CHAPTER 2: THE KNOWLEDGE INTENSIVE BUSINESS SERVICE SECTOR IN HUNGARY IN A COMPARATIVE PERSPECTIVE

(Hungarian vs. Slovak Business Service Firms)

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THE NEED TO BETTER UNDERSTAND INNOVATION IN THE KIBS SECTOR

In relation to the innovation performance of the economy, we have an abundance of knowledge on technologically related product and process innovation, especially in the manufacturing sector (Schienstock–Hamalainen, 2001). Since the 1980s, there has been renewed interest in better understanding, from both the theoretical and empirical perspectives, the complex, dynamic, and multi-level relationship between organizational development and innovation, especially in the KIBS sector (Salter–Tether, 2006; Lam, 2005). In this context, it is necessary to call attention to the similarities and differences of organizational innovation and patterns of knowledge use between KIBS and manufacturing firms. The literature dealing with service sector innovation can be classified into two contrasting schools of thought: the first theoretical strand stresses the particular character of innovation in the service sector (e.g., the key role of organizational development, the extensive use of external knowledge sources, the higher priority given to training, the collective practice of knowledge development, interactive working practices, client-specific specialization, and a generalization of the consultative way of working) in comparison with the manufacturing sector (Leiponen, 2003, 2004; Salter–Tether, 2006; Toivonen, 2006). The second approach emphasizes the similarity of innovation in the service and manufacturing sectors and rejects black-and-white views (Pavitt, 1984; Evangelista, 2000; Evangelista–Savona, 2003; Miozzo–Soete, 2001) on the character of the sectors' innovation.

In the Hungarian academic community, there is a scarcity of systematic research on organizational innovation in general, and especially with regard to the KIBS sector. To overcome this knowledge deficiency, the Research Group of

the Sociology of Organization and Work at the Institute of Sociology, Hungarian Academy of Sciences (Budapest) recently initiated desk-top screening of literature on the diffusion of organizational innovation and gathered empirical materials acquired from its strong involvement in several EU-funded projects.[36]

This paper provides the first analysis of systematically collected company-level data with the objective of better understanding the diffusion and drivers of organizational innovation and the practice of knowledge development by comparing the KIBS sectors in Hungary (2008) and Slovakia (2008–2009).

SAMPLE OF THE COMPANY SURVEY AND SAMPLING METHOD

The cross-country company survey was designed to collect systematic information on the working practices of business service firms operating in Hungary and Slovakia.[37] There is no generally accepted definition of 'business service'; this category covers rather heterogeneous economic activities. In our study, based on screening the literature and with the aim of producing internationally comparable data, the knowledge-intensive professional services offered to other companies are defined as 'business services,' such as IT services (both software and hardware), administrative and legal services, financial services, and R&D.[38] Table 1 includes the activities selected for the purpose of the company surveys in both Hungary and Slovakia.

36 In this respect, it is worth mentioning our involvement in the following projects: EU-funded projects: 'Work Organization and Restructuring in the Knowledge Society' (WORKS, Integrating and Strengthening the European Research Area – CIT3/CT/2005-006193, 6th FP, 2005/2009), 'Measuring the Dynamics of Organization and Work' (MEADOW – Priority 7: Citizens and Governance in a Knowledge-based Society – 028336, 6th FP, 2007–2010).

37 Regarding the service sector, the following classifications have often been used (Salter–Tether, 2006): (1) traditional services (e.g., personal service), (2) system services (e.g., airlines and banking), and (3) knowledge-intensive business services (KIBS). The main focus of our research is on activities classified as KIBS.

38 For more details, see Makó–Illéssy–Csizmadia (2008).

Table 1: Share of KIBS firms by types of activities (NACE[39] codes) in Hungary and Slovakia (%)

Activity	Hungary	Slovakia
Accounting, finance, and legal services (NACE codes: K 66.1, Activities auxiliary to financial services, except insurance and pension funding; K 66.2, Activities auxiliary to insurance and pension funding; K 64.9, Other financial service activities, except insurance and pension funding; M 69, Legal and accounting activities; M 70, Activities of head offices; management consultancy activities)	20.9	22.7
Human resources management (NACE codes: N 78, Employment activities; P 85.5, Other education)	19.4	20.7
Technical engineering, consultancy (NACE codes: M71, Architectural and engineering activities; technical testing and analysis; M 72, Scientific research and development)	25.2	18.5
Information- and computer-related activities (NACE codes: J62, Computer programming, consultancy, and related activities; J 63, Information service activities)	21.9	21.6
Advertising, marketing, customer service, other services (NACE codes: M 73, Advertising, market research; M 74.3, Translation and interpretation activities; N 77.3, Renting and leasing of other machinery, equipment, and tangible goods; N 81.1, Combined facilities support activities; N81.2.2, Other building and industrial cleaning activities; N 82.2, Activities of call centers)	12.6	16.5
Total	100	100

In the first quarter of 2008, according to the National Register of Economic Organizations compiled by the Hungarian Central Statistical Office (HCSO), 4,049 companies with 10 or more employees were registered in the field of business services, while 2,714 were registered in Slovakia.[40] In order to design a statistically representative sample of firms, 200 companies were selected from Hungary and 100 companies from Slovakia using a multi-stage stratified sampling method. The basic economic activity of the firms classified by the NACE code was used as the stratification variable. This sampling method ensured that all companies belonging to the population surveyed had equal chances to be selected for the sample and reflected the heterogeneity of the organizational population as well.

39 NACE: 'Statistical Classification of Economic Activities' – an international statistical system for the classification and registration of economic activities. Source: http://ec.europa.eu/competition/mergers/cases/index/nace_all.html

40 Bajzikova–Sajgalikova–Wojcak–Polakova, 2009: 5–6.

In other words, the sampling structure reflects the composition of the companies operating in various (e.g., 'new' and 'mature') economic activity branches. For instance, there are more IT companies within the field of IT services than facility management providers or more clothing companies within 'mature' manufacturing than the pharmaceutical industry. The sampling frame was restricted for companies employing at least 10 persons. Firms with 0 to 9 employees were excluded because, according to previous research experience, these firms are often unavailable for surveys and also because the division of labour within these firms is rather underdeveloped, making it difficult to find and compare the forms of organizational innovation with firms in other size categories (Valeyre et al., 2009).

Here, it is noteworthy that in Hungary the research covered both the manufacturing and the KIBS sectors. Partly due to the lack of available resources and for the sake of an international comparison, the sample in manufacturing was limited to the following sub-sectors: textile and clothing products, machinery, and the automotive, pharmaceutical, and electrical industries. These sub-sectors represent different 'maturity cycles' with respect to the technology used, work organization, and knowledge-use practices. The so-called 'mature' industrial sectors are the textile and clothing industries, machinery, and car industries, and the 'new' sectors are the pharmaceutical and electrical industries, together with computer equipment producers.

We may summarize the empirical findings concerning the manufacturing sector as follows: the largest segment of the Hungarian manufacturing firms was created at the beginning of the 1990s. Within the group of manufacturing firms, the share of foreign ownership is twice as high as that in the KIBS sector, and, while multinational KIBS firms are supervised by their Hungarian headquarters, the manufacturing firms' headquarters are located primarily in foreign countries, such as Germany, Austria, and Japan. A very important distinctive feature of the manufacturing sector compared to the KIBS is that the KIBS firms are focused almost exclusively (94.7%) on the Hungarian market, while the manufacturing firms have a more balanced distribution between the Hungarian and foreign markets and the manufacturing firms are more active in both the domestic and foreign markets. By and large, the diffusion of less radical or incremental innovation characterizes both sectors. However, the 'interdisciplinary working groups' are more widely diffused in the manufacturing sector.

STRUCTURE OF THE QUESTIONNAIRE AND CHARACTERISTICS OF THE DATA COLLECTION

The fieldwork took place in 2008 in Hungary, and the survey was divided into two stages as a result of the summer holiday season. The Slovak survey was carried out between October 2008 and January 2009 in a rather unfriendly climate for social research in the context of the global financial and economic downturn. To ensure the quality of data collection, specific steps were taken. In addition to the 200-element sample in both countries, additional address lists of 400 companies in Hungary and 200 companies in Slovakia were used to reduce the expected refusal rate of the selected population (managers and/or owners). To guarantee good quality data, personal interviews were conducted with top managers of the firms surveyed. Before starting the fieldwork, the interviewers and their coordinators were trained by the designers of the project at the Institute of Sociology of the Hungarian Academy of Sciences. In addition, project designers and coordinators randomly supervised the interviewers by follow-up phone calls to respondents. The quality assurance covered the data recording and the compilation of the database as well. During data recording, an automatic control system and internal logical investigations were applied by using special algorithms to minimize the chances of any possible failures. In designing the questionnaire, a pilot survey was conducted to test any possible cognitive contradictions in the planned questions. As a result of the multi-level monitoring of data collection, the final database in the Hungarian business services was restricted to 196 cases and, in the Slovak business services, to 97 cases, ensuring the validity and internal coherence of data. To guarantee the statistical representativeness of the survey, the data sets were weighted. The final database is statistically representative of the firm population surveyed, i.e., the 4,094 companies operating with at least 10 employees in Hungarian business services and the 2,714 companies operating with at least 10 employees in the Slovak business service sectors investigated.

