

## Chapter 6

### ***Changing Patterns of Skill and Manpower Use: Improving Labour Flexibility - An International Comparison***

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#### **1. Introduction: Some Methodological Problems of Comparative Research**

Due to the radical changes in the economic and political environment in the last 10 years, the international research team was unable to satisfy the ideal type methodological requirements. In relation to that, it is necessary to mention that, in the majority of the countries surveyed, a non-negligent number of firms participating in the 1984 project ceased to exist by 1994-95: it was impossible to re-produce the 1984-85 sample in 1994-95. Another additional change was that an important new group of countries (China, the Czech Republic, Finland, Slovakia, and Spain) is participating in the 1994-95 international survey. Further difficulties were created by the changing statistical system in the period between 1984 and 1994; for example, the system of registration and categorisation of business organisations, too, changed in this period in the post-Socialist countries participating in the international project. These changes forced the national teams in the participating countries to adopt a method which was less expensive than the large scale representative survey. This method represents a preparation of country case studies, which combine the method of a questionnaire survey with the use of secondary information (e.g., analysing documents, papers dealing with the variables investigated by the international research team.).<sup>23</sup>

It is impossible to evaluate the statistical representativeness of our data, but the multidimensional analysis of the variables investigated and the combination of the macro- and meso-level analyses with the firm level certainly have improved the extent of generalisation of the tendencies observed and we may call this research method as a 'documented hypothesis'.<sup>24</sup>

The core methodological aim of this chapter is to call attention on the risk of using identical job categories in the interpretation of attitudes and perceptions of employees surveyed in international comparative studies, including the Denki

23 The national research teams have completed the standard interview and Social Audit with other methods. For instance the Hungarian national research team relied on several kinds of background information, non-structured interviews, firm documents, and national- and mezo-level analysis. Data collected by the standard questionnaires in the international survey were tested, too, by statistical-mathematical methods.

24 Laki, Mihály, (1998), *Kisvállalkozás a szocializmus után (Small Business after Socialism)*, p. 182, (Budapest: Közgazdasági Szemle Alapítvány).

Rengo project, too. By evaluating the tendencies in variations and changes in the job structures of people surveyed, we may get an insight into the heterogeneous character of task structure having identical job title. For example, terms such as 'blue collar worker', 'technical employees', and 'managers' are often used as independent variables representing identical task structures across the nations in measuring the level of loyalty (or commitment) or satisfaction of employees.

In this chapter - using the above mentioned approach - we intend to identify the changes in the task (or job) structure of various socio-professional groups (e.g., blue collar workers, technical employees, and managers) and to criticise the practice of international comparative research using identical job titles without any reservation. Following the illustration of the variety in the task structure in the case of same job title, we turn our attention to changes in degree and patterns of employee commitment to the firm.

## **2. Significant Differences in the Manpower and Skill Use**

According to the experiences of the Denki Rengo Project, the content of jobs and places occupied by different kinds of job holders (e.g., blue collar workers, administrative and technical employees, supervisors, *etc.*) in a factory environment are shaped by the practice of manpower and skill use in the firms surveyed. Through analysing the patterns of manpower use in the various sectors of production - for instance production, maintenance, quality control, *etc.* - it is possible to understand both 'functional mobility' of the manpower and also the elements of the manpower flexibility.<sup>25</sup>

To facilitate the analysis of the national patterns of manpower use, we distinguish among the following groups of tasks carried out by employees:

- (1) Direct production related activities (e.g., machine operation and assembly work, repair and maintenance, quality control).
- (2) Indirect production related activities (e.g., programming, product and process development).
- (3) General / co-ordination related activities (e.g., supervision, administration, sales).<sup>26</sup>

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25 'Flexibility represents individual or collective capacity (in the labour market or in the organisation) to cut with old habits and patterns of behaviour and to learn new one or adapt to the new social-cultural and economic conditions.' (Dahrendorf, Ralf, (1986), *Labour Market Flexibility*, (report by high level group of expertise to the Secretary General), p. 6, (Paris: OECD)).

26 Differences in the practice of manpower use are influenced strongly by the pattern of work organisation of plants / workshops. One of the most important dimensions of the work organisation is the task structure; during the survey, the people interviewed were asked to rank the types of tasks they were doing (several types of tasks could be selected). During the sur-



As a starting point - using the techniques of mathematical / statistical analysis<sup>27</sup>, the countries participating in the project were classified into different groups on the basis of the task structure carried out by the persons surveyed. This provided the means to understand the possible differences in the job content of *the same job title existing in different countries*. The second step was to try to identify the key characteristics of the different groups of job titles obtained. Finally, following the country (or international) comparison of the task structure in different jobs, we looked for the factors which could explain the degree of division of labour in Hungarian firms within the groups of various job titles.

## **2.1 Blue Collar Workers**

Blue collar workers represented the most stable category of jobs. The great majority of blue collar workers (100% - with the exception of Slovakia) started their careers in the firm as blue collar workers and are still working under the same job title.<sup>28</sup> In this respect, the majority of the countries participating in the international project represent a similar tendency. Only Slovakia, Spain, and China differ slightly from the general pattern: in the blue collar worker category in these countries, a noticeable proportion of blue collar workers started their professional career as technical employees (technicians or engineers).

