



# **CRANET SURVEY**

*ON*

**COMPARATIVE HUMAN RESOURCE MANAGEMENT**

***INTERNATIONAL EXECUTIVE REPORT 2005***

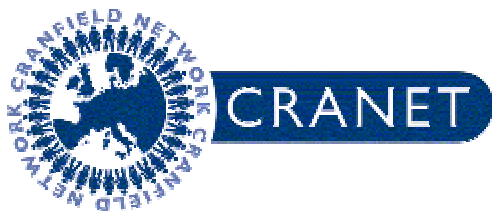


# **CRANET SURVEY**

**ON**

**COMPARATIVE HUMAN RESOURCE MANAGEMENT**

***INTERNATIONAL EXECUTIVE REPORT 2005***



**© Cranet 2006**

## TABLE OF CONTENTS

INTRODUCTION.....	4
COUNTRIES PARTICIPATING .....	4
METHODOLOGY .....	6
THE STRUCTURE OF THE REPORT .....	7
1. HR ROLES .....	8
2. FLEXIBLE WORKING ARRANGEMENTS: DIVERGENCE AND CONVERGENCE ACROSS COUNTRIES .....	34
3. EMPLOYEE RELATIONS AND COMMUNICATION.....	40
4. PAY.....	49
5. TRAINING AND DEVELOPMENT .....	53
APPENDIX 1 – THE QUESTIONNAIRE .....	58
APPENDIX 2 – PARTICIPATING COUNTRIES .....	73
APPENDIX 3 – RESPONSE RATES .....	75

## Introduction

'Cranet' is an international network of business schools around the world which conducts a survey of Human Resource Management, enquiring into policies and practices in people management through a set of common questions. The survey is undertaken approximately every four years. The purposes of the survey are to provide high quality data for academics, for public and private sector organisations, as well as for students of the field, to inform research and to create new knowledge about Human Resource Management across the world.

This international report is a first of its kind. Whilst Cranet has existed since 1989, and there have been numerous reports and articles on the data gathered, this is the first report to cover such a wide range of countries, from the UK to the USA, from Cyprus to Nepal, from Eastern European countries to Western European countries. As a data set it is therefore unique.

Cranet data is valuable within each country, where it is collected and disseminated by well-known scholars, who comprise the group which meets regularly to steer the project. The international comparisons between countries produce data which are new and interesting, informing debates in many academic fields. Such comparisons are not without difficulties. Changes to the political and economic landscape are charted by Cranet, for example the expansion of European Union membership, but make simple comparisons problematic, for example when examining changes to EU averages over time.

These data were gathered over an eighteen-month period from late 2003 until mid 2005. Such a timeframe is inevitable given the needs of different countries and the varying opportunities for funding and for doing the work, the time taken to conduct the survey, to follow-up, and to report.

The comparisons themselves can prove challenging, as words have different meanings in different countries. Our methodology of translating the surveys from English into each language, and then back into English before the survey, seeks to overcome some of these problems but meanings are in people and their cultures, so in spite of our efforts to obtain exactly the same meaning, there will inevitably be some distortion in some questions. Nevertheless, the longevity of this survey, which has retained a core of the same questions for most rounds of the survey over the years, has through the resulting discussions and debates reduced the differences to a minimum. Readers of this report can therefore be confident that the English language version is as accurate as we can expect, and that these are common meanings for the topics discussed.

## Countries participating

Of the countries which normally took part in the survey in the past, only Japan, Portugal, South Africa, Poland and Ireland did not conduct the Cranet survey in this round. New partners have joined us, from Slovakia, Hungary, Iceland, USA, Canada, New Zealand, Philippines and Nepal. The total list of countries taking part in this the 2003/2005 round is 32.

Countries participating in the survey

Australia	Greece	Sweden
Austria	Hungary	Switzerland
Belgium	Iceland	The Netherlands
Bulgaria	Israel	Tunisia
Canada	Italy	Turkey
Cyprus	Nepal	Turkish Cypriot Community
Czech Republic	New Zealand	UK
Denmark	Norway	USA
Estonia	Philippines	
Finland	Slovakia	
France	Slovenia	
Germany	Spain	

## **Content**

The data derived from this survey have been collected with a longitudinal perspective in mind. We have therefore followed the same broad areas with the current round as in the past; the six sections being:

Section I	HRM activity in the organisation
Section II	Staffing practices
Section III	Employee development
Section IV	Compensation and benefits
Section V	Employee relations and communication
Section VI	Organisational details

The questions, which are shown in detail in Appendix 1 reveal much data that can be of value to those examining, inter alia, convergence and divergence in HR policies and practices, the impact of globalisation and commercial development on the management of people at work, the changing fortune of the HR occupation itself, relationships between HR practices and performance, how employers associations are regarded around the world, what the trends are in payment systems, and in studying a range of techniques from communications to employee development.

Although a common set of issues have been covered over the different rounds of the survey, new topics are introduced, sparingly, where the network as a whole believe there is a significant development in HRM. Additions to the 1999 survey round made in 2003/2005 were:

### ***Section I***

Questions on HR information systems, reflecting the continuing growth in importance of new technology to the processes carried out by the HR function. These included questions about the stage of development of the system, how it is used, and the extent to which it meets the HR function's needs (Q9, 10, 11, 12 and 13).

### ***Section II***

There were minor changes including questions on commercial job and company websites; and on flexibility, questions on the compressed working week, were added.

### ***Section III***

Questions about who has the most influence over training needs, design and implementation of training (Q4, A, B and C). The growth of importance of the training and development area is shown here, and there were additional items on the questions about training/learning methods.

### ***Section IV***

A question about variable pay was added. Whether team, individual, or company wide performance was being measured (Q3, A, B and C).

### ***Section V***

Question 3, the recognition of Trade Unions was a question included, following some changes in regulations about recognition in some countries, and the on-going interest in TU growth/decline.

Question 7, satisfaction with Employers Association's services was added in view of the position of EA's in many countries, where new services and a new role are being created for Employers' Associations.

## Section VI

A question on the stage at which HR is involved in the process of mergers/acquisitions was added because of the growth in recent years of mergers and acquisitions activity.

### Methodology

The methodology of the survey has remained predominantly a paper-based questionnaire, although in some countries (for example the USA) this has now developed into an on-line survey. Reminders are sent out and attempts made to ensure that a representative sample is produced. This is especially important since the number of respondents is not always large, no doubt due to the difficulties inherent in countries where 'survey fatigue' has set in amongst HR Directors or their equivalents to whom the survey was sent.

The population in each country was public, private, not for profit, and mixed sector organisations.

**Table 1: Number of organisations responding**

<b>EU countries (18)</b>	<b>Number of responses</b>	
UK	1101	
France	140	
Germany	347	
Sweden	383	
Spain	158	
Denmark	516	
Netherlands	397	
Italy	117	
Finland	293	
Greece	180	
Austria	270	
Belgium	230	
Cyprus	85	
Estonia	118	
Slovenia	161	
Slovakia	259	
Czech Republic	72	
Hungary	59	
Total EU countries		4886
<b>Europe - non EU countries (6)</b>		
Norway	303	
Switzerland	311	
Turkey	171	
Bulgaria	157	
Iceland	114	
Turkish Cypriot Community	87	
Total Europe - non EU countries		1143
<b>Rest of world (8)</b>		
USA	260	
Canada	456	
Australia	259	
New Zealand	286	
Israel	175	
Philippines	56	
Nepal	204	
Tunisia	189	
Total Rest of world		1885

A total of 7,914 organisations from around the world therefore have responded to our survey.

The results were reported and discussed in the participating countries, through conferences and seminars, and the analysis of the data was undertaken by the Human Resource Research Centre of Cranfield University, which coordinates the Network.

## **The structure of the report**

The report follows the sequence of the questionnaire, as shown in the contents list. The sections of the report discuss the frequencies and describe or point to any trends, or changes. No detailed analysis is possible in a brief report of this kind, but some key trends are shown in each section.

The sections of the report have been written by members of the network. This epitomizes the strength of our network; it is a collaborative adventure in which we are engaged, our commitment to the academic field crosses national boundaries, and our common concern with many of the main themes has retained the membership of organisations over the years.

The authors of the report are:

Section I	Nancy Papalexandris
Section II	Erling Rasmussen and Eleni Stavrou-Costea
Section III	Shaun Tyson and Paul Gooderham
Section IV	Erik Poutsma
Section V	Wolfgang Mayrhofer, Francoise Dany and Florian Hatt

All members of the network have, of course, in a sense been the originators of the report because they have produced the data from their surveys. A list of their names is shown in Appendix 2.

No report of this kind can be introduced without an acknowledgement to Professor Chris Brewster, the founding genius of Cranet who left Cranfield in 2001.

Whilst we gratefully acknowledge the roles of all those who have helped to write and produce this report, we would also wish to thank Jayne Ashley who has assisted so ably with the editing of the report, and who, as usual, has made the final document possible.

Nevertheless, any errors or omissions remain our own.

**Emma Parry, Shaun Tyson, Sue Brough (Eds).**  
**Cranfield University**

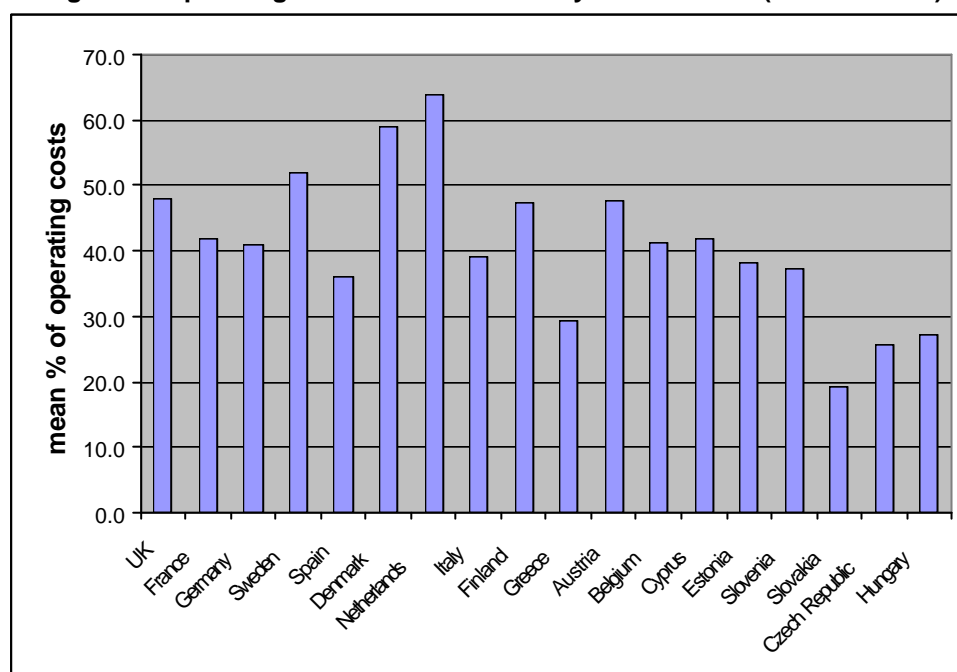
## 1. HR Roles

We begin our description of HR roles with an examination of labour costs in different countries as reported in the survey. This is because one driver of HR specialisation is believed to be the significance of labour costs.

### Operating Costs accounted for by labour costs

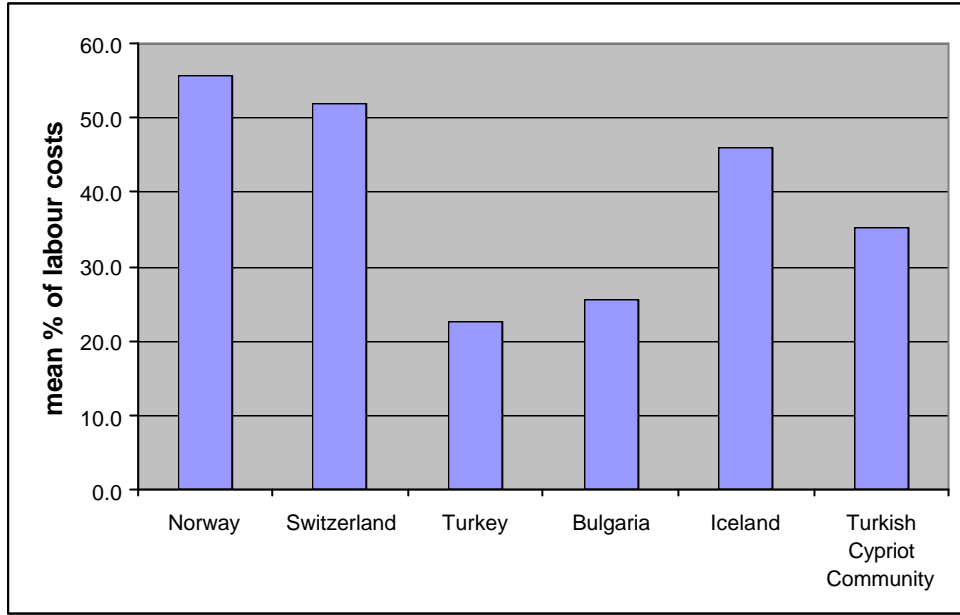
As shown in Figure 1, Figure 2 and Figure 3, in most of the participating countries labour costs account for 25% to 50% of the total operating costs. This underlines the magnitude of labour costs in the total operating costs of companies around the world. Labour costs represent the highest percentage of the total operating costs in the Netherlands (64%), Canada (59%), Denmark (59%), Norway (56%), the USA (53%) and Sweden (52%). They have the lowest impact on total operating costs in Slovakia (19%), Turkey (23%), Bulgaria (25%), Hungary (27%) and Czech Republic (26%). This is most probably due to the lower labour costs, as well as the mix of industries in countries where for example there is a large agricultural sector.

