Dusseldorf, 2007. Available from: www.efmn.eu

Selwyn, J. and Leverett, B., *Emerging markets in the environmental sector*, study prepared for the UK Department of Trade and Industry, London, 2006.

Spohrer, J. et al., 'NBIC convergence and technology-business co-evolution: Towards a services science to increase productive capacity', published in: *Managing nano-bio-info-cogno innovations - Converging technologies in society*, ed. by Bainbridge W. S. and Roco, M. C., Springer, Doordrecht, 2005, pp. 227-254.

Strambach S., 'Innovation processes and the role of knowledge-intensive business services (KIBS)', in: *Innovation networks. Concepts and challenges in the European perspective. Technology, innovation and policy 12*, ed. by Koschatzky, K., Kulicke M. and Zenker A, Series of the Fraunhofer Institute for Systems and Innovation Research (ISI), Physica-Verlag. Heidelberg, 2001.

Toivonen, M., *Expertise as business - Long-term development and future prospects of knowledge-intensive business services (KIBS)*, Doctoral dissertation, Helsinki University of Technology, Department of Industrial Engineering and Management, Doctoral dissertation series 2004/2, Espoo, 2004.

Ueda, S., *The outline of the 12th revision draft of Japan standard industrial classification*, paper prepared for the meeting of the expert group on International Economic and Social Classifications held in New York on 16-18 April 2007, United Nations Department of Economic and Social Affairs Statistics Division, ESA/STAT/AC.124/21, New York, 2007.

UK, *UK Standard Industrial Classification of Economic Activities 2007 (SIC 2007) - Structure and explanatory notes*, Office for National Statistics, 2007. Available from: http://www.statistics.gov.uk/methods_quality/sic/downloads/SIC2007explanatorynotes.pdf (UK-SIC, 2007)

UN, *Preamble: International family of economic and social classifications*, United Nations, Statistical Commission, New York, 1999. (UN, 1999)

Vogt, L., The EU's Single Market: At your service?, OECD, Economics Department Working Papers No. 449, ECO/WKP(2005)36, Paris, 2005.

Wanduch, V., VDI, Statement at the expert workshop on quality assessment and standardisation of service, Berlin, 12.12.2007.

Weiler, P., DIN, private communication, 2006.

Which?, Future of the Internal Market, consultation response to the EC DG Internal Market and Services, London, 2006. (*Which?*, 2006)

Wölfl, A., *The service economy in OECD Countries*, OECD STI Working Paper 2005/3, DSTI/DOC(2005)3, Paris, 2005.

Websites:

AFNOR, French Standards Association: http://www.afnor.org, retrieved on 28 November 2007 (Web-AFNOR, 2007)

BMWI, http://www.bmwi.de/BMWi/Navigation/Europa/Wirtschaftsraum-Europa/dienstleistungsrichtlinie,did=230196.html, retrieved on 24 January 2008 (Web-BMWI, 2008)

CEN, European Committee for Standardization: www.cen.eu, retrieved on 28 November 2007 (Web-CEN, 2007)

COPANT, Pan-American Standards Commission: www.copant.org, retrieved on 19 December 2007 (Web-COPANT, 2007)

DIN, www.din.de, retrieved on 24 January 2008 (Web-DIN, 2008)

EBJ, Environmental Business Journal, Business activity segments in the environmental industry, http://www.ebiusa.com/Segments.html, retrieved on 7 December 2007 (Web-EBJ, 2007)

EC, Internal Market, A single market for services: http://ec.europa.eu/internal_market/top_layer/index_19_en.htm, retrieved on 28 November 2007 (Web-EC, 2007a)

EC, Competition, professional services: http://ec.europa.eu/comm/competition/sectors/professional_services/overview_en.html, retrieved on 28 November 2007 (Web-EC, 2007b)

EC, Internal Market, business-related services: http://ec.europa.eu/internal_market/services/brs/index_en.htm, retrieved on 29 November 2007 (Web-EC, 2007c)

EC, Internal Market, business-related services, business services: http://ec.europa.eu/internal_market/services/brs/business-services_en.htm#publications, retrieved on 29 November 2007 (Web-EC, 2007d)

EC, Recognition of professional qualifications, http://ec.europa.eu/internal_market/qualifications/future_en.htm, retrieved on 27 January 2008 (Web-EC, 2008a)

EC, Services Directive, http://europa.eu/rapid/pressReleasesAction.do?reference=IP/07/753&format=HTML&aged=0&language=EN&guiLanguage=en, retrieved on 27 January 2008 (Web-EC, 2008b)

EC, Quality of services - Codes of conduct, http://ec.europa.eu/internal_market/services/services-dir/conduct_en.htm, retrieved on 27 January 2008 (Web-EC, 2008c)

EC, New Approach - Harmonised standards, http://ec.europa.eu/enterprise/newapproach/standardization/harmstds/index_en.html, retrieved on 28 January 2008 (Web-EC, 2008d)

EU, Correspondence Table between NACE Rev.2, NACE Rev. 1.1 and ISIC Rev. 4, Communication and Information Resource Centre Administrator (CIRCA), http://circa.europa.eu/irc/dsis/nacecpacon/info/data/en/NACE%20Rev%202%20structure%20and%20correspondences%20NACE%20Rev%201%201%20and%20ISIC%20Rev%204.pdf, retrieved on 28 November 2007 (Web-EU, 2007a)

EU, Correspondence Table between NACE Rev. 1.1 and NACE Rev. 2, Communication and Information Resource Centre Administrator (CIRCA), http://circa.europa.eu/irc/dsis/nacecpacon/info/data/en/Correspondence%20table%20NACE%20Rev.%201.1%20-%20NACE%20Rev.%202%20short.pdf, retrieved on 29 November 2007 (Web-EU, 2007b)

INSEE, Révision 2008 des nomenclatures d'activités et de produits, http://www.insee.fr/fr/nom_def_met/nomenclatures/naf-cpf_2008/naf2008.htm, retrieved on 11 January 2008 (Web-INSEE, 2008)

NAGD, http://www.nagd.din.de, retrieved on 24 January 2008 (Web-NAGD, 2008)

VDI, http://www.vdi.de/en/vdi/english/vrp/richtlinien/guidelines/10678/, retrieved on 24 January 2008 (Web-VDI, 2008)

WTO, General Agreement on Trade in Services, World Trade Organisation, http://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm6_e.htm, retrieved on 12 December 2007 (Web-WTO, 2007)

ANNEXES

Annex 1: Overview of barriers to services trade

The box below provides an overview of all barriers to trade in services, as identified in a study by Vogt (Vogt, 2005).

Box A1. 1: Identified barriers to service trade. Source: (Voigt, 2005)

- Monopolies in some member states have the effect of preventing the establishment of service providers from other member states in which no such monopoly exists. The monopoly concerned may be one that is entrusted to a specific body (such as postal services or energy utilities), a monopoly on the distribution of certain products or activities reserved exclusively for certain operators.
- Quantitative restrictions on access to service activities, *e.g.* quotas or numerus-clausus rules governing the number of service providers, rules on maximum surface area, or geographic distance limits between service providers, can place established national operators at an advantage over new entrants. Examples of this can be rules like imposing a limit of 1 optician per 10 000 inhabitants and one driving school per 15 000 inhabitants.
- Territorial restrictions may require authorisation to engage in service activities to a specific region or locality, so that service providers wishing to cover the entire national territory are obliged to become established in several regions. Nationality requirements exist in several member states with respect to shareholders, management and staff of service enterprises and with respect to some regulated professions.
- Residence requirements, particularly those relating to managers of service enterprises, give rise to problems. For example, depending on the particular country, two thirds, one half or at least one of the members of the management board must be resident.
- Some service activities are subject to rules designed to ensure independence and autonomy between different activities, preventing them from being exercised jointly. In one member state, for example, estate agencies are prohibited from engaging in other professional activities such as property management, financial consultancy or cleaning.
- Regulations governing professional qualifications differ. For example, a service provider from a member state with no requirement for a professional diploma wishing to become established in another member state that does have such a requirement will not find it easy to have professional qualifications recognised.
- The different company tax regimes result in obstacles which penalise cross-border establishment of service providers. Although businesses would like to consider the Internal Market as just one market, numerous problems result from the fact that companies must conform with 15 different fiscal regimes. There is a risk of double taxation and compliance costs increase.
- Price regulations applicable to a certain number of services, whether providing for maximum prices, minimum prices or prices set or recommended by member states or professional bodies are liable to cause problems in the case of cross-border service provision.
- Opening a bank account in the member state in which a particular service is provided is often necessary in order to facilitate payments, but is difficult as it involves making a declaration of residence or of non-residence, which in turn gives rise to tax declarations and causes administrative delays and costs.

- Accounting rules are designed amongst other things to meet tax inspection needs; for this reason, they differ markedly from one member state to another. An enterprise which is active in several member states is therefore obliged to maintain parallel accounting systems while at the same time ensuring consistency in the accounting of the enterprise as a whole.
- The payment and reimbursement of VAT also causes problems. Indeed, the rule according to which services are subject to VAT in the country of establishment of the provider is accompanied by numerous exceptions which give rise to complex situations in the context of cross-border sales. This results in numerous service providers being subject to VAT obligations in member states other than the one in which they are established. Furniture removers, for example, are obliged to deal with the competent authorities in each of the member states in which they offer their services, and ask for a VAT number in each of these member states and settle their affairs according to the different rules.
- More favourable tax treatment for services by local providers is a major hindrance to the provision of services. In some member states, for example, the costs of professional training are tax-deductible only if the courses take place in the particular country concerned. Similarly, life insurance and additional insurance policies, as well as pension fund and investment fund contracts can be offset against tax only if concluded with local insurance companies.
- Difficulties encountered in the context of debt collection are a problem which is exacerbated by long delays of cross-border payments. One particular difficulty relates to the use of debt collection agencies and the protection of creditors' rights in the event of bankruptcy in other member states. An enterprise cannot use its debt collection agency if the latter is not established in other member states: approval formalities for debt collection agencies differ between member states and sometimes even from one region to the next, the provision of legal assistance may be the preserve of the legal professions and the costs of debt collection are not always for the account of the debtor.
- Authorisation for the reimbursement of medical costs incurred in another member state is only granted by national authorities under certain conditions and this may discourage persons insured under social security schemes from turning to service providers established in another member state. Persons who decide for various reasons to travel to another member state to receive medical treatment there, will often not be reimbursed.