The share of the blue collar workers who started to work as managers is extremely low - less than 4%. In 6 countries (France, Germany, Hungary, Italy, China, and Finland) we could not find any blue collar workers who had ever held a supervisory (or managerial) job.

The highest level of education of blue collar workers was the 'compulsory school' or school giving vocational training qualification. In the following 6 countries, the great majority of blue collar workers have a compulsory school degree and vocational training: South Korea, Japan, Czech Republic, China, Poland, and Slovakia. The highest rates of blue collar workers with a secondary school degree were found in the Polish, Slovakian, Swedish, Hungarian, Italian, and Spanish plants, and workers with college (university) degrees were found only in the Spanish and Chinese factories surveyed. Concerning further training,

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vey 10 years ago, they were asked to indicate only one, the most characteristic or dominant task. Due to this difference in the technique of questions formulated, the comparability of the data of 1984-85 with those of 1994-95 is limited.

27 Within the methods of multi-variant statistical analysis, special tools and an algorithmic process were developed to create typology and combination of groups. The method of cluster analysis was used in our data processing. In the cluster analysis, the country data were used by particular job title.

28 The so-called job mobility analysis was carried out by comparing the present job with the first job in the following 3 job categories: blue collar workers, technical employees, and managers. The method is suitable to describe the intra-generation mobility.

a lack of participation of employees in company training schemes was found in the post-Socialist countries (Hungary, Czech Republic, Slovakia, and Slovenia) and in Spain. The proportion of employees who did not participate in further training was extremely high among blue collar workers (45-73%). The recent nation-wide survey carried out in Hungary in a large sample of the firms ( $n = 1,048$ ) reveals that problems with keeping and training workers rank low on the list of problems facing companies: only 8.5% of managers reported that labour questions of any kind limited the development of their firms.<sup>29</sup> However, in the French plants investigated we did not find any blue collar workers who did not attend further training and in the Swedish plant more than 3/5 of blue collar employees participated in retraining courses.

In the majority of the countries surveyed, blue collar workers are employed under contracts for an 'unspecified period', but in Hungary, Slovenia, and Sweden, the share of the so-called 'fixed-term' labour contract is noticeable (11.2%, 8%, and - respectively - 7.3%). *It is worth noting that 10 years ago - at the time of the first Denki Roren Survey - workers with ' under 1% of the blue collar workers.*

The results of the cluster analysis of task structures are summarised in Table 1 (page 143).<sup>30</sup> The following 2 groups could be distinguished. The first group contains 9 countries (Hungary, Italy, Czech Republic, Slovenia, China, Korea, Poland, Slovakia, and Spain), the second group comprises only the 2 North European countries (Sweden and Finland). Outside these 2 groups, 3 countries could be distinguished, among them Japan and Germany, where workers have more varied task structures.

Table 1 (page 143) illustrates the great variety in the task structures of the blue collar workers. Comparison of blue collar worker task structures shows that *the Japanese, German, Swedish, and Finnish workers are carrying out the most varied tasks: in these countries, blue collar workers not only carry out production related tasks, but also carry out regularly repairs, maintenance, and quality control. The most one sided or most fragmented tasks are found in the Polish, Slovenian, and Hungarian plants, where a significant segment of the blue collar workers are carrying out only 1 or at maximum 2 types of tasks.*

29 Ellingstad, Marc, (1997), 'Maquilladora Syndrome: Central European Prospects', in *Europe Asia Studies*, Vol. 49, No.1, p. 15.

Kasahara, Kiyoshi, and Makó, Csaba, (1996), *Manpower and Skill Use in the Transformation Process (The Case of the Post Socialist Firms)*, p. 131, (Tokyo: Rikkyo University and Budapest: Institute for Social Conflict Research).

30 The cluster analysis aimed to classify individuals or their characteristics into classes. See the general description of this method in Anderberg, M. R., (1973), *Cluster Analysis for Applications*, (New York: Academic Press), and Füstös László-Meszána, György-Simonné, and Mosolygó, Nóra, (1977), 'Cluster analízis: Fogalmak és módszerek', in *Sigma*, No. 3.



French workers specialised in 3 kinds of tasks (e.g., machine operation, maintenance, and product development). However, among these workers we could not find any dealing with quality control, programming, process development, supervision / co-ordination, sales, and administration related tasks. On the other hand, in the German and Japanese plants, blue collar workers participate more than the average in general supervisory and indirect production tasks.

**Table 1:** *Blue Collar Workers and the Content of Job (Aggregated Data on the Differences and Similarities of Clusters)*

Country	Machine operator and assembly	Maintenance	Quality Control	Programming	Product development	Process development	Supervision	Sales	Administration	Total
Group 1	-	--	--	-	-	o	-	o	-	-----
Group 2	++	++	+++	o	-	o	o	o	-	+++++
France	---	++++	-----	-	+++++	-	-	-	-	+
Germany	+++	+++++	+++++	++	+	o	+	+	++	+++++
Japan	---	+++++	+++++	++	-	++	++++	-	+++	+++++
Average (%)	70.19	22.15	23.81	2.46	5.19	2.10	4.19	1.86	4.81	136.62

**Notes:** o ≤ 1% deviance (in positive or negative direction) from the country's average. If this deviance is stronger, then:

- + positive deviance from the country's average;
- negative deviance from the country's average.

