

Knowledge Intensive Business Services (KIBS)

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Knowledge-intensive business services (KIBS) are firms that provide services into the business processes of other organizations based on technological or professional knowledge. The KIBS sector includes activities such as computer services, R&D services, legal, accountancy and management services, architecture, engineering and technical services, and advertising and market research. The growth of KIBS reflects growing demands for knowledge to deal with change – both technological and social- and also the growing level of interaction among firms in innovation activities.

KIBS have attracted increasing policy attention for five reasons:

- The rapid growth of the sector;
- The evidence of the important role of KIBS in enabling upgrading and innovation in firms;
- The role of KIBS in improving the innovation and export performance of SMEs; and
- The role of KIBS as intermediaries between public sector research organizations and business.
- KIBS are particularly important in assisting the formation and survival of new firms that are exploiting technological or market-based opportunities.

All five of these are important for Australia and suggest that KIBS may be an important focus for analysis and policy. They reflect the rising importance of dynamic efficiency in an increasingly complex and changing commercial, technological and social context.

What are KIBS?

Knowledge intensive business services (KIBS) are business services that draw on knowledge related to a specific domain and contribute to the knowledge processes within the client firm. They are a subset of the wider category of Knowledge intensive services. Table 1 identifies the main sectors that include KIBS, but KIBS firms also exist in other sectors, such as financial services and telecommunications. KIBS sectors are characterized by the proportion of their employees who are highly skilled. According to EMCC (2005) about 16m workers in Europe work in the KIBS sectors, with about 3 million in the sector in both the UK and Germany.

Table 1: Major Sectors that Encompass KIBS
Computer and related activities

<ul style="list-style-type: none">❖ 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
<ul style="list-style-type: none">❖ 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.

What are the Drivers of KIBS Development?

The growth of KIBS appears to be driven both by the growing demands for specialist knowledge inputs into production and change and also to the growth of **outsourcing**. While the extent of outsourcing is expected to grow so also is the growth of offshoring – the relocation of outsourced activities to another country. India, in particular, has a rapidly growing services export sector, which is becoming increasingly knowledge-intensive and widening the range of services provided.

The increasingly significant and pervasive use of IT in business, and the continuous change in **IT systems**, has created a demand for IT-related services from system design and upgrading to the provision of services based on the providers IT systems. Similarly, **environmental services** (design, auditing, remediation) are an increasing sub-sector of KIBS. More generally, the increasing level of **regulation** in relation to, for example, environment, health & safety, liability, has led to a need for knowledge intensive services for testing, training and auditing. It may also be the case that the incomes, flexibility and variety of working for KIBS firms is attractive to highly trained workers, giving such firms an advantage in a tight labor market.

The growth of competition and of the **globalization** of trade has also led to a growth in demand for services in such areas as marketing, logistics, business law, risk assessment and public relations.

Miozzo & Miles (2002) suggest internationalization is both a stimulus for the KIBS firms in creating new demands and also a stimulus for "KIBS firms themselves to internationalise which, in turn, creates new pressures for these firms:

- ❖ they may need to internationalise in order to follow their clients into new operating environments;
- ❖ they may internationalise to find new markets;
- ❖ they are liable to face competitive challenges from overseas KIBS firms which enter the markets of more and more countries. Trade liberalisation agreements may facilitate such competitive pressures;
- ❖ the internationalisation of KIBS also allows for direct comparison with KIBS from other countries and their practices, and to learn and improve as a result;
- ❖ some informational elements of KIBS – design and delivery of services, remote management and coordination of service processes – may be facilitated through the application of new information technologies." (EMCC, 2005, p7)

These KIBS firms are combining generic knowledge and the specific knowledge of the clients business domain, and knowledge accessed from a wide range of other domains and from prior experience, to develop solutions to a client's specific problems. In this way KIBS firms develop as conduits and knowledge transfer mechanisms in the knowledge economy.