Annex 2: Differences in regulations regarding fixed, minimum and maximum prices for professional services

The table below displays, by way of example, the differences in regulations regarding fixed prices, minimum and maximum prices between EU Member States, as they existed in 2004, as well as reforms carried out or planned at national level in this domain. The table is based on the national regulators responses to Commission questionnaire dated December 2004. Where responses were incomplete or not received information has been taken from the 2004 Report or the Stocktaking Report on the new EU Member States (CEC, 2004a) and the country name is shown in *italics.* Pharmacists are not included (CEC, 2005b).

Table A2.1: Regulatory restrictions related to fixed prices, minimum and maximum prices:

Profession	Fixed prices as at February 2004	Minimum prices as at February 2004	Maximum prices as at February 2004	Reforms made or planned since February 2004
Accountancy / audit	Greece	Italy (for public accountants only) Portugal (for statutory audit only)	Italy (for public accountants only)	
Tax consultants (where this profession exists separately)		Germany (lists of criteria that must be taken into account when setting prices)	Germany (lists of criteria that must be taken into account when setting prices)	**Germany**: professional rule has been changed so that the criteria are now 'guidelines' and are not binding
Architects	Luxembourg	Cyprus (for public projects and work only) Germany Italy (for specific services defined in law)	Germany Italy (for specific services defined in law)	**Germany**: work underway by the government to abolish fixed minimum and maximum tariffs. (The first draft law from the Ministry proposing abolition of tariffs did not get a political majority.) **Italy**: work group set up in Ministry to revise tariffs scales for both private and public works.
Engineers	Luxembourg	Cyprus (for public projects and work only) Germany *Greece* Italy (for specific services defined in law)	Germany *Greece* Italy (for specific services defined in law)	**Germany**: work underway by the Government to abolish fixed minimum and maximum tariffs. (The first draft law from the Ministry proposing abolition of tariffs did not get a political majority.) **Italy**: work group set up in Ministry to revise tariffs scales for both private and public works.

Profession	Fixed prices as at February 2004	Minimum prices as at February 2004	Maximum prices as at February 2004	Reforms made or planned since February 2004
Legal profession	Czech Republic Estonia (for legal and cases only) France (for technical and procedural aspects of court work only) Ireland (for legal aid cases only) Luxembourg (for legal aid cases only) Poland (for court work only) Slovenia Spain (for the profession of *procuradores* only)	Cyprus Germany Greece Italy	Italy	**France**: work underway to legally reinforce the requirement on lawyers to inform clients fully as to how services will be priced. **Germany**: tariffs for out-of-court work to be removed from 1/7/06. **Italy**: on 8/4/04 revised tariffs were adopted.
Notaris	Belgium (for certain services defined in law) Estonia France Germany Greece Hungary Italy Latvia Lithuania Slovakia (for areas of work reserved for notaries and probate work only) Slovenia Spain (for certain services it is possible to negotiate a reduction of up to 10% on fees)	*Czech Republic* Portugal	Austria (for notarial acts only) *Czech Republic* Luxembourg (for notarial acts only) *Malta* Netherlands (for those on a low income and only in respect of family law) Poland Portugal	**Germany**: work has begun to reform the fixed tariff systems. **Hungary**: following on from the proposal of the NCA, the Ministry of Justice intends to replace fixed tariffs with maximum prices. **Slovakia**: revised fixed tariffs were introduced in 2005 for some reserved areas of work by the Ministry of Justice. **Slovenia**: professional body has lost competence to propose tariffs and this has passed to the Ministry of Justice who also has the final say on the level of tariff.

Source: CEC, 2005b

Annex 3: Differences in regulations regarding advertising restrictions for professional services

The table below displays, by way of example, differences in regulations regarding advertising restrictions between EU Member States, as they existed in 2004, as well as reforms carried out or planned at national level in this domain. The table is based on the national regulators responses to Commission questionnaire dated December 2004. Where responses were incomplete or not received information has been taken from the 2004 Report or the Stocktaking Report on the new EU Member States (CEC, 2004a) and the country name is shown in *italics.* Pharmacists are not included (CEC, 2005b).

Table A3.1: Regulatory restrictions related to advertising restrictions:

Profession	**Effective prohibitions on advertising as atFebruary 2004**	**Some advertising restrictions at February 2004**	**Reforms made or planned since February 2004**
Accountancy/ audit	France Luxembourg (for audit) Portugal (for audit) Spain (for audit)	Belgium Cyprus Czech Republic (for audit) Germany *Greece* Hungary (for audit) Italy Lithuania (for audit) Luxembourg Netherlands (for audit) Poland (for audit) Portugal (for non-audit) Slovenia (for audit)	**France**: from 25/3/04 the law now allows personal informative advertising (cold calling and comparative advertising are still not permitted). Project also underway to modify the ethical code to relax advertising restrictions contained therein to allow 'solicitation'. **Germany**: review underway on rules for professional bodies on advertising with the aim of relaxing restrictions.
Tax consultants (where this profession exists separately)	Poland	Germany Spain	
Architects	Cyprus Italy	Belgium *Greece* Ireland Luxembourg Portugal	**Ireland**: professional body withdrew restrictions in 2004 following intervention by the NCA. **Italy**: ethical code was reviewed in 2004 to relax advertising restrictions contained therein in agreement with NCA.
Engineers	Cyprus	*Greece* Ireland Italy Luxembourg	**Ireland**: restrictions have been removed following the publication of the NCA's report on engineers in 2004. **Italy**: there are plans to review the ethical code with the aim of relaxing the advertising restrictions contained therein.

Profession	Effective prohibitions on advertising as atFebruary 2004	Some advertising restrictions at February 2004	Reforms made or planned since February 2004
Legal profession	Estonia Greece Ireland (for barristers only) Lithuania Poland Portugal	Austria *Belgium* Cyprus *Czech Republic* Denmark France Germany Ireland (for solicitors) Italy Luxembourg Slovakia Slovenia Spain Sweden UK-Scotland (for solicitors only)	**Denmark**: work is underway on legislation to remove the advertising restrictions. **Estonia**: consideration is being given to amending the law to permit price lists to be printed. **France**: project 'décret' underway to reform the ethical code so that lawyers will not have to get ex-ante authorisation from the professional body for the way they propose to advertise. The décret will also allow lawyers to publicise (provide information) on their services to prospective clients via, for example, a mail shot, but cold calling or canvassing will still not be allowed. **Germany**: internal review underway on professional ethical rules by Federal Chamber of lawyers, including advertising. **Greece**: new draft lawyers' law has been proposed and the intention is to review rules on 'publicity' (but not advertising) contained therein. **Lithuania**: new Law on the Bar relaxed the effective prohibition on advertising to allow some limited 'publicity' by lawyers for example via business cards. Promotional activities by an individual lawyer of their practice are still prohibited. **Portugal**: new law enacted in 2005 modifying the Statute of the Portuguese Bar relaxed the advertising rules to allow 'publicity' type activities if objective and lawful. **UK-Scotland**: restrictions are under review by the Scottish Executive Working Group on the Legal Services market in Scotland. The Law Society of Scotland has agreed to review the advertising restrictions identified in the review and to consult the NCA on proposed alternative.

Profession	Effective prohibitions on advertising as atFebruary 2004	Some advertising restrictions at February 2004	Reforms made or planned since February 2004
Notaries	Czech Republic Estonia France *Greece* Italy Latvia Lithuania Luxembourg *Malta* Poland Portugal Slovakia Slovenia Spain	Austria Germany *Hungary* UK - England and Wales (for Notaries Public)	**Italy**: project to elaborate new ethical rules on the provision of information to the public.
Pharmacists	Cyprus France (for prescription only products) *Greece* Hungary (for prescription only products) Ireland Lithuania (for prescription only products) Luxembourg Portugal Spain	*Austria* *Czech Republic* Finland France (for non-prescription only products) Germany (advertising has to comply with professional rules) *Malta* Netherlands *Poland* Slovenia Sweden	**France**: plans to ask the NCA for an opinion on the rules on advertising included in the professional body's deontological code. **Hungary**: plans to review the law on advertising in the pharmaceutical area to bring them into line with the revised ethical code which has to be reformed and the provisions on advertising revised to the satisfaction of the NCA. **Luxembourg**: plans to incorporate the professional guidelines on advertising into the ethical code and make them binding (i.e. the rules are about to become more restrictive).

Source: CEC, 2005b

Annex 4: Correspondence between ISIC Rev.3 – NACE Rev. 1 (in force until 31 December 2007) and ISIC Rev. 4 – NACE Rev. 2 (in force from 1 January 2008) at the level of sections.