The number of marks indicate the degree of deviance from the countries' average:

- + 1 - 5% deviance;
- ++ 5 - 10% deviance;
- +++ 10 - 15% deviance;
- ++++ 15 - 20% deviance;
- +++++ 20 - 25% deviance;
- ++++++ > 25% deviance.

It is worth noting that the German and the Japanese plants surveyed have the highest proportion of blue collar workers dealing with quality control: every second worker is responsible for quality control in addition to production related tasks. The proportion of workers who are taking care of quality control is also high in the Swedish, Finnish, Korean, Hungarian, and Italian plants: in these countries almost 1/3 of the blue collar workers surveyed are responsible for quality control. The proportion of workers dealing with quality control is strikingly low in the following countries: Slovakia, Spain, Poland, and France.

Comparing the changes between 1984-85 and 1994-95, the increased priority of quality control within the task structure of the blue collar workers' jobs is remarkable. This tendency is especially clear in the Japanese, German, and Hun-

garian plants where in comparison with the 1984-85 results, blue collar workers are carrying out a 4-5 times higher proportion of quality supervision. (See Table 2 below.)

**Table 2:** *Proportion of Blue Collar Workers Involved in Quality Control (%)*

Country	1984-85	1994-95
France	21.30	00.00
Italy	13.10	24.80
Germany	12.80	48.60
Japan	11.60	52.70
Slovenia	7.30	17.90
Poland	6.90	4.50
Hungary	5.30	25.10
Average	11.19	24.80

## 2.2 Technical Employees

Technical employees have a more varied professional mobility than blue collar workers. For the majority of them (from 54.5% to 88.1%), the first and the present jobs are the same. The only exceptions from this pattern are the Finnish and Slovakian plants: in the former case almost 2/3 of technical employees started their careers as blue collar workers, while in the Slovakian plants, the first and the present jobs were the same for 46.9% of technical employees, 34.4% started their careers as blue collar workers and 15.6% had an administrative background.

A significant minority of technical employees (technicians and engineers) have 'blue collar backgrounds'. In addition to the Finnish and Slovakian plants, technicians with blue collar background were to be found (from 22.5% to 40.9%) mainly in the German, Swedish, Italian, Chinese, the Czech Republic, and South Korean plants. We found the highest proportion of technical employees who started their career as administrative employees in the Slovakian (17.6%) and Spanish (15.6%) plants. A relatively high number of technical employees moved from supervisory jobs into technical ones (between 3.1% and 14.5%) in the Polish, Hungarian, the Czech Republic, German, Spanish, and Slovakian plants - in other countries this pattern of professional career represents less than 1-2% of the respondents.

The proportion of women among the technical employees is relatively high (20-30%) in Spain, South Korea, China, and in the post-Socialist countries (Slovakia, the Czech Republic, Poland, Slovenia, and Hungary).

Among technical employees secondary school and high school degrees are typical. For instance, in the French and Hungarian plants, 2/3 of technical employees have a high school degree. In contrast, in the Japanese and South Korean plants, more than 3/4 of technical employees have professional diplomas as the

highest degree level. In the German plants, more than half of the technical employees did not participate in any further training after their obligatory training.

In 5 countries (the Czech Republic, Japan, Slovakia, South Korea, and China) more than 25% of technical employees did not participate in further training. An important segment of engineers (35%) in Hungary and in Spain of technicians (50%) did not attend any further training courses.

Using cluster analysis, we identified the similarities and dissimilarities in the task structures of technical employees. (See Table 3 below.)

**Table 3:      *Job Profiles of Technical Employees (Table Summarising Similarities and Dissimilarities of Different Clusters)***

Country	Machine operator and as- sembly	Main- tenance, repair	Quality control	Program- ming	Product develop- ment	Process develop- ment	Super- vision	Sales	Adminis- tration	Total
Group 1	--	o	--	-	-	++	--	-	-	-----
Group 2	+	-	+++	-	++	++++	++++	++	++	+++++
Group 3	+++++	++	++++	---	-----	---	--	-	--	---
Group 4	--	-	---	++++	+++++	---	o	-	+	++
Average (%)	12.37	15.07	27.21	18.64	37.31	24.29	16.71	7.22	18.09	177.50

Notes: o      ≤ 1% deviance (in positive or negative direction) from the country's average. If this deviance is stronger, then:

- +                positive deviance from the country's average;
- negative deviance from the country's average.

The number of marks indicate the degree of deviance from the countries' average:

- +                1 - 5% deviance;
- ++              5 - 10% deviance;
- +++            10 - 15% deviance;
- ++++           15 - 20% deviance;
- +++++        20 - 25% deviance;
- ++++++       > 25% deviance.