In designing the questionnaire, we conducted a 'benchmarking exercise' to review Hungarian and international surveys dealing with various features of organizational innovation. Among other things, we have been learning extensively from projects such as the Danish DISKO (Danish Innovation System in Comparative Perspective) survey carried out five times between 1993 and 2006 by the Aalborg University Business School, the Community Innovation Surveys

(CIS) carried out six times by Eurostat, the Continuous Vocational Training (CVTS) survey carried out in 1999 and in 2006 by Eurostat, and several Europe-wide surveys organized by the European Foundation for the Improvement of Living and Working Conditions (Dublin). Finally, in designing our organizational survey methods the members of the international research team relied substantially on 'The MEADOW Guidelines' (EU 6th FP Project), which '... set out guidelines for collecting and interpreting information on both organizational states and organizational change. The Guidelines are concerned with collecting data at the workplace and employee level providing relevant definitions and indicators for capturing general characteristics of organizations, such as the nature of authority relations and the method of coordination and control.'[41]

In addition, designing the research tools of the Hungarian and Slovak company surveys, in 2007, the Research Group of the Sociology of Organization and Work (Institute of Sociology) of the Hungarian Academy of Sciences launched a national survey to test concepts and questions measuring the diffusion of new organizational values or institutional standards in more than 500 industrial firms (Makó–Illéssy–Csizmadia, 2007).

The questionnaire used in the company survey in both countries in the KIBS sectors was finalized after the pilot study, which aimed at testing the validity of the questionnaire within the cluster of firms (n=36) belonging to the 'Magyar Outsourcing Szövetség' (Hungarian Outsourcing Association), comprising 'leading-edge' firms in the KIBS sector. The finalized questionnaire, composed of 43 questions, has the following four thematic sections:

1. General characteristics of firms. This section contains a description of the architecture of the organization (e.g., length of operation and size), ownership, market structure, types of activities, and type of technology employed.

2. Composition of Management and Institutional Transfer of Business Practices. This section includes a report regarding firms in which foreign managers are employed and an examination of the proportion of foreign versus local managers, the recruitment practices of foreign managers, and the generic business functions occupied by them. In addition, this section indicates the degree of autonomy in the local subsidiaries in developing their business practices.

41 The Measuring the Dynamics of Organization and Work (MEADOW) Project funded within the 6th Framework Program of the European Commission DG Research (http://www.meadow-project.eu/).

3. Diffusion and Drivers of Organizational Innovation. In addition to mapping the differences and/or similarities of forms of organizational innovation, this section contains an examination of the degree of embeddedness of the ICT in the business practices in the sectors surveyed. Regarding the forms of organizational innovation, the drivers of innovation are also identified.

4. Characteristics of Knowledge Development Practice in the Firm. In this section, the dominant combination of the required skills or competencies is identified. In assessing the training practices of the firms surveyed, we tried to understand not only the roles of the formal training and education in the skill formation of employees but also the importance of the so-called on-site (in situ) learning. In addition, particular attention was given to the role of the various external knowledge sources in skill development.

ORGANIZATIONAL ARCHITECTURE, MANAGEMENT, AND BUSINESS PRACTICE TRANSFER

The empirical outcomes are based on data collected during the 2008 and 2009 company surveys that involved firms employing more than 10 persons in the KIBS sector in both Hungary and Slovakia. The report presents a preliminary descriptive statistical analysis of the survey results using variables such as ownership, company size, year of consolidation, market structure, and company group membership (networking). In addition, this section shows the composition of the management and the patterns of transferring business practices.

OWNERSHIP, SIZE, MARKET STRUCTURE, AND SOURCE OF THE FIRM'S COMPETITIVENESS

INCORPORATION AND OWNERSHIP STRUCTURE OF SURVEYED FIRMS

One-fifth (21.1%) of the firms in the Hungarian KIBS sector were incorporated (established) in the last four years, and one-fourth (24.7%), between

2000 and 2003. Only a tiny minority of the firms (6.5%) were established in the period of state socialism (i.e., before 1990). The peak year of the company establishment in the KIBS sector was at the beginning of the new millennium, when the growth rates of the firms were as follows: 9.8% in 2004, 7.2% in 2003, and 7.9% in 2000. A similar pattern of company creation was identified in Slovakia as well. The overwhelming majority of business service companies in Slovakia were established after 1990, and, as in Hungary, only a fraction of them (6.5%) existed during the period of state socialism.

With regard to the ownership structure of the surveyed firms, in both countries, namely, in Hungary (87.5%) and Slovakia (52.6%), the domestically owned firms dominate. However, the share of foreign-owned firms is almost three times higher in Slovakia than in Hungary (26.8% versus 9.5%). Similarly, the proportion of mixed ownership is visibly higher in Slovakia than in Hungary. The composition of firm ownership is shown in *Table 2.*

Table 2: Ownership composition of firms in the KIBS sectors

Types of ownership	Hungary n=196	Slovakia n=97
Domestic or national ownership	77.5%	52.6%
Foreign ownership	9.5%	26.8%
Mixed ownership	13.0%	20.6%

The KIBS firms are very young and dominated by domestically owned firms. However, in Slovakia, the share of foreign or mixed ownership is significantly higher than in Hungarian business service sector firms. In summary, the majority of the surveyed firms, especially in Hungary, belong to the de novo segment (Martin, 2008) of the economy in both countries. They were created following the collapse of the state-socialist economy and are domestically owned.

Membership of a company group or company networking plays an important role in the learning and innovation capacity of business organizations due to the access it gives to a greater knowledge pool and smoother knowledge sharing and transferring practices. Firms belonging to a company group tend to be more innovative than single firms. In this field, we found visible differences in the two countries. Company group or network firms represent the minority of the Hungarian business service firms (18.2%), while, in Slovakia, every second firm

surveyed (50.5%) belongs to this category. In addition, looking at the headquarters ownership, again, the differences are striking. More than three quarters of the Slovak business service firms belong to groups located in 10 countries, the USA being the most frequent location (28.6%); the remaining 30% of firms have headquarters in Germany, the UK, and the Czech Republic. An important percentage of the business service firms' headquarters (14.3%) were located in such countries as Austria, Ireland, France, the Netherlands, and Slovenia. In the case of the Hungarian KIBS sector, domestically (or Hungarian) based headquarters dominate. The foreign headquarters are dispersed in 10 countries, and Austria is the dominant location for the company headquarters.

In relation to the important innovation-generating impacts of company networking, the following empirical example is noteworthy. The results of the Danish innovation surveys (DISKO) empirically confirm this view: manufacturing firms operating as a member of company groups, especially foreign owned groups, have visibly higher innovation activity than single firms (see *Table 3* for details).

Table 3: Product or service innovation in 1993–95 and/or 1998-2000 by ownership/company group membership

	P/S innovation 1993-1995 and 1998-2000	P/S innovation 1993-1995 or 1998-2000	Not P/S innovative	(N)
Danish group member	33.1%	39.6%	27.2%	169
Foreign group member	51.0%	27.5%	21.6%	102
Single firm	22.2%	32.9%	44.9%	216
All firms	32.0%	34.1%	33.9%	487

Note: P=product innovation, S=service innovation
Source: Nielsen, P. 2006: 42.

Nielsen (2006: 42) emphasizes '... single firms have the largest group of the firms with no product innovation in the periods surveyed. Danish group firms have the largest share of one-time innovators and foreign group firms have the largest proportion of firms with innovation in both periods. This distribution may be an indication of the importance of economic resources or international

influence, and not least of the importance of the international or global dimension, on the propensity to innovate among firms.'

SIZE AND ORGANIZATIONAL ARCHITECTURE OF FIRMS: DOMINANCE OF SMALL AND FLAT ORGANIZATIONS

The next table shows the size distribution of the surveyed firms. In both the Hungarian and the Slovak business service sectors, the share of small firms (i.e., those with 9 to 49 employees) is rather high: almost four-fifths (78.7%) of the Hungarian KIBS firms belong to this category, but, in the Slovak case, slightly more than every second firm (56.7%) belongs to this class. It is also noteworthy that there are three times as many large firms in the Slovak KIBS sector (16.5%) as in Hungary (4.6%). In addition, there are more Slovak companies in the medium category than in Hungary (26.8% versus 16.6%). In short, the size of the Slovak KIBS firms is more balanced than that of the Hungarian ones.