ISIC Rev. 3 – NACE Rev. 1		ISIC Rev. 4 – NACE Rev. 2	
Section	Description	Section	Description
A B	Agriculture; hunting and forestry; Fishing	A	Agriculture, Forestry and Fishing
C	Mining and quarrying	B	Mining and quarrying
D	Manufacturing	C	Manufacturing
E	Electricity, gas and water supply	D E	Electricity, gas, steam and air conditioning supply; Water supply, sewerage; waste management and remediation activities
F	Construction	F	Construction
G	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	G	Wholesale and retail trade; repair of motor vehicles and motorcycles
H	Hotels and restaurants	I	Accommodation and food service activities
I	Transport, storage and communications	H J	Transportation and storage; information and communication
J	Financial intermediation	K	Financial and insurance activities
K	Real estate, renting and business activities	L M N	Real estate activities; Professional, scientific and technical activities; Administrative and support service activities
L	Public administration and defence; compulsory social security	O	Public administration and defence; compulsory social security
M	Education	P	Education
N	Health and social work	Q	Human health and social work activities

ISIC Rev. 3 – NACE Rev. 1		ISIC Rev. 4 – NACE Rev. 2	
Section	Description	Section	Description
O	Other community, social and personal service activities	S R	Other service activities Arts, entertainment and recreation
P	Activities of private households as employers and undifferentiated production activities of private households	T	Activities of households as employers; undifferentiated goods- and service-production activities of households for own use
Q	Extraterritorial organizations and bodies	U	Activities of extraterritorial organizations and bodies

Source: Eurostat, 2006a

Annex 5: Business and professional services – Correspondence Table between NACE Rev. 1.1 and NACE Rev. 2

The table lists the main business and professional services as classified in the former NACE Rev. 1.1 and in the new NACE Rev. 2. However, as detailed in section 4.3, some business and professional services may also be found in other NACE categories.

NACE Rev. 1.1	Description	NACE Rev. 2	NACE_2007_DESCRIPTION
70.11	Development and selling of real estate	41.1	Development of building projects
70.11	Development and selling of real estate	42	Civil engineering
70.12	Buying and selling of own real estate	68.1	Buying and selling of own real estate
70.2	Letting of own property	68.2	Renting and operating of own or leased real estate
70.31	Real estate agencies	68.31	Real estate agencies
70.32	Management of real estate on a fee or contract basis	68.32	Management of real estate on a fee or contract basis
70.32	Management of real estate on a fee or contract basis	81.1	Combined facilities support activities
71.1	Renting of automobiles	77.11	Renting and leasing of cars and light motor vehicles
71.21	Renting of other land transport equipment	77.12	Renting and leasing of trucks
71.21	Renting of other land transport equipment	77.39	Renting and leasing of other machinery, equipment and tangible goods nec
71.22	Renting of water transport equipment	77.34	Renting and leasing of water transport equipment
71.23	Renting of air transport equipment	77.35	Renting and leasing of air transport equipment
71.31	Renting of agricultural machinery and equipment	77.31	Renting and leasing of agricultural machinery and equipment
71.32	Renting of construction and civil engineering machinery and equipment	77.32	Renting and leasing of construction and civil engineering machinery and equipment
71.32	Renting of construction and civil engineering machinery and equipment	77.39	Renting and leasing of other machinery, equipment and tangible goods nec
71.33	Renting of office machinery and equipment, including computers	77.33	Renting and leasing of office machinery and equipment (including computers)
71.34	Renting of other machinery and equipment not elsewhere classified (nec)	77.39	Renting and leasing of other machinery, equipment and tangible goods nec
71.4	Renting of personal and household goods nec	77.21	Renting and leasing of recreational and sports goods
71.4	Renting of personal and household goods nec	77.22	Renting of video tapes and disks
71.4	Renting of personal and household goods nec	77.29	Renting and leasing of other personal and household goods
72.1	Hardware consultancy	62.02	Computer consultancy activities
72.21	Publishing of software	58.21	Publishing of computer games
72.21	Publishing of software	58.29	Other software publishing
72.21	Publishing of software	62.01	Computer programming activities
72.22	Other software consultancy and supply	62.01	Computer programming activities
72.22	Other software consultancy and supply	62.02	Computer consultancy activities
72.22	Other software consultancy and supply	62.09	Other information technology and computer service activities
72.3	Data processing	62.03	Computer facilities management activities
72.3	Data processing	63.11	Data processing, hosting and related activities
72.4	Database activities	58.11	Book publishing

NACE Rev. 1.1	Description	NACE Rev. 2	NACE_2007_DESCRIPTION
72.4	Database activities	58.12	Publishing of directories and mailing lists
72.4	Database activities	58.13	Publishing of newspapers
72.4	Database activities	58.14	Publishing of journals and periodicals
72.4	Database activities	58.19	Other publishing activities
72.4	Database activities	58.21	Publishing of computer games
72.4	Database activities	58.29	Other software publishing
72.4	Database activities	59.2	Sound recording and music publishing activities
72.4	Database activities	60.1	Radio broadcasting
72.4	Database activities	60.2	Television programming and broadcasting activities
72.4	Database activities	62.01	Computer programming activities
72.4	Database activities	63.11	Data processing, hosting and related activities
72.4	Database activities	63.12	Web portals
72.5	Maintenance and repair of office, accounting and computing machinery	33.12	Repair of machinery
72.5	Maintenance and repair of office, accounting and computing machinery	95.11	Repair of computers and peripheral equipment
72.6	Other computer related activities	62.09	Other information technology and computer service activities
73.1	Research and experimental development on natural sciences and engineering	72.11	Research and experimental development on biotechnology
73.1	Research and experimental development on natural sciences and engineering	72.19	Other research and experimental development on natural sciences and engineering
73.1	Research and experimental development on natural sciences and engineering	72.2	Research and experimental development on social sciences and humanities
73.2	Research and experimental development on social sciences and humanities	72.2	Research and experimental development on social sciences and humanities
74.11	Legal activities	69.1	Legal activities
74.12	Accounting, book-keeping and auditing activities; tax consultancy	69.2	Accounting, bookkeeping and auditing activities; tax consultancy
74.13	Market research and public opinion polling	73.2	Market research and public opinion polling
74.14	Business and management consultancy activities	2.4	Support services to forestry
74.14	Business and management consultancy activities	70.21	Public relations and communication activities
74.14	Business and management consultancy activities	70.22	Business and other management consultancy activities
74.14	Business and management consultancy activities	74.9	Other professional, scientific and technical activities nec
74.14	Business and management consultancy activities	85.6	Educational support activities
74.15	Management activities of holding companies	64.2	Activities of holding companies
74.15	Management activities of holding companies	70.1	Activities of head offices
74.2	Architectural and engineering activities and related technical consultancy	71.11	Architectural activities
74.2	Architectural and engineering activities and related technical consultancy	71.12	Engineering activities and related technical consultancy
74.2	Architectural and engineering activities and related technical consultancy	74.2	Photographic activities
74.2	Architectural and engineering activities and related technical consultancy	74.9	Other professional, scientific and technical activities nec
74.3	Technical testing and analysis	71.2	Technical testing and analysis

NACE Rev. 1.1	Description	NACE Rev. 2	NACE_2007_DESCRIPTION
74.4	Advertising	73.11	Advertising agencies
74.4	Advertising	73.12	Media representation
74.5	Labour recruitment and provision of personnel	78.1	Activities of employment placement agencies
74.5	Labour recruitment and provision of personnel	78.2	Temporary employment agency activities
74.5	Labour recruitment and provision of personnel	78.3	Other human resources provision
74.6	Investigation and security activities	74.9	Other professional, scientific and technical activities nec
74.6	Investigation and security activities	80.1	Private security activities
74.6	Investigation and security activities	80.2	Security systems service activities
74.6	Investigation and security activities	80.3	Investigation activities
74.7	Industrial cleaning	81.21	General cleaning of buildings
74.7	Industrial cleaning	81.22	Other building and industrial cleaning activities
74.7	Industrial cleaning	81.29	Other cleaning activities
74.81	Photographic activities	74.2	Photographic activities
74.82	Packaging activities	82.92	Packaging activities
74.85	Secretarial and translation activities	74.3	Translation and interpretation activities
74.85	Secretarial and translation activities	82.11	Combined office administrative service activities
74.85	Secretarial and translation activities	82.19	Photocopying, document preparation and other specialised office support activities
74.85	Secretarial and translation activities	82.99	Other business support service activities nec
74.86	Call centre activities	82.2	Activities of call centres
74.87	Other business activities nec	59.2	Sound recording and music publishing activities
74.87	Other business activities nec	63.99	Other information service activities nec
74.87	Other business activities nec	74.1	Specialised design activities
74.87	Other business activities nec	74.9	Other professional, scientific and technical activities nec
74.87	Other business activities nec	77.4	Leasing of intellectual property and similar products, except copyrighted works
74.87	Other business activities nec	82.3	Organisation of conventions and trade shows
74.87	Other business activities nec	82.91	Activities of collection agencies and credit bureaus
74.87	Other business activities nec	82.99	Other business support service activities nec

Annex 6: Overview of national classifications of economic activities in European Member States

Table Annex A6.1: Overview of national classifications in force until 1 January 2008:

EU Member State	Name of institution responsible for elaboration and maintenance of classification	English name (original name)	Link to international classification	Deviation from international standard - if any[16].
Austria	Bundesanstalt ‚Statistik Österreich' www.statistik.at/oenace	Austrian Statistical Classification of Economic Activities (ÖNACE 2003)	Changes are made only in concordance with revisions to NACE Rev. 1.1	The four levels of NACE Rev. 1.1 have been taken over unchanged and a fifth level (sub-class) has been added
Belgium	National Institute for Statistics (NIS) – Belgium www.statbel.fgov.be	NACE-BEL 2003	NACE Rev.1.1	52.48 from NACE Rev. 1.1 = (52.48 + 52.49) from NACE-BEL 2003
Bulgaria	National Statistical Institute of Bulgaria http://www.nsi.bg/	National Classification of Economic Activities (NCEA-2003, for international use NACE.BG-2003)	NACE Rev.1.1	Five levels: Sections, one-character alphabetical code; Subsections, two-character alphabetical code; Divisions, two-digit numerical code; Groups, three-digit numerical code; Classes, four-digit numerical code. The structure of national classification is identical to international standard.
Cyprus	No information			
Czech Republic	Czech Statistical Office gw.czso.cz	Statistical Classification of Economic Activities (OKEČ)	NACE Rev.1.1	The 4-digit structure is the same. The national version is more detailed due to the fifth digit.
Denmark	Statistics Denmark www.dst.dk/db03	Danish Activity Classification 2003	Follows NACE Rev. 1.1	We have added two more digits to the NACE classes, which mean we have additional breakdowns in our national classification.
Estonia	Estonian Enterprise Register	Estonian Classification of Economic Activities EMTAK	NACE Rev.1, ISIC Rev.3	The four levels are identical; the two additional breakdowns are for specifying Estonian economy. The code consists of six numbers without points

[16] Is the structure identical to international standard or, if not, how does it differ? (Additional levels added? changes made, e.g. aggregations or additional breakdowns?)