According to the results of the cluster analysis, the countries surveyed could be classified into 1 large and 3 small groups in respect to 'range of tasks' carried out by technical employees. *In the 1st and large group* belong the following countries: Hungary, Slovakia, Sweden, Italy, Slovenia, Spain, and Poland, where *the majority of technical employees are specialised* and carry out 1 or a maximum 2 kinds of tasks. Czech, German, and Finnish plants belong to *the 2nd group*, where technical employees are the so-called '*generalists*': they are carrying out a great variety of tasks. In addition, Korea and China comprise *the 3rd group*, and Japan and France *the 4th group*. In the countries belonging to the 3rd group, the core tasks of technical employees relate to direct production activities



(e.g., machine operation, maintenance, and quality control). While, in the countries belonging to the 4th group, technical employees are carrying out not only directly production related tasks, but the majority of them are dealing with programming and product development tasks, too.

Comparing the 1994-95 period with 1984-85, the participation of technicians and engineers in product and process development related activities has increased: from 2 to 3 times more technical employees are carrying out these types of tasks. At the same time, we notice a strong polarisation of the technical employee's role in the field of supervisory / co-ordination type tasks. (See Table 4 below.)

It is worth mentioning that the proportion of Japanese and German technical employees who are dealing with supervisory and co-ordination types of tasks increased by more than 10%. In the post-Socialist countries the opposite tendency is visible: the proportion of technicians and engineers having supervisory and co-ordination responsibilities has declined compared with the task structures in 1984. *As for blue collar workers, the importance of quality control has increased for technical employees, also, especially in the German, Hungarian, and Japanese plants surveyed.*

**Table 4:**      *Technical Employees and Changing Task Structure (%)*

Country	Quality Control		Supervision / Co-ordination	
	1984	1994	1984	1994
France	7.90	4.00	16.80	12.00
Italy	10.50	23.20	22.40	26.60
Germany	8.80	40.90	8.80	23.80
Japan	9.70	21.70	1.00	20.00
Slovenia	21.90	15.90	5.60	4.30
Poland	17.30	23.90	11.70	7.50
Hungary	7.80	26.70	12.00	3.30
Average	11.99	22.33	11.19	13.93

### 2.3 Managers

Managers have had the most varied job mobility pattern, differing between countries in the following way:

(1) In the Czech, Hungarian, and Swedish plants, the majority of managers *started their professional careers* within the company as *blue collar workers or technical employees*. In these countries a tiny minority of managers started their careers as managers. At the same time, in the Czech plants, 1/5 of managers started their careers as administrative employees, while in the Hungarian plants we could not find any manager whose first job was either supervisory or administrative.



(2) In France, Italy, South Korea, and Spain, the proportion of managers whose *first job was a supervisory or administrative* one is noticeably high. These countries have the lowest proportion of managers who started their career as blue collar workers.

(3) In a 3rd group of the countries, the proportion of managers who *started their company careers either as blue collar workers or technical employees* and whose first jobs were either *technical or supervisory* is noticeably high. Germany, Japan, Poland, Slovakia, Slovenia, and China belong in this group. (It should be noted, though, that the Japanese sample included only first level managers, unlike the other samples.) In this group of countries, investigated employees have the most balanced chances to achieve supervisory positions. The only exceptions from this tendency are the German and Chinese plants: in the 1st case, no one became manager from an administrative job, and in the 2nd case very few administrative employees became supervisors.

(4) The 4th group of countries surveyed is characterised by *managers who started their careers as managers*. In the Finnish plants investigated, the great majority of managers (73.1%) started their careers as managers.

During the decade following the first survey the 'recruitment pattern' of managers changed dramatically in the majority of the countries investigated. For instance, 10 years ago, almost 2/3 of French managers started their careers as managers and only 25% of technical employees and not more than 2% of blue collar workers had the opportunity to become a manager. Contrary to this tendency, the 1994 survey shows that almost every second technical employee (47.4%) and every tenth blue collar worker had a chance to become manager. The chances of becoming a manager thus increased during the last 10 years.

Evaluating the changes in the 10 years between the 2 Denki Roren surveys, we may identify the following patterns in the countries observed. For example, in the *Hungarian case*, in 1984-85, 1/5 of managers started their careers as managers or administrative employees. Ten years later, we could not find any manager who started his or her career as a manager or administrative employee. At the same time, the proportion of managers who started their careers as technical employees increased from 27.3% to 48%. In Germany, 10 years ago, 23.1% of managers started their careers at the firm surveyed as administrative employees and only 7.7% of them as managers. Ten years later, we could not find any manager whose first job was administrative and 28.6% of them started their careers as managers. Ten years later more managers were recruited from the blue collar worker group: the share of managers who came from the blue collar worker category increased from 34.6% to 42.9%. The most important changes were registered in the Italian plants, where in the middle of the 1980s, more than half of the managers started their careers as blue collar workers, 14.3% of them began their factory life as administrative employees, and 28.6% as technical employees, but none of them had managerial positions from the beginning. According to the

data from the 1994 survey, only a very small group of managers (7.4%) was recruited from amongst blue collar workers, but almost 1/3 (29.6%) started their careers as administrative employees, nearly 1/2 of them (44.4%) were technical employees in their first job, and almost 1/5 of managers (18.5%) started their careers as managers.