Table 4: Size of the firms in the KIBS sector

Size of firm	Hungary n=196	Slovakia n=97
Small firm (9–49 persons)	78.7%	56.7%
Medium firm (50–249 persons)	16.6%	26.8%
Large firm (250 and over)	4.6%	16.5%

In addition to the size category, we examined the organizational architecture of the firm. The consensus among organization and management scientists is that the organizational levels separating the highest and lowest positions in the occupational/job hierarchy influence the flexibility and learning capacity of the firm. In both countries, slightly more than every second business service firm (Hungary: 56.8% and Slovakia: 56.6%) has only one or no separate hierarchical level. Besides this similarity in the organizational architecture, the proportion of Hungarian firms with 2 or 3 hierarchical levels is slightly higher than that in Slovakia (38.1% versus 29.9%). However, firms having 4 or more hierarchical

levels represent a slightly higher proportion in the Slovak than the Hungarian KIBS sector (10.5% versus 13.4%), which can be explained by the significantly greater percentage of larger firms in the Slovak (16.5%) than in the Hungarian (4.6%) KIBS.

Comparing the types of business services, basically similar patterns were identified. In relation to the scale of services, 'customer-tailored' solutions are dominant in both countries. However, in Hungary, they represent a visibly higher share of the services provided than in Slovakia (83.7% versus 66.3%). The standard solutions score minimally and have a roughly similar percentage in both countries (Hungary: 32.4% and Slovakia: 33.7%). Similarly, the high value-added content of services is dominant in both Hungary and Slovakia, although it has a slightly higher share in Slovakia (65.8% versus 70.8%). The low value-added services represent less than one third of all services in both countries (Hungary: 32.8% and Slovakia: 29.2%). In addition, it is noteworthy that almost one third of the Hungarian (28.6%) and Slovak firms (29.9%) produce exclusively high value-added services. However, 14.4% of the Hungarian and only 3.1% of the Slovak firms in the KIBS do not offer high value-added services. The composition of services by degree of standardization and value-added content is illustrated in *Table 5*.

Table 5: Types of business services by value-added content

Characteristics of services	Hungary n=196	Slovakia n=97
Customer-tailored	83.7%	66.3%
Standardized	32.4%	33.7%
High value-added	65.8%	70.8%
Low value-added	32.8%	29.2%

MARKET STRUCTURE: THE SLOVAK KIBS FIRMS ARE MORE INVOLVED IN THE GLOBAL VALUE CHAIN (GVC)

During the survey, managers/owners were asked to locate their market share in relation to their primary and secondary markets. Although to a significantly different degree, the domestic product market plays a crucial role in both countries,

the domestic market as the primary market plays a more important role for Hungary (94.7%) than for Slovakia (55.4%). The market structure is more balanced in the Slovak KIBS sector, where the international market (both primary and secondary) plays a more important role than in Hungary. A higher proportion of firms focuses on both the North American (25.6%) and the EU–15 (22.8%) markets than in Hungary. In other words, we can say that the Slovak firms are more integrated into the global value chain (GVC) of business services than their Hungarian counterparts. *Table 6.* illustrates the market composition and its relative importance for the firms surveyed.

Table 6: Market distribution: primary and secondary markets

Types of markets	Hungary n=196		Slovakia n=97	
	Primary market	Secondary market	Primary market	Secondary market
National market	94.7%	3.4%	55.4%	39.9%
EU-15 countries	10.5%	4.8%	22.8%	38.6%
New Member States (NMS)	6.5%	8.0%	23.3%	46.7%
North America	2.4%	1.5%	25.6%	16.3%
Russia and Ukraine	1.5%	1.5%	12.8%	29.8%
Asia	1.9%	2.3%	11.6%	25.6%
Others	1.5%	-	16.7%	12.5%

SOURCE OF THE FIRMS' COMPETITIVENESS: RELIABILITY, QUALITY, AND FLEXIBILITY WITH SLIGHT COUNTRY VARIATION

During the survey, company managers were asked to assess the role of 11 factors shaping the competitiveness of their firms. As shown in *Table 7.*, in both countries, the following four factors play a similarly decisive role: (1) reliability, (2) quality, (3) flexibility/speed, and (4) experience. The variety of products and services represents the only noticeable difference between factors of competitiveness. In the case of Hungary, more than two thirds of the company managers stressed their importance (67.4%), compared with less than one third (29.9%) of their Slovak counterparts. Surprisingly, price, continuous development of services, branding, and lobbying are also less important.

Table 7: Sources of competitiveness: Hungarian versus Slovak KIBS sector (ranking)

Factors of competitiveness	Hungary n=196	Slovakia n=97
Reliability	92.4%	85.7%
Quality	90.5%	83.5%
Experience	88.2%	81.9%
Flexibility and speed	88.8%	83.1%
Skilled labour force	85.7%	81.8%
Customer orientation	82.7%	83.7%
Price	78.6%	73.8%
Variety of products and services	67.4%	29.9%
Image and brand	60.4%	73.2%
Continuous development of products and services	67.6%	70.9%
Lobbying	45.0%	39.0%

Note: Factors of competitiveness were measured by managers on a 5-point scale, where 1 is the least important factor and 5, the most important.

COMPOSITION OF COMPANY MANAGEMENT AND TRANSFERRING BUSINESS PRACTICES

In this section, we outline the composition of management and the autonomy of the local managers to develop business practices in the subsidiary units of foreign-owned companies. According to previous research (Adler, 1999; Makó–Nemes, 2003: 105–142), the presence of foreign managers (expatriates) played a key role in transferring managerial competence and methods during the acquisition of Hungarian firms by multinational corporations (MNCs), especially in the catch-up phase of the emerging market economy in post-socialist countries. Some scholars dealing with transformation economies characterized this early period with the term 'knowledge deficiency,' indicating that the managers socialized in the period of state socialism very often did not possess market economy-consistent competence (Thompson, 1993). However, in the last two decades, local managers have successfully acquired the necessary competence to manage their firms.

In spite of the progress achieved in diminishing the so-called 'knowledge deficiency' syndrome, foreign managers (expatriates) still play crucial roles in assisting their local colleagues in the fields of such high-value-added activities as research and innovation.

DOMINANCE OF LOCAL MANAGERS WITH VISIBLE COUNTRY DIFFERENCES. EXPATRIATES IN HIGH- VALUE-ADDED BUSINESS FUNCTIONS

Table 8. shows the composition of managers (foreign and host country national) by the type of generic business functions (services) assigned to them. The general trend in the KIBS sector of the two countries is that the majority of the managerial positions were filled by locals; however, in the Slovak case, the presence of foreign managers or expatriates is much more visible than in the Hungarian one. In the Slovak KIBS firms, 'expats' are dominant in the fields of accounting and finance. In addition to these functions, their presence is higher than in the Hungarian firms in such functions as production management (41.3% versus 16.4%), quality control (QC) (43.5% versus 27.7%), sales and marketing (30.3% versus 17.4%), customer service (34.8% versus 5.9%), ICT (40.4% versus 6.9%), and R&D (36.2% versus 23.0%).

Table 8: Share of foreign managers and locals in the various business services – greater presence of 'expats' in the Slovak KIBS

Business functions	Hungary n=196		Slovakia n=97	
	Foreign managers	Hungarian managers	Foreign managers	Slovak managers
R&D	23.0%	63.9%	36.2%	63.8%
Sales and marketing	17.4%	72.6%	30.3%	69.7%
ICT	6.9%	80.8%	40.4%	59.6%
Production management	16.4%	70.5%	41.3%	58.7%
Customer service	5.9%	83.6%	34.8%	65.2%
HRM	22.4%	72.5%	23.9%	76.1%
Quality Control	27.7%	60.0%	43.5%	56.5%
Accounting and finance	19.3%	80.7%	52.2%	47.8%

HYBRIDIZATION AS A COMMON PATTERN IN TRANSFERRING BUSINESS PRACTICES

In the 1990s, there was intense debate in the literature on Human resources management (HRM) concerning the degree of autonomy of subsidiaries of foreign firms (e.g., Japanese automobile plants in the U.S.A.) in developing their business practices. The concept and practice of hybridization are generally interpreted as a mixture of the host and foreign countries' (e.g., the mother country of the MNCs) business practices.

During the survey, we asked our respondents working in foreign-owned company groups about their degree of autonomy in developing business practices in general and, in particular, to assess their autonomy in creating their HRM system. Local managers in the KIBS sector are not free to operate their business processes. In both countries, the great majority of firms use the strategy of 'creative adaptation' or 'hybridization' in developing their business practices (Hungary: 69.4% and Slovakia: 69.5%). This means that in Hungarian and Slovak foreign-owned firms, the 'working standards' or the 'guiding principle' of the headquarters plays an important norm-setting or 'benchmarking' role in creating local business practices. Local managers, however, still have a certain degree of autonomy in developing the management methods and organizational structure of the firm. In more than one fifth (21.9%) of the Hungarian firms, local managers are still free to develop their business practices. In Slovak practice, autonomous development of business practice occurs in less than one fifth of the firms (16.2%).