EU Member State	Name of institution responsible for elaboration and maintenance of classification	English name (original name)	Link to international classification	Deviation from international standard - if any[17].
Finland	Statistics Finland www.stat.fi	Standard Industrial Classification TOL 2002	Based on NACE Rev.1.1	5-digit level added to Finnish classification to meet national needs *deviations: When Finland joined the European Union and adopted the new national Standard Industrial Classification (TOL 1995) based on the Community classification of economic activities, agreement was reached on the deviations below. These deviations are included in TOL 2002 as well. 1) Classes 5147, Wholesale of other household goods, and 5248, Other retail sale in specialized stores, are divided into more than nine 5-digit Sub-classes (51471-51489, 52482-52499). This means that they also occupy the 4-digit codes 5148 and 5249. 2) The classification has been extended by adding the categories X, 99, 999, 9999 and 99999 Industry unknown. Extra-territorial organisations and bodies have therefore been given the codes Q, 98, 980, 9800 and 98000 (in NACE Q, 99, 990 and 9900). 3) In addition to the above, since 2000, generation of electricity for the use of an industrial plant solely is classified by the activity of the plant. The same procedure is valid for coking, too.
France	INSEE	French Industry Classification NAF Rev. 1 (Nomenclature d'activités Française NAF)	derived from NACE Rev. 1:1	-

[17] Is the structure identical to international standard or, if not, how does it differ? (Additional levels added? changes made, e.g. aggregations or additional breakdowns?)

EU Member State	Name of institution responsible for elaboration and maintenance of classification	English name (original name)	Link to international classification	Deviation from international standard - if any[18].
Germany	Statistisches Bundesamt (Federal Statistical Office), Wiesbaden http://www.destatis.de (http://www.destatis.de/allg/d/klassif/wz2003.htm)	Classification of Economic Activities, edition 2003	derived from NACE Rev. 1:1	Divisions 96 and 97 of ISIC Rev. 3.1 have not been adopted. Different coding for two classes (compared with NACE Rev. 1.1).
Greece	National Statistical Service of Greece / Registers and Classifications Section www.statistics.gr	Statistical Classification of Branches of Economic Activity (STAKOD-2003).	NACE Rev.1.1, ISIC Rev.3.1	STAKOD-2003, like GRIC-91, is a hierarchically structured 4-digit classification system in close relation with NACE Rev.1.1. However, some 3-digit and 4-digit branches of NACE Rev.1.1 were disaggregated, where necessary, in order to satisfy national needs. In the 4-digit codes of STAKOD-2003 there is full stop between the third and fourth digit as a kind of distinction between STAKOD-2003 and NACE Rev.1.1 - the 4-digit codes of NACE Rev.1.1 have a full stop between the second and third digit. The digit "9" is used as last digit of the 4-digit codes of STAKOD-2003 in the branches of "other activities", that is activities not belonging to any of the remaining 4-digit branches of a specific 3-digit code.
Hungary	office.ksh.hu Hungarian Central Statistical Office	Standard Industrial Classification of All Economic Activities 2003.	ISIC Rev.3.1/NACE Rev.1.1	Identical to NACE at all levels
Ireland	Central Statistics Office www.cso.ie	There is no national classification, we merely use NACE Rev 1.1	NACE Rev 1.1	At present the structure is identical to the international standard. No additional levels have been added to date however, some survey sections are considering adding a fifth level to elaborate on the financial sector.
Italy	ISTAT - Istituto Nazionale di Statistica - ROMA - Italy www.istat.it	Classification of economic activities (ATECO 2002).	NACE Rev.1.1	ATECO 2002 is identical to NACE Rev.1.1 at four digit level. Additional five digit breakdowns levels have been added.

[18] Is the structure identical to international standard or, if not, how does it differ? (Additional levels added? changes made, e.g. aggregations or additional breakdowns?)

EU Member State	Name of institution responsible for elaboration and maintenance of classification	English name (original name)	Link to international classification	Deviation from international standard - if any[18].
Latvia	Central Statistical Bureau of Latvia www.csb.lv	General Classification of Economic Activities (NACE Rev. 1.1	NACE Rev.1.1	4 levels. Structure is identical to international standard.
Lithuania	Department of Statistics http://www.stat.gov.lt/lt/	Classification of Economic Activities EVRK	NACE Rev.1.1	Six-digit level. Additional breakdowns.
Luxembourg	STATEC http://www.statistiques.public.lu/fr/publications/thematiques/Entreprises/NACELUX/PDF_NACE.pdf	Nacelux rev.1.1	NACE Rev.1.1	Code NACE NACE is the acronym (Nomenclature des Activités économiques dans la Communauté Européenne or General Name for Economic Activities in the European Union) used to designate the various statistical classifications of economic activities developed since 1970 by the European Union. It is designed to categorise data relating to "statistical units", in this case a unit of activity, for example an individual plant or group of plants constituting an economic entity such as an enterprise. It provides the basis for preparing a large range of statistics (output, inputs to the production process, capital formation and financial transactions) of such units. Luxembourg is using for the moment NACELUX Rév. 1.1. You find further information in the STRATEC publication on Nomenclature d'activités NACELUX Rév. 1.1 (PDF, French version, 342 Kb). http://www.statec.public.lu/en/respondents/nace/index.html
Malta	National Statistics Office Malta http://www.nso.gov.mt/site/page.aspx?pageid=192			
The Netherlands	Statistics Netherlands http://www.cbs.nl/	Standard Industrial Classification 1993 (SIC'93)	NACE Rev.1.1	14 classes, 7 groups, two divisions (overlapping) not included - (nearly) don't exist in The Netherlands, div. 40 combined, split in 3 new 5th digits (subclasses), div 50 combined, split into new classes, div 62 not split into NACE 621 + 622*

EU Member State	Name of institution responsible for elaboration and maintenance of classification	English name (original name)	Link to international classification	Deviation from international standard - if any[18].
Poland	Central Statistical Office of Poland (GUS). http://www.stat.gov.pl	Polish Classification of Activities (PCA).	Nace Rev.1 (OJ No. L293 from October 24, 1990) with further changes published in OJ No. L83 of April 3, 1993, and publication titled "NACE Rev.1 Statistical Classification of Economic Activities in the European Community" (Eurostat, Brussels, Luxembourg 1996).	- Taking into account the Polish conditions, subclasses composing the lower, fifth level of classification, were implemented in all classes; - Alphanumerical symbols were used in all subclasses; - The scopes of activity were defined on the level of all subclasses; - All sections composing the first level of classification were defined; - The methodological part was completed by the detailed descriptions and examples.
Portugal	Instituto Nacional de Estatística (INE) www.ine.pt	Portuguese Classification of Economic Activities - Revision 2.1 (CAE-Rev.2.1).	CAE-Rev.2.1 linked to Class NACE-Rev.1.1 CAE-Rev.2.1 with the same division code of the ISIC -3.1	Identical to Section and Division ISIC – Rev.3.1 Identical to the same levels of NACE-Rev.1.1 Additional breakdowns to start the class NACE – Rev.1.1
Romania	National Institute of Statistics (NIS) Http://www.insse.ro/NOMENCLATOARE	Classification of Activities of National Economy rev.1 (CANE rev.1)	NACE-Rev.1.1	5 levels. All levels are identical to NACE Rev.1.1 .
Slovakia	Statistical Office of the Slovak Republic www.statistics.sk	Statistical branch Classification by Economic Activity Rev. 1.1 (OKEČ)	NACE Rev. 1.1	5 levels. The 4th level is identical to NACE. The fifth level follows from a national need, as an addition
Slovenia	Statistical Office of Slovenia.	Standard Classification of Activities. (SKD)	NACE Rev. 1.1	It follows mostly NACE, with some exceptions: No 62.3, 70.11 and 70.12 together in 70.10 One digit added for national level.
Spain	INE http://www.ine.es	National Classification of Economic Activities, 1993, Revision 1 (CNAE-93 Rev.1)	NACE Rev. 1.1	Every level of the international classification can be re-constructed using the national categories. CNAE-93 Rev.1 includes one additional level of splitting.
Sweden	Statistics Sweden. www.scb.se	Swedish Standard Industrial Classification 2002 (SNI 2002)	Linked to NACE Rev.1.1 (and ISIC Rev.3.1).	One additional (five-digit) level. Refuse to regard is as another additional level.
Uunited Kingdom	Nat. Statistics Office Classifications Helpdesk ons.gov.uk	UK SIC (2003) UK Standard Industrial Classification of Economic Activities 2003	NACE Rev. 1.1	Identical to NACE Rev 1.1 to 4 digits. 5-digit subclass level.