Concerning the recruitment pattern of managers, the least significant changes were registered in the Polish plants surveyed: like 10 years ago, the majority of managers are recruited from blue collar workers and technical employees, but a similarly significant share of managers started their careers as managers or administrative employees. (We have to note in parenthesis that the rate of female managers is higher in the post-Socialist countries where the 'double wage earner' model is strong.)<sup>31</sup>

The youngest managers - measured by average age - were found in the German, Italian, Slovakian, Slovenian, Swedish, and South Korean plants, while the oldest ones in the Czech, French, Hungarian, Polish, and Spanish plants. Comparing the highest level of education in the 14 countries surveyed, the blue collar workers' category is the most homogeneous and the category of managers is the most heterogeneous. In 4 countries (Spain, Slovenia, Slovakia, and Italy), more than half of the managers received a high school or university degree. In the group of another 4 countries (Hungary, South Korea, China, and Germany), the great majority of managers have a university degree but a significant number of them have a secondary school degree only (e.g., in the German plants). Only in the remaining 5 countries (the Czech Republic, France, Poland, Sweden, and Finland) the secondary degree is the dominant - it is interesting to note that among the Japanese supervisors vocational training is significant.

The majority of managers in the countries investigated participated in further training programmes. However, among the Japanese, South Korean, Chinese, and Slovenian middle and top managers and the Czech and Hungarian supervisors (or first line managers) over 50% of them did not attend any professional training programs.

The *managerial task structure* shows significant differences amongst the 14 countries. Using cluster analysis, the following 2 groups of countries could be distinguished: the first group is composed of France, Slovenia, Spain, Hungary, Sweden, China, Italy, and Poland. The following countries belong to the second group: the Czech Republic, Japan, South Korea, and Slovakia. The differences in the managerial task structures illustrated by these 2 groups of countries show the

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31 In 8 countries surveyed (China, Slovenia, the Czech Republic, Hungary, Spain, Sweden, Slovakia, and Poland) more than 2/3 in the families, male or female, are wage earners. Among the managers, the highest rate of female managers was found in China (almost 2/3 of managers). One fifth or 1/4 of managers are female in the following countries: Hungary, the Czech Republic, Poland, and Slovakia. Only from 10 to 20% of managers are female in Sweden, Italy, Slovakia, and Spain.



risks of mechanically comparing the same job title (e.g., managerial job) across countries. In addition to this, it is worth calling attention to the variety of social and cultural conditions influencing the diffusion of modern or 'leading edge' managerial methods and practices in the post-Socialist countries of Central and Eastern Europe. *The main difference between the 2 groups of countries lies in the degree of specialisation in managerial work.* The supervision (or control) of subordinates represents the core content of managerial work in the first group of countries. Managerial work is much more varied in the second group of countries surveyed. (See Table 5 below.)

**Table 5:** *Variations in the Managerial Job Structure (Summary of Similarities and Dissimilarities amongst Clusters)*

Country	Machine operator and assembly	Maintenance, repair	Quality Control	Programming	Product development	Process development	Supervision	Sales	Administration	Total
Group 1	-	-	---	-	-	-	---	--	----	-----
Group 2	++	o	++	+	---	-	++++	+	+++++	+++++
Finland	o	---	+	+	+++++	+++++	----	+++	+++++	+++++
Germany	++	+++++	+++++	+++++	+++++	+++	+++++	+++++	+++++	+++++
Average (%)	10.34	12.61	27.86	10.65	20.57	19.56	65.73	16.56	29.77	213.66

Notes: o  $\leq 1\%$  deviance (in positive or negative direction) from the country's average. If this deviance is stronger, then:

- + positive deviance from the country's average;
- negative deviance from the country's average.

The number of marks indicate the degree of deviance from the countries' average:

- + 1 - 5% deviance;
- ++ 5 - 10% deviance;
- +++ 10 - 15% deviance;
- ++++ 15 - 20% deviance;
- +++++ 20 - 25% deviance;
- ++++++ > 25% deviance.

In the countries belonging to the second group, managers carry out 3 kinds of tasks during their daily activities: they take care not only of the supervision of their subordinates, but they also pay attention to administration, quality control, machine operation, and programming. Beside the 2 distinctive groups of countries, we may identify further differences in the case of Finnish and German plants. The distinctive feature of the *Finnish managers* is that they pay attention more than the average to the tasks related to the product and process development, and are less interested in the direct control (or supervision) of their subor-

dinates. The German managers are 'generalists', their tasks are more varied than those of the managers belonging to the second group of countries investigated.

It is interesting to note that in 5 countries (Germany, Japan, Hungary, Finland, and the Czech Republic), more than 60% of managers carry out tasks directly related to production in their daily work. Amongst these, the task of 'quality control' is the dominant one; 83.3% of the German, almost 1/2 of the Japanese, 41.2% of the Czech, and more than 1/4 of the Finnish and Hungarian managers are dealing with quality control related activities. *The role of 'quality control' became important not only generally in supervisory work, but also in comparison with 10 years ago.* Moreover, in comparison with the situation in 1984, managers are paying more attention to production related tasks in general. Besides quality control they are also supervising more closely such tasks as machine operation and assembly. However, in the Italian and Slovenian plants, participation of managers in direct production decreased, and in France we could not find anymore managers responsible for production related tasks as in 1984. (See Table 6 below.)