However, only a minority of firms copy the business practices of their mother company. The share of firms mechanically adopting the mother company business practice is smaller in Hungary than in Slovakia (8.7% versus 14.3%). Finally, it is noteworthy that the role of customer experience is less important for the development of original business practices in both countries (Hungary: 8.3% versus Slovakia: 7.6%). The degree of autonomy enjoyed by local managers in the development of their own business practices is shown in *Table 9*.

Table 9: Autonomy of local managers in creating business practices in subsidiary firms of foreign companies

Sector (Sample size)	Hungary n=32	Slovakia n=38
A) The method of developing business practices		
a) Autonomously but within the framework of the company group guidelines	39.1%	24.8%
b) Adapting to the local conditions of the mother company standards	22.1%	22.9%
c) Using the standard of the mother company and further development	8.1%	21.9%
d) Adopting mechanically (copying) the standards of the mother company	8.7%	14.3%
e) Learning from the customer	8.3%	7.6%
f) Independently creating business practices	13.6%	8.6%
B) Pattern of developing business practices		
a) Creative adaptation: Hybridization	69.3%	69.5%
b) Copying	8.7%	14.3%
c) Original development	21.9%	16.2%

Looking at the creation of HRM practices,[42] the great majority of subsidiary firms of foreign-owned companies show a significant degree of respect for the local institutional and labour market regulatory system. This means that the hybridization process is dominant. According to several studies dealing with the institutional transfer of organizational and management practices (e.g., Ishikawa–

42 In relation to the hybridization of Human Resources Management (HRM), Adler (1999: 75–80) made a distinction among the following five theoretical strands: 1) The 'rational design view,' in which the type of activity or technology of a firm shapes the optimal organizational framework for HRM; 2) The 'culturalist approach,' in which adaptation is necessary only in cases in which the cultural differences between the host and mother countries are significant; 3) The 'strategic strand,' in which the firm indicates that the foreign firm is following a diverse strategy (e.g., geocentric, ethnocentric, and administrative heritage) in controlling the local activity of its subsidiary firm; 4) The 'institutional approach,' in which the HRM practice in the subsidiary firm is shaped by 'identical structures' in the subsidiary and mother firms or by the forces of 'isomorphism;' and 5) The HRM practice, which, according to the 'resource-dependent strand', in the local subsidiary is the result of the following three forces: mother company, subsidiary firms, and other local institutions. These approaches explain the hybridization of business practice (e.g., HRM) in a rather different way. For instance, in the logic of an 'institutional view,' Scott (1991) notes that, in the case of the HRM practice, the pressure to legitimate is much stronger than the pressure for efficiency. In the argument of the 'resource-dependency strand,' the production practice is less dependent on external actors than it is in the field of HRM, and, according to the 'strategic explanation' for the headquarters of the MNCs, the financial performance of the subsidiaries is more important than the tools or methods used.

Makó–Warhurst, 2006; Koike, 1998; Kennedy–Florida, 1991), in the case of the HRM, firms, independently of their economic sector, have greater autonomy than they do in transferring other areas of business practices (e.g., production methods, quality assessment, and auditing). From this viewpoint, the remark of Fujio Cho, former President of the Toyota Motor Manufacturing Company in Kentucky (U.S.A.) (Adler, 1999: 86) is revealing:

'I told people here that the (Japanese) coordinators were teachers on production issues and TPS (Toyota Production System), but that they were the students on the office areas, such as Legal, Human Resources, and Public Affairs.'

It is not at all surprising that the number of firms that are copying the mother company Headquarters' system in the KIBS is lower in the field of HRM than the number of firms that copy business practices in general. However, the following contrasting differences were found between the Hungarian and Slovak business service companies. The percentage of firms developing a hybrid version of, or mechanically copying, the headquarters' HRM practices is higher in the Slovak (78.4% and 11.8%) than the Hungarian firms (58% and 5.8%). It is noteworthy that the share of firms autonomously creating their HRM practice is significantly higher in Hungary than in Slovakia (Hungary: 36.2% versus Slovakia: 9.8%) (see *Table 10.*).

Table 10: Patterns of transferring HRM practices into subsidiary firms of foreign companies

Sector (Sample size)	Hungary	Slovakia
Modes of Transfer		
a) Consistent with the local and the headquarters' requirements	30.4%	45.1%
b) Local practice created independently from the headquarters of the mother company	36.2%	9.8%
c) Adapting the headquarters' HRM system to the local conditions	27.6%	33.3%
d) Mechanically copying the HRM practices of the headquarters of the mother company	5.8%	11.8%

DIFFUSION AND DRIVERS OF ORGANIZATIONAL INNOVATION AND THE USE OF ICT USE

DEVELOPING A TYPOLOGY OF ORGANIZATIONAL INNOVATION: A BRIEF THEORETICAL OVERVIEW

Organizational and technological innovations are in interaction, and, even before the Second World War, Schumpeter (1934) recognized the interrelatedness of various forms of innovation and went beyond that to focus exclusively on the technical side of innovation. In his view, technological and organizational innovations were interrelated - Lam wrote that Schumpeter '...saw organizational changes, alongside new products and processes, as well as markets as factors of 'creative destruction" (Lam, 2005: 115). Schumpeter made a distinction among the five following types of innovation:

1. New product
2. New production methods
3. New markets
4. New sources of supply
5. New forms of organization

Other innovation researchers, following the Schumpeterian intellectual heritage, see innovation as '... a complex phenomena including technical (e.g., new products and new production methods) and non-technical aspects (e.g., new markets and new forms of organization) as well as product innovation (e.g., new products or services) and process innovation (e.g., new production methods or new forms of organization)'.[43] Based on these considerations, these authors distinguished four different types of innovation: (1) technical product innovation, (2) non-technical service innovation, (3) technical process innovation, and (4) non-technical process innovation, understood to be organizational innovation.

Unfortunately, in spite of the abundance of literature on organizational innovation, there is no consensus among innovation researchers regarding the definition of 'organizational innovation.' In this respect, Lam (2005: 116) catego-

43 Armbruster et al., 2008: 644–645

rized the literature as follows, representing the different interests and issues related to the attempt to identify and assess organizational innovation:

(1) Organizational design theories deal primarily with relationships between structural forms and the capacity of an organization to innovate (Mintzberg, 1979; Teece, 1998).

(2) The organizational change and adaptation (development) theory is used to understand the ability of an organization to overcome the forces of stability (inertia) and adaptation/change in the context of a radical shift in its environment and technological setting. Innovation represents the capacity to answer or respond to the challenges created by radical shifts in an organization's external environment (Hannan–Freeman, 1984; Child, 1997).

(3) The third theoretical stream focuses on the micro-process level of how an organization understands the characteristics of knowledge creation and learning within an organization. This organizational cognitive approach explains the interplay between learning and organizational innovation (Nonaka–Takeuchi, 1995; Senge, 1990; Amiable, 1988; Argyris–Schön, 1978).

In addition to this effort to classify the various theoretical streams (Lam, 2005), the Schienstock (2004) innovation matrix intends to integrate key elements of comprehensive organizational innovation. His approach goes beyond the dualistic theoretical strands that made a distinction between isolated (cumulative) and integrative (holistic) innovation (Alasoini, 2003). In Schienstocks' classification attempt, one dimension of classification relates to the 'core' components of an organization, and the other refers to the changes in the 'relations' between the core components. Using these two dimensions, the matrix shown in *Table 11.* describes the possible types of organizational innovation from both a static and a dynamic perspective.

*Table 11: Typology of organizational innovation**

Relations between the core components of the organization	**Core components of the organization**	
	Not changing	**Changing**
Not changing	**Incremental innovation** (e.g., participation of employees in quality control)	**Modular innovation** (e.g., cross-functional or interdisciplinary project team)
Changing	**Architectural innovation** (e.g., lean organizations)	**Radical innovation** (e.g., project-based firms, PBF)[1]

Source: Shienstock, 2004: 18.

In this perspective, the cumulative or incremental type of organizational innovation does not produce changes in the core elements and in their relations within an organization. For example, job rotation and job enrichment, which remain within the scope of an individual workplace, are the organizational methods which belong to this type of organizational innovation. According to Schienstock (2004), a modular version of organizational innovation, such as a cross-functional project team, changes the content of the core elements of an organization but does not modify the relationships among them. Contrary to the incremental and modular types of organizational changes, architectural innovation, such as the decentralization of responsibilities and decisions within an organization, may result in a shift in the existing balance of interest and power relations. Similarly, radical innovations such as the creation of project-based firms (PBF) may modify both the core elements and their relationships within firms. In translating these major forms of innovation into the language of organizational learning, the incremental or modular forms of innovations require a single-loop or first-level mode of learning, while radical innovation represents a double-loop or second level (holistic) form of organizational learning.