Table A6.2: Overview of national classifications in force from 1 January 2008 onwards:

EU Member State	Name of institution responsible for elaboration and maintenance of classification	National Classification of economic activities from 01.01.08 on Revision of national classification according to the new NACE Rev. 2 planned or already carried out?
Austria	Bundesanstalt ‚Statistik Öesterreich' www.statistik.at/oenace	The presently up-to-date version is ÖNACE 2003, which will be replaced by ÖNACE 2008 in 2008.
Belgium	National Institute for Statistics (NIS) - Belgium www.statbel.fgov.be	Effective 1 January 2008 the new rev 2 NACE codes must also be used in Belgium. These codes replace the old NACE code rev 1.1. The code has to be mentioned on certain forms such as the declaration of a work-related accident and in the annual report of an organisation's internal department for prevention and protection at work. You can request the code for your company or institution from the Labour Inspection. NACE stands for 'Nomenclature générale des Activités économiques dans les Communautés Européennes' (General nomenclature of economic activities in the European communities). Throughout the European Union, 'NACE' is used as an official acronym. The NACE code consists of 5 digits that the European Union and its Member States assign to economic activities. The first four digits are set by the European Union and apply for all Member States. The fifth digit gives Member States a margin of manoeuvre to specify their own classification of activities whilst taking the reality of individual nations and sectors into account. The Belgian variant of the NACE code is also called 'NACE-BEL'.
Bulgaria	National Statistical Institute of Bulgaria http://www.nsi.bg/	If there are national needs - yearly updating in accordance with adopted national Regulation for apply of NACE.BG, Revision - depending on the revision of NACE/ISIC (planned for 2007)
Cyprus		
Czech Republic	Czech Statistical Office gw.czso.cz	no plans for revision or update of the current classification. http://www.czso.cz/eng/redakce.nsf/i/classifications
Denmark	Statistics Denmark www.dst.dk/db03	Statistics Denmark www.dst.dk/db03 1 January 2008 a new Danish Industrial Classification – DB07 – takes effect. The classification and the associated standard groupings can be seen and downloaded from Statistics Denmark's website at: www.dst.dk/db07. DB07 is based on a revised NACE (rev. 2) which is further on based on a revised ISIC (rev. 4). http://www.dst.dk/Vejviser/dokumentation/Nomenklaturer/DB/DB07/Branchebogen.aspx Dansk Branchekode 2003 is planned to be updated according to the revision of ISIC and NACE in 2007.

EU Member State	Name of institution responsible for elaboration and maintenance of classification	National Classification of economic activities from 01.01.08 on Revision of national classification according to the new NACE Rev. 2 planned or already carried out?
Estonia	Estonian Enterprise Register	Along with the current revision of NACE our national version of the classification (EMTAK) is also revised. EMTAK 2008 will come to force at Jan 1st 2008. Several classes that were separated only at 5-digit level in EMTAK are now also separated in NACE Rev. 2 (f. ex. publishing books/publishing catalogues, telephone books etc, radio broadcasting/television broadcasting, architectural activities/building engineering; design; performing arts/artistic creation; museums/historical sites). Changes in the 5-digit level codes in EMTAK 2008, compared to the last version of EMTAK (NACE 1.1): Separate codes for the sale of photographic equipment and for the sale of souvenirs and craftwork articles; Separate codes for the sale of antiques (but not for second-hand books, as previously); Separate code for printing of books, (but not for printing of periodicals, as previously); Separate code for publishing books (but classes for publishing textbooks and publishing dictionaries and encyclopaedias are merged); Separate codes for motion picture production and television programme production; Architectural activities are distinguished at 4-digit level, but architectural engineering, city planning and landscape architecture are merged; Separate codes for sports schools, hobby schools, art and music schools, dance instructors; Separate codes for production of concerts and theatre performances; Separate codes for archives and libraries (same as previously); Separate code for culture centres. The use of the 5th level of EMTAK The 5-digit codes are needed and/or employable for cultural statistics in several ways: To form samples for the special cultural surveys; To compile cultural statistics on register data (f. ex. Business Register). In most cases it is not possible to separate out data on the 5-digit (or even 4-digit) level in regular business surveys (surveys on wages, turnover etc) because of the insufficient sample sizes. The field of activity was coded only up to 3-digit code in the previous Population Census (2000) as well. In these cases we have sometimes used NACE division 92 as a rough equivalent of the cultural sector.
Finland	Statistics Finland www.stat.fi	The recent developments have been to establish enterprise group register and to increase data collection on enterprise groups, to include the rest of missing sectors, NACE A and B in BR. The actual big challenge is to implement NACE Rev. 2, which work is at the moment going on and will be finalised until April, 2008.
France	INSEE	The version of the French classifications of economic activities (NAF) and products (CPF) in effect since January 1, 2003, have been revised. The new versions, NAF Rev. 2 and CPF Rev. 2, were released on January 1, 2008.

EU Member State	Name of institution responsible for elaboration and maintenance of classification	National Classification of economic activities from 01.01.08 on Revision of national classification according to the new NACE Rev. 2 planned or already carried out?
Germany	Statistisches Bundesamt (Federal Statistical Office), Wiesbaden http://www.destatis.de (http://www.destatis.de/allg/d/klassif/wz2003.htm)	The current updating of economic activities classification standards in Europe (e.g. WZ 2008 in Germany) has been implemented with extensive participation from users and producers of data in administrative bodies, business, research and society in general. The updated standards take into account the new NACE version 2 stipulations for systematic statistical analysis of various areas of business in the European Union as defined in European directive (EU) no. 1893/2006, published by the European parliament and council (European summit) on 20th December 2006 (ABl. EU no. L 393 S.1). Approval has been granted by the European Commission as stipulated in article 4, paragraph 3 of the directive. Use of the German implementation of the NACE standard, WZ 2008, is covered by article 8 of the directive. This stipulates that statistics relating to economic activity being conducted as of 1st January 2008 (the current reporting period) are to be presented on the basis of NACE Rev. 2 (or WZ 2008 in Germany). One exception to this concerns economic cycle statistics, which are to be presented as per NACE Rev. 2 (or WZ 2008 in Germany) as of 1st January 2009 according to directive (EU) no. 450/2003. Use of the standard is not applicable as of 2008/2009 for the following statistics: Gross national product statistics as per directive (EU) no. 2223/96, gross agricultural product statistics as per directive (EU) no. 138/2004, balance of payment statistics, international trade in services and direct investments as per directive (EU) no. 184/2005. These statistics will utilise NACE Rev. 2/WZ 2008 as of some later date.
Greece	National Statistical Service of Greece / Registers and Classifications Section www.statistics.gr	No information
Hungary	office.ksh.hu Hungarian Central Statistical Office	Revision 2007 according to the international revision programme. http://www.hollandnagykovetseg.hu/en/browse.php?cid=31&pid=98 Changes in Hungary's standard classification of economic activities: On 1 January 2008, Hungary similarly to other EU Member States will introduce a uniform statistical classification of economic activities. The new classification will be introduced by a Council Regulation and its application in the Member States will be mandatory and direct. As a result, activity codes in TEÁOR'03 will be replaced by new codes in TEÁOR'08. The list of activities in TEÁOR'08 will be more detailed, and the new classification will be markedly different from its predecessor in terms of its structure. All new activities will have to be registered under TEÁOR'08 codes from 1 January 2008. Courts of registration will use the Hungarian Central Statistical Office's conversion key to convert the codes of activities that are registered prior to 1 January 2008 and report such conversions to the Tax Authority (APEH). It will also complete such conversions in connection with activities that it exclusively registers. APEH will convert the codes that can be converted automatically with the Central Statistical Office's key before 31 January 2008. It should be kept in mind that due to the nature of the new classification system, automatic conversion is not always possible. In such cases, taxpayers themselves must apply for conversion at a court of registration or APEH. Applications for conversion must be filed when first requesting the registration of changes in public company information after 31 December 2007, but no later than 1 July 2008. As a result of the changes involving new TEÁOR codes, companies must monitor which codes are converted automatically by the authorities and which ones require application for conversion to a court of registration or APEH. N.B. The TEÁOR'08 codes and the corresponding conversion keys are available at the Central Statistical Office's website (www.ksh.hu).