**Table 6:** *Participation of Managers in Production Related Tasks (%)*

Country	Machine operation and assembly		Quality control	
	1984	1994	1984	1994
France	0.00	0.00	1.40	15.80
Italy	14.30	10.30	0.00	24.10
Germany	3.80	16.70	7.70	83.30
Japan	6.70	10.10	9.60	48.80
Slovenia	4.70	0.00	2.80	19.60
Poland	1.60	7.70	7.90	4.60
Hungary	1.70	12.00	0.80	28.00
Average	4.69	8.11	4.31	32.03

Another interesting change visible in the nature of managerial work is the *increasing importance of supporting activities* (both R&D into product and process development) in the 1990s. Ten years ago, only 7% of managers were involved with product development and 5% in process development. In 1995, 25% of managers were dealing with product development and 15% were carrying out process development related tasks. The increase of the development related tasks is higher than the average in the German plants surveyed: in 1984 only 4% of the German managers were involved with product development tasks and none of them participated in process development, but 10 years later, more than 40% of German managers are engaged in product development and 1/3 in process development related tasks. Table 7 (page 151) shows the importance of the product and process development tasks within managerial work.



Finally, it is worth noting that, in the case of managers with more varied task structures (the second group distinguished by cluster analysis), the role of administration is more important in comparison with managers who are dealing exclusively with the supervision of subordinates (countries belonging to the first group distinguished by cluster analysis).

**Table 7:      *Roles of Managers in Development Related Activities (%)***

Country	Product development		Process development	
	1984	1994	1984	1994
France	30.60	21.10	6.90	10.50
Italy	0.00	27.60	14.30	20.70
Germany	3.80	42.90	0.00	33.30
Japan	3.50	8.90	1.40	10.10
Slovenia	3.70	16.10	2.80	8.90
Poland	4.80	3.10	9.50	-
Hungary	4.10	20.00	3.30	20.00
Average	7.21	19.96	5.46	14.79

### **3. Degree and Types of Commitment to the Firm**

During the survey, the international research team identified the main characteristics of commitment to the company through an investigation of firm related feelings. The following hypothesis was used: in the case of employees who are eager to make a maximum effort, behaviour is shaped by the long-term interest of preserving the employment level in the company. This pattern of company loyalty is often called 'moral commitment'. Employees whose performance is influenced by the present level of the company reward system are motivated by their short run financial interests. If they do not care about the company's related problems and express no commitment to the firm, then this behaviour is assumed to be conditioned by the primary need for everyday survival. Scholars dealing with socio-cultural dimensions of the business organisations usually called the core pattern of European firms 'Gesellschaft' and that of Asian firms 'Gemeinschaft'.<sup>32</sup>

In the Denki Rengo survey, organisational commitment was measured basically by the following question: 'What are your feelings towards the company: (1) "I would like to put my best effort."; (2) "I give as much as the company gives."; (3) "I do not have much feeling towards the company."; (4) "Indiffer-

<sup>32</sup> In relation with the organisational loyalty, several scholars make distinction between 'Gemeinschaft' and 'Gesellschaft' type firms, where the 1st represents 'moral commitment' (or commitment without preconditions) and the 2nd the 'instrumental commitment' based on economic calculation. (See in detail: Odaka, Kunio, (1986), 'Japanese Management: A Forward-Looking Analysis', in *Asian Productivity Organisation*, pp. 26-7.)

ent."?). Among these items we compared the answers representing 'moral commitment' (item 1) and 'instrumental commitment' (item 2).

Following this logic of firm level socio-cultural relations, we expected that the majority of Japanese employees surveyed would have 'moral commitment' to the firm: instead of that, only less than the average 20.2% were eager to make maximum effort for the company's success. Whereas, the attitudes reflecting short-term financial (or 'instrumental') commitment to the firm among the Japanese employees are much higher than the average: 55.4% compared with 46.9% average. Even the proportion of workers having no special feelings towards the company is higher among the Japanese employees (24.4%) than the sample average (15.5%). This briefly presented '*commitment pattern á la Japanese*' was found in the following countries: France, Hungary, and South Korea.

Looking at the scale of loyalty to the firm, the Finnish employees have the strongest commitment - or are eager to make maximum effort for the success of the company (63.0%), followed, in ranking order, by Chinese (55.3%), Spanish, and German employees (50.0%). However, the majority of employees participating in the international survey intend to 'make as much effort as the company rewards them'. In this respect the countries investigated could be categorised into the following 2 groups:

- (1) countries where the proportion of workers who are motivated by moral commitment to the firm is higher than the sample average of 33.7% (China, Finland, Germany, Spain, Slovenia, Slovakia, Sweden, and Poland);
- (2) countries where the proportion of workers who are motivated by instrumental commitment to the firm is higher than the sample average of 55% (Japan, the Czech Republic, and Hungary).

In 2 countries (Slovenia and Sweden) we have found that both types of commitment ('moral' and 'instrumental') are strong. Evaluating the countries according to the indifference of employees, this is the strongest in 3 countries: Japan (24.4%), South Korea (25.8%), and France (26.7%). (See Table 8, page 153.)

