

Expertise in Demand

Knowledge-intensive Business Services (KIBS)

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Knowledge Intensive Business Services

Although the term is not in everyday use, “business services” have gained considerable prominence in the global economy. In such diverse endeavours as the reform of federal authorities, the implementation of software projects or the restructuring of major corporations, it is not unusual today for consulting companies such as McKinsey and Accenture to make headlines because the – often controversial – results of their activities have a far-reaching impact on the strategies and organisational structures of their clients. Also finding their way on occasion into the glare of media attention are global auditing firms such as KPMG and Ernst & Young, which often substantially influence the fortunes of their clients. Advertising agencies, too, are instrumental in defining a company’s image and, for many an unpromising project, successfully conquer the hearts of consumers.

For decades the economic role of high-quality business services has been steadily expanding, even in spheres far removed from high-profile events and Fortune 500 companies. An increasing number of service providers in this segment offer business customers a broad range of services ranging from product innovations to legal expertises, and from marketing studies to logistics management.

In many countries the business services segment has achieved faster growth than the economy as a whole since the 1970s. This trend embraces traditional professional services such as advertising, tax consulting and legal advice as well as new, technology-based services such as IT or energy management. The expansion of business services is rooted in long-term trends that indicate that the sector can look forward to a stable future. The trend toward outsourcing, in which companies spin off functions to business service providers, is by no means the only driving force behind this development. There has been an overall increase in companies' need for highly specialised knowledge, fed by such factors as the dizzying pace of technological developments

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and the globalisation of companies. Both of these developments make companies more reliant on external expertise.

The very evident increase in the importance of knowledge-intensive business services (“KIBS”) as compared with the production sector cannot be equated with a role of these services as an “eliminator” of the manufacturing industry. Business services greatly boost the innovation and competitiveness of industrial companies through such contributions as inventive technological solutions, improved production processes and market research. They have become an integral part of the economy as a whole and demonstrate a high degree of interdependence with their “client sectors.”

In the business services sector, the major players certainly do not dominate the field unchallenged: The market for high-quality services is also shaped by numerous small companies and independent professionals. Other characteristic features of the KIBS working world include high qualification and income levels and a strong tendency of employees to identify themselves with their work.

1 WHAT ARE KNOWLEDGE-INTENSIVE BUSINESS SERVICES?

To gain a better understanding of the basic characteristics and special features of KIBS (knowledge-intensive business services), the business services segment, of which they are a part, is a good place to start. Along with trade, financial services and network services, business services comprise an increasingly important category of economic services that flow into customers' production and business processes. Alongside the knowledge-intensive activities, business services also include operational services such as security and cleaning services.

The core of *knowledge-intensive* business services is comprised by technology-related activities such as computer services, research and development and such services as technical analysis and testing. Also forming a major pillar of this sector are the traditional activities of tax, legal and business consulting, advertising and marketing. Other activities contributing to the sector's increasing importance are outsourced functions such as personnel recruitment and administration. Occupying the "middle ground" between operational and knowledge-intensive services are call centres, which perform work ranging from highly standardised sales activities to qualified telephone consulting.

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In the currently valid European Statistical Classification of Economic Activities (NACE 1.1.), it is primarily sectors 72, 73 and 74 that are included among knowledge-intensive business services. These sectors include the following areas:

Computer and related activities

Hardware consultancy

Software consultancy and supply

Data processing

Database activities

Maintenance and repair of office, accounting and computing machinery

Other computer-related activities

Research and experimental development

Research and experimental development on natural sciences and engineering

Research and experimental development on social sciences and humanities

Other business activities

Legal activities

Accounting, book-keeping and auditing activities; tax consultancy

Market research and public opinion polling

Business and management consultancy activities

Management activities of holding companies

Architectural and engineering activities and related technical consultancy

Technical testing and analysis

Advertising

Labour recruitment and provision of personnel

Miscellaneous business activities n.e.c., including call centres

In the North American NAICS classification, the KIBS sector includes activities mainly from sectors 54 (professional, scientific and technical services) and 51 (information services).

The KIBS areas are not yet adequately reflected in statistical reporting. The international sector classifications have been revised for 2007 in the interest of reflecting the importance of the new service sectors better and making finer distinctions.

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As diverse as these individual activities are, all of them provide their business customers with outside expertise which they transform into useful services for their own customers. These services frequently consist of the production of knowledge, for instance through consulting, reports or measurements, or in the design of knowledge and information processes, as in the case of IT systems.

Vital aspects of KIBS are the combination of professional and customer-specific knowledge and the high degree of interactivity frequently seen, comprising a close exchange and joint learning processes between the supplier and customer. Most knowledge-intensive services are thus generated through a co-production process involving both parties. Another common characteristic of KIBS is the preponderance of professional and experience-related competencies, as reflected in the workforce structure, which includes large percentages of scientists, engineers and highly skilled specialists (Miles et. al. 1995, p.28).