Figure 1: Operating costs accounted for by labour costs (EU countries)

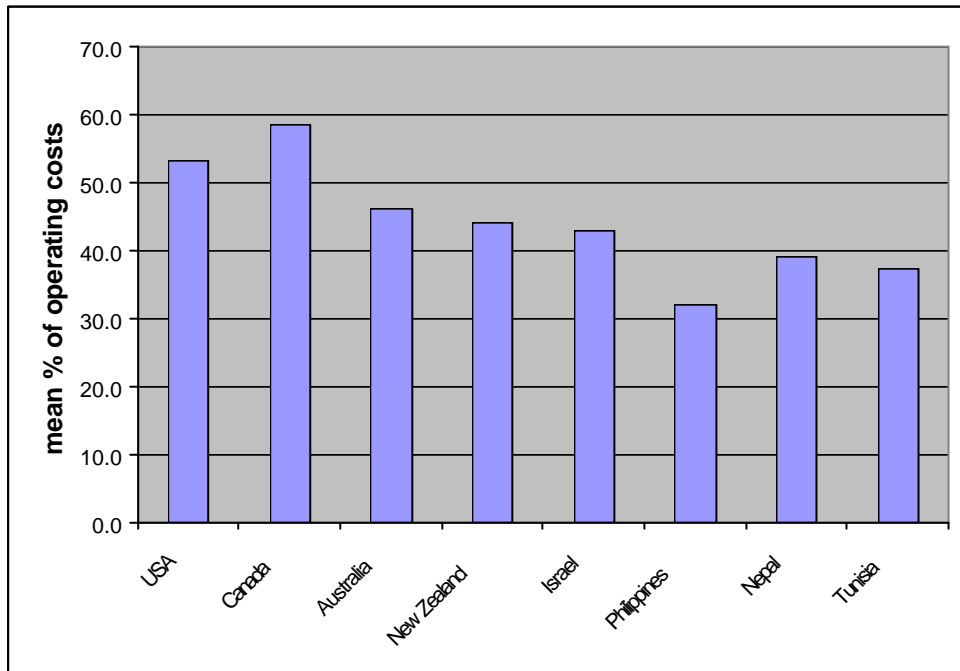




**Figure 2: Operating costs accounted for by labour costs (Europe – Non EU countries)**



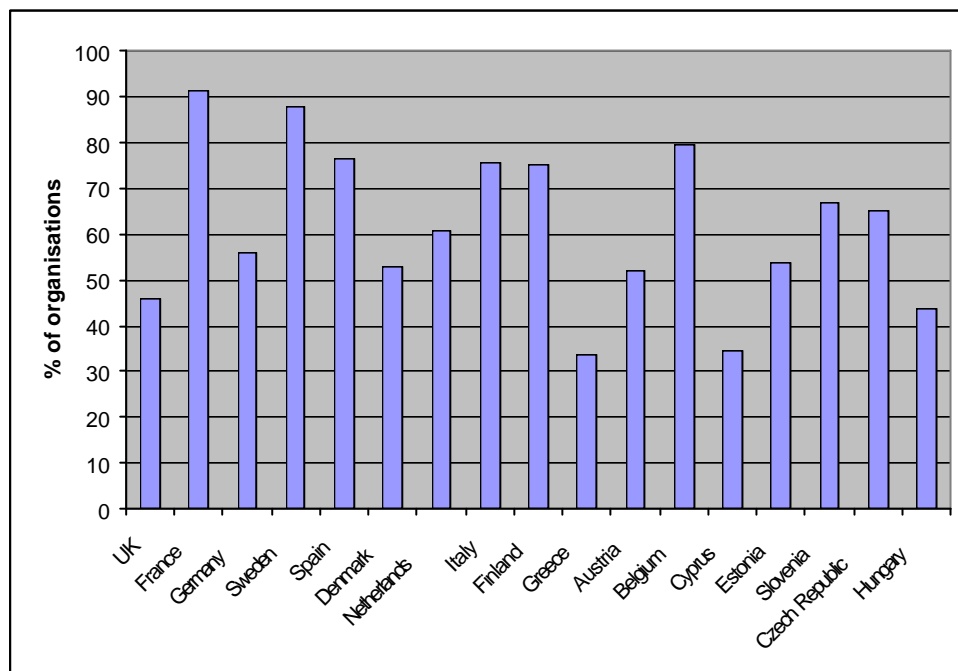
**Figure 3: Operating costs accounted for by labour costs (Rest of the world)**



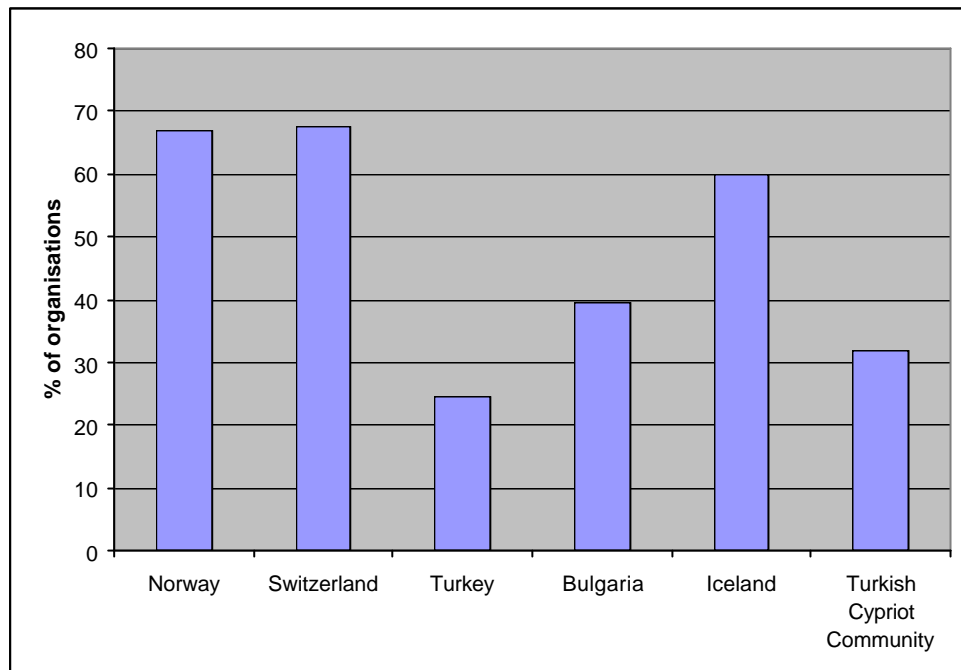
## The Head of the personnel/HR department has a place on the main Board of Directors or the equivalent

In the majority of the world, the head of the personnel/HR department seems to participate on the main board of directors at a percentage ranging from 40% to 70% of the companies. The participation of the HR/personnel director on the Board is most common in France (91%), Tunisia (92%), Belgium (79%), Sweden (88%) and Israel (85%). Participation is least common in Turkey (25%) and the Turkish Cypriot Community (32%), Greece (34%), Cyprus (35%) and Bulgaria (40%), all of which belong to the larger group of southern Balkan countries. Whilst there is some regional specificity, the reasons for HR to be represented at Board level by an HR specialist may be because of other factors, such as the extent of development of the function, board structure and the mix of industry sectors, the presence of multinationals etc. HR may be represented as part of a general management remit by other Directors, or by the CEO, for example.

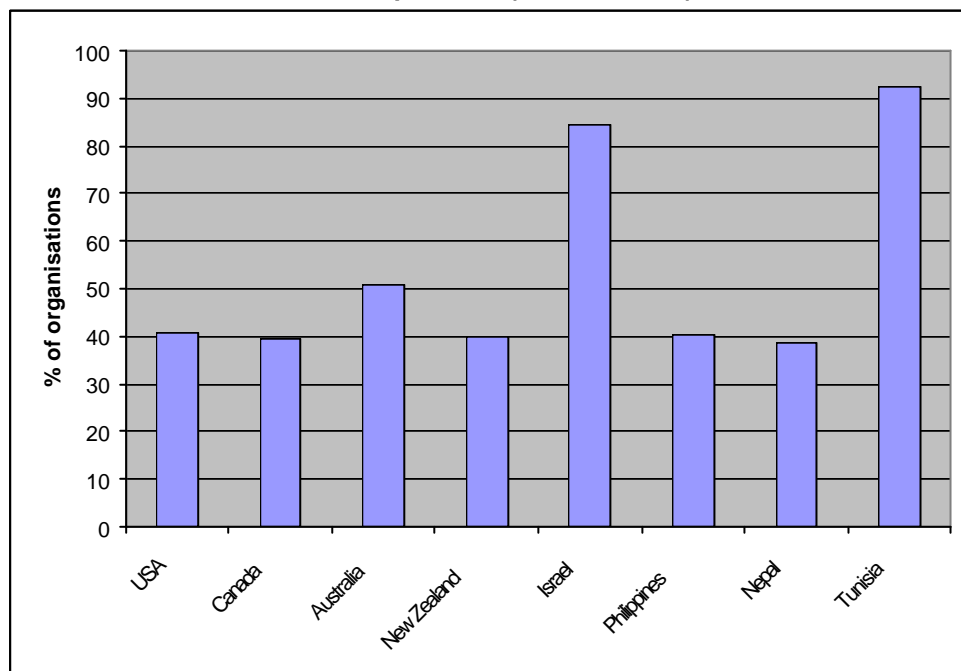
**Figure 4: The Head of the personnel/HR department has a place on the main Board of Directors or the equivalent (EU countries)**



**Figure 5: The Head of the personnel/HR department has a place on the main Board of Directors or the equivalent (Europe- non EU)**



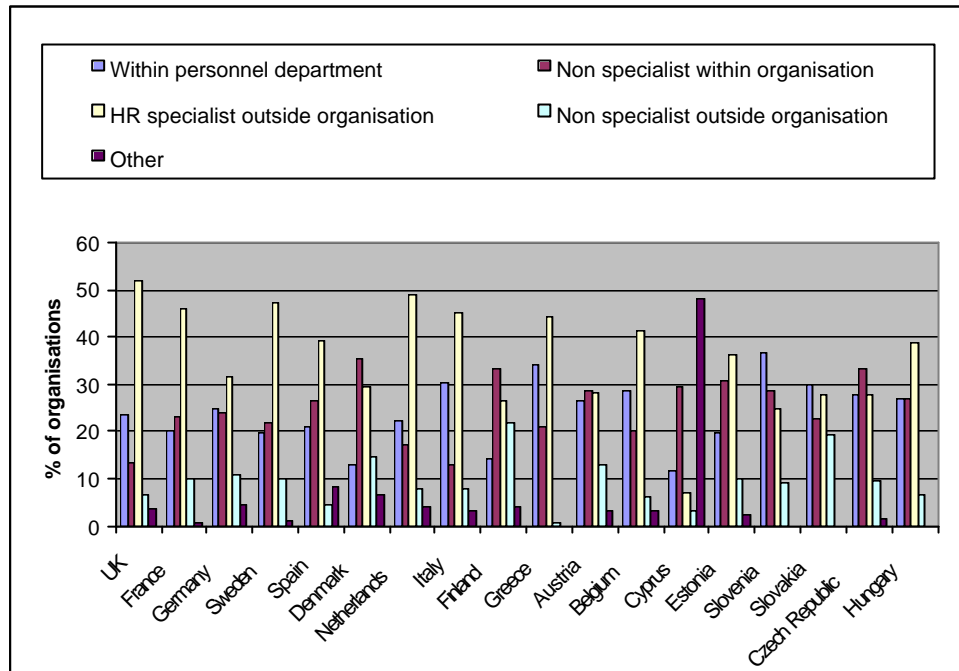
**Figure 6: The Head of the personnel/HR department has a place on the main Board of Directors or the equivalent (Rest of world)**



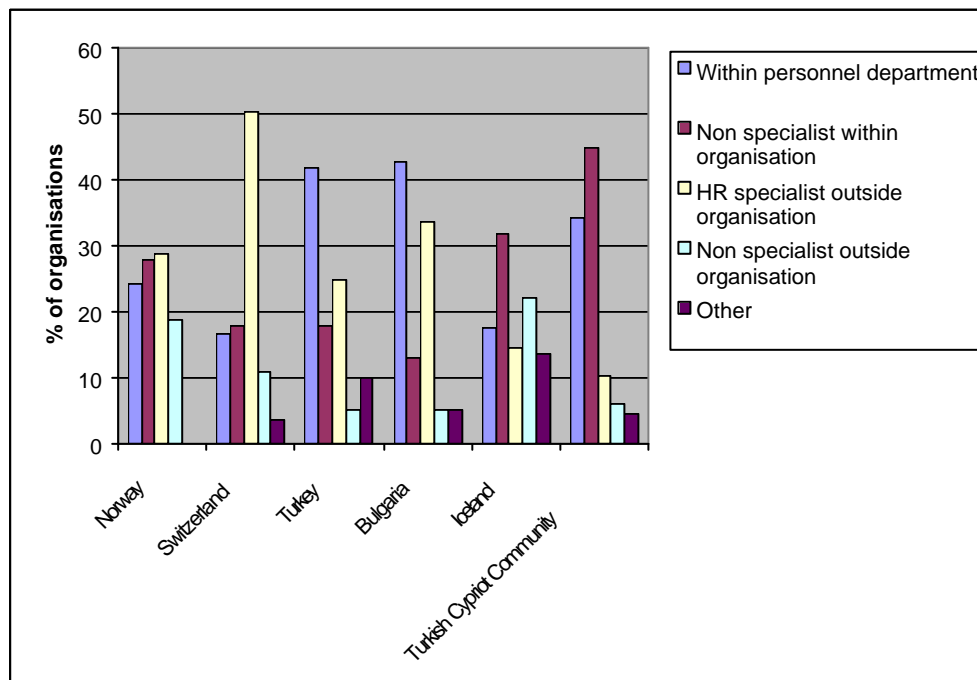
## Where the senior HR Director was recruited

In most countries, the HR Director usually is an HR specialist coming from outside the organisation. This is most pronounced in Anglo-Saxon countries like the USA (52%), the UK (52%), and Australia (55%). Exceptions to this were Denmark, Finland, Austria and Czech Republic, where the HR Director is more likely to be a non-specialist from within the organisation, as well as Slovenia and Turkey, where the HR Director comes more usually from within the HR department. In Cyprus and Nepal other recruitment sources are very common.