(Changes in types and levels of commitment of Japanese employees presented above are also supported empirically by the experiences of the annual survey carried out by the research centre of the steel workers trade unions.)<sup>33</sup>

It is not surprising that it was in the managerial group that the strongest commitment towards the firm was found: among the most loyal employees. In 4 countries, however, even in the managerial group significant numbers expressed rather indifferent feelings with reference to the problems of the company. For example, in Korea 23.1% of managers, in Italy 17.9%, in France 15.8%, and in Japan 11.3% were indifferent to any matters / problems concerning the company.

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33 Shiraiishi, Toshimasa, (1994), 'Current Conditions and Educational Training in Japanese Steel Industry', in Makó, Csaba, and Novoszáth, Péter (eds.), (1994), *Convergence versus Divergence. The Case of the Corporate Culture*, (Budapest: Dunatáj Kiadó).



Contrary to this situation, in Germany, Hungary, Slovakia, Spain, and Finland we could not find any managers who did not express their concern - or various levels of commitment - to the company.

**Table 8:**      *Commitment to the Firms by Countries (%)*

Country	'Put my best efforts towards the company's success'	'Give as much efforts as the company gives to me reward'	'Indifferent to any matters concerning the company'
Hungary (n = 403)	28.3	57.2	14.5
Czech Republic (n = 382)	36.7	55.4	7.9
Japan (n = 978)	20.2	55.4	24.4
Slovenia (n = 632)	44.8	50.6	4.6
France (n = 105)	23.8	49.5	26.7
Italy (n = 756)	34.9	45.8	19.4
Slovakia (n = 411)	43.6	45.7	10.7
South Korea (n = 744)	28.8	45.4	25.8
Spain (n = 168)	50.6	43.5	5.4
Sweden (n = 566)	41.9	49.9	14.8
Poland (n = 624)	41.0	42.9	16.0
Germany (n = 131)	52.7	41.1	5.4
China (n = 548)	55.3	33.5	10.1
Finland (n = 358)	63.0	32.5	3.6
Total (n = 6,806)	37.7	46.9	15.5

Comparing the groups of blue collar workers and technical employees, we find that they expressed almost to the same extent, either strong feelings (or moral commitment) or had no feelings (lack of commitment) towards their companies: 86-90% of employees belonging to these 2 occupational groups expressed commitment (moral or instrumental) towards their company. In relation to the various types of identification with the firm, the majority of blue collar workers have instrumental identity (instead of moral) towards the company. However, in some countries (e.g., France, China, and Finland) the so-called moral commitment is dominant even among blue collar workers.

Concerning the employees who are indifferent towards the company, it is necessary to mention that the proportion is quite high in the South Korean, Japanese, Polish, and Italian plants. In 3 countries of this group (Japan, Italy, and South Korea) significant numbers of technical employees have no particular feelings towards the company. The highest proportion of indifferent technical employees was found in the French plants, where a third of them had no feelings towards their company's problems.

Finally, the majority of blue collar workers (between 73.3% and 95.5%), surveyed in the electric and electronic machine industry expressed strong organisational commitment based either on instrumental or moral orientation.

We will now consider the results on commitment towards the company in conjunction with the survey results on 'social integration'.<sup>34</sup> In measuring social integration the following 2 dimensions were used:

- (1) vertical social integration (measured on 4 items): (1.1) 'Are you satisfied with the relationship with your boss?'; (1.2) 'Do you believe that the top management has the same interests as you?'; (1.3) 'How far do the decisions of plant management reflect your opinions?'; (1.4) 'How far do the decisions of the local union reflect your opinions?';
- (2) the degree of horizontal social integration was measured by 2 items: (2.1) 'Are you satisfied with the relationship with your co-workers?'; (2.2) 'Do you believe that those in the same job as you have the same interests as you or not?'

The 2 vertical social integration indicators measure the extent to which employees' opinions are reflected in the decisions of management and the local union. We calculated special indicators by taking the proportion of positive attitudes and deducting the proportion of negative attitudes. In 7 countries (Italy, Japan, Sweden, China, Hungary, Finland, and France) the indicator was positive in the case of the management's and local union's decision. In 3 countries (Germany, the Czech Republic, and Slovakia) the indicator was negative. In 5 countries (France, Sweden, Finland, Slovakia, and the Czech Republic) workers are particularly well integrated into the firm, compared with workers in other countries. Surprisingly, Japanese and German workers - in comparison with others - expressed strong negative satisfaction with horizontal social integration.

#### **4. Concluding Remarks**

As for *social origin*, it has been found that, out of the blue collar, technical employees, and managerial strata, blue collar workers form the most homogeneous and the most closed (self-reproducing) group: the great majority of them - with the exception of the Slovakian case - started their careers as blue collar workers and are still working as blue collar workers. The restrictive nature of the socio-occupational group of blue collar workers 10 years ago is indicative of a lack of internal (or job) mobility within the firm. More mobile societies would be more flexible because of a better collective utilisation of the social and professional knowledge (experience) of different socio-professional groups. Managers have the most varied professional trajectory: comparing first with present job, we may say that the majority of them started their professional careers as blue collar workers, technical (administrative) employees, and supervisors. Only a minority of them began their careers as managers (e.g., Finnish managers).