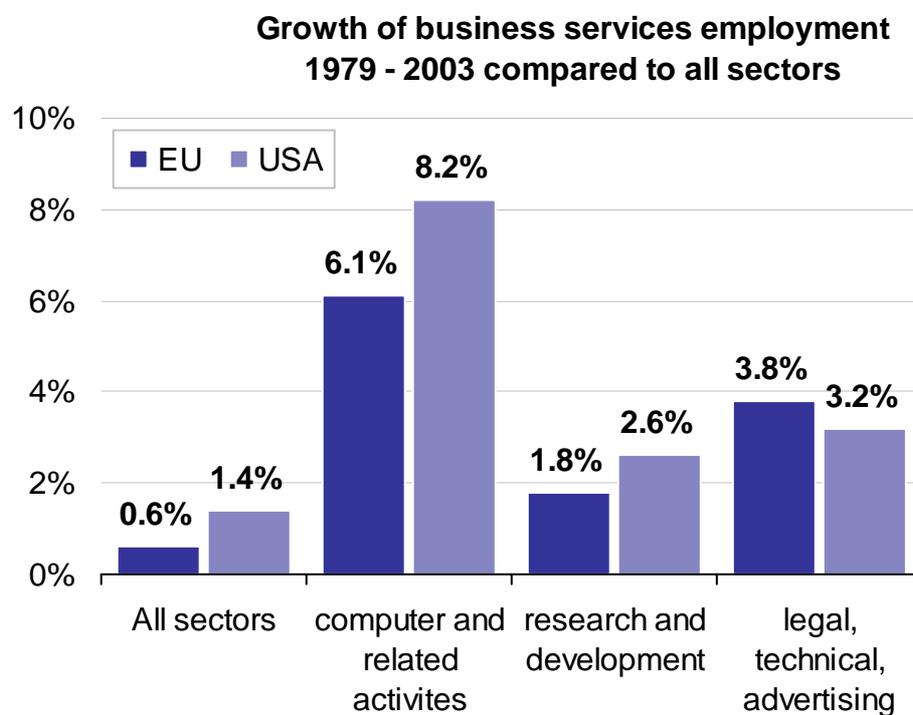
Because KIBS providers generally work for several clients, they play an important role in the diffusion of knowledge among companies, thus contributing to cross-segment innovation processes (Kox et. al. 2007, p.33).

2 WORLD-WIDE GROWTH: DEVELOPMENT OF THE KIBS SECTOR

Business services as a whole and KIBS in particular have gained in economic importance during the past decades. In the USA, above-average growth in these areas began back in the 1950s. Initially, strong growth rates were posted in particular in engineering services, accounting, legal services and advertising (Toivonen 2004, p.42). The sector continued to expand during the 1970s and 1980s, with IT services moving increasingly to the forefront of the trend (see Tschetter 1987, p.32). Although the USA has led the way in the growth of business services, the sector has since posted above-average growth in other countries as well. Data published by the OECD show employment in business services expanded at an average rate of 3.4% in Canada in the 1990s, as compared with 0.5% employment growth in the economy as a whole. Similar trends were seen in Mexico, Japan and the European countries, where growth rates in business services in terms of the value created and total employment were significantly higher than in the entire economy (Toivonen 2004, p.45 et. seq., based on OECD data from 2001)

Data for individual subsegments underscore the dynamic growth in knowledge-based services: Between 1979 and 2003, employment in legal services, technology-related services and advertising increased at an annual rate of 3.8% in the EU-15 countries, as compared with an annual growth rate of just 0.6% in overall employment. In computer services, job growth was even stronger, at 6.1%, and the trend in the USA was similar (Kox et. al 2007, p.6).

Some business services such as human resources or advertising are relatively susceptible to cyclical trends, as demonstrated by the declining figures during the economic slump at the turn of the millennium. The segment of computer-related services also underwent a temporary downturn, but soon recovered (Krantz 2002; Eurostat 2005, p.396).



Source: Based on Rubalcaba 2007, Kox/Rubalcaba 2007

With the availability of powerful information and communication technologies, knowledge-intensive services have acquired a new geographical reach. An ever-widening range of services is produced in distant regions. Although the overseas migration was initially limited to “simple” services (such as data input or transcription), offshoring (or nearshoring) now increasingly affects more sophisticated activities, including analysis work in the financial sector, IT services, design tasks and editing activities (Smith 2004; Cathcart 2004). India is considered a prime example, with its high growth rates not only in IT services, but also in numerous other business services (Nayak 2006). Other countries in eastern Europe and Asia are following close behind. In general, the availability of information and communication technologies and high-performance networks can be expected to further boost the potential for the outsourcing of business services. This creates potential for KIBS companies while intensifying international competition among service providers. Current WTO data demonstrate double-digit growth rates in the international export of services since the turn of the

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millennium and the increasing importance of business services in world trade (WTO 2006, p.185 et. seq.). In many KIBS segments, however, it is important for suppliers to be close to customers: Above all when services involve the communication of knowledge rooted in experience and creative processes, there is a strong need for personal cooperation and the establishment of trust. While outsourcing to foreign locations is gaining in importance, a study on the transfer of business activities by European companies showed that a substantial share of such moves take place within the originating company's own region (Huws et. al. 2001, p.17, 51 et. seq.).