Armbruster et al. (2008), implicitly adopting Schienstock's (2004) theoretical classification of organizational innovation, develop an item-oriented typology of organizational innovation. In their definition of 'organizational innovation as the use of new managerial and working concepts and practices' (Armbruster et al., 2008: 646), the item-oriented typology of organizational innovation makes a distinction between structural and procedural organizational innovations and their intra-organizational and inter-organizational dimensions (using Schienstock's categories, incremental and modular innovations are classified under the category of process innovation, while architectural and radical innovations belong to the category of structural organizational innovation).

An item-oriented typology of organizational innovation, developed by Armbruster at al. (2008), is convenient to empirically measure (monitor) organizational innovation by using organizational surveys.

The groups of an 'item-oriented typology of organizational innovation' are as follows:

1. Structural organizational innovation, which may modify the divisional structure of organizational functions, hierarchical levels, and information flow, or, in general, the organizational architecture of the firm. This type of innovation

requires changes in the existing status quo (and the related interest-) and power relations within the organization.

2. Procedural organizational innovation, which may change the process and operation routines within the firms, such as improving the flexibility of manpower and the use of knowledge through the implementation of team work, just-in-time production systems (Kan-Ban in Japanese), or quality circles.

3. Intra-organizational innovation that takes place within an organization.

4. Inter-organizational aspects of innovation, which refer to new organizational forms and processes that exist beyond the organizational border of the firm.

DIFFUSION AND DRIVERS OF ORGANIZATIONAL INNOVATION

Our company survey was designed to focus exclusively on intra-organizational innovation, and it was not our intention to cover new organizational forms (e.g., project-based firms), which are beyond the scope of the individual firm's organization. Regarding the various forms of intra-organizational innovation, the diffusion of both structural and procedural organizational innovation was our primary interest. The following forms of structural and procedural organizational innovation were assessed by a representative of the firms surveyed:

a) Structural organizational innovation:

- Project-based work;
- Lean or flat organization;
- Inter-professional (functional) working groups.

b) Procedural organizational innovation:

- Quality-assurance or continuous improvement process (e.g., ISO, TQM);
- Collecting suggestions from workers;
- Teamwork;[44]
- Benchmarking;
- Job rotation;
- Delegation of quality assurance to workers (decentralization).

44 Both teamwork and job rotation are key components of the lean production and 'high-performance work systems,' and the use of teams, in particular, has been the subject of many studies concerned with the impact of new managerial practices on enterprise performance and on the quality of work, including worker satisfaction (Kyzlinková–Dokulilová–Kroupa, 2007).

Among the above-listed new organizational or managerial practices, 'structural organizational innovation' is less often used than its 'procedural' version. This is not by chance, because structural organizational innovation affects both the 'core' components and their relationships within the organization. These types of changes require significant modification in the existing interest and power relations and some degree of participation by various actors in collective learning. On the other hand, successful procedural innovation can be carried out without a radical shift in the core components and their relationships within an organization and requires rather limited learning activity from the actors concerned.

It is clear from the empirical data collected from the company surveys that strong differences characterize the diffusion of organizational innovations in the Hungarian and Slovak KIBS sectors. For example, forms of structural (or radical) organizational innovation such as project-based work, lean organization, and inter-professional working groups are more widely used in Slovak than Hungarian KIBS company practices.

In the case of the diffusion of procedural organizational innovation, the contrast is less marked. Teamwork (89.6% versus 41.7%), quality management (33.0% versus 21.9%), and, particularly, job rotation (28.9% versus 9.7%) are more often used in Slovak than Hungarian firms. However, in Hungarian firms, in comparison with the Slovak practice, quality circles (23.7% versus 14.4%), benchmarking (37.3% versus 21.6%), and collecting suggestions from employees (49.7% versus 41.2%) were more prevalent (see *Table 11.* for more details).

Table 12: Diffusion of new ('leading edge') managerial practices in the KIBS sector

Types of Organizational Innovation*	Hungary n=196	Slovakia n=97
I. Structural organizational innovation:		
Project-based work	34.8%	69.1%
Flat or lean organization	10.7%	13.4%
Inter-professional (inter-disciplinary) working groups	13.4%	36.1%
II. Procedural organizational innovation:		
Quality Assurance and Auditing Systems (e.g., ISO and TQM)	21.9%	33.0%
Collecting suggestions from employees	49.7%	41.2%
Team work	41.7%	89.6%
Benchmarking	37.3%	21.6%
Quality control carried out by rank-and-file employees	23.7%	14.4%
Job rotation	9.7%	28.9%

Note: Attempts to classify different types of organizational innovation based on the approach of Armbruster et al., 2008: 646–647.

In mapping the diffusion of organizational innovation, besides grouping nine forms of organizational innovations into the categories of 'structural' and 'procedural' innovations, we used the four larger classes of organizational innovations listed below:

1. New methods in organizing work (i.e., collecting suggestions from employees, team work, job rotation, and lean organization);

2. Creating new methods to renew external relations (networking)[45] with other firms and public institutions;

3. Implementing new business practices[46] that have an impact on the organizational and labour process; and

4. Introducing new knowledge management methods to improve the quality of information processing and facilitate knowledge sharing.

According to the survey results, there are visible differences in the Hungarian and Slovak company practices in the KIBS sectors. In Slovak business service practices, the share of firms implementing new business practices and new

45 The content of external relations or networking was as follows: alliances, partnerships, and delocalization of business functions.

46 The new business practices covered such activities as supply change management, re-engineering business process, learning organization, renewal education, and training systems.

methods of knowledge management is quite high in comparison to the Hungarian case (Slovakia: 44.3% versus Hungary: 26.1% and Slovakia: 33.0% versus 18.0%). In this regard, it is important to mention that one of the key challenges for high-quality knowledge management (KM) in KIBS firms is how to codify/formalize the working experiences of project-level learning into organizational knowledge.

> In this regard, several options are available. As Salter–Tether (2006: 16) reported, 'In order to help ameliorate some of these problems and to increase the effectiveness of their project performance and knowledge sharing between projects, professional service firms have invested considerable resources in knowledge management (KM). This approach to KM varies, with some organizations investing heavily in technology to capture knowledge through documentation and data, and others introducing cultural change initiatives to encourage knowledge sharing within the organization. These KM systems include electronic networks of practice, expert yellow pages, communities of practice, project repositories, searchable internal records, image libraries and mentoring. They are an important part of the infrastructure supporting innovation in professional service firms, allowing them to capture knowledge from past projects and use this knowledge in the future projects.'

The rate of diffusion of new methods of organizing work and the creation of new methods to renew firms' external relations are similar in both countries (Hungary: 39.3% versus Slovakia: 40.2% and Hungary: 29.9% versus Slovakia: 29.9%). *Table 13.* includes more details of the survey results on this subject.

Table 13: Diffusion of bundles of organizational innovation (multiple answers) in the KIBS sector

Groups of organizational innovation	Hungary n=196	Slovakia n=97
New methods in organizing work (i.e., system for suggestions, team work, and job rotation)	39.3%	40.3%
Creating a new method to renew external relations	29.9%	29.9%
Implementing new business practices (i.e., re-engineering business process and supply-chain management)	26.1%	44.3%
Introducing new knowledge management methods	18.0%	33.0%

After identifying various forms of organizational innovation, our respondents were asked to assess the drivers of implementation of the new organizational concepts and practices. In both countries, the most important driver is the improvement of the efficiency of daily operations. This factor is followed by the motivation to renew the existing knowledge base, adapting to environmental changes, strengthening cooperation within an organization, improving quality and customer service, and increasing the size of the firms. Surprisingly enough, the outsourcing or delocalizing of business services received the lowest assessment among the drivers of organizational changes in both countries. It is noteworthy that such drivers of organizational changes as the renewal of products and services, the renewal of existing knowledge, the increasing size of the firm, and, especially, the outsourcing of business functions play weaker roles in Slovak company practices than in Hungarian ones (see *Table 14.* for more details).

*Table 14: Driving forces behind important organizational changes in the KIBS sector**

Drivers of Organizational Changes	Hungary n=196	Slovakia n=97
Improving daily efficiency of work	73.9%	67.0%
Strengthening cooperation within the firm	61.5%	53.6%
Adapting to environmental changes	62.8%	62.9%
Renewal of products and services	54.3%	36.0%
Renewal of the existing knowledge base	63.5%	33.0%
Outsourcing business functions	36.8%	16.5%
Improving quality and customer service	65.9%	44.4%
Increasing the size of the firm	42.5%	37.2%

Note: Drivers of organizational changes were assessed by managers on a 5 point-scale, where 1= the least important and 5 = the most important factor.