EU Member State	Name of institution responsible for elaboration and maintenance of classification	National Classification of economic activities from 01.01.08 on Revision of national classification according to the new NACE Rev. 2 planned or already carried out?
Ireland	Central Statistics Office www.cso.ie	A new version of the European industrial activity classification (NACE Rev.2) has been approved by the European Commission. The NACE Rev.2 classification incorporates significant changes from NACE Rev 1.1. The changes are occurring at every level of the classification and will introduce new sectors for 'Water Supply, Sewage, Waste Management and Remediation', 'Information and Communication', 'Professional, Scientific and Technical Activities', 'Administrative and Support Service Activities' and 'Arts, Entertainment and Recreation'. The European timetable for implementation of NACE Rev.2 is as follows: 1 January 2008:- Business Registers Year 2008:- First reference period for all community statistics Exceptions - Short-term Statistics, Labour Cost Index, National Accounts, BOP and Agriculture. 1 January 2009:- Short-term Statistics and Labour Cost Index Year 2011:- National Accounts CSO statistical areas will be affected as follows: Structural Business Statistics First reference year 2008:- For 2008 reference year, data classified to both NACE Rev 1.1 and NACE Rev.2 are required for: Preliminary results October 2009 Final results in June 2010 CSO Structural Surveys are - › Census of Industrial Production (CIP) › Annual Services Inquiry › Census of Building and Construction Short Term Statistics First reference period - 1 January 2009/Q1 2009 Backdata to first quarter of 2000 will be made available at the same time as the results for the January 2009 reference period. Change to 2005 base year, new weights for base year will be estimated according to NACE Rev.2 The new classification NACE Rev.2 is available along with its concordance to NACE Rev 1.1 on the official Eurostat NACE Rev.2 webpage. The Nace Rev.2 Coder facility is available on the CSO Database Direct. By searching the NACE Coder using a keyword/business description it will bring back a list of possible NACE Codes using the NACE Rev.2 Classification system.
Italy	ISTAT - Istituto Nazionale di Statistica - ROMA - Italy www.istat.it	Economic Activities - Classification Codes “ATECO 2007” (Italy) The Decision of the Director of the Revenue Agency of 16 November 2007 has endorsed the new classification table for economic activities - ATECO 2007. http://www.istat.it/strumenti/definizioni/ateco/ateco2007.html
Latvia	Central Statistical Bureau of Latvia, www.csb.lv	Documentation available in Latvian only

EU Member State	Name of institution responsible for elaboration and maintenance of classification	National Classification of economic activities from 01.01.08 on Revision of national classification according to the new NACE Rev. 2 planned or already carried out?
Lithuania	Department of Statistics http://www.stat.gov.lt/lt/	http://www.stat.gov.lt/en/pages/view/?id=1491 http://www.iue.it/LIB/Guides/Economics/Statistics/Descriptions/wiiw.shtml The Industrial Database Eastern Europe, produced by the Wiener Institut für Internationale Wirtschaftsvergleiche (Vienna Institute for International Economic Studies), contains series on Central and Eastern European industry from 1989 to 2006. Countries covered are: Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia. Full details of the database may be found on these pages: http://www.wiiw.ac.at/pdf/Industrial%20Database%20Description%20July%202004.pdf, or in the first file on the CD-rom.
Luxembourg	STATEC http://www.statistiques.public.lu/fr/publications/thematiques/Entreprises/NACELUX/PDF_NACE.pdf	http://www.statec.public.lu/fr/statec/rapports/PDF_Programme_statistique_2007.pdf Implementation of NACELUX rev 2 As already mentioned in the section above (cf. 1.9) the implementation of NACELUX rev 2 (revised version of NACELUX rev 1.1) has to be finalised by 1 January 2008 at the latest. In this regard a great deal of work remains to be done in 2007, which will place significant demands on personnel and financial resources. The final structure of NACELUX rev 2 has to be completed as soon as possible. On that basis, it will be possible to create a definitive conversion table between the two classifications. The IT unit of Statec will be in charge of reprogramming the database, thus permitting the storage of the data of the new classification. The entry and display screens of the database interface have to be adapted in order to permit the encoding of the NACE codes according to the new classification (an extended period of parallel coding is foreseen) and their visualisation. Once this IT structure has been put in place, the team of encoders will be able to start reclassifying the existing units and the double coding for the new units. For the case where there is a relation (1 1, m 1), this reclassification will take place automatically. In cases of type (1 n, m n), however, manual research will be required to establish the right classification. This research will be based essentially on existing information within Statec, other public administrations or external sources (Internet, Yellow Pages, Chambers of Labour and Trade,...). In the case where the abovementioned sources are inadequate, supplementary investigations will be carried out to obtain information on the economic activities exercised by the units concerned. Finally, the new national explanatory notes taking the new structure of NACE into account and making it possible to define the content of each code used have to be prepared. Plans can be drawn up for publishing the new structure and the explanatory notes.
Malta	National Statistics Office Malta http://www.nso.gov.mt/site/page.aspx?pageid=192	no information
The Netherlands	Statistics Netherlands http://www.cbs.nl/	In EU regulation 3037/90 dated 9/10/1990, all member countries were under the obligation to harmonize their international classifications of economic activities with NACE from 1993. As of January 2003, version NACE Rev. 1.1 is applicable. The Standard Classification 1993 (SBI '93) used by the CBS is the same as NACE Rev. 1.1, up to and including the levels for classification (4 figures), with only a few exceptions. On the departmental level, indicated by two figures, SBI '93 and NACE Rev. 1.1 correspond with ISIC Rev. 3.1, the classification of economic activities recommended by the United Nations. With the commencement of the statistical descriptions from 2008, a revised version of NACE Rev.2 will be used.
Poland	Central Statistical Office of Poland (GUS). http://www.stat.gov.pl	http://www.stat.gov.pl/Klasyfikacje/www/com.gus.Search/ The Polish classification of activities has been revised and new version PKD2007 has been developed.

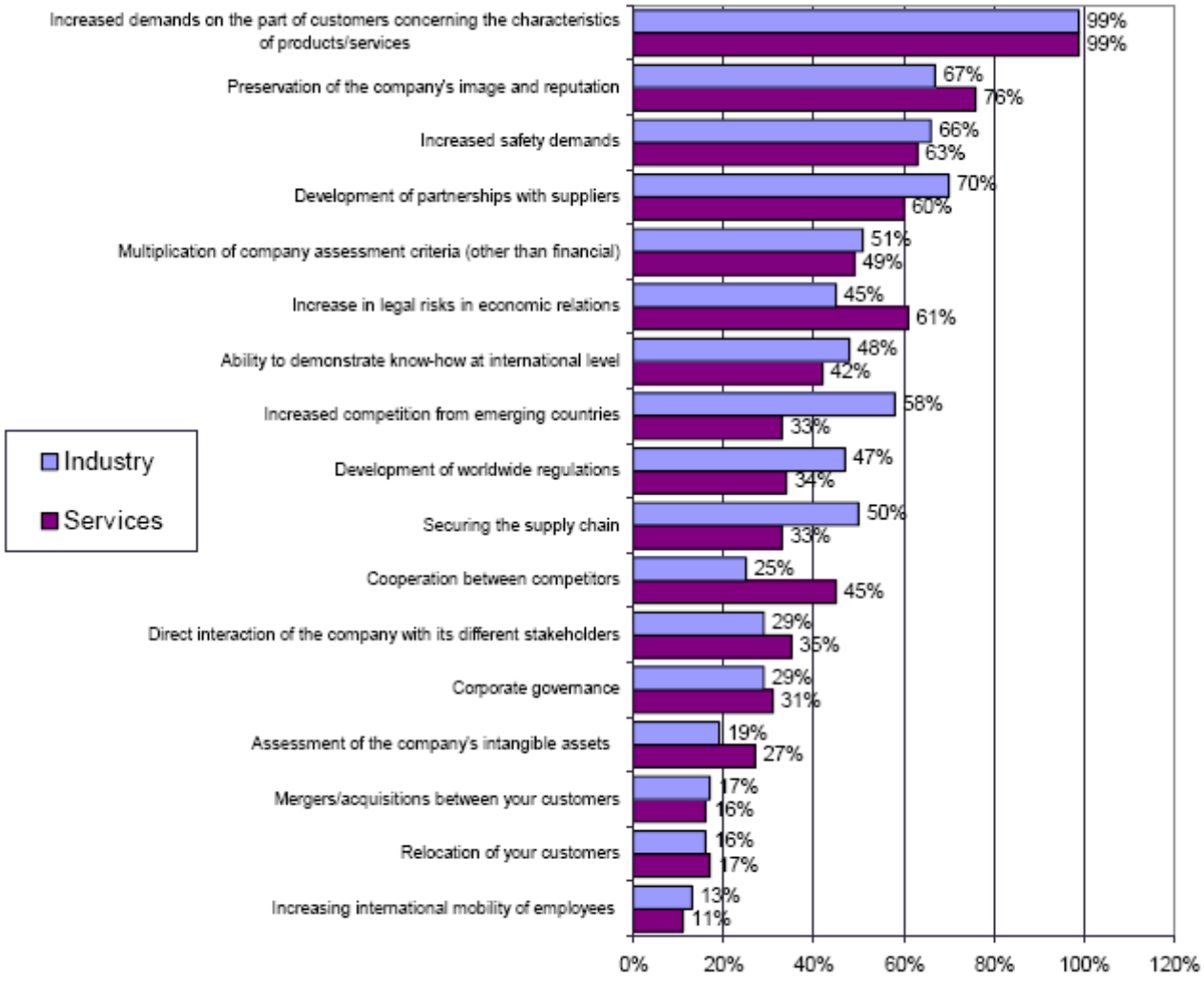
EU Member State	Name of institution responsible for elaboration and maintenance of classification	National Classification of economic activities from 01.01.08 on Revision of national classification according to the new NACE Rev. 2 planned or already carried out?
Portugal	Instituto Nacional de Estatística (INE) www.ine.pt	At this time the national committee is studying a revision programme in articulation with the international plan of 2007. Portugal will have a new Classification of Economic Activities, in January 2008. The Portuguese Classification of Economic Activities, Revision 3 (CAE-Rev.3), will replace after January 1, the present CAE-Rev.2.1, in use since 2003. All Portuguese economic agents will have to readjust the codes that presently represent their activity (based on CAE-Rev.2.1) into the correspondent codes of CAE-Rev.3. On October 23, Statistics Portugal holds a Seminar, in Lisbon, to present and debate with the users the new Classification' main changes. www.ine.pt and http://ue2007.ine.pt/portal/page/portal/PORTAL_INE/Destaques?DESTAQUESdest_boui=8342958&DESTAQUESmodo=2
Romania	National Institute of Statistics (NIS) Http://www.insse.ro/NOMENCLATOARE	CANE rev.1 will be updated in 2007 according with the revisions of international classifications. Documentation available in Romanian only at http://www.insse.ro/cms/rw/resource/chestionare/cfm/s3_2007_caen%20rev2.doc
Slovakia	Statistical Office of the Slovak Republic www.statistics.sk	www.statistics.sk OKEČ - the Branch Classification of Economic Activities (national version of NACE). Revision of the international basic classification NACE As a basic reporting unit stands there an enterprise (a legal subject) with predominating industrial activity. This activity is inserted into sectors as from 10 to 41 according to Statistical Branch Classification of Economic Activities (OKEČ, i. e. national version of NACE). OKEČ classifies industry into three basic categories: mining and quarrying (C), manufacturing (D), electricity, gas and water supply (E). The returns are being submitted by organizations PRODSLOV list classifies production according to ten-digit code which is equal with the NACE in four places, in six places it is equal with the Classification of production (CP further on) and in eight places with PRODCOM. The last two digits express the need of more detailed specification of a product from the national needs point of view. PRODSLOV is updated annually on the base of needs of monitoring of selected items within the EU and changes in the Customs Tariffs as well as in consequence with running changes in the production structure of the Slovak industry. Data are not published in a comprehensive way because in several products confidential data are concerned (monopoly producer), which are protected according to the Digest No. 540/2001 Z. z on official statistics.
Slovenia	Statistical Office of Slovenia.	The role of the Statistical Office of the Republic of Slovenia (SORS) as the institution responsible for the national version of the classification – Standard Classification of Activities (SKD) – was to prepare a new national version of the classification (the so called SKD 2008), which would be harmonized with NACE Rev. 2, and to implement the new classification, in line with the EU requirements and in co-operation with other responsible institutions, into statistics and administrative environment. The new Regulation on SKD 2008 with Annexes (structure of the classification and explanatory notes) was published in the Official Gazette of the Republic of Slovenia No 69 on 31 July 2007. http://www.stat.si/eng/skd_nace_2008.asp
Spain	INE http://www.ine.es	http://www.ine.es Spain is involved in the revision process opened at international level. http://www.ine.es/en/daco/daco42/clasificaciones/rev.1/quees_cnae_en.pdf It was forecast that at the end of 2006, the regulation relating to the NACE Rev. 2 would be approved, which would include the amendments of another 10 regulations from the European Council and European Economic Area: Cooperation agreement between the European Union, Iceland, Liechtenstein and Norway. Parliament relating to community statistics, such as short-term and structural statistics or the Labour Cost Index.
Sweden	Statistics Sweden. www.scb.se	SNI 2007: http://www.scb.se/gemensamma_filer/_Dokument/Pdf/StrukturSni2007_070306.pdf www.scb.se