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34 Edling, Christofer R., (November 1996), 'Social Integration and Organisational Commitment: A theoretical Model and an Empirical Test on the Case of Electrical Industry: Workers in Hungary, Italy, Japan, Poland and Sweden', (manuscript), pp. 16-17, (Stockholm: Department of Sociology, Stockholm University).



As 10 years ago, considerable differences in human resource management are closely connected with the *division and specialisation of work and with the forms of plant and shop floor work organisation* in the firms investigated. One of the most important dimensions of this phenomenon is the use of skill and manpower. The analysis of job content of *blue collar workers* showed that 10 years ago the utilisation of labour was versatile in West German, Italian, Polish, and Japanese plants, and rather rigid in the Hungarian, Swedish, and the Slovenian plants surveyed. Nowadays, the most 'polyvalent' or versatile workers are found in the German, Japanese, Swedish, and Finnish plants. This shop floor practice of manpower and skill use could be explained to the strong tradition of the so-called 'Anthropocentric Production System' in these countries.<sup>35</sup> The most specialised task structure of the blue collar workers is still found in the post-Socialist countries of Central and Eastern Europe: Hungary, Poland, and Slovenia. This practice of human resource utilisation is partly a legacy of the Socialist past, where in this sector the Fordist type work organisation was dominant and partly due to the need for cheap, low skilled labour by foreign direct investors in the sector of electric and electronic industry.

In relation to the high international competitive pressure, we may see in both the 'matured' and 'emergent' capitalist countries an increasing priority of 'quality consciousness' in the last decade. Between 1984-85 and 1994-95, within the 'direct production related activities', the importance of 'quality control' increased dramatically in the Japanese, German, and - rather surprisingly - in the Hungarian plants.

Among the *technical employees*, the specialised nature of the job is predominant in the majority of plants (Hungarian, Slovakian, Slovenian, Spanish, Swedish, Italian, and Polish) investigated. Only in 3 countries (German, Finnish, and the Czech plants) were technical employees responsible for a greater variety of tasks. Within the varied tasks of technicians, the importance of quality control has increased - as in the case of blue collar workers; the share of product and process development related activities has also increased. In the case of *managers*, it is absolutely impossible to identify a firm tendency because of the lack of a sufficient number of managers in the plants investigated. In spite of the shortcomings of the survey, we may say that the nature of managerial jobs varies across the countries. Therefore we have to be very cautious in comparing directly the same managerial job titles. To illustrate this phenomenon, Finnish managers are paying more attention than the average to the product and process development activities compared to the control of subordinates. In addition, within the managerial duties of daily production, concern with quality has increased. This phenomenon could be explained by the intensive international de-localisation of the routine and

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35 Alasoini, Tuomo, *et. al.*, (1994), 'Manufacturing Change: Interdisciplinary Research on New Modes of Operation in Finnish Industry', in *Working Papers*, No. 48, (Tampere: Work Research Centre, Research Institute for Social Sciences, University of Tampere).

labour intensive work into the less developed countries, and by the increasing role of research and development activities together with the concern with quality in the 'core' Finnish plants.

There is the following commonly shared view among scholars which treats *organisational commitment* (or loyalty) as a 'tool of management', to improve the loyalty or identification of employees with the firm. By implementing various techniques of human resource management (HRM), management tries to create stronger social and cultural bonds between employees and the firm. For instance, the 'corporatist organisation' - which is the ideal type of organisational commitment - has the following features: (1) structures facilitating participation; (2) structures facilitating integration; (3) strong incentives for mobility and career within the firm; (4) a structure strengthening legitimacy.<sup>36</sup> Comparing these forms of commitment, the results indicate that '*instrumental commitment*' towards the firm is stronger than the '*moral one*' in the majority of countries surveyed (Hungary, the Czech Republic, Japan, Slovenia, France, Italy, South Korea, and Sweden). In a minority of countries (Spain, Germany, China, and Finland) a majority of employees expressed 'moral commitment'. Finally, we consider the results concerning 'commitment towards the company' together with the survey results on 'social integration'. In 4 countries (France, Finland, Hungary, and China) the employees very strongly supported both the company management and the trade union: dual commitment. It is worth to note that among these countries, in Hungary, blue collar workers are particularly well integrated into the firm in comparison with the workers in other countries, and in Italy they are least well integrated. The distinctive patterns of loyalty of employees to the firm is shaped to an important degree by the traditions of firm-level labour relations.<sup>37</sup> Surprisingly, Japanese workers - in comparison with the Swedish - expressed strong negative satisfaction with horizontal social integration. This latter attitude towards unions and management may reflect the erosion of the Japanese employment system with its cornerstone institution of dual loyalty.

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36 Lincoln and Kalleberg, (1985), cf. footnote 34.

37 Ishikawa, Akihiro, (1992), 'Patterns of Work Identity in the Firm and Plant: An East-West Comparison', in Széll, Gy. (ed.), (1992), *Labour Relations in Transition in Eastern Europe*, pp. 85-92, (Berlin and New York: Walter de Gruyter).