**: Significant at the 1% level, *: at the 5% level.

Finally, regarding the drivers of organizational innovation, *Table 15.* presents the main reasons for the lack of organizational innovation. In the case of Hungary, especially, an important segment of the firms (43%, compared to 12.4% in Slovakia) carried out organizational changes before the reference period (2005–2007); therefore, no further efforts were necessary to modernize the organizational practice. In addition, one third of the Hungarian, and only one

tenth of the Slovak firms' representatives, said that even in the reference period (2005–2007), there was no need for organizational innovation. In the literature dealing with technological and organizational changes, resistance on the part of employees/managers and skill shortages are frequently reported as constraints for these changes. It is noteworthy that, in the present study, such factors were reported by a tiny minority of respondents and in conjunction with a lack of financial resources.

*Table 15: Reasons for the absence of organizational innovation in the KIBS sector**

Factors responsible for the lack of organizational innovation	Hungary n=196	Slovakia n=97
No need for organizational innovation from 2005 to 2007	33.0%	10.3%
Implementation of organizational innovation before 2005–2007; since then, no need for further changes	43.0%	12.4%
Lack of financial resources	6.9%	6.2%
Skill shortage	6.9%	6.2%
Resistance of employees and managers to change	5.4%	7.3%

Note: Employers interviewed assessed these factors on a 5 point-scale, where 1= least important and 5=most important with regard to the absence of organizational innovation.

Comparing organizational innovations from a wider or European perspective, it is worth using some of the results from the international establishment-level surveys carried out just before our company surveys in Hungary and Slovakia. For example, flexible working time arrangements, mobile work, and home-based telework are among the new organizational (working) practices aimed at improving flexibility in the use of manpower and knowledge within the firm. According to the latest European Establishment Working Time Survey (ESWT-2005), Hungary belongs to the 'least flexible country cluster' with Mediterranean countries such as Cyprus, Greece, Portugal, and Italy. On the other hand, Slovenia is located in the 'most flexible country cluster' in the EU countries participating in the survey[47] (see details in *Table 16.*).

47 In the 2005 Establishment Survey on Working Time, in addition to the EU-15 countries, the following post-socialist countries participated: Bulgaria, the Czech Republic, Estonia, Latvia, Poland, and Romania.

Table 16: Measuring the flexibility of working time: Country clusters

Level of working time flexibility	Countries
Most flexible countries	Denmark, Finland, Latvia, The Netherlands, Sweden, and Slovenia
Flexible countries	Austria, Belgium, Estonia, Ireland, and Luxembourg
Less flexible countries	Lithuania, Bulgaria, Romania, and Spain
Least flexible countries	Cyprus, Greece, Hungary, Portugal, and Italy

Source: Vinken–Ester (2006)

Telework and mobile work are the other tools of organizational innovation used to improve the flexibility of manpower.[48] In this field, Hungary (3.2%) was located at the bottom, and, among the EU–15 countries, only Portugal had a smaller proportion of teleworkers (1.8%).[49] Within the group of other post-socialist countries of Central and Eastern Europe (CEE), the highest rate of teleworkers was found in the Czech Republic (16.1%), but, even in Slovakia (11.7 %), the proportion of teleworkers was three times higher than in Hungary.

Due to the fact that the KIBS service sector was characterized by one of the most important concentrations of the so-called 'knowledge workers,' in the company survey, particular attention was given to the sector-level distribution of such forms of organizational and contractual innovations as 'part-time employment,' 'working time flexibility,' 'mobile work,' and 'home-based telework.' The data summarized in *Table 17.* indicate that these forms of organizational innovation are more integrated into Slovakian than Hungarian employment and working practices.[50]

48 There are many varieties of telework, not all of which are connected to innovative or learning organizations. However, as it is clear from the data below, in the majority of them, it is still only the so-called knowledge worker who typically does this kind of work. This is reinforced by the fact that the EWCS questionnaire was designed to obtain information about the intensity of telework carried out at home, and, thus, the service centers and call centers, characteristically organized on Taylorist principles, were omitted.

49 To analyze the data, it is important to know that the EWCS dealt with the general characteristics of the working conditions of European employees. In this sense, it was primarily health and safety at work, working hours, general conditions of employment, and the criteria of tasks that were featured in the questionnaire (the Foundation is based in Dublin and supported by the European Commission and by employer and employee organizations coordinated at a European Union-level). It is, thus, understandable that teleworking (not being a central theme in the survey) was only referred to in one question: 'Please evaluate on the scale below how typical it is of your work that you work at home with the help of a PC.' The 7-point scale ranged from 'Always' to 'Never,' and the options offered to respondents were as follows: 'Always,' 'Nearly always,' 'About ¾ of my working time,' 'About ½ of my working time,' 'About ¼ of my working time,' 'Almost never,' and 'Never.' In our analysis, we interpreted these values to mean that 'Almost never' and 'Never' referred to those not involved in teleworking, while all other responses referred to teleworkers.

50 Comparing the business sector level data to the national one, the following patterns could be identified. In the case of Hungary, the share of mobile workers or home-based teleworkers was several times that reported on the national level.

Table 17: Tools to improve the flexibility of manpower and knowledge use in the KIBS sector

Forms of organizational and contractual innovation	Hungary n=196	Slovakia n=97
Part-time employment	36.1%	58.8%
Flexible working time arrangement	26.1%	76.3%
Mobile work	15.6%	39.2%
Home-based telework	15.4%	51.5%

THE PRACTICE OF ICT USE IN THE FIRM

It is a commonly shared view among scholars of organizational innovation that since the last decades of the 20th century, the term 'knowledge economy' has become a catchphrase for identifying new trends of development. This shift was attributed to the forces of globalization and the growing use of information and communication technology (ICT). According to Ramioul et al. (2006), in contrast to previous technological changes (e.g., automatization), and due to its integrative character, ICT represents an 'organizational technology' that offers to the actors concerned specific opportunities to shape the division of labour and the practices of knowledge use. In this sense, Nielsen (2006: 15–16) added that during the so-called 'take-off' period of ICT in the mid-1980s, 'the more narrow rationalization phase dominated up to the end of eighties; then in the early nineties a more organic, pervasive and information-oriented approach to the use of ICT started to emerge. The importance of thinking of new ICT as an integrative part of new managerial and organization forms became more widely recognized. Even though rationalization was still an important function, information and communication came to be seen as more and more important functions. This development of ICT from pure rationalization towards information and communication functions is in line with the view held by Zuboff (1985); the phases, however, are not 'clean' ... we still empirically presume rationalization to be an important function in the use of ICT.'

Using the extensive quotation from Nielsen (2006), we intend to call attention to the various degrees of embeddedness of ICT in the everyday working and management practice of the firm. It is widely known that ICT plays various

crucial roles in the everyday life of a firm, especially in the service sector.[51] According to our experience, ICT is more intensively used in the KIBS than in the manufacturing sector. This could be explained by the fact that '... ICT process innovation is often a necessary prerequisite for the service innovation in this industry' (Nielsen, 2006: 56).

ICT can be implemented and used in a multitude of functions, such as information processing and communication, and in different fields of firms' activities, such as routine production, research, and development within the business process. Our survey intended to identify the functions in which ICT is employed in KIBS firms in both countries. A crucial role of ICT in the organizational changes or, more precisely, in the diffusion of organizational innovation is widely supported by the results of a recent international study on the restructuring of the value chain in both the manufacturing and service sectors (Flecker–Holtgrewe–Schönauer–Dunkel–Mail, 2008).

As shown in *Table 18.*, ICT is used more extensively in Hungarian than in Slovakian company practices. This is especially true in such basic functions as information processing and communication (Hungary: 68.7% versus Slovakia: 42.9%). In addition, in the development activities, which are emblematic fields for the deeper and more intensive use of ICT, Hungarian firms are again in a better position than Slovakian business service firms (Hungary: 44.9% versus Slovakia: 27.8%).

Table 18: Use of ICT by function and location in the business process in the KIBS sector

Function/location of business process	Hungary n=192	Slovakia n=97
Information processing and communication	68.7%	42.9%
Rationalization of labour process and reengineering company development	34.3%	29.3%
Development activities (e.g., development of knowledge base)	44.9%	27.8%

51 For example, in the U.S.A., more than 70 % of ICT equipment is purchased by service companies. The selection, implementation, and integration of this technology are key factors in their business success (Chesborough–Shphrer, 2006).