EU Member State	Name of institution responsible for elaboration and maintenance of classification	National Classification of economic activities from 01.01.08 on Revision of national classification according to the new NACE Rev. 2 planned or already carried out?
United Kingdom	Nat. Statistics Office Classifications Helpdesk ons.gov.uk	A major revision of the UK Standard Industrial Classification (SIC) will be published in 2007 in parallel with the major revision of NACE/ISIC. To inform the revision a process of consultation with data producers and users is in progress. The revision provides the opportunity to consider the structure and underlying methodology of the SIC. There is the option of a radical revision, if this meets the needs of users of statistics and is feasible to implement. Potentially, the impact will be major, both within and outside government. ons.gov.uk The 2007 revision of the UK Standard Industrial Classification of Economic Activities. SIC 2007, the major revision of the UK Standard Industrial Classification of Economic Activities (SIC), announced in 2002, has been completed and is effective from 1 January 2008. It is the outcome of Operation 2007 - a series of consultations started in 2002 and carried out in conjunction with the major revision of the European Union's industrial classification system, NACE. The consultations involved many stakeholders: the National Statistical Institutes of all EU member states the European Commission In the UK, a range of government departments, the Bank of England the devolved administrations, business and trade associations and other interested bodies European Business and Trade associations. The UK is required by European legislation to revise the SIC in parallel with NACE so that both systems remain identical down to and including the 4 digit class level. A further breakdown is provided for certain classes by the addition of a 5 digit subclass level. Both the UK SIC and NACE are completely consistent with the UN's International Standard Industrial Classification of all Economic Activities (ISIC). These revisions are motivated by the need to adapt the classifications to changes in the world economy. The revised classifications reflect the growing importance of service activities in the economy over the last fifteen years, mainly due to the developments in information and communication technologies (ICT). http://www.statistics.gov.uk/methods_quality/sic/operation2007.asp

Annex 7: Benefits of standardisation for service providers based on a study carried out by the French standardisation AFNOR

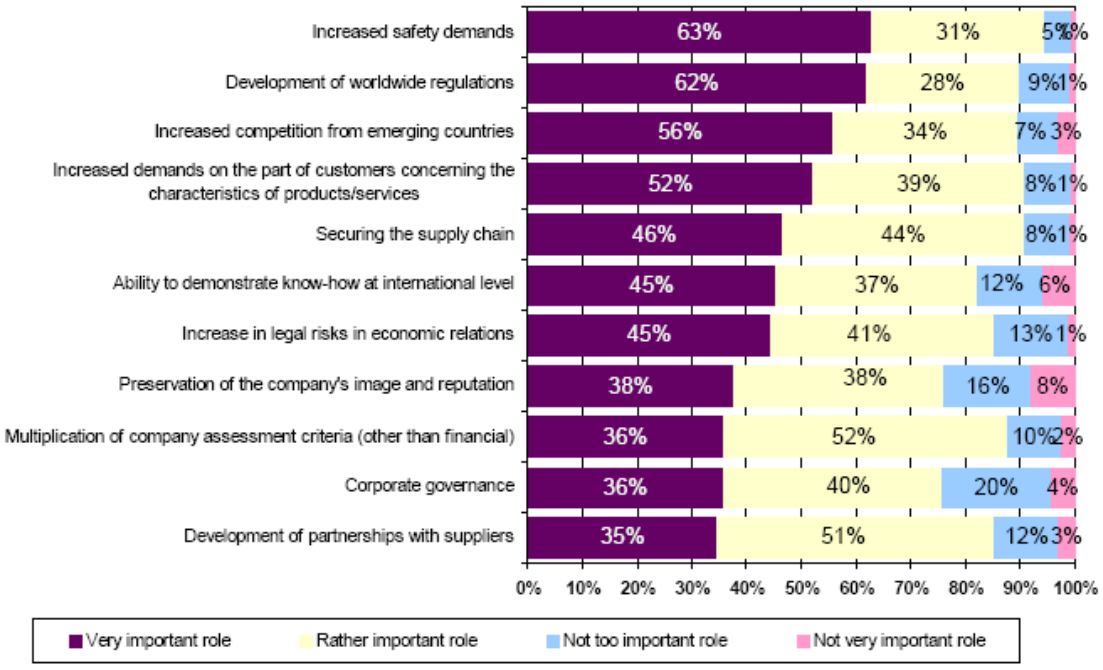
In the scope of the survey, carried out in 2005 by the French standards association (AFNOR) among French company executives (in both the industry and the services sector), the main challenges related to standardisation, as well as the expected advantages and disadvantages coming from standardisation from the point of view of enterprises were identified. About 500 company executives participated in the study, 40% coming from the services sector (AFNOR, 2005b). This annex displays the main figures regarding standardisation in services as emerged from the study.

Figure A7.1: Main challenges to be faced by the services sector in the next five years.