3 SMALL COMPANIES, HIGH SPEED: STRUCTURES IN THE KIBS SECTOR

Size of the sector and regional differences

In 2003 approximately 15 million people were employed in the KIBS sector in the EU-25 countries, which amounted to a 7.4% share in total employment. KIBS service contributed approximately 7.6% of total economic output within the EU countries. By far the largest subsector is legal, accountancy and management services. This area includes such activities as legal and tax advice, accounting and auditing, market research and management consulting (Huggins 2006a, p.2).

Across the KIBS sector there are major differences related to the specifics of regional and national markets. In Luxembourg, the UK and the Netherlands, more than 10% of all employees work in the KIBS sector; in Lithuania and Slovakia, by contrast, the share is close to 2% (Huggins 2006a, p.6). Due to varying statistical definitions, there is a lack of precise data from other countries for comparison purposes. The US Department of Labor reports that, in 2005 approximately 5.2% of the workforce were employed in the category “professional, scientific and technical services” (US Department of Labor 2006a).

KIBS display a high level of regional concentration, with densities of KIBS providers particularly high in metropolitan areas, partly due to the proximity of customers or suppliers and of universities and other educational institutions. Access to qualified personnel is another factor promoting the decision to locate in urban areas (Huggins 2006a, p.10). London, for example, is described as a genuine KIBS cluster. Among the biggest KIBS providers within that financial metropolis are companies in the legal consulting field. A number of the major international players in that segment have their head offices in the City of London. They offer services in the areas of corporate and financial law, intellectual property, real estate and conflict resolution (de Castro 2006).

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Small companies in the majority

Alongside a few major companies, often operating at the global level, small companies account for a substantial share of activity in most KIBS segments. Many of them serve local and national niches, but some are also active on international markets.

In Europe (EU-25), for instance, approximately half of the value created in the business services segment is generated by microenterprises and small companies. In some areas such as law, accounting and management services as well as technology-related services, the share of small companies in value creation is even higher (Eurostat 2005, p.355 et. seq.). The number of one-person companies in the KIBS sector is high: They account for approximately 60% of all companies in Europe (Huggins 2006a, p.7). Microenterprises are similarly widespread, for instance in the advertising sector and in management consulting in the USA. As a result, these areas are considered attractive for people seeking to set up their own businesses (U.S. Department of Labor, 2005). Companies in the area of research and development are an exception to the prevailing size distribution. This area is dominated by large companies (Eurostat 2005, p.365).

Interestingly, some KIBS segments – for instance advertising – contradict the rule that working productivity (as the ratio of added value to the number of employees) generally increases with size: Small advertising companies are more productive than their large competitors, as shown in a report on Europe (Eurostat 2005, p.368 et. seq.).

Although concentration trends – i.e. a shift toward larger companies – are evident in some sectors, small providers will presumably remain an important part of the mix. Between small and large KIBS company, a sort of “division of labour” has become established in many areas: The large service providers primarily serve large companies, and often do so at the international level as well because many customers want standardised services around the globe. The small companies, by contrast, offer their services primarily to small business partners within

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their own country (Toivonen 2004, p.166). However, cross-border business is becoming increasingly common here, too, often resulting when KIBS providers follow their customers abroad.

Rapid rhythm: start-ups and shutdowns

The business services sector displays an above-average level of start-up activity: According to Eurostat data for several European countries, the sector accounted for approximately one-third of all start-ups in 2001. In general, start-ups make up 8% of all companies. In business services, however, nearly 11% of all firms fall into the start-up category and in computer services they actually comprise 15% of the total. One factor fuelling the rush to set up new companies in the IT services segment was the speed of technological innovations (Eurostat 2004, p.48 et. seq.). But even more important are the low barriers to entry in the KIBS sector: In most cases there is no need for extensive investments in technology, and the formal hurdles in the areas of advertising and business consulting are also low (with the exception of such areas as architecture or legal advice). Frequently, a lack of alternative employment opportunities is a key motivating factor for starting a company, for instance when specialists start their own businesses after being laid off.

The downside of the enthusiastic rush to launch new knowledge-intensive service companies is the relatively high "death rate" among companies in the KIBS sector. The percentage of companies in this sector that do not survive the first two years in business is higher than in the economy as a whole. In view of the strong focus of policymakers on promoting entrepreneurship, participants in the political process would thus be well advised to pay more attention to the growth and survival of companies in the KIBS sector (Eurostat 2005, p.44).

Pooled expertise: multi-level KIBS

In some areas a trend can be observed toward cooperative activities between specialised KIBS providers and so-called service integrators. (Toivonen 2004, p.180 et. seq.). With this combination, the aim is to address the demand for solutions that are tailored to customers' needs

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while providing a comprehensive range of services on a cost-effective basis. While KIBS suppliers at the “grassroots level” focus on individual service segments, enabling them to exploit the benefits of specialisation, the coordinators work at the customer interface where they bundle the individual services in customer-specific packages. These patterns of multi-level services can be found in such areas as outsourced HR functions and the advertising sector, where central suppliers draw on the services of subcontractors to offer turnkey solutions (Benner 2002, p.110; Eichmann et. al. 2005, p.91). On the international outsourcing scene, which is often confusing and risky for companies seeking KIBS providers, “meta-KIBS” offer their services. They support their customers in offshoring, from the strategy for transferring activities and the choice of suppliers to project management and quality monitoring (Huggins 2006a, p.24).