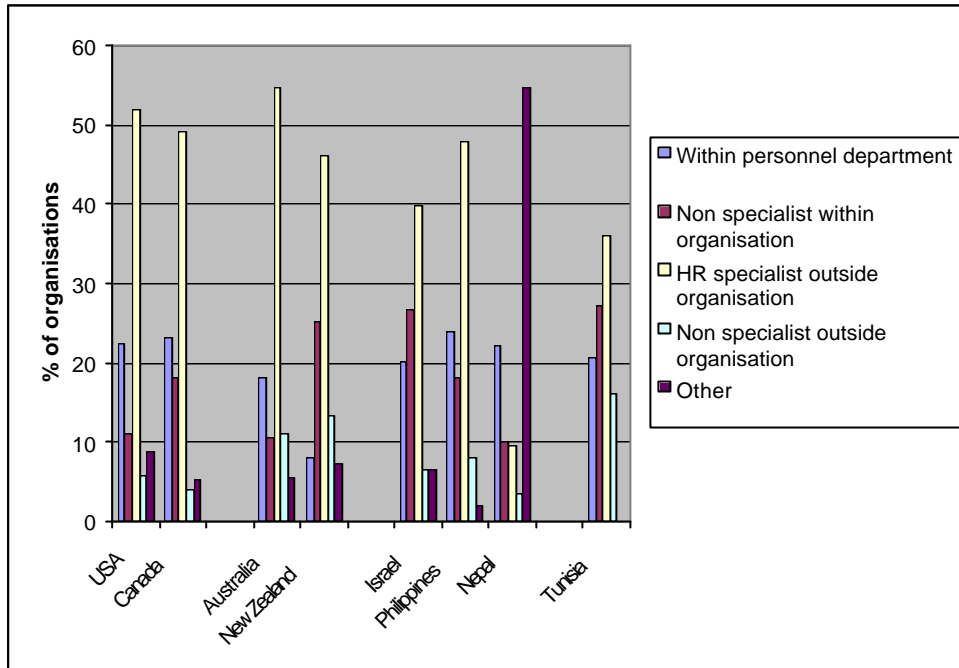
**Figure 7: Where the senior HR Director was recruited (EU countries)**



**Figure 8: Where the senior HR Director was recruited (Europe, non-EU countries)**



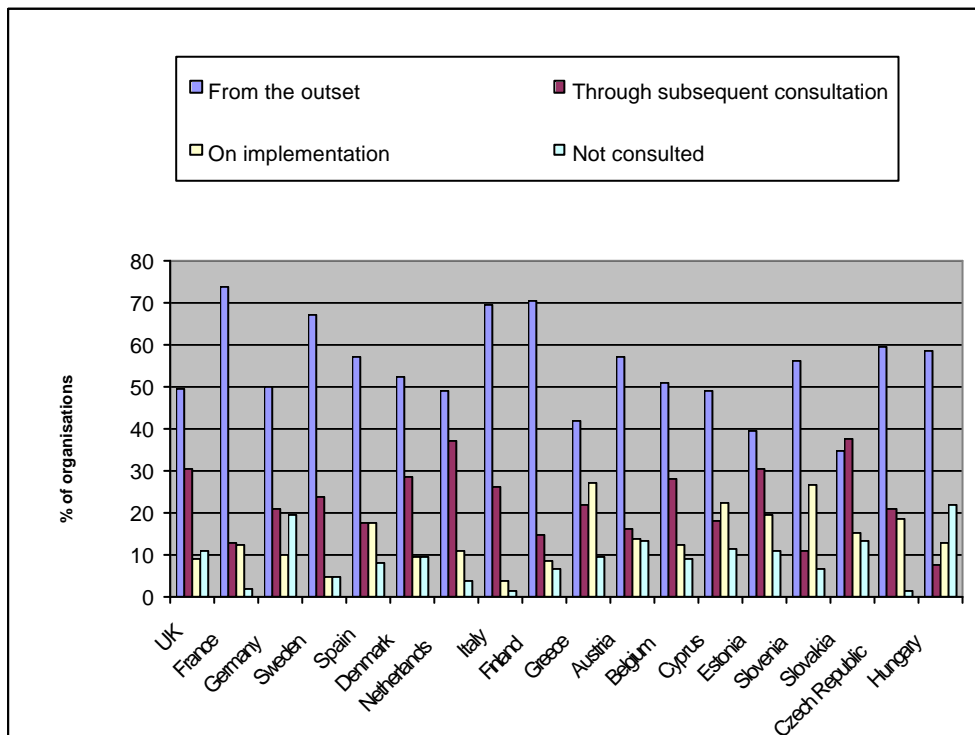
**Figure 9: Where the senior HR Director was recruited (EU countries)**



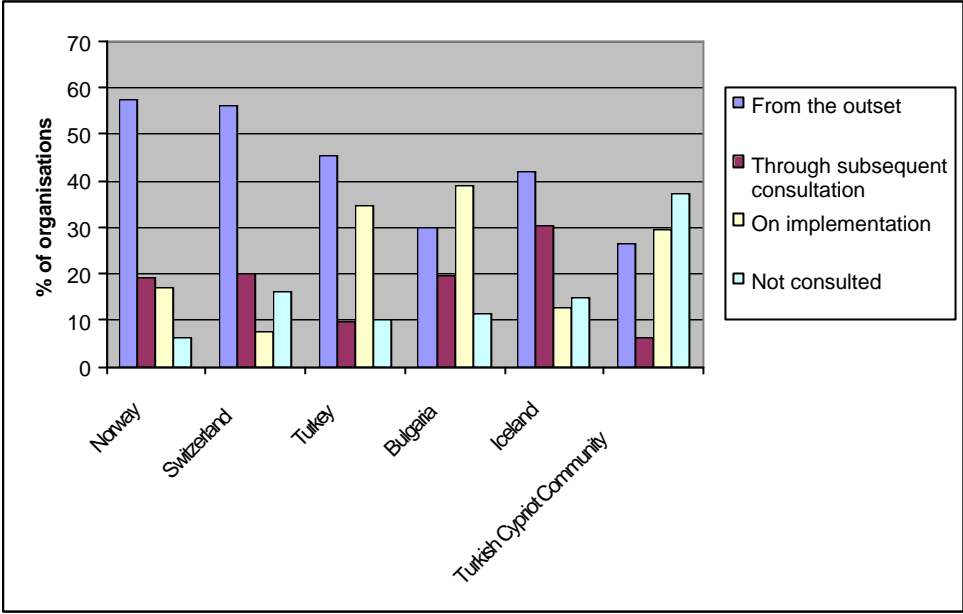
### Stage at which HR is involved in development of business strategy

In most countries, HR is involved from the outset in the development of business strategy. In most countries 40%-60% of the respondents reported that HR is involved from the outset in business strategy development. This is most common in France (73%), Finland (70%), Italy (69%), Spain (57%) and Canada (65%). Only in Bulgaria and Nepal is HR most commonly involved on implementation only (at 39% and 43% of the cases, respectively), while in 38% of companies of the Turkish Cypriot community, HR is not involved at all.

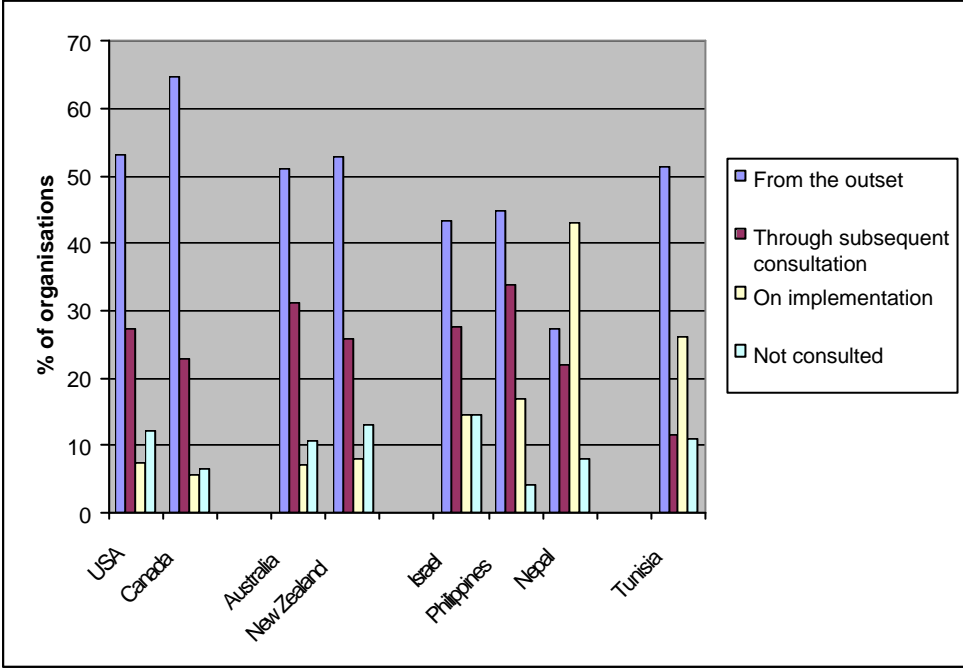
**Figure 10: Stage at which HR is involved in development of business strategy (EU countries)**



**Figure 11: Stage at which HR is involved in development of business strategy (Europe-non EU countries)**



**Figure 12: Stage at which HR is involved in development of business strategy (Rest of world)**

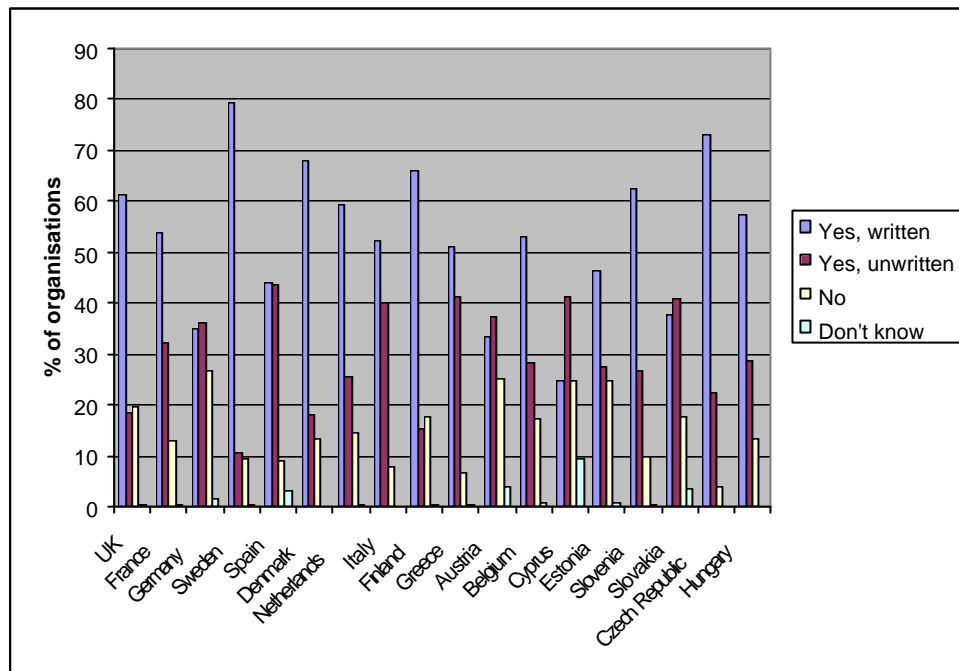


## Existence of HR Strategy

In most countries the prevailing practice is most commonly a written HRM strategy. This is especially notable in Sweden, where around 80% of organisations have a written HR strategy. In some countries, like Germany, Austria, Slovakia and Israel, however, there is a similar frequency of written and unwritten HR strategy (35-40%), but there is some HR strategy to dictate HR policies and actions. In Cyprus and Tunisia the use of an unwritten HR strategy is most common.

There are few cases where countries report a low level of HR strategy development.

**Figure 13: HR strategy (EU countries)**



**Figure 14: HR strategy (Europe- non-EU countries)**

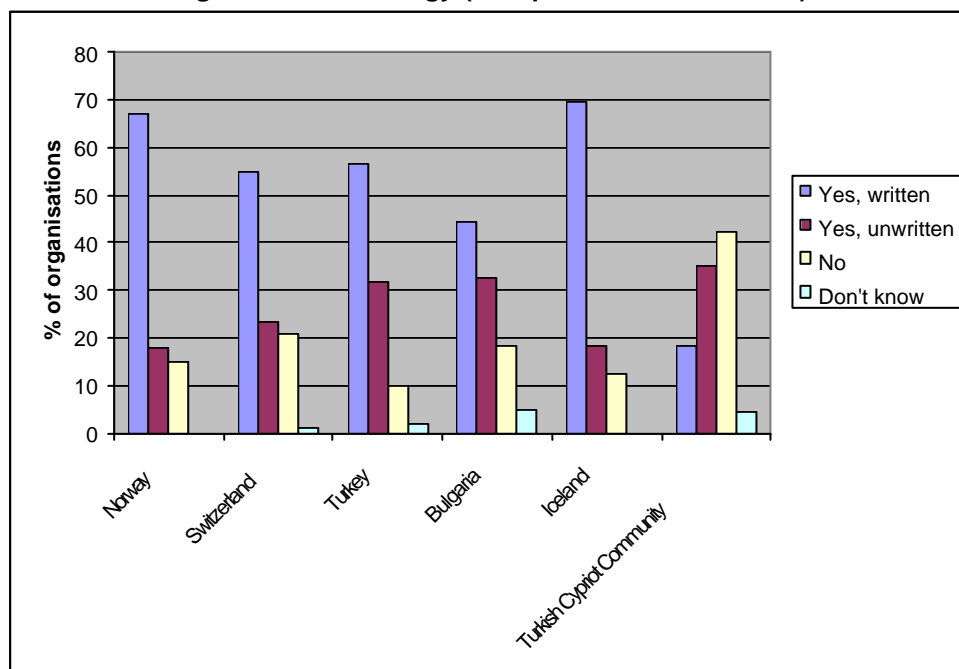
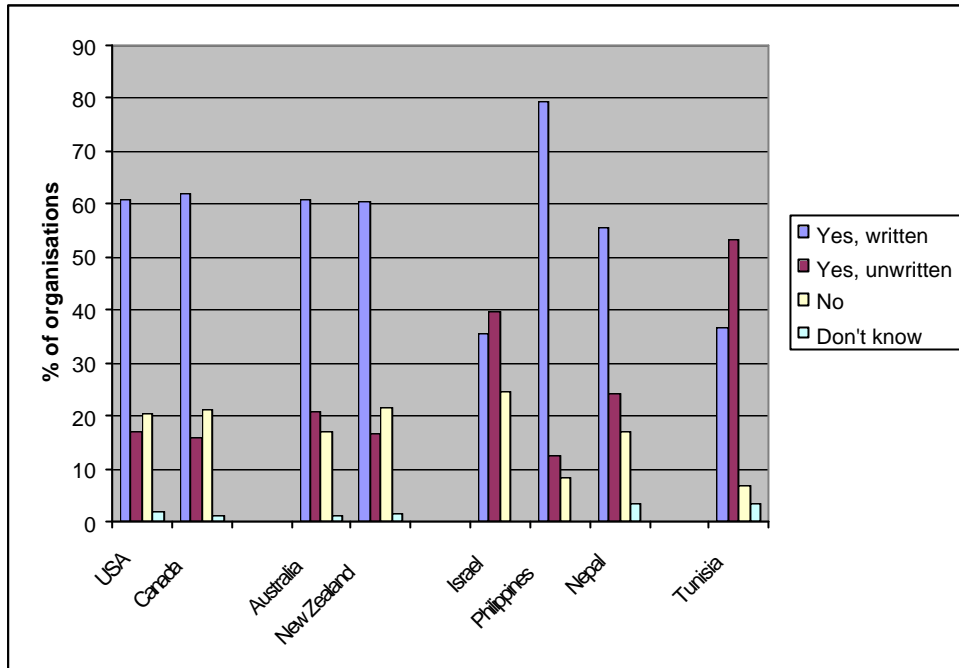