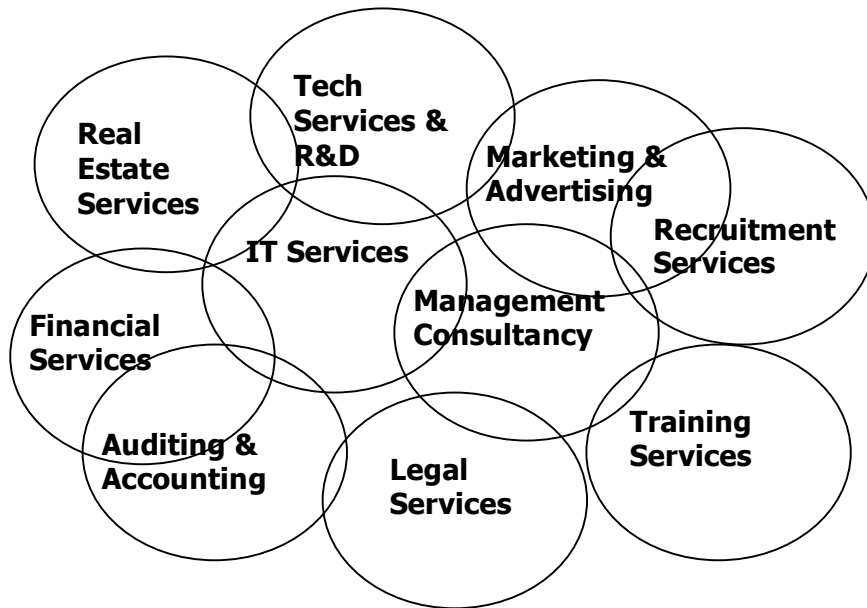
Because of this close interaction with the client firm the effectiveness of KIBS provision is significantly related to the competencies of the client firm, and the provider and client are involved in the 'co-production' of the outcomes. The outputs of that co-production are: the service itself, the learning by the provider and the client; the enhanced capability of the client; and possibly innovation by the client. However, it is generally acknowledged that the provider- client interaction has not been sufficiently analysed to provide a general basis for understanding (Miles, 2002). Knowledge intensive services have been shown to contribute to the diffusion of new technologies and management approaches so enabling the renovation of firms. (Leiponen, 2004, Miles, 1999; Muller & Zencker, 2001)

How will KIBS Sectors Evolve in the Future?

Employment in KIBS appears to be growing substantially more rapidly than overall employment. According to Toivonen (2001) the KIBS sector in Finland grew by over 40% over the 1990s – much of this growth from technical and computer related services.

An number of trends are shaping the development of KIBS. While many sub-sectors are characterized by relatively small firms and active processes of new firm formation, increasing concentration (nationally and internationally) is evident in other sectors, such as computer services. There is also evidence of increasing convergence between KIBS, driven in part by KIBS providers seeking to standardize services wherever possible and by clients seeking integrated services. Toivonen (2004) suggests that the main patterns of convergence are those shown in Figure 1. Some commentators expect to see larger platform firms emerge, integrating a range of services, while many specialist firms will continue in niche areas.

Figure 1 Convergence Among KIBS Sectors



Toivonen- reproduced in EMCC (2005).

Internationalisation and offshoring will continue as strong shapers of evolution. Many specialist KIBS firms internationalise by following their clients, others are 'born global' as they focus on a narrow niche where markets are global. Others develop global activities or alliances with overseas KIBS firms through addressing the information needs of their national clients.

Does the Growth of KIBS Raise New Policy Issues?