4 THE FORCES DRIVING GROWTH

Some services in the KIBS sector – such as legal consultation – have existed since ancient times, while others – such as advertising – became firmly established in the economic landscape in the 19th century (see Toivonen 2004, p.37 et. seq.). Knowledge-intensive business services now comprise a highly differentiated economic sector. In view of the strong employment growth in this area, it is still regarded as a job-generating engine of the future. A number of factors contribute to its dynamic growth.

Outsourcing: The main driving force behind the development of differentiated KIBS is considered to be the outsourcing of activities formerly situated within companies. The underlying cause is the widespread trend among companies to focus on “core competencies” and contract other activities out to specialists. This is motivated by the aim of reducing costs and utilising economies of scale achieved by external providers. External procurement also makes it possible to expand or reduce individual activities flexibly, in particular in response to short-term changes in requirements or tasks that arise only rarely. A high degree of uncertainty and a rapidly changing operating environment favour outsourcing as a loose form of coordination, since it permits companies to combine and dissolve connections quickly. Among companies’ foremost expectations are the quality and innovation advantages offered by specialised service companies. KIBS providers benefit from the outsourcing of functions from the manufacturing sector and from service companies.

KIBS are integrated into almost all phases of the value chain, as a few function-based examples help to illustrate (see European Commission 2004, p.20).

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Company function	Business service
Management/ administration	Management consulting Legal services Auditing, tax consulting, accounting
Human resources	Personnel recruitment, headhunting Training
Production and technology	R&D, industrial design Tests and quality control Energy management, environmental protection
Information management	Data processing, communication and IT services
Sales and marketing	Market research Advertising and public relations Sales Customer service

KIBS do not owe their growth only to the shifting of employment between individual companies (or sectors). The expansion in services is based to a considerable extent on an *expansion in absolute terms in the need for specialised knowledge*. In most cases, individual companies are hardly in a position to maintain in-house resources covering the entire range of specialised skills they need. Various developments in the technological, economic and social environment contribute to this reality.

Technological change: The speed and complexity of technological innovations make it necessary to establish knowledge resources that often exceed the capacity of an individual company. This is clearly evident in the field of computer services, a young KIBS sector which recently had above-average growth rates. To utilise the full potential of information and communication technologies, many companies, especially SMEs, must draw on external skills. With the rapid pace of change in this sector, taking recourse to specialists with the latest skills and knowledge is an obvious solution. Companies in technology-related KIBS sectors in particular are regarded as a major force driving the innovations of their customers.

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Competition and regulation: To operate successfully within saturated markets and with highly differentiated products, companies frequently draw on the services of KIBS providers who provide them with solid knowledge on markets, consumer needs or innovation potential. In addition, many KIBS are adapting their activities to the internal processes or knowledge management of their customers. Driving this trend are the increasingly complex internal structures of companies, the short restructuring cycles and the relentless pressure to optimise processes. Another important entry point for external suppliers and many highly specialised companies is change in the regulatory environment, for instance in environmental protection, labour law and trade law. For example, only a few exceptional companies are able to employ suitable internal staff to cover the entire range of legal knowledge from patent law or tax regulations to emission regulations.

Globalisation: The need for expertise increases when companies extend their activities into other countries. In the words of the economist Luis Rubalcaba, "A modern company can hardly be competitive and successful in the global economy if it does not use business services." An important function of globalisation services is to serve as a bridge between the company and its various local environments, for example through market research and the local modification of products, legal services and language services. In that role, KIBS can help a company adapt to the environment in which it is operating (Rubalcaba 2007).

Management consulting: expanded product range

The individual KIBS sectors have developed into industries with extensive ranges of products and services, some of them highly specialised. This is clearly evident in the consulting sector.

Conventional management consulting has undergone a metamorphosis into a multifaceted spectrum of services. Their customers buy in support in strategic development, for restructuring measures or the acquisition of companies. A majority of start-ups involve support from consultants.

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External experts provide companies with advice on financial issues or the launch and ongoing management of IT systems. Many companies rely on headhunters for the recruitment of staff – especially managers and specialists. Specialised providers handle the development of psychometric tests for employees – or potential recruits – develop salary packages and conduct surveys on employee satisfaction. It is not unusual for employees to receive support through outplacement agencies after being laid off. Legal obligations – for instance the US regulations on the balance sheet treatment of pension reserves – are also an important catalyst driving demand for HR consulting (Kennedy 2006). It is hardly surprising, in view of the extremely wide range of services available, that a North American overview of management consulting services is broken down into 88 categories.

KIBS providers frequently succeed in discovering new market niches and generating demand for services that previously did not exist. For example, since the 1980s in some European countries, service providers have appeared that design corporate communication processes or training programmes using concepts from the world of the arts, for instance with methods used in theatre. Among the pioneers in this area were management consultants and trainers seeking to add innovative elements to their product range and theatre professionals in search of new spheres of activity. Initially this market was characterised by a grave lack of transparency, uncertain product quality and widespread skepticism regarding the new methods employed. Within a short time, products built around these creative techniques gained the status of serious services, leaving the image of a short-lived fad far behind. Companies such as Daimler-Chrysler, Mövenpick, Hewlett-Packard and Lufthansa use elements drawn from theatre arts in such areas as personnel development and conflict resolution or to add flair to company events.