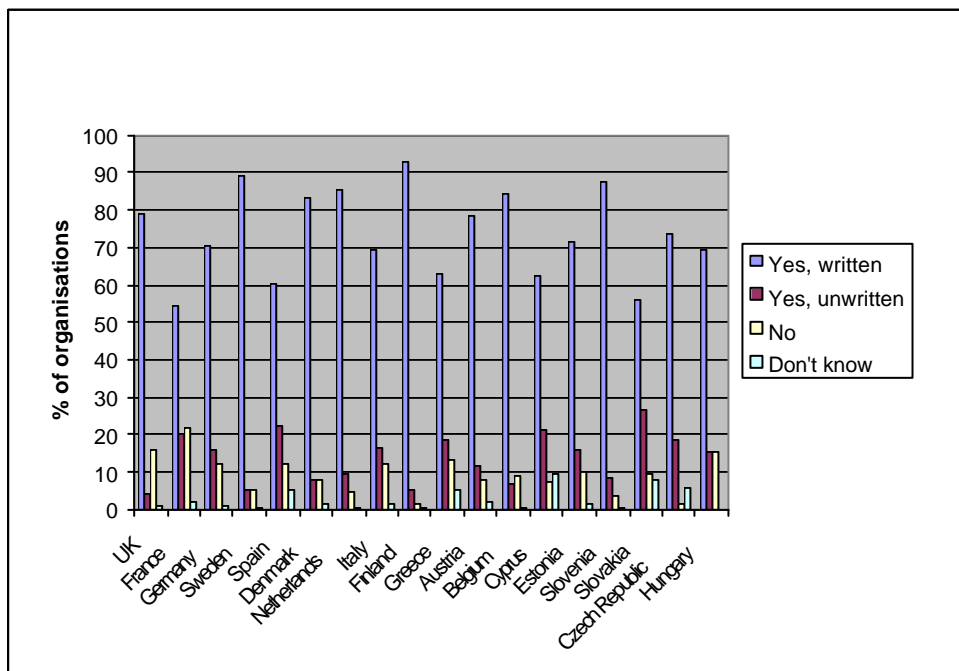
Figure 15: HR strategy (Rest of world)



## Mission Statement

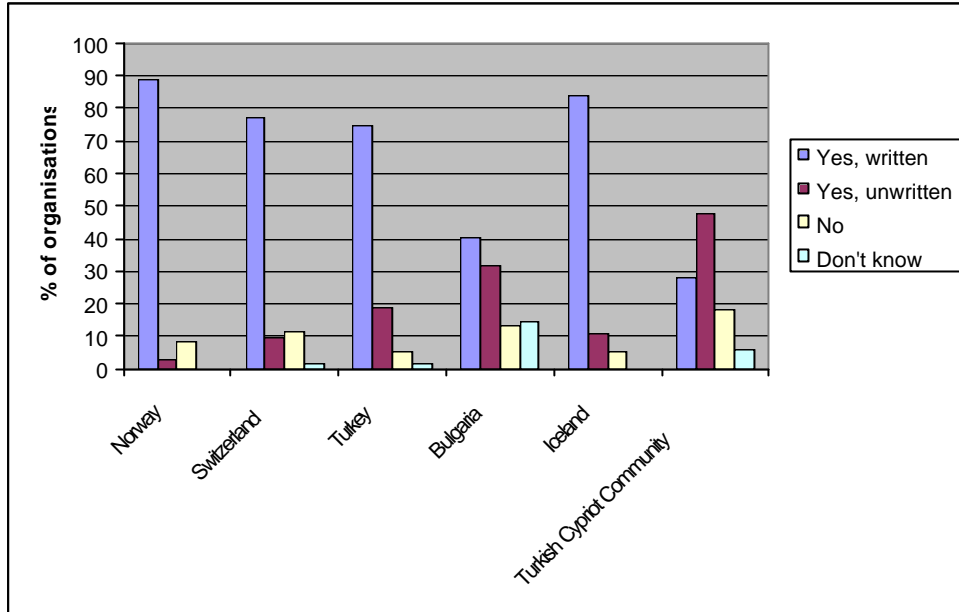
In most countries, both in Europe and other continents, the vast majority of companies (from 55-85%) have a written mission statement. In Finland (93%), Sweden (89%), Slovenia (87%), Norway (89%), Canada (90%) and Philippines (88%), the percentage of companies with a written mission statement goes, in general, far beyond 85%. Sole exceptions are Bulgaria and the Turkish Cypriot Community, where there is a written mission statement only at the 40% and 28% of the companies examined, respectively.

Figure 16: Mission statement (EU countries)

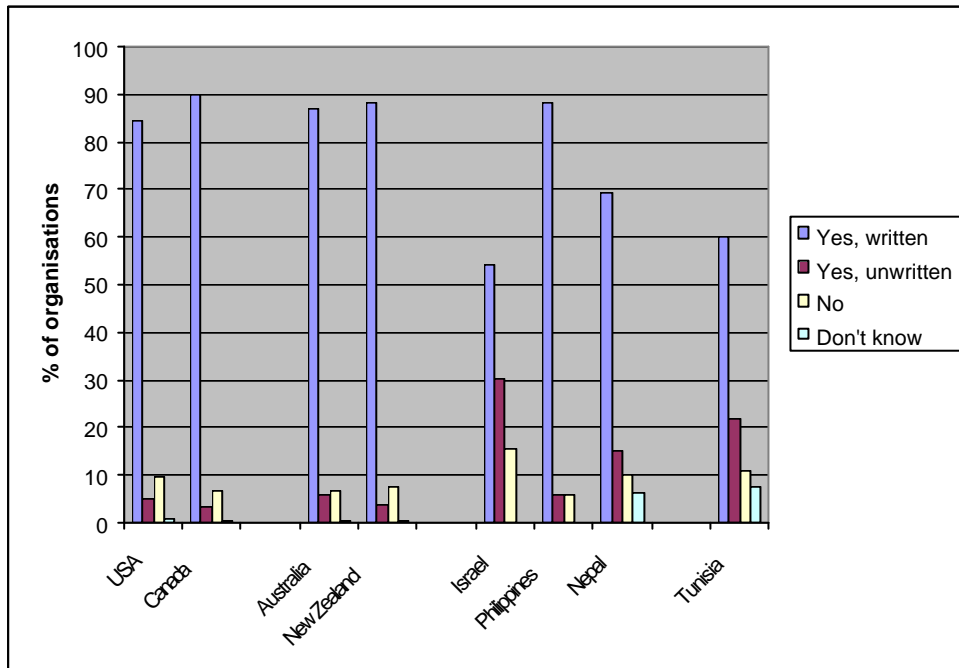




**Figure 17: Mission statement (Europe, non-EU countries)**



**Figure 18: Mission statement (Rest of world)**



## Corporate Values Statement

In most countries, the majority of companies reported that there is a written values statement. Only in Germany, Austria, Cyprus and the Turkish Cypriot Community, as well as Iceland, is it more common not to have a Corporate Values statement. It is interesting to note that in those countries it is also rare to have a written HR strategy.

Figure 19: Corporate values statement (EU countries)

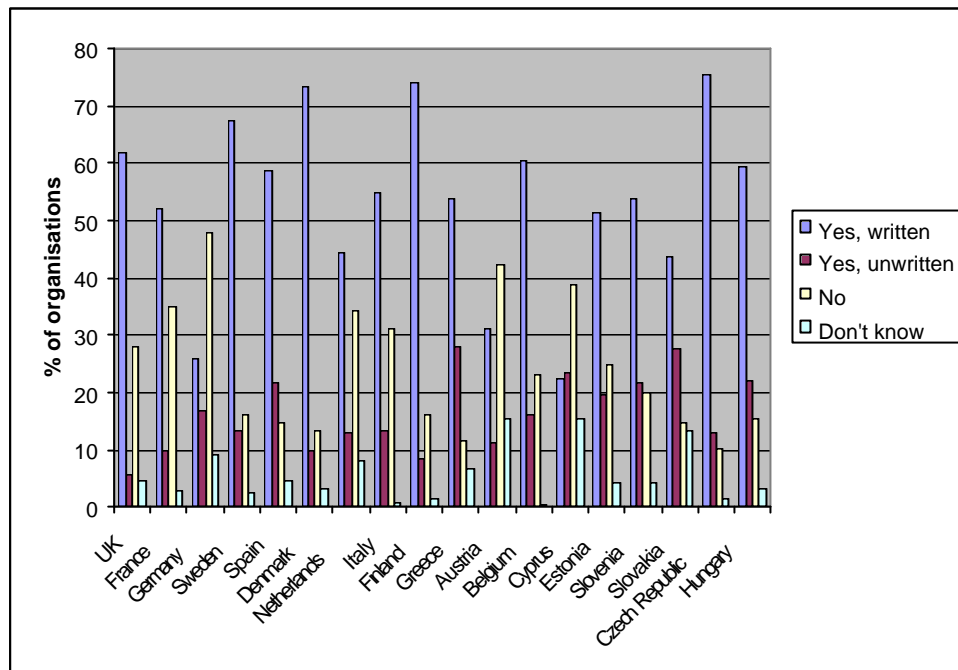
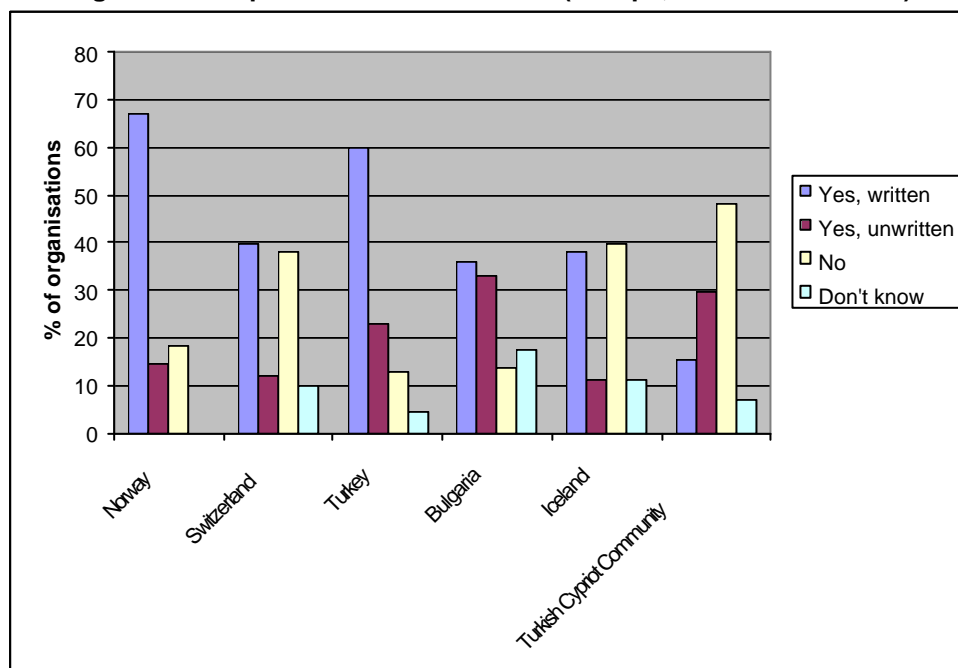
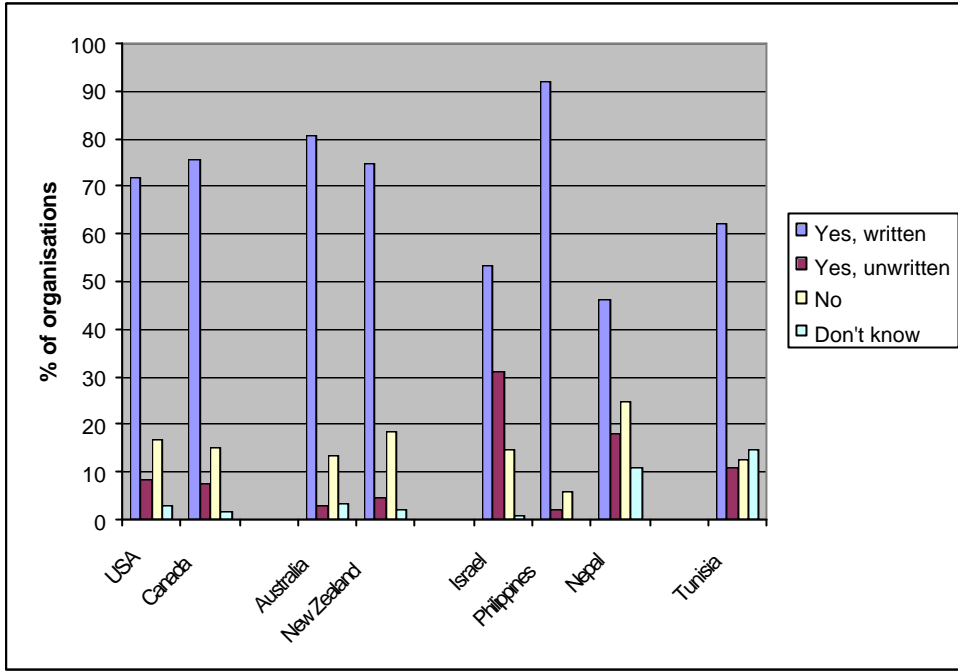


Figure 20: Corporate values statement (Europe, non- EU countries)



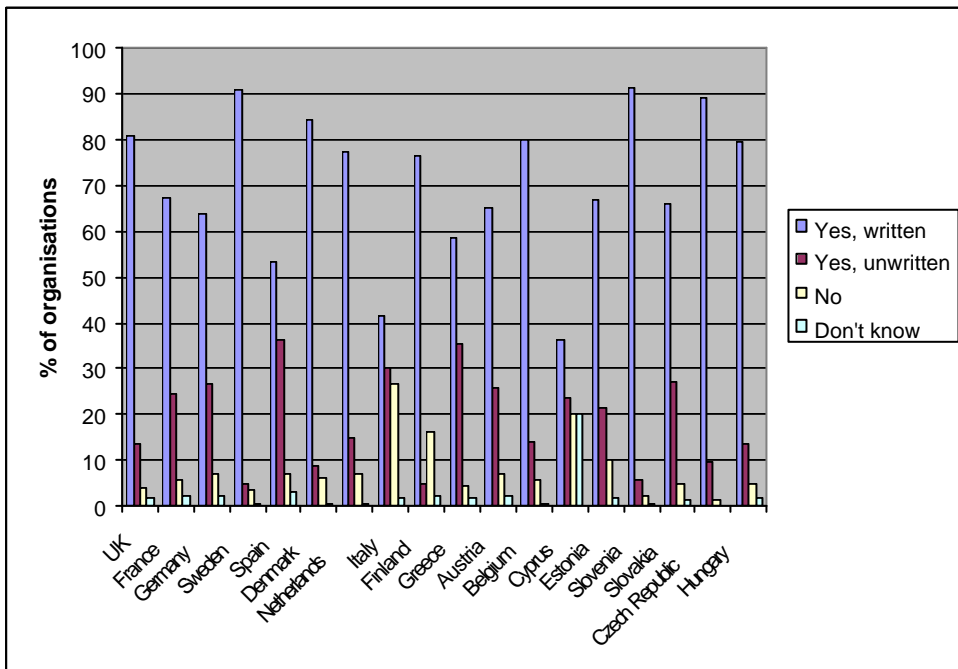
**Figure 21: Corporate values statement (Rest of world)**