4. SKILL REQUIREMENTS AND KNOWLEDGE DEVELOPMENT PRACTICE IN THE FIRM

DIFFERENCES IN SKILL DEVELOPMENT AND THE KEY ROLE OF EXPERIENCE-BASED LEARNING

Section 4 is a report on the issue of knowledge development practices within a firm, and, in this sense, organizational learning indicates '... the capacity (or process) within an organization to maintain or improve performance based on experience. This activity involves knowledge acquisition (the development or creation of skills, insights, relationships), knowledge sharing (the dissemination to others of what has been acquired by some), and knowledge utilization (integration of the learning so that it is assimilated, broadly available, and can also be generalized to new situations' (DiBella–Nevis–Gould, 1996: 363). There is a strong interplay between innovation and the learning process within the organization, and, in this respect, it is noteworthy that there is a complementary relationship between formal education and experience-based learning as Nielsen (2006: 117) summarized:

'To make learning complete and sufficient, with the innovative mode in focus, it is necessary to combine experience-based and reflective learning with the new knowledge achieved from formal training and education. Only in this way does learning become both knowledge-based and experience-based, and may evolve dynamically in the context of the organization ... Competence development and continuous vocational training must form the two sides of the same coin in the learning organization's employment system, and be complementary to its production strategies.'

Skills development and formal training are important preconditions for innovation. However, an individual's ability to perform within a specific job situation is extremely important. 'While qualifications are individually adopted characteristics, built into and carried out by a person, competence as a concept has to do with specific job situations and assignments, and concerns the capacity of an employee to use his or her qualifications in the job situation ... the potential possibilities to act in a specific assignment, situation or context. In line with this definition, competence development as a concept in this context will be defined

as continuous development of experiences, skills, influence, possibilities and responsibilities, related to the job situation, tasks and context of the employees' (Nielsen, 2006: 124).

Prior to describing the knowledge development practices of the firms surveyed, we identified the types of knowledge and skills required by the employers. The most important knowledge evaluated by the employers interviewed in both countries is described as follows:

1. Professional-technical skills (Hungary: 93.7% and Slovakia: 98.1%)
2. Reliability on the job (Hungary: 97.5% and Slovakia: 89.1%)
3. Customer-centred attitude (Hungary: 90.3% and Slovakia: 86.5%)

Evaluating the importance of the various methods of knowledge development in the firm, the following classification was used:

(1) Participation in formal education

(2) Competence development

(3) Improving social skills[52]

In both countries, forms of experience-based ('on-site') knowledge or competence development, such as 'consulting with management/other employees' and 'on-the-job training (OJT),' play a more important role than participation in formal education (e.g., participation in courses/educational schemes and involvement in further training tailored to the needs of the firm).[53] In spite of this common pattern, it is noteworthy that formal training (e.g., standard educational schemes, further training) plays a relatively more significant role in Slovakian business service firms than in Hungarian ones.

The importance of training aimed at improving the social skills of employees (e.g., motivation to cooperate between various organizational units, and job rotation) is located between the 'competence development' and 'participation in formal education.'

52 Besides the briefly presented classifications of knowledge preconditions for learning or innovative organization, another strand of the labour process school makes a distinction between 'learning as acquisition' and 'learning as participation.' Quoting Felstead et al., 2008: 5, 'The former refers to a conceptualization, which views learning as a product with a visible, identifiable outcome, often accompanied by certification or proof of attendance. The latter perspective, on the other hand, views learning as a process in which learners improve their work performance by carrying out daily activities.' This distinction is similar to the distinction of 'formal education' and 'competence development.'

53 According to the experiences of a European-wide project carried out in 13 countries on outsourcing software development in leading IT firms, only 10% of training activities were based on training programs, and the remaining 90% represented on-the-job training (OJT) (Flecker-Holtgrewe-Shönauer-Dünkel-Mail, 2008: 57).

In both countries, 'consulting with managers and other employees' and 'on-the-job training' (or 'learning by participation') were more often used as tools of knowledge development than 'participation in formal training' (or 'learning by acquisition'). In addition to this common pattern of knowledge development, we identified slight differences, too. Such sources of experience-based learning as 'attending professional fairs and expositions' play a more important role in Hungary than in Slovakia, (67.5% versus 44.3%); however, 'job rotation' is organized more frequently in Slovakian than Hungarian business firms (40.1% versus 31.1%). In relation to the development of social skills, the cooperation between organizational units has similarly important roles in both countries (Hungary: 62.6% and Slovakia: 63.3%), but team-work as a widely recognized source of social skill development[54] is more widely used in Slovakian than Hungarian business service firms (74.0% versus 57.1%). *Table 19.* illustrates the methods of knowledge development employed in company practices.

*Table 19: Methods of knowledge development in the KIBS sector**

Methods of knowledge development	**Hungary n=196**	**Slovakia n=97**
I. Participation in formal education		
Standard courses/educational schemes	45.5%	60.4%
Further training designed according to the needs of the firm	64.3%	69.6%
II. Experience-based learning or competence development		
Consulting with management/other employees	80.3%	75.5%
On-the-job training (OJT)	74.1%	70.3%
Attending professional fairs and expositions	67.5%	44.3%
Job rotation	31.1%	40.1%
III. Improving social skills		
Supporting cooperation between organizational units	62.6%	63.3%
Teamwork	57.1%	74.0%

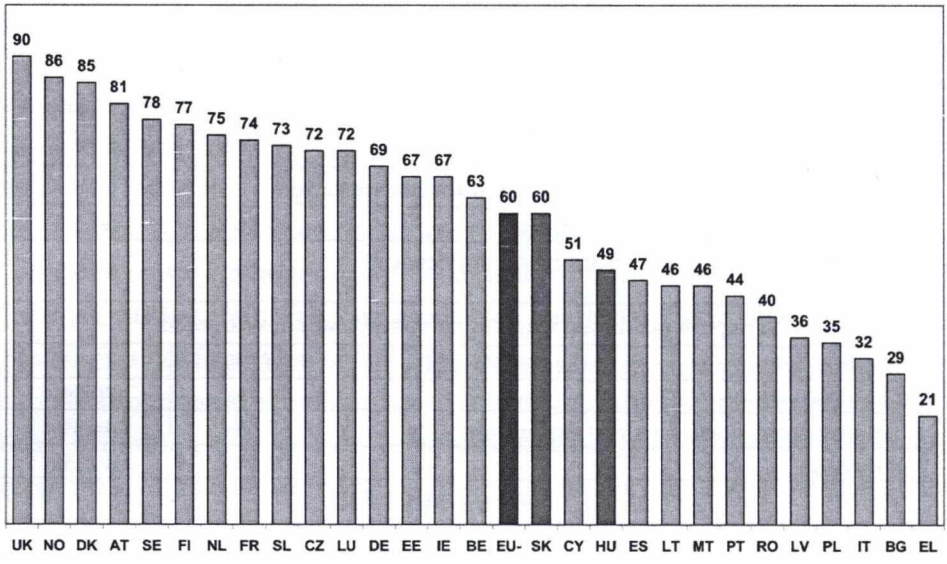
54 Kyzlinková, R.–Dokulilová, L.–Kroupa, A., 2007.

COMPANY TRAINING PRACTICE: MORE TRAINING AND STRONGER RELIANCE ON EXTERNAL KNOWLEDGE SOURCES IN SLOVAKIA THAN HUNGARY

While the previous sub-section focused on the identification of various forms of knowledge development (i.e., participation in formal education, experience-based learning, and improving social skills), this sub-section deals with the issue of company training practice and the role of external knowledge sources.

According to the data stemming from the latest wave (2005) of the European Continuing Vocational Survey[55] (CVTS), European countries vary remarkably in terms of their company training practices.

Figure 1: Distribution of enterprises providing training courses as a percentage of all enterprises by European countries[56] in 2005*



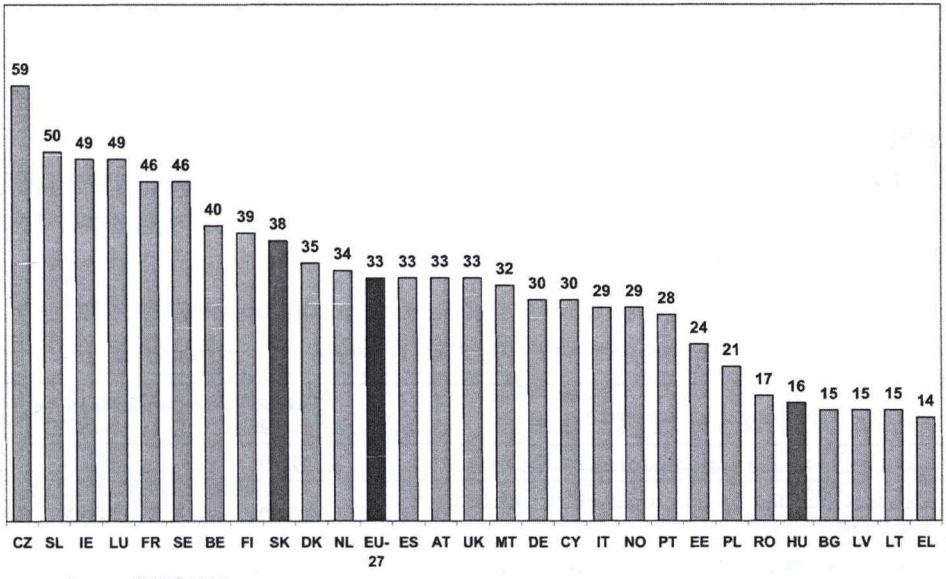
Source: CVTS 2005
* Both formal and informal training

As shown in Figure 1, an average of 60% of European companies provided formal and/or informal training courses to employees in 2005. The UK, the Nordic

55 The Continuing Vocational Training Survey (CVTS) is a European Union-wide representative employer survey on the vocational training practices of European enterprises carried out by Eurostat.
56 EU-27 + Norway

countries (Norway, Denmark, Sweden, and Finland), and some continental countries (Austria and the Netherlands) have the largest proportion of training providers. Among the post-socialist countries, Slovenia, the Czech Republic, and Estonia are in a better position than the EU average. Romania, Latvia, Poland, Italy, Bulgaria, and Greece are lagging far behind the EU average. Slovakia performs around the average, while Hungary is in a weaker position (49%). It is noteworthy, however, that country differences can be partly explained by the various institutional settings of the different vocational training systems (e.g., in UK firms, specific company training plays an important role in the vocational training system, which is not the case in most post-socialist countries).