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In sourcing or outsourcing? Although the need for external expertise is on the increase, the contracting out of knowledge-intensive services is by no means putting an end to in-house employment of specialised “knowledge workers.” Even large manufacturing companies are employing increasing numbers of highly qualified employees to perform tasks similar to those of KIBS companies (Toivonen 2004, p.61). Many companies maintain a significant skills base parallel to KIBS providers. And in addition, external and internal activities are not mutually exclusive solutions; instead, they complement one another. This is because companies can reap the full benefits of bought-in services only if they have a certain minimum of in-house knowledge of the area in question. Only then are they in a position to clearly define the services purchased from outside, access the quality and effectively utilise the results (“absorptive capacity”).

5 TENDENCIES: WHERE ARE KIBS HEADED?

“The sky is the limit” ...? Through the heavy demand for highly qualified expertise, KIBS have gained access to a large number of fields of activity. Most forecasts for KIBS anticipate further growth. For example, Cambridge Econometrics expects growth rates in computer-related and professional services in the EU to be substantially higher than those in the economy as a whole until 2010 (Cambridge Econometrics 2006, p.3). In the USA, forecasts indicate that the consulting segment will achieve 60% growth by 2014 as compared with 14% across all economic sectors (US Department of Labor 2005). The trend in the various emerging economies may prove even more dynamic, as ZenithOptimedia predicts for the advertising industry, for example (Ashridge 2006). The activities in the KIBS sector are also becoming increasingly attractive to companies from other sectors. For instance, traditional electronic manufacturers such as IBM, Hewlett Packard, Siemens and Dell are stepping up their work in the areas of IT services and consulting.

... or limited expansion? Despite the future scenarios predicting unrestrained expansion, there are various growth risks. In some areas they could contribute to a flattening out of the upward trend in KIBS (or even cause it to reverse itself). The widespread fear that companies could be progressively “hollowed out” and lose their own competencies acts as a natural impediment to excessive reliance on bought-in services. Parallel to the outsourcing of knowledge-intensive activities, companies are frequently “insourcing” previously outsourced tasks, in some cases because of bad experiences with external suppliers. A point of some significance here is the fact that the assessment of the quality of KIBS is subject to considerable measurement problems. Customers often do not know in advance what exactly they are getting, and in some cases have no recourse in case of poor performance. Stories in

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circulation about “cowboy consultants,” auditing errors and overpriced IT systems are apt to undermine trust in KIBS suppliers (PREST 2005). Particularly management consultants have come to bear the brunt of a wave skepticism that is practically a mainstream phenomenon. In the same context, controllers issue frequent warnings to companies regarding expenditures without clearly recognisable benefits.

The scenarios under examination use present trends as a starting point for assessing possible future developments and consequently are hypothetical in nature. A conservative view states, “The eventual future of KIBS is likely to be a mixture of different elements” (PREST 2005, p.18). The various KIBS subsectors are likely to show the influence of different developments, depending on their specific characteristics. In view of the prevailing conditions that have contributed to the growth of KIBS and remain in effect today, however, demand can be expected to remain strong.

To promote the long-term development of the KIBS sector, there is discussion on such issues as quality assurance measures, including the possibility of internationally recognised voluntary quality standards and certificates (EFBRS 2005, p.15). The objective is to improve market transparency and foster trust among customers and potential customers.

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The top 20 providers of IT and business services

(by sales; Western Europe, 2005)

Rank	Supplier	Country of origin	Growth (04-05)
1	IBM Global Services	USA	5.5
2	Accenture	USA	11.4
3	HP Services	USA	15.0
4	Capgemini	France	15.4
5	Atos Origin	France	1.6
6	EDS	USA	(1.3)
7	BT Global Services	UK	14.0
8	CSC	USA	1.4
9	Siemens Bus. Services	Germany	17.4
10	T-Systems	Germany	(7.1)
11	Fujitsu	Japan	13.5
12	LogicaCMG	UK	10.0
13	Getronics	Netherlands	37.9
14	Capita	UK	11.1
15	Deloitte	USA	11.6
16	TietoEnator	Finland	19.4
17	SAP	Germany	8.6
18	France Telecom	France	3.0
19	Dell	USA	59.5
20	Unisys	USA	4.3

(IDC 2006, p.4; "Business Services" = Consulting and Business Process Outsourcing)

A glance at the top providers of IT and business services in Europe in terms of sales shows that traditional sector boundaries have begun to shift. Now positioned among the top-ranking KIBS providers are many companies previously known primarily as technology suppliers. Business services have become a major field of activity for IT and telecommunication companies as well. This is clearly illustrated by the range of services now offered by such companies as IBM and T-Systems:

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The product range of **IBM** now increasingly comprises services applicable to the entire spectrum of company functions, including financial management and analysis as well as training and HR services. IBM supports corporate customers in the management of supplier relationships and in change management. In the meantime the portfolio of this “electronics manufacturer” has expanded to take on such activities as site planning and real estate procurement. Services now generate approximately 50% of IBM's revenues, with hardware accounting for a little more than 30% (Spohrer et. al. 2005, p.2).