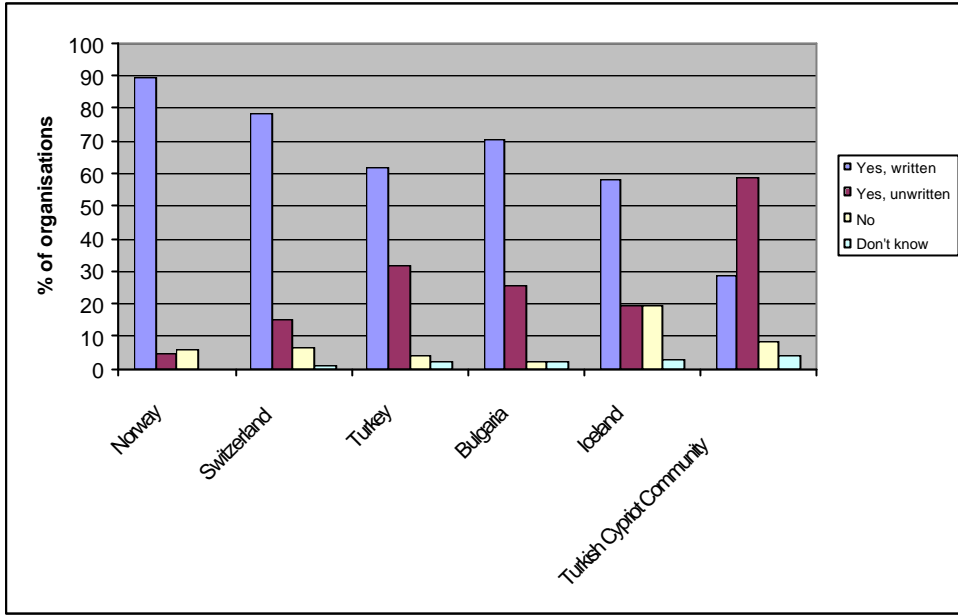
**Business Strategy**

In most countries the prevailing practice is to have a written Business Strategy (50%-80% of companies examined). Only in Cyprus (37%), Italy (42%) and Israel (48%), less than 50% of the companies examined have a written business strategy. The Turkish Cypriot community is the only case where the practice of unwritten business strategy is more common than the written one, at 59%.

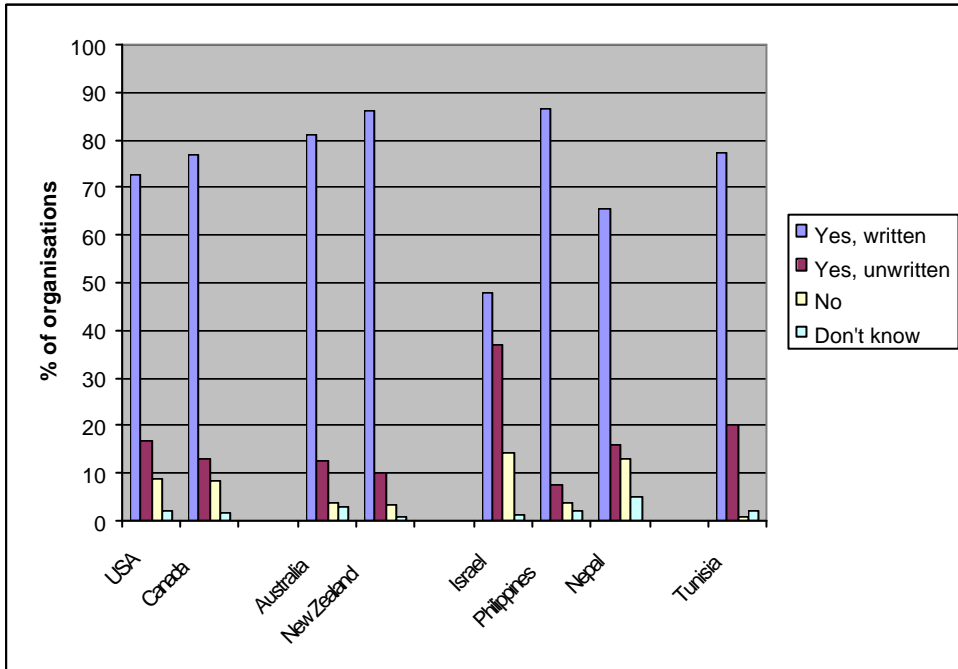
**Figure 22: Business strategy (EU countries)**



**Figure 23: Business strategy (Europe, non-EU countries)**



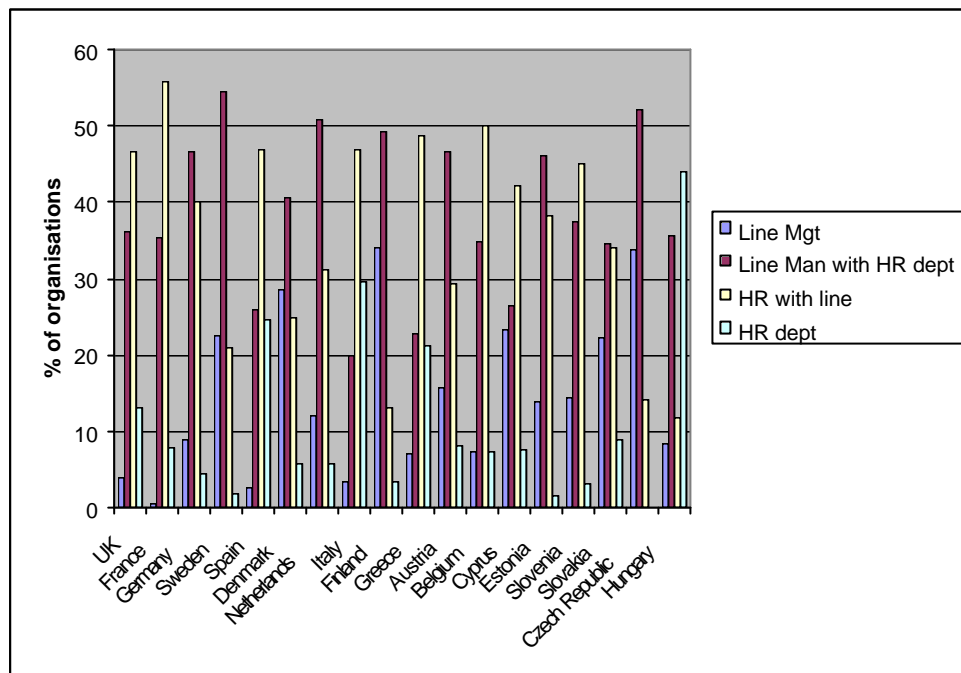
**Figure 24: Business strategy (Rest of world)**



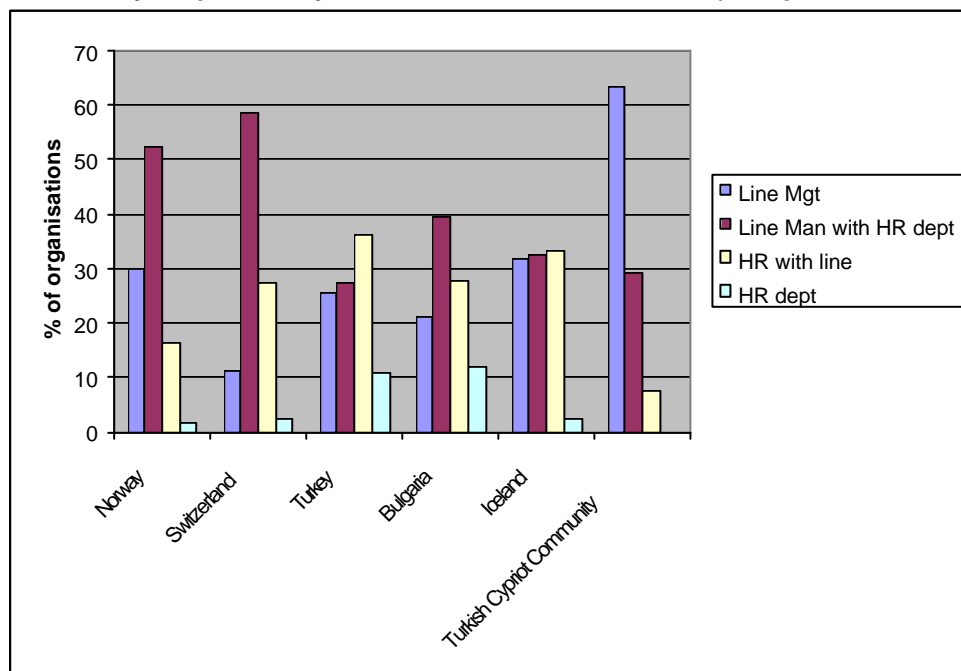
## Primary Responsibility for Recruitment and Selection

All around the world, it seems that it is common for HR and the line to share the responsibility for recruitment and selection. In some countries it is more common for HR to have an assisting role to the line, while in others it is the other way round. The only exceptions are Nepal and the Turkish Cypriot community, where the main responsibility for recruitment and selection lies more commonly within the hands of the line only.

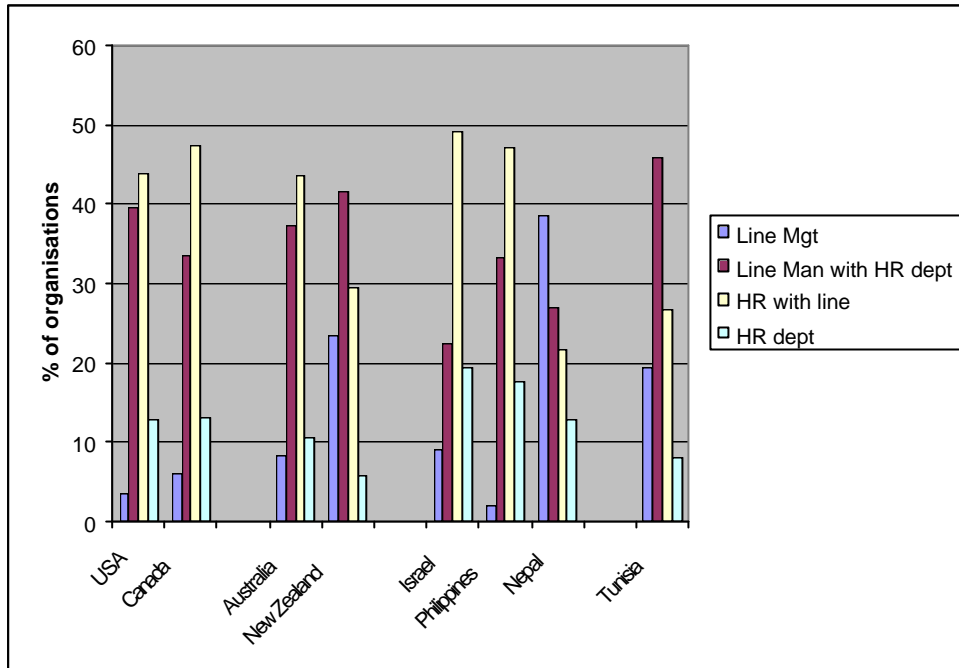
**Figure 25: Primary responsibility for recruitment and selection (EU countries)**



**Figure 26: Primary responsibility for recruitment and selection (Europe, non- EU countries)**



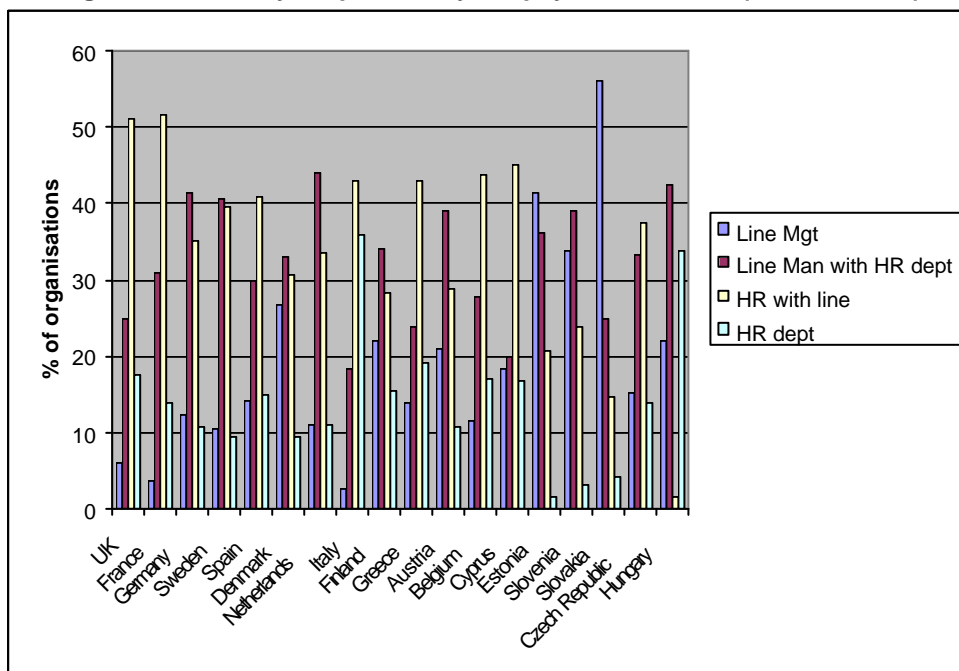
**Figure 27: Primary responsibility for recruitment and selection (Rest of world)**