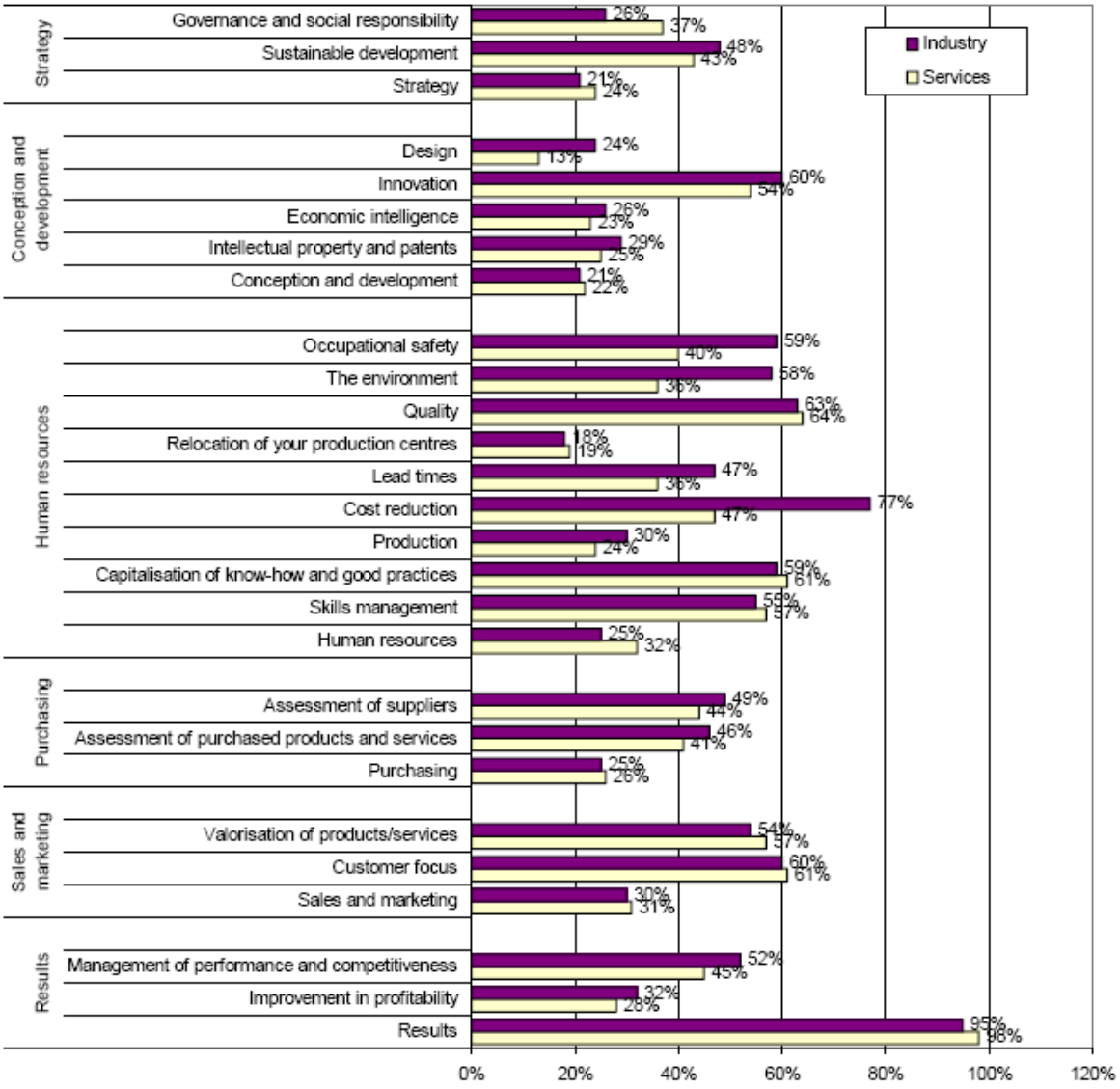
Source: AFNOR, 2005b

Figure A7.2: Importance of standardisation in responding to the main challenges for the next 5 years.



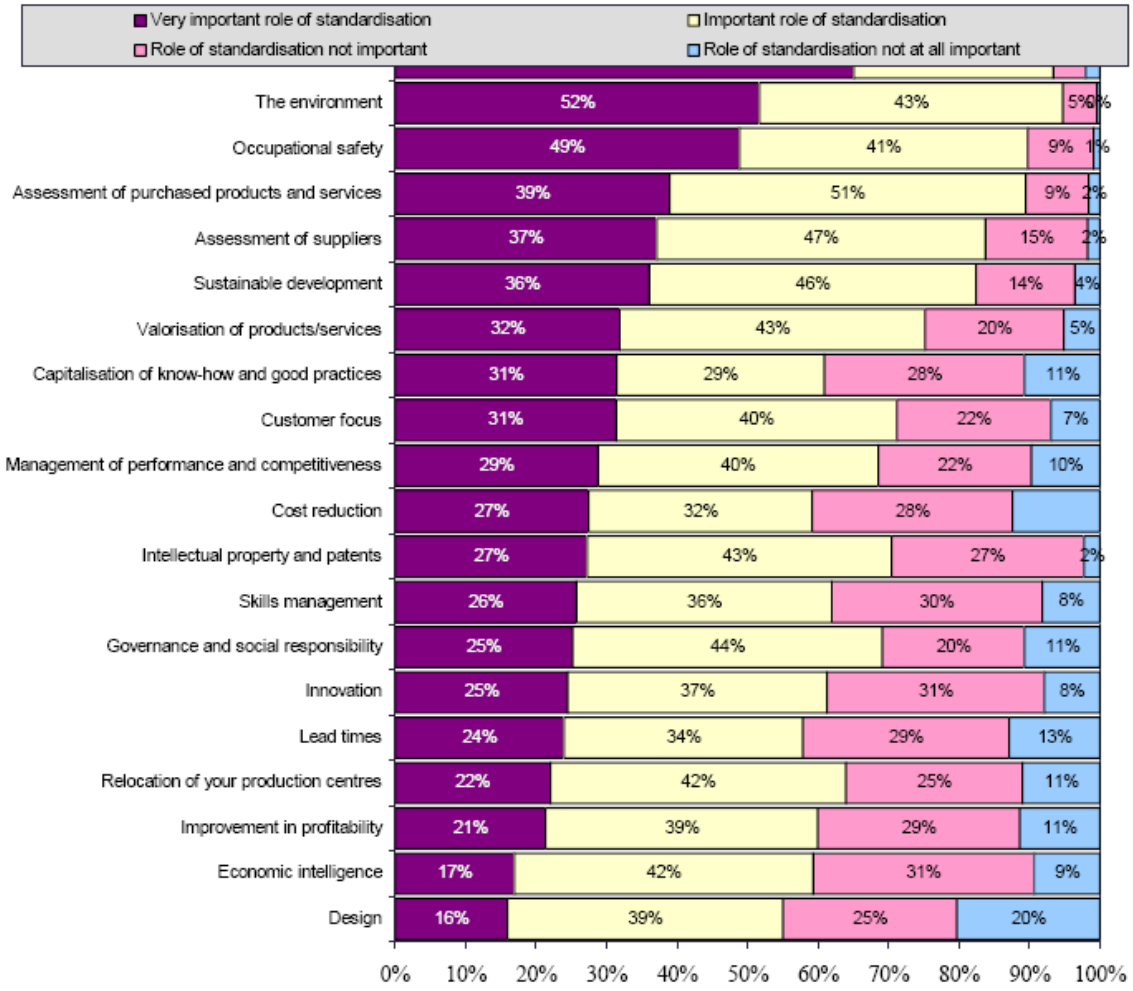
Source: AFNOR, 2005b

Figure A7.3: Areas of corporate practices where marked development is expected in the next five years.



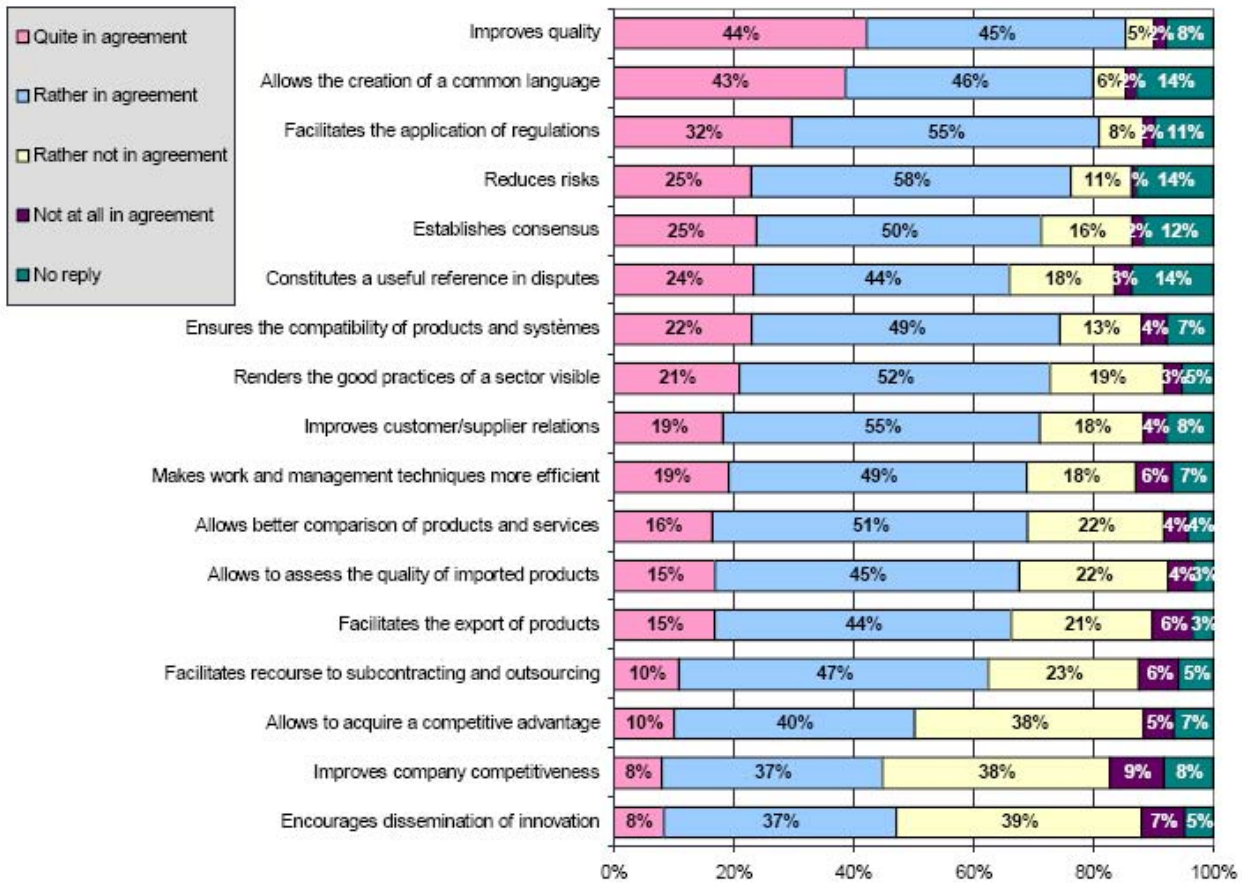
Source: AFNOR, 2005b

Figure A7.4: Legitimacy of standardisation with respect to corporate practices that are expected to experience marked changes in the next five years.



Source: AFNOR, 2005b

Figure A7.5: Main advantages of standardisation – as seen by French company executives.



Source: AFNOR, 2005b