The product range of the telecommunication company **T-Systems** also reflects the accelerating convergence between the sectors. Alongside telecommunications and IT solutions, T-Systems is now engaged in such activities as business process outsourcing in financial management and accounting, accounts receivable management, document administration and HR services.

6 WORKING IN THE KIBS SECTOR: THE « EMPLOYEE ENTREPRENEUR »

The diversity of the many KIBS subsectors, ranging from architecture to tax consulting, IT services and market research, are paralleled in the working and employment conditions in the KIBS world. Nevertheless, some common features of the “knowledge work” in KIBS companies can be described. Work in these areas is generally highly qualified. Pay is above average and KIBS professionals have considerable freedom to decide when, where and how they work. They identify themselves closely with their work and show a strong self-motivated desire to contribute to their company’s success. Nevertheless the KIBS field is subject to its own specific stress factors and risks.

Qualification structure: highly qualified staff are predominant

The education level of KIBS employees is relatively high. In Europe far more highly qualified people work in the fields of IT services, research and development and other business services than in agriculture, manufacturing or other service segments (Kox et. al. 2007, p.22). The situation is similar in the USA, where 30% of people working in technological, scientific and management consulting have master’s degrees as opposed to 10% in the economy as whole (US Department of Labor, 2006b).

With the exception of such KIBS areas as architecture or legal consulting, there are few *formal* barriers to entry. It is considered relatively easy for people making a fresh start to get their foot in the door in such professional fields as graphic design, advertising and IT. Even a priest with the right talent looking to change careers may on occasion find work as a copywriter with an advertising agency (Huggins 2006c, p.9). Nevertheless the qualification level KIBS companies expect from applications has risen in many respects. Management

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consulting companies primarily hire university graduates. A trend toward an academically trained workforce can also be seen in the advertising industry (see Eichmann 2005, p.95).

- In addition to professional qualifications directly related to the position, many KIBS employers expect their staff to have a solid knowledge of the sectors where their clients operate. Because everyday working life is dominated by project work and a high degree of cooperation, there is also a strong emphasis on “soft skills” such as communication and language skills, time management and stress resistance. It is no accident that consulting companies are renowned for putting applicants through numerous interactive situations and stress tests.

Above-average income: top salaries widespread

Employees in the KIBS sectors earn more than those in many other industries. For example, the salary level in the broadly defined field of professional and business services in the USA is higher than in other economic sectors (US Department of Labor, 2006a). In some KIBS subsegments, very high salaries are paid. Employees in management, scientific and technical consulting services receive weekly salaries of \$826 as compared with \$529 across the entire private economy (US Department of Labor, 2005). Earnings in the R&D sector are even higher, at \$1006 per week (US Department of Labor, 2006a). IT specialists in most countries earn far higher incomes than other professional groups. In many KIBS companies, performance-linked bonus payments play a major role in addition to base salaries.

At the other end of the scale: uncertainty and part-time jobs

Nevertheless, for many KIBS providers, the income situation appears less rosy. These include young self-employed graphic artists, web designers and architects, some of whom work with great dedication but achieve little monetary success. For many of them, the income generated by their work is not sufficient to provide them with a living on a continuous basis to say nothing of providing adequate social

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benefits. Often contributing to this situation are inadequate business plans and a lack of formal training in marketing, copyright law and other matters related to running a company, as well as frequent high dependency on individual clients. The prevalence of project work in the KIBS sector results in a “de facto” limitation of employee relationships, a situation that puts some employees in a precarious situation in terms of job security. Nevertheless many young creative people choose this path because their desire for self-realisation in their professional lives outweighs other considerations (Eichmann et. al. 2005, p.56 et. seq., 108). In many major cities, this lifestyle is cultivated under the label “digital Bohemianism” – a unique blend of existential worries and success, uncertainty and dependency.

Employee entrepreneurs: high levels of autonomy and free market

A key characteristic of knowledge work is the high degree of **autonomy and self organisation**. Complex tasks involving a substantial amount of individual problem-solving are an obstacle to tight control over the working process. Consequently, creativity and cooperation are regarded as decisive prerequisites for finding innovative solutions or translating hazy customer expectations into precise specifications (Flecker et. al. 2006, p.50). In this context, decentralised structures, flat hierarchies and generous manoeuvring space are described as key characteristics of knowledge work. These characteristics add up to a high level of individual responsibility, work that is driven by results, and highly varied tasks: a combination that certainly meets desire on the part of highly skilled professionals for self-realisation (Kadritzke 1997, p.134; Hurd et.al. 2003, p.11).

However, the weak role played by bureaucratic forms of coordination does not mean a complete absence of control. Self-organisation is usually embedded in forms of **indirect context management**. These include hard targets, tight budgets or market-based performance benchmarks. Within this framework, it is largely up to the knowledge workers how to meet the requirements. The interface between

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generous manoeuvring space and rigid (market-based) compulsion is where we find the species known as the “employee entrepreneur,” who – although employed on a dependent basis – works as an “entrepreneur within the company” and takes his or her own labour to market (Voss 1998, p.477 et. seq.).