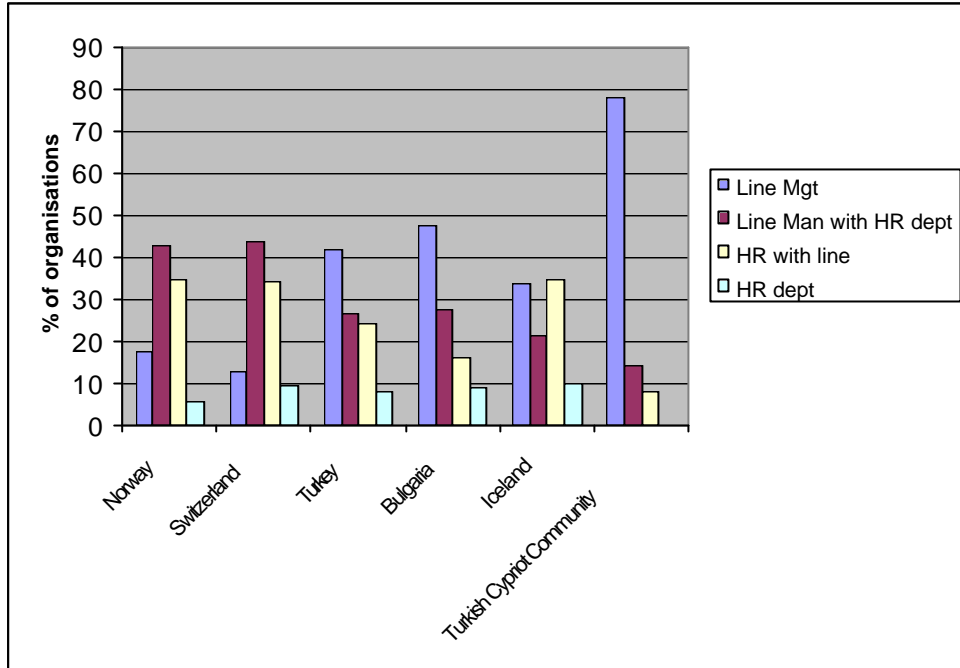
### Primary Responsibility for Pay and Benefits

As in the case of Recruitment and Selection, the primary responsibility for Pay and Benefits is shared by the line and HR, with most common practice of HR doing it with the assistance of the line. There are some countries, however, where it is more common for the line to have the main responsibility for Pay and Benefits [Slovakia (56%), Estonia (41%), Turkish Cypriot Community (78%), Bulgaria (48%), Turkey (42%), Nepal (55%)].

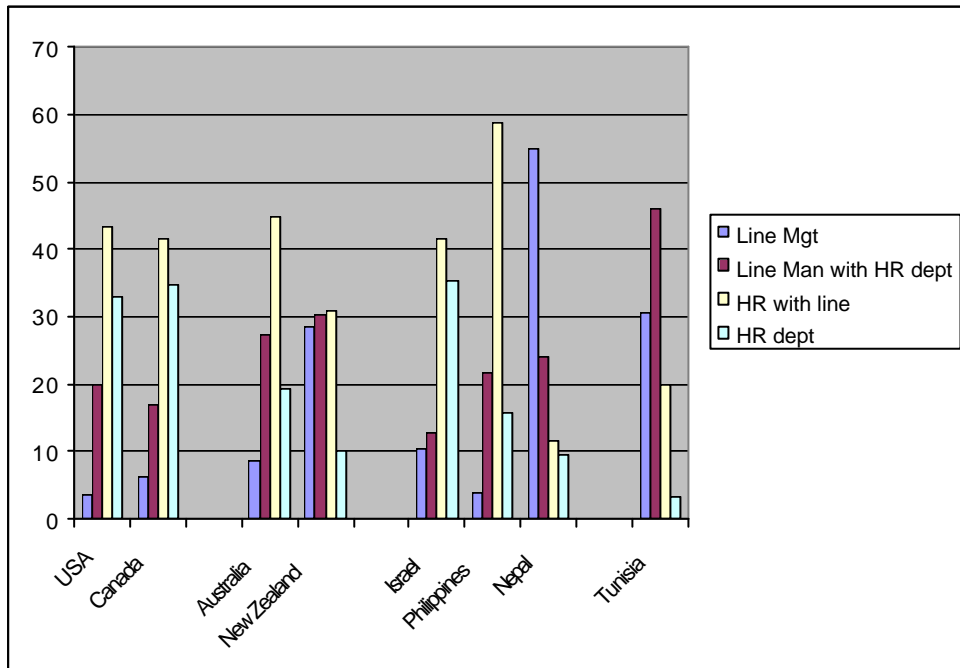
**Figure 28: Primary responsibility for pay and benefits (EU countries)**



**Figure 29: Primary responsibility for pay and benefits (Europe, non- EU countries)**



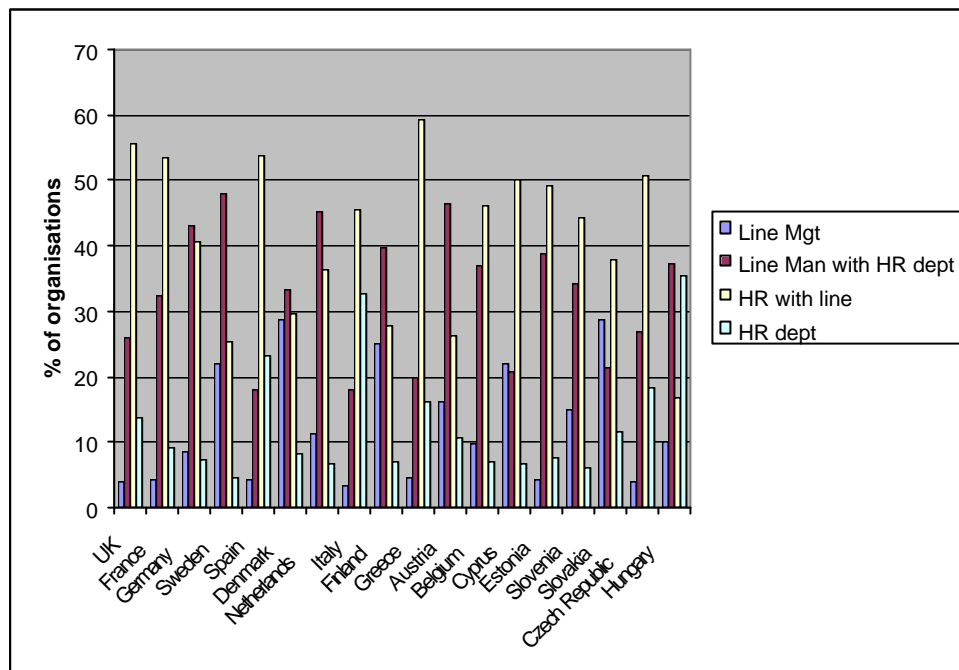
**Figure 30: Primary responsibility for pay and benefits (Rest of world)**



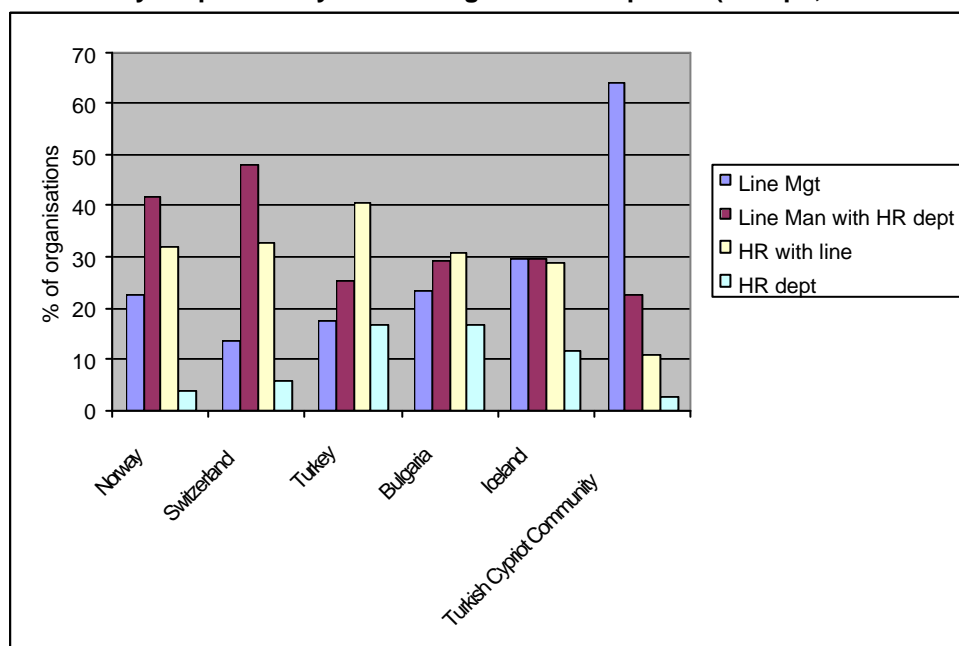
## Primary Responsibility for Training and Development

In training and development, the responsibility is shared by the line and HR, but it is common for most EU countries for HR to be responsible with the assistance of the line (except Sweden, Finland, Austria and the Netherlands, where most commonly the line does the training and development with the assistance of HR). It can be said, therefore, that training and development is seen as a shared responsibility for managers.

**Figure 31: Primary responsibility for training and development (EU countries)**

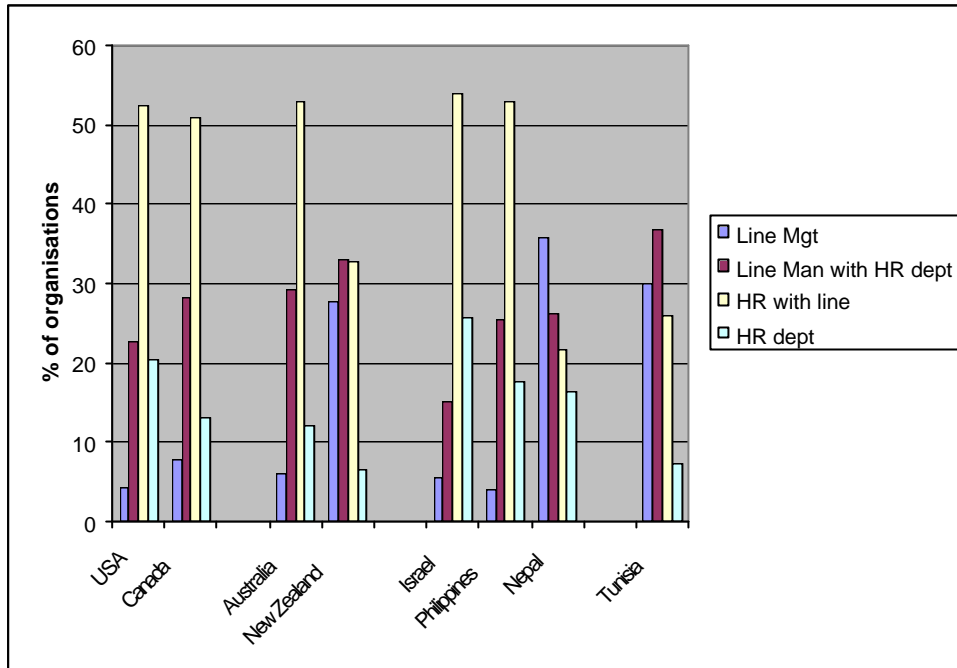


**Figure 32: Primary responsibility for training and development (Europe, non- EU countries)**





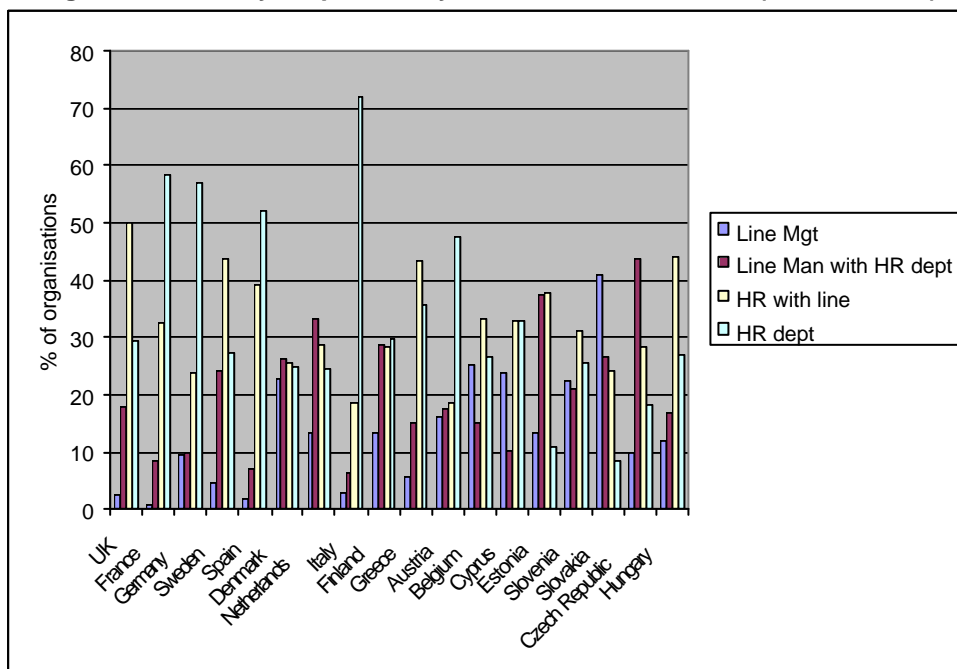
**Figure 33: Primary responsibility for training and development (Rest of world)**



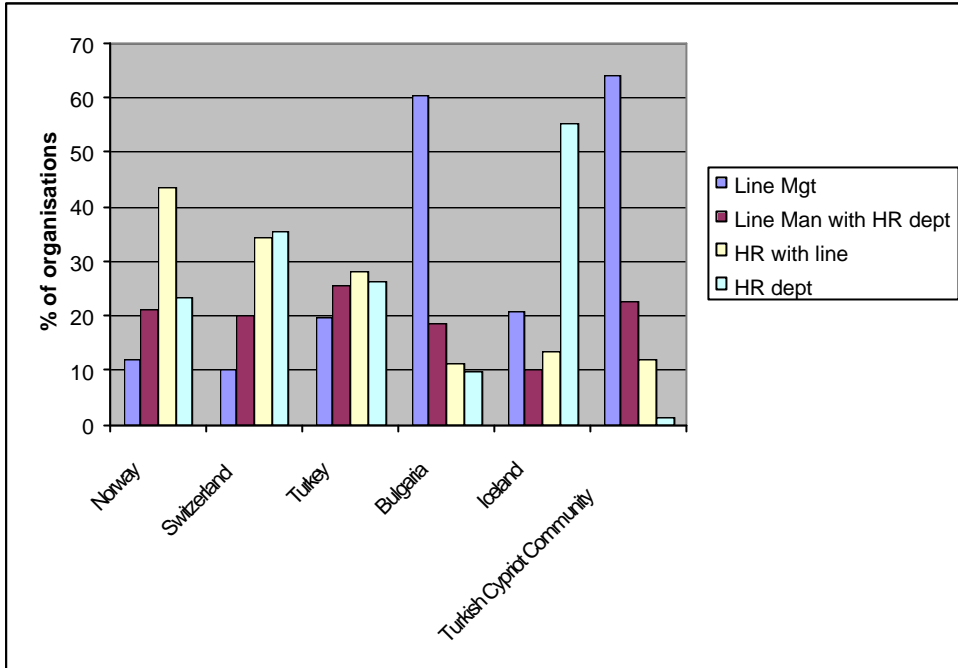
### Primary Responsibility for Industrial Relations

Industrial Relations, in contrast with all the other HR functions examined, is often seen as the primary responsibility of HR alone. Though in many countries (UK, Sweden, Greece, Belgium, Hungary, Norway, USA, Canada, Philippines), industrial relations are considered most commonly as a shared responsibility under the guidance of HR, in all other countries Industrial Relations are most commonly seen as the job of HR. Sole exceptions were Slovakia, Bulgaria, Nepal, Tunisia and the Turkish Cypriot community, where it is most common for the line to assume responsibility for industrial relations, without the support of the HR.