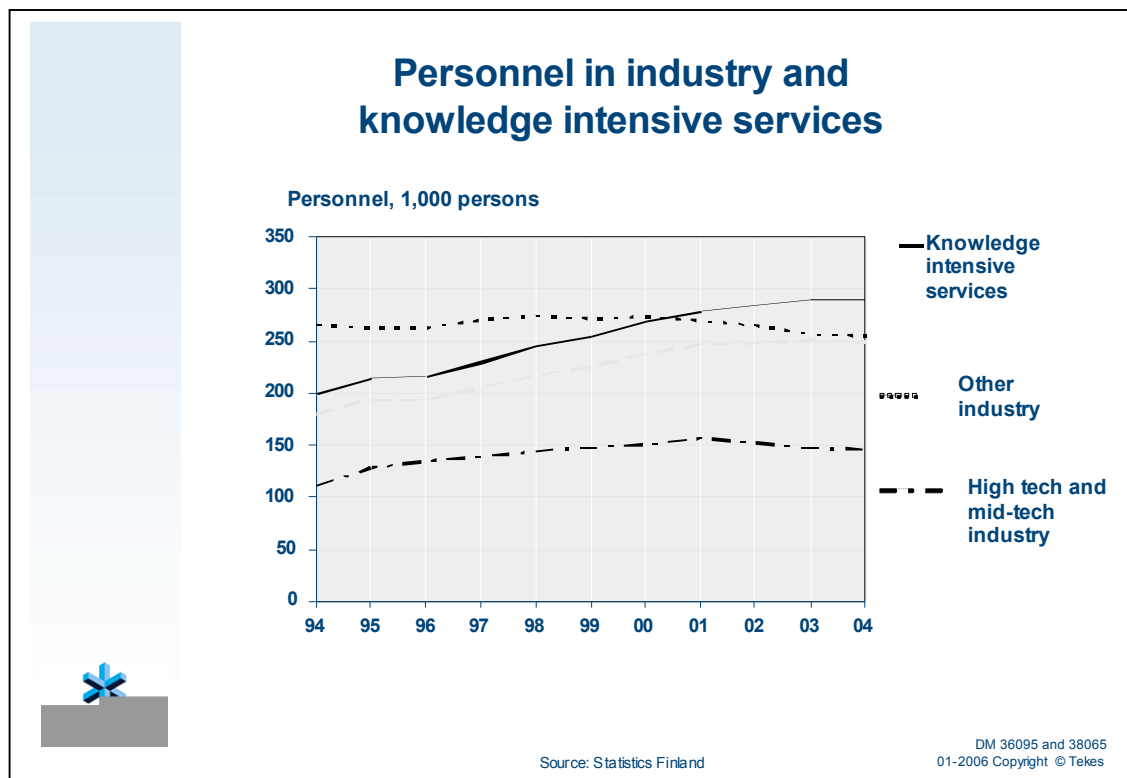
KIBS is a policy issue both because of the significance of the growth of the sector, but also because of the systemic role of KIBS in the knowledge economy. KIBS are among the most active innovators in the services sector, as well as an important influence on the innovation activities of client firms (see Miles, 2005).

There is increasing recognition of the extent to which innovation policies are oriented toward manufacturing sectors and may be far from neutral in relation to service sectors. Innovation in services typically involves less emphasis on R&D as a source of innovative knowledge, less organisation of innovation through R&D departments and managers, and more through project development teams; greater emphasis on organisational innovation; and less use of patents for IPR protection. Some European countries are developing R&D programs oriented to services sectors, but possibly only Finland has developed innovation policies focused on KIBS sectors. For the last several years in Finland ICT-using services sectors have been growing more rapidly than either ICT- producing services and ICT-using manufacturing (Kuusisto & Meyer, 2003).

The role of KIBS in innovation processes may be particularly important, particularly for SMEs and for firms in more remote or less dynamic regions. But the non-transparency of KIBS makes it hard for the potential user to assess the value of buying services from a potential supplier.

Among the policy issues that may support the development of dynamic KIBS sectors are:

- ❖ Greater support for training of high level professionals to develop competencies in the combination of managerial, interpersonal and technological skills that enable them to develop effective solutions, work in teams and interface with clients.
- ❖ Greater support for SMEs to access KIBS services through, for example, encouraging industry associations to work to bundle a range of clients to access support for shared needs, or subsidizing access to basic services in association with innovation or regulatory or sustainability objectives (as is the case through COMET, and was the case in the past through NIES).
- ❖ Support case studies of the role of KIBS in different types of change activities in different sectors, to enable potential users to assess the value of the services.
- ❖ Support systematic research on the role of KIBS in improving the flow of knowledge from public sector research organizations to Australian private and public sector organizations. The question of the role of public sector research organizations in what is increasingly a service economy is attracting increasing attention – it may be the case that the nature of change in economies makes it more difficult for them to function effectively.



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