This form of “entrepreneurship” – although provided with many degrees of entrepreneurial freedom – involves **substantial stress factors** from an employee's standpoint. For instance, employees are under considerable pressure, with generally scarce resources and frequently contradictory requirements. In particular where employees work directly with customers, the customers’ wishes and scheduling requirements represent an almost inescapable power.

A typical risk faced by highly skilled employees, as well as the self-employed, is the trend toward **excessive working time**. As shown in a German study, the actual working time of the highly skilled exceeds the agreed working time by an average of seven hours (Wagner 1999, p.260). When individuals are largely responsible for how they will meet the defined project objectives and deadlines, such matters as the duration of the working day or when vacation is taken are frequently decided on an individual and *ad hoc* basis – often at the expense of leisure time. Another widespread phenomenon is the blurring of boundaries between working life and personal life. Phone calls with customers and colleagues late at night or on the weekend are considered quite routine, along with missed family occasions and vacations that are cancelled at the last minute (or not booked in the first place). New communication tools such as the BlackBerry have heightened the pressure on skilled specialists to be available; many cannot escape the tasks clamouring for their attention even in their leisure time. Demands on individual time management are intensified for people working on international projects, either through frequent business trips or teleconferences with partners in other time zones.

As subjectively experienced by qualified experts, the tough demands imposed on them even at peak periods are not always seen as entirely

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stressful. High-pressure work situations in the final phase of software projects are often experienced as near-heroic feats, when the team “starts the seemingly hopeless race against time and, after living through a sort of collective state of emergency, working overnight and pushing themselves to their utmost limits,” finally achieve the goal (Paul 1999, p.86). An essay with the revealing title “Extreme Jobs – the dangerous allure of the 70-hour workweek” speaks of the “thrill of the all-consuming career” – a working life characterised by high levels of satisfaction and heavy – sometimes excessive – demands. A scaled-down personal life and health problems are among the major risks posed by this level of professional commitment (Hewlett et. al. 2006).

Gentle treatment? « Labour is our main resource »

Employees are regarded as the key to the success of KIBS companies because high-quality services are particularly dependent on the qualification and motivation of the workforce. This means that great importance is attached not only to recruitment, but also to the ability to retain staff. After all, when KIBS employees leave, the employer generally loses a substantial store of knowledge and experience that cannot be regenerated in a short time. Moreover, the relationship capital between KIBS employees and clients is highly personalised, so that the finely tuned personal working relationships between specialists and customers are difficult to replace.

To retain top performers, KIBS providers not only try to offer competitive salaries, but also invest in non-monetary incentives. For instance, companies such as PriceWaterhouseCoopers, UBS and AmEx try to retain talented employees – especially women – by implementing family-friendly policies, including health consultation and flexible working time models as well as support in finding domestic services (Huggins 2006a, p.17; Hewlett et. al. 2006, p.10).

At the same time, competitive and cost pressures are intensifying in many KIBS companies, thus jeopardising the basic foundation of this “gentle treatment” of top performers. Frequent restructuring and tough cost-cutting measures increase the uncertainties facing highly qualified employees. The established trade-off of job security and responsibility in exchange for motivation and identification with the company is in danger of being undermined (Kadritzke 1997, p.156) – particularly when a “remote management team” makes decisions that are incomprehensible from the standpoint of employees (Kotthoff 1996).

The role of technology: industrialisation in the KIBS sector?

It is possible only to a very limited extent to codify sophisticated knowledge activities and experience-related know-how and map them into detailed rules. For this reason, expert services are considered quite resistant to rationalisation efforts. Nevertheless, KIBS are not necessarily immune to standardisation or even the automation of activities; on the contrary, the limits of what is possible are being continually redefined. Consequently, varying development patterns can be expected to continue operating simultaneously in individual segments of the KIBS working world for a long time to come.

Relatively complex tasks of today may sometimes turn out to be tomorrow's candidates for automation, explains a manager with the international law firm Simmons & Simmons. He advises companies to be on the lookout for new technology-based opportunities: “One likes to think that the work we do is so highly intellectual that it could never be done by a machine, but if you are not careful, you are sitting there (...) with water lapping round your ankles” (Huggins 2006d, p.7). Legal firms are intensifying their efforts to codify knowledge, with the result that knowledge management systems are becoming increasingly widespread. In this context, Simmons & Simmons reports a new division of labour, with lawyers working on the “customer front” and knowledge managers (the so-called systemisers) doing research and preparing information in the background to relieve the “front office.” At

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the same time, the modular and automated drafting of contracts aims to enhance the efficiency of the legal services. Standardised online services are also steadily expanding, for instance offerings on the subject of employment law. An area where automation and self-service via the Internet are considered relatively advanced is accounting. This development is motivated primarily by the desire to cut costs, but also to make round-the-clock service available (Huggins 2006b, p. 22 et. seq.). Such developments change labour requirements while creating new alternatives for organisational and geographical distribution, for instance through the offshoring of activities.