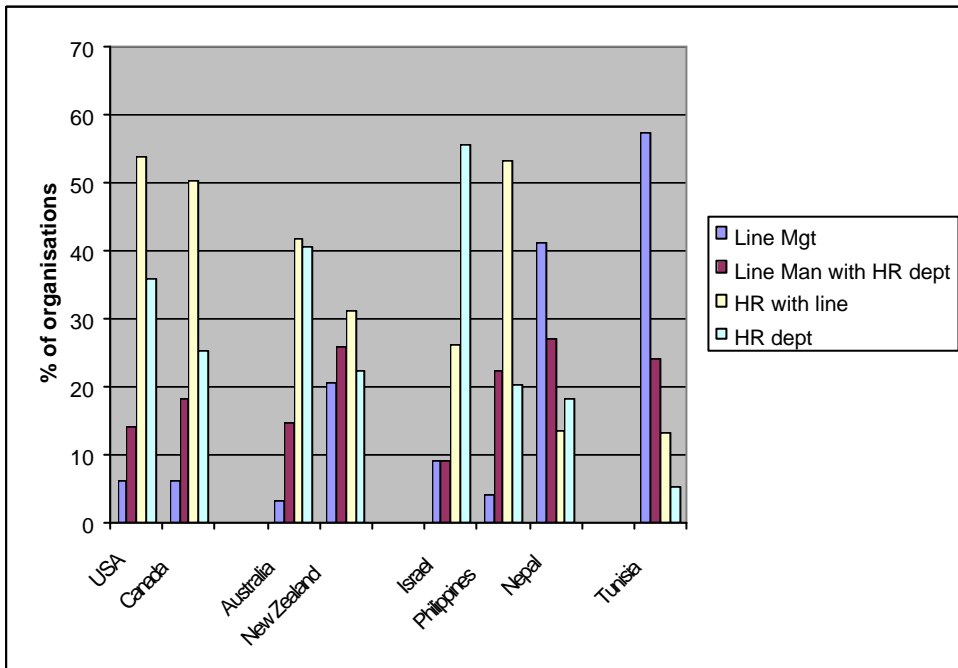
**Figure 34: Primary responsibility for Industrial Relations (EU countries)**



**Figure 35: Primary responsibility for Industrial Relations (Europe, non-EU countries)**



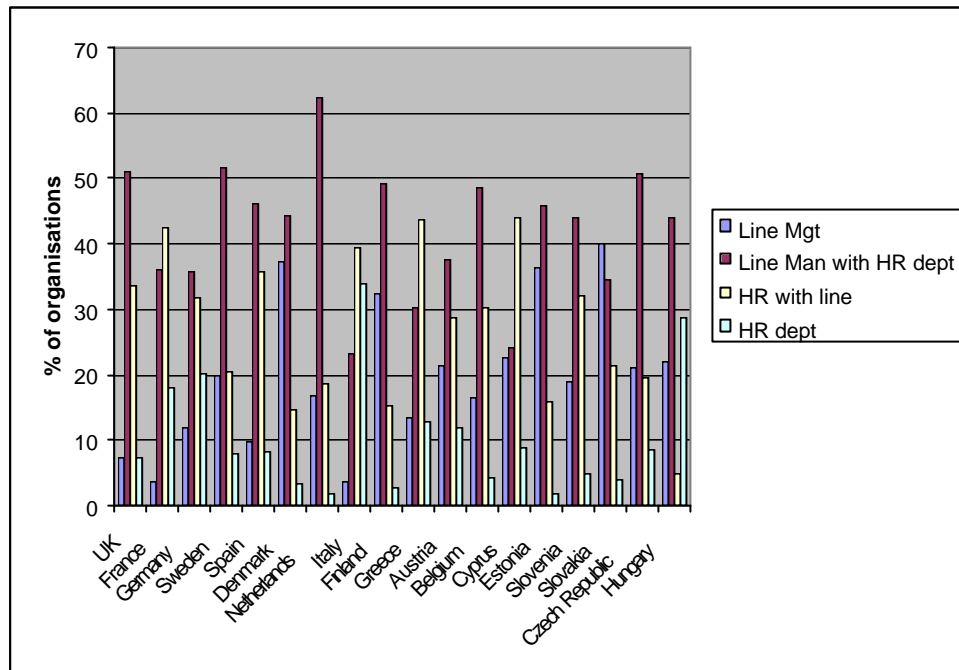
**Figure 36: Primary responsibility for Industrial Relations (Rest of world)**



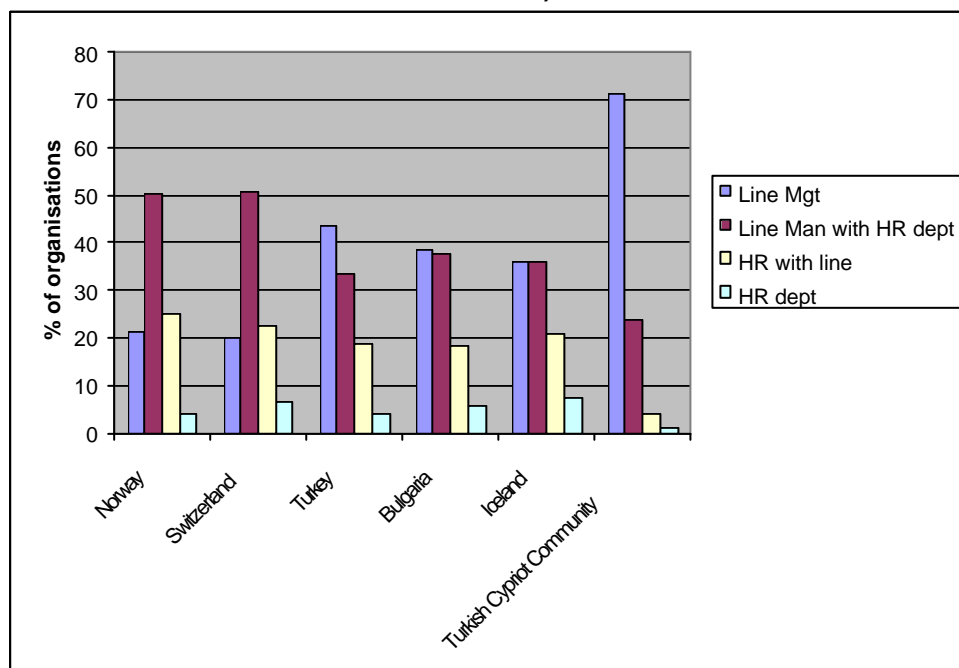
## Primary Responsibility for Workforce expansion reduction

The primary responsibility for workforce expansion/reduction in most countries resides with the line, with the assistance from the HR department. In some countries, though, it is the HR department, with the assistance of the line that has the primary responsibility (Germany, Italy, Greece, Cyprus, Australia, and Israel). Finally, in some countries it is more common for the line alone to have the responsibility for workforce expansion/reduction [Slovakia (40%), Turkey (44%), Turkish Cypriot community (71%) and Nepal 43%].

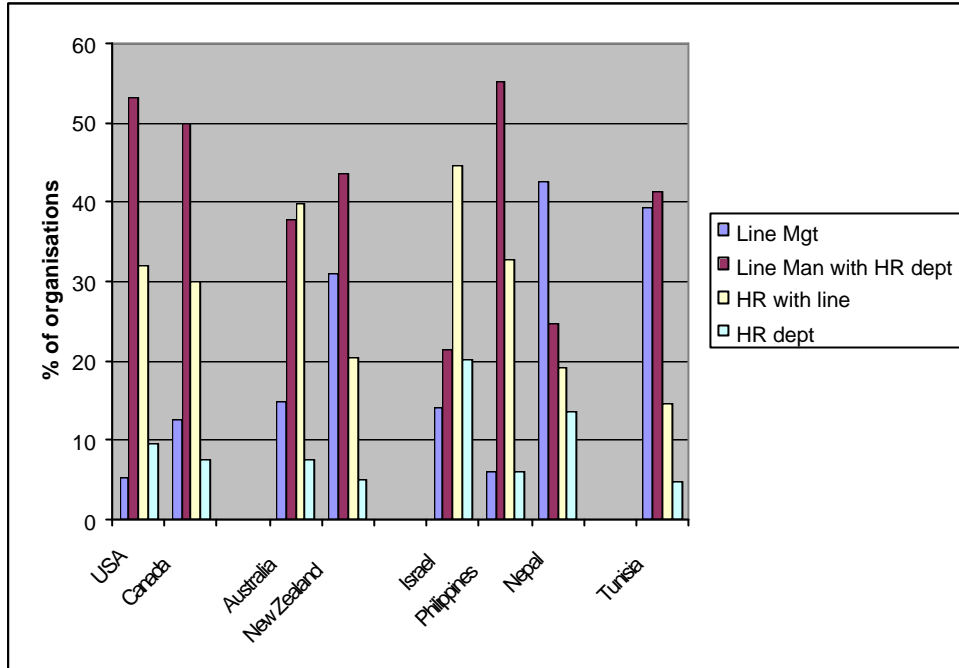
**Figure 37: Primary responsibility for workforce expansion/reduction (EU countries)**



**Figure 38: Primary responsibility for workforce expansion/reduction (Europe, non-EU countries)**



**Figure 39: Primary responsibility for workforce expansion/reduction (Rest of world)**

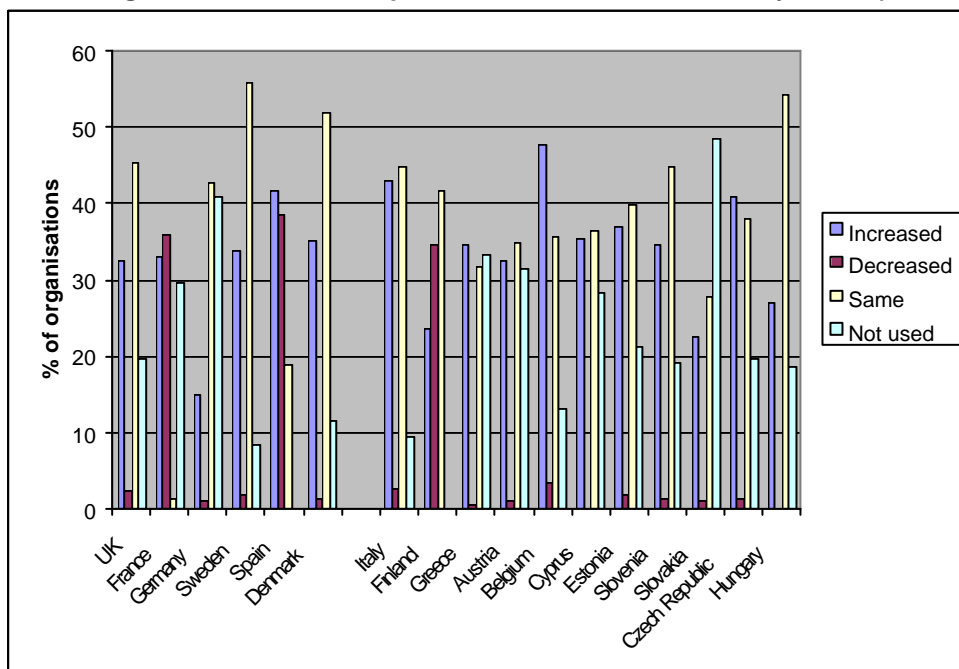


**Change in use of external providers for HR Information Systems (HRIS)**

External providers for HRIS are used extensively in most countries. Generally, over 65% of companies in most countries appear to use such services. Exceptions are met in Germany where 41% do not use external providers for HRIS, Slovakia (48%), Turkish Cypriot community (57%), Nepal (64%) and Tunisia (48%).

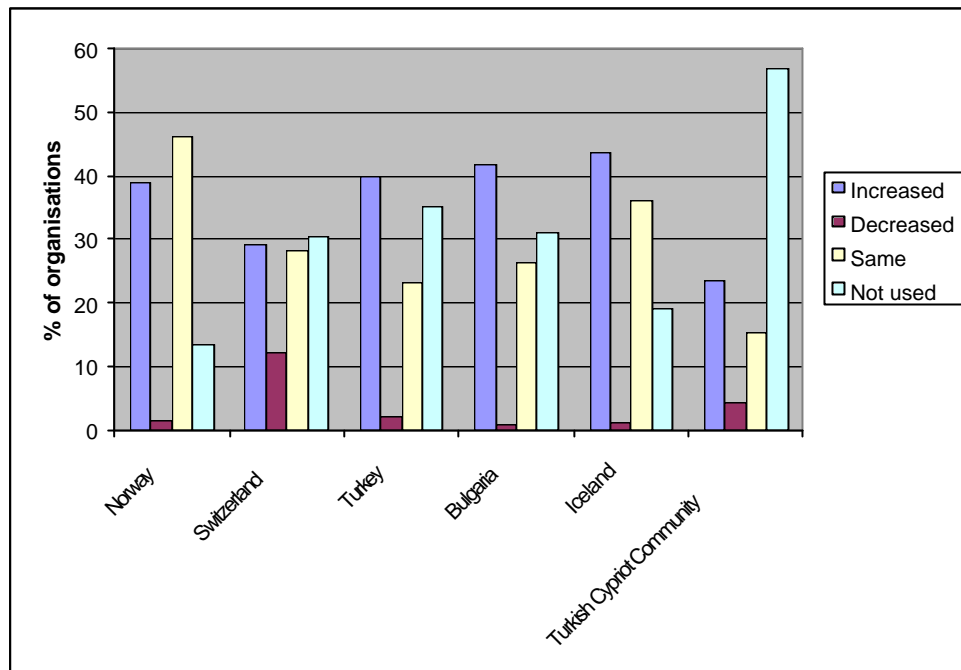
In most countries the use of external providers of HR Information Systems has either increased or stayed the same. Only in France (36%), Spain (39%), Finland (35%) and Israel (46%) more than 10% of the companies reported a decrease in the use of external providers of HRIS.