Figure 2: Percentage of employees participating in CVT courses in 2005 by European countries in 2005*



Source: CVTS 2005
* Both formal and informal training

If we broaden the scope and take not just the proportion of companies that provide training but also the percentage of the employees participating in training activities, the picture becomes more complex. Approximately every third employee participated in company training in Europe in 2005. There are, however, remarkable differences among the European countries. In the Czech Republic, almost 60% of

all employees participated in training courses, and Slovenia, Ireland, Luxembourg, France, and Sweden also performed far above the average in this respect. Romania, Hungary, Bulgaria, Latvia, Lithuania, and Greece are in the worst position within the EU–27. In Slovakia, 38% of all employees took part in formal and/or informal company training, while this proportion in Hungary was only 16%, far below the European average. These data indicate that there are rather large inequalities among Hungarian employees in terms of their access to new knowledge. The low participation rate indicates that the access to and transfer of knowledge within companies, which are prerequisites of innovation and high-value-added economic activities, are limited.

The findings of the joint survey provide a broader insight into the company practices of the Hungarian and Slovakian KIBS firms. Empirical outcomes indicate visible differences in the company practices of the two countries. As shown in *Table 20.*, in Slovakian business service firms, in 2007 every second employee (50.7%) participated in a training course organized and financed by the firms. In the case of Hungary, less than one third of the firms organized and financed training for their employees (31.2%). Employee autonomy in participating in training, again, is stronger in Slovakia than in Hungary (Slovakia: 24.5% versus Hungary: 16.1%). Even in the case of training supported by non-financial means (e.g., working time reduction), Slovakian firms are doing visibly better than their Hungarian counterparts (10.8 % versus 5.4%).

Table 20: The rates of company-supported training

Forms of training and support	Hungary n=196	Slovakia n=97
Courses organized and financed by the firm	31.2%	50.7%
Courses selected by an employee but financed by the firm	16.1%	24.5%
Courses supported by working time reduction	5.4%	10.8%

With respect to the **content of the training**, we found that, in both countries, almost half of the training courses aimed at improving job-related specific knowledge and two-fifths of the employees were involved in the job-specific + general training. In both sectors, less than 10% of employees had a chance to participate in training activities improving their generic knowledge and competencies (e.g., language and communication skills).

Finally, dealing with the knowledge development practices of firms, special attention was given to the role of external knowledge resources. Scholarly consensus among those dealing with innovation is that organizational differences in generating innovation are intimately related to 'absorption' or to the dynamic capabilities of companies. The dynamic capabilities indicate 'firms' ability to integrate, build and reconfigure internal and external competences to address rapidly changing environments' (Lazonick, 2006: 33). In relation to the particular importance of external knowledge in the radical innovation generation process within the KIBS sector, Salter–Tether (2006: 13) stressed that:

'Radical innovations in these industries will typically involve changes to more than one of the triumvirate of the employees' division of labour, technologies, and organization, as their complex intertwining can create powerful barriers to innovation amongst incumbents. Outsiders and newcomers are therefore the main source of more radical innovation. When incumbents do initiate the change (...) this is typically through a new and separate organization.'

Identifying the importance of external knowledge sources, managers participating in the company surveys were asked to assess the role of these sources. *Table 21.* compares the varying external knowledge sources used in Hungarian and Slovakian business service firm practices.

Table 21: External sources of knowledge development (multiple answers) in the KIBS sector

External knowledge sources	Hungary n=196	Slovakia n=97
Customers	79.2%	61.9%
Suppliers, service providers	62.1%	59.8%
External consulting	54.2%	68.0%
Higher educational institutions	27.4%	55.7%
Educational (training) institutions	29.0%	66.0%
Research institutes	19.7%	28.9%
Development agencies	26.5%	23.7%
Labour market agencies, professional associations	25.9%	43.3%

Ranked in order, the experience and knowledge of customers, suppliers, and external consulting are the most important external knowledge sources in both countries,

in comparison to other external knowledge sources such as 'higher education,' 'training institutions,' and 'labour market institutions.' However, these institutions, especially educational (training) institutions and labour market agencies, continue to play more important roles in Slovakian than in Hungarian company practices. We need to include other factors (e.g., R&D expenditure, access to a highly educated and skilled population, and quality of institutions) to better understand the systematic prerequisites for the knowledge-based growth in the countries investigated.[57] However, the relatively stronger reliance on the variety of external knowledge sources in the Slovak KIBS in comparison to Hungary indicates the better innovation and learning potential of Slovak KIBS firms.

57 Veugelers, R. (2010): Assessing the Potential for Knowledge-based Development in Transition Countries. *Bruegel Working Paper*, 2010/01, May.

REFERENCES

Bajzikova, L.–Sajgalikova, H.–Wojcak, E.–Polakova, M. (2009): *Multinational and Local Resources.* – Business Services (Report for Slovakia). Bratislava: Comenius University in Bratislava – Faculty of Management, May. P. 25.

DiBella, A. J.–Nevis, E. C.–Gould, J. M. (1996): Understanding Organizational Learning Capability. *Journal of Management Studies.* 33: 3. May, Pp. 361–379.

Flecker, J.–Holtgrewe, U.–Schönauer, A.–Dunkel, W.–Mail, P. (2008): *Restructuring across Value Chains and Changes in Work and Employment.* (Case Study evidence from Clothing, Food, IT and Public Sector). Leuven: Katholieke Universiteit Leuven.

Kyzlinková, R.–Dokulilová, L.–Kroupa, A. (2007): *Teamwork and high performance work organisation.* Dublin: European Foundation for the Improvement of Living and Working Conditions.

Lazonick, W. (2006): The Innovative Firm. In: Fagerberg, J.–Mowery D. C.–Nelson, R. R. (Eds.): *The Oxford Handbook of Innovation.* Oxford: Oxford University Press. Pp. 29–55.

Leiponen, A. (2004): Knowledge services in the Finnish Innovation System. In: Schienstock, G. (Ed.) (2004): *Embracing the Knowledge Economy.* (The Dynamic Transformation of the Finnish Innovation System) London: Edward Elgar. P. 85–105.

Leiponen, A. (2001): *Knowledge Services in the Innovation System.* Helsinki: Taloustieto Oy in Association with ETLA (The Research Institute of the Finnish Economy and Sitra (The Finnish National Fund for Research and Development).

Mintzberg H. (1979): The Structuring of Organisations. Prentice Hall: Englewood –Cliffs

The MEADOW Guidelines (2010): Measuring the Dynamics of Organization and Work (MEADOW, Project Founded within the 6th FP of the European Commission's DG Research) Grigny (France) P. 386.

Nielsen, P. (2007): From Theories to Themes and Basic Definitions, MEADOW Project (Measuring the Dynamics of Organisations and Work) 6th FP. Aalborg: University Business School, Aalborg. P. 67.

Salter, A.–Tether, B. S. (2006): *Innovation in Services.* (Through the Looking Glass of Innovation Studies) Advanced Institute of Management (AIM), Research's Grand Challenges on Service Science.

Toivonen, M. (2006): Future Prospects of Knowledge-Intensive Business Services (KIBS) and Implications to Regional Economies. ICFAI *Journal of Knowledge Management.* Vol. 4. No. 3. Pp. 18–36.

Valeyre, A.–Lorenz, E.–Cartron, D.–Csizmadia, P.–Gollac, M.–Illéssy, M.–Makó, Cs. (2009): *Working conditions in the European Union: Work organisation.* Luxemburg: Office for Official Publications of the European Communities. P. 59.

Vinken, H.–Ester, P. (2006): *The need for European company surveys*: Some results from panel surveys in the Netherlands and Germany. Paper presented at the First WORKS Conference, Chania, Greece, 21st–22nd September 2006.