However, core KIBS activities continue to evade tightly-woven structuring and the automation of working processes. The sophisticated, complex activities necessitate creative processes or individual problem-solving, and often involve personal and flexible consultations with customers. Consequently, services such as R&D, architecture, management consulting and advertising offer only limited scope for comprehensive rationalisation efforts. In the software development field it also seems very unlikely, in view of the highly dynamic and complex processes involved, that the concept of a "software factory" could be implemented with a fully task-based organisational structure (Paul 1999, p.80).

Mostly "very satisfied": working in the KIBS sector

All in all it is apparent that there is no such thing as "working life in the KIBS sector" as such. First, the various KIBS subsectors differ widely. In addition, there are also major differences within the individual fields, depending on company size, individual employment relationships and the specific areas where people work.

Numerous studies demonstrate that among the highly skilled workforce in the KIBS sector, there is an overall picture of **high job satisfaction**. The specialists in this sector generally consider themselves to be in a privileged situation (see European Foundation 2007, p.80; Kotthoff

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1996, p.437; Hurd et. al. 2003, p.11). Similarly, a survey of German IT specialists revealed that although 70% reporting feeling heavily stressed, 90% were satisfied with their work (Eichmann et. seq. 2005, p.17). However, the sustainability of this form of work – which is attractive and demanding, but fraught with uncertainty – is likely to become an important issue. Many highly committed professionals say that they do not plan to maintain their current high level of activity over a period of many years. Especially women who have jobs involving extremely long hours ask how their work can be combined with a satisfactory family life (Hewlett et. al. 2006, p.10). Above all the self-employed are under intense pressure. This group generally displays a particularly high level of health problems (European Foundation 2007, p.62).

7 THE KIBS WORKFORCE: NEW TERRITORY FOR UNIONS?

The growing field of knowledge-intensive business services represents a substantial and so far largely untapped membership potential for unions. Organisation levels across the KIBS sectors is predominantly low. In the USA, for example, only about 2% of the employees in the sector “management, scientific and technical consulting services” belong to unions or are covered by collective agreements, in contrast to a 14% average over all industries (US Department of Labor, 2005). Figures published by IBITS, the UNI department responsible for IT and business services, paint a similar picture: At present, approximately 955,000 members are registered in Europe, and 1.2 million worldwide – a figure that falls far short of the potential. Many professionals see their interests promoted mainly by professional associations. In addition, KIBS employees are scattered over a large number of small companies, a situation that raises its own special problems of access for unions.

To reach the potential clientele represented by the KIBS workforce, unions face the challenge of reaching a very heterogeneous target group with a **differentiated range of services**. Collective agreements are (just) one of many pillars because many highly qualified people are outside the scope of collective bargaining – above all the numerous experts who work as one-person companies. One in five people working in business services is self-employed (Kox et. al. 2007, p.21). A key benefit of unions for KIBS specialists could be to offer them back-up support when operating in an uncertain market, whether through training or market information, career consulting or mobility services. Self-employed people, most of whom have only themselves to rely on, could benefit from services to support them in finding clients, negotiating with clients, drawing up contracts, legal matters or tax issues (Bibby 2006). Another key area is the pooling of

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market power, as demonstrated by the Freelancers Union in New York: One of the first major goals of this “customer-focused” union was to make affordable health insurance accessible to the self-employed. It now offers numerous services to its members, who number 37,000 in New York City alone (Economist, November 7, 2006). In view of high stress levels and health risks, it would seem to make sense to offer union services to support members in learning to use the resource of their own work in a sustainable way – whether these members are “employee entrepreneurs” working for companies, or are entrepreneurs in the true sense of the word.

Successfully establishing contact with KIBS employees requires addressing them as **competent, highly autonomous experts**. They tend to be alienated by class warfare slogans and do not generally identify strongly with the victims of the labour market. In the words of one IT specialist, for instance, union activities must come across as “differentiated, moderate and well-informed.” A promising approach is that embodied by decentralised organisational forms in which (potential) members can make a contribution as experts acting in their own cause. For example, the special interest groups backed by GPA, the Austrian union for private sector white-collar workers, provide specialists with platforms where they can exchange views and information and set their own agenda. Groups such as work@professional, work@it and work@flex start up on their own initiative and make their own decisions on services to offer members. The special interest groups send delegates to GPA’s governing bodies. Intensive communication via the website extends the organisation's range and reaches employees who would otherwise have no contact with unions.

On the company side, a campaign by German IBM works councils gained considerable attention in the 1990s. It focused on “trust-based” working time and “work without end,” leveraging the experience of IT experts with these phenomena. By publishing anonymous texts written by IT experts on their own working situation and organising meetings on these issues, a process was initiated to raise awareness of excessive

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working hours, health issues and problematic situations common to all employees (Glißmann et. al. 2000).

There is a definite need for union strategies targeted toward highly skilled personnel. Despite the strong appeal of employment in the KIBS sectors, there are numerous stress factors and problems where the employees could benefit from support. In view of the increasing employment in KIBS, it would definitely seem worthwhile to pay more attention to their interests.

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