**Figure 40: Change in use of external providers for HR information systems (EU countries)**

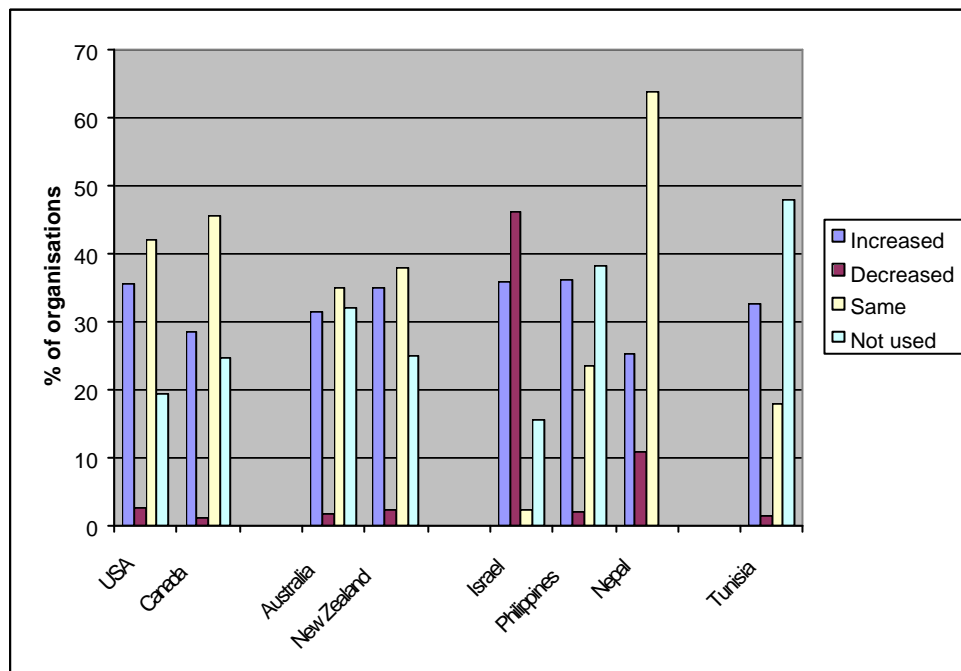


Note: this question was not asked in the Dutch version of the questionnaire.

**Figure 41: Change in use of external providers for HR information systems (Europe, non-EU countries)**



**Figure 42: Change in use of external providers for HR information systems (Rest of world)**

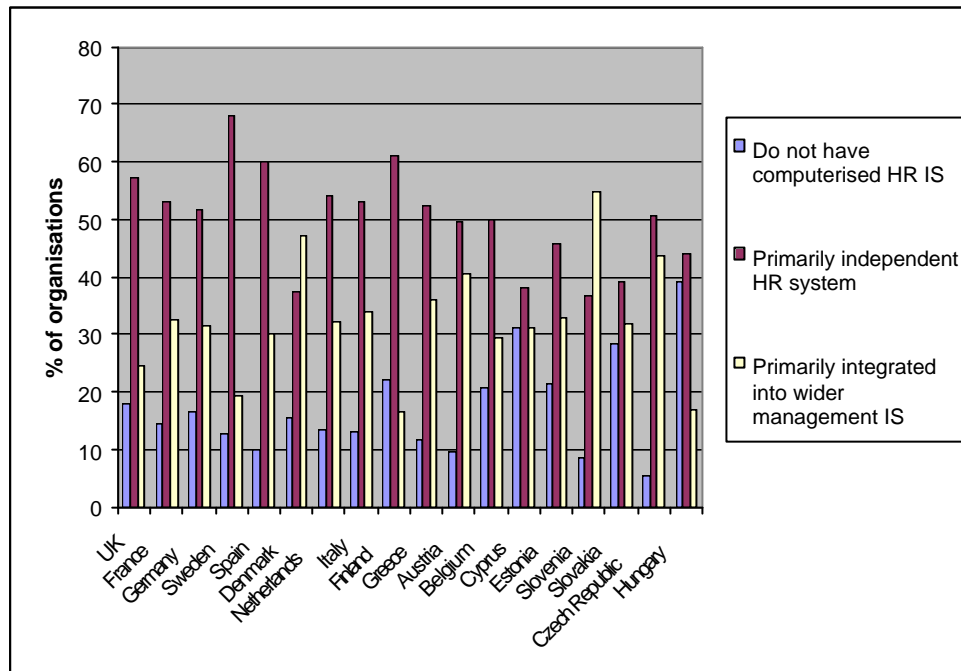


## Type of HR Information System

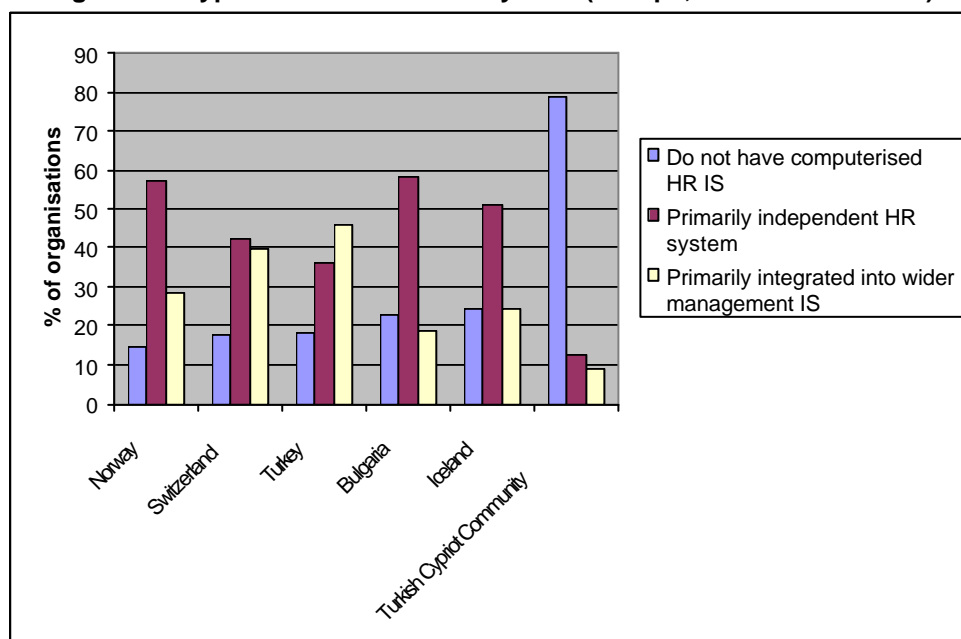
In most of the countries examined the most common practice is for companies to use a primarily independent HR system. In Slovenia (55%), USA (52%), Denmark (47%) and Philippines (42%), it is most common, though, to have a HRIS which is integrated into the wider management information system.

Surprisingly, there are many countries where there was a relatively high report of no use of any computerized HRIS, such as the Turkish Cypriot community (79%), Nepal (65%), Hungary (39%), New Zealand (37%), Australia (35%) and Cyprus (31%).

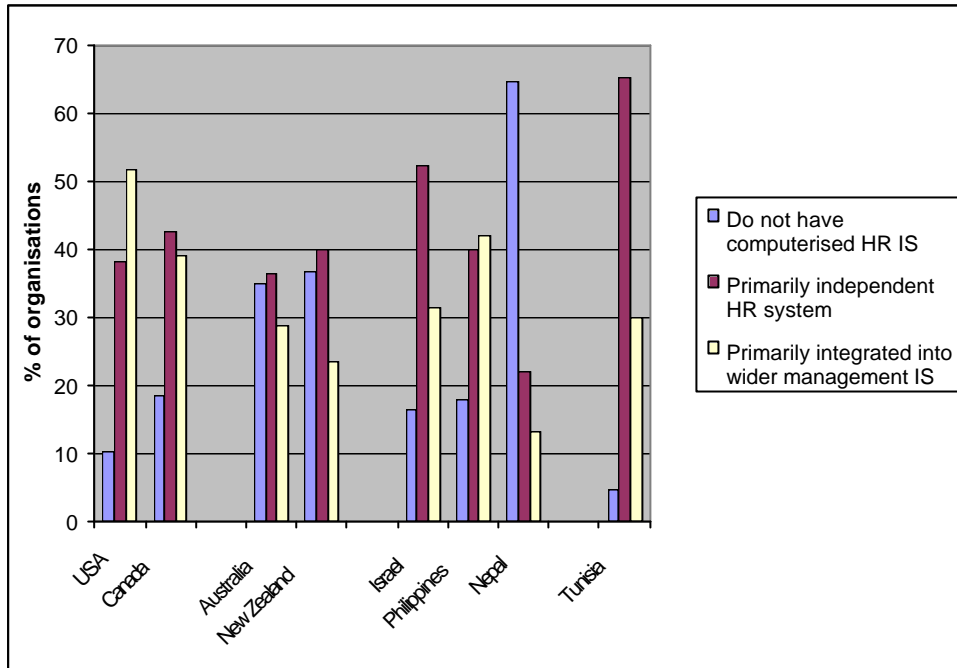
**Figure 43: Type of HR information system (EU countries)**



**Figure 44: Type of HR information system (Europe, non- EU countries)**



**Figure 45: Type of HR information system (Rest of world)**

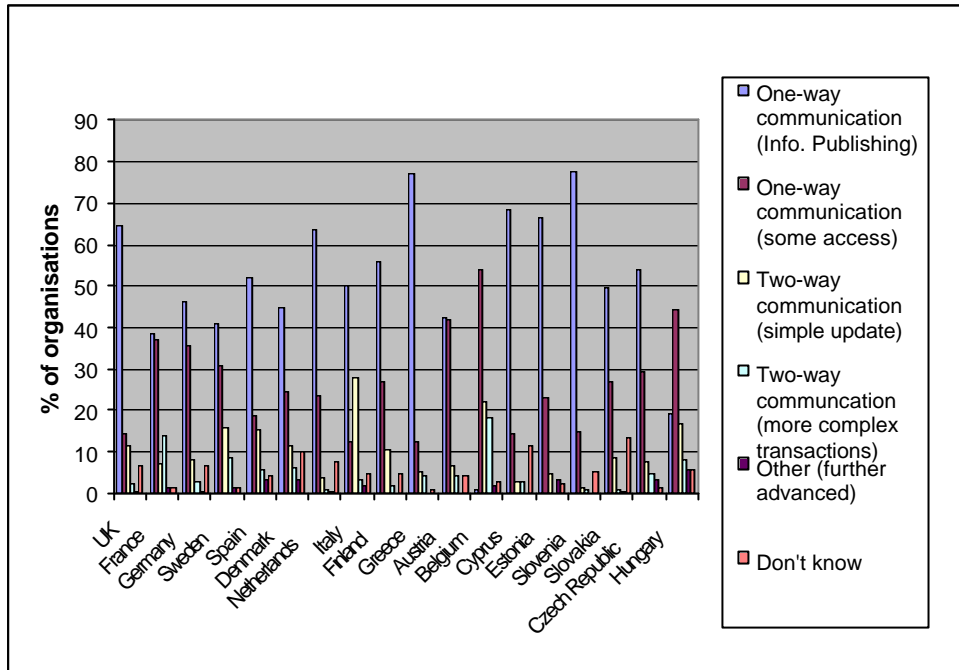


### Stage of EHRM web deployment

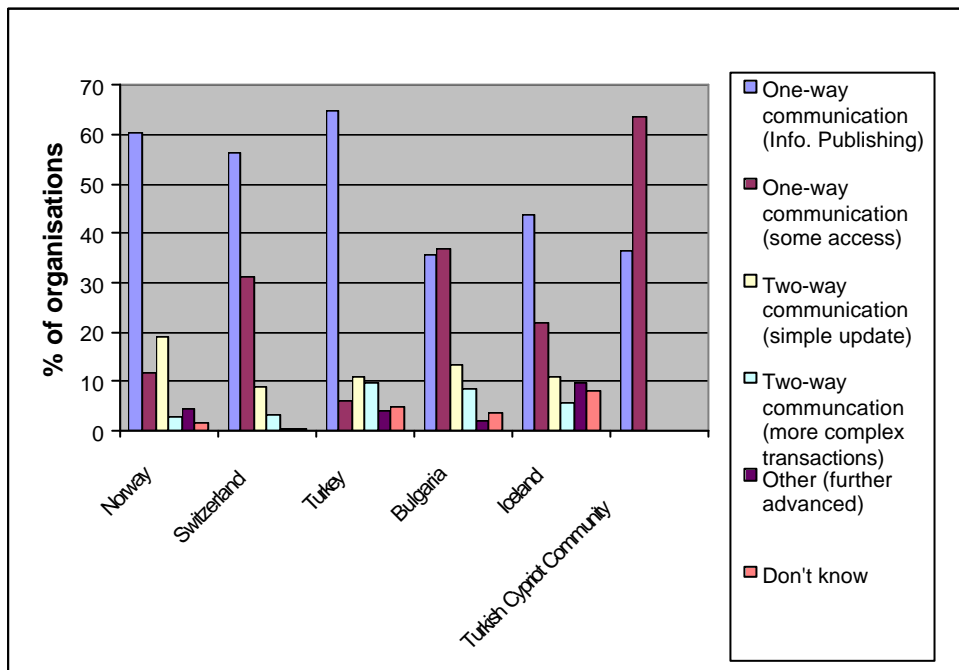
In most countries examined, e-HR allows for mostly one-way communication (mostly publishing of information and in some cases with some access from the user). As a matter of fact, in some countries, the use of one-way communication with some access is almost as common or more than the publishing of information (Hungary, France, Austria, Nepal).

Face to face communication may well be a preferred option in a majority of countries. The use of e-HRM for two-way communication is much more restrained and as a rule fewer than 20% of the respondents use such systems. The use of such two-way communication systems is more common in the USA, Australia, New Zealand, probably because advanced information systems and email are well established and there may be longer distances to communicate, where the benefits from using such systems are more evident. The use of two-way communication in Europe is also very common in Italy and Belgium.

**Figure 46: Stage of EHRM web deployment (EU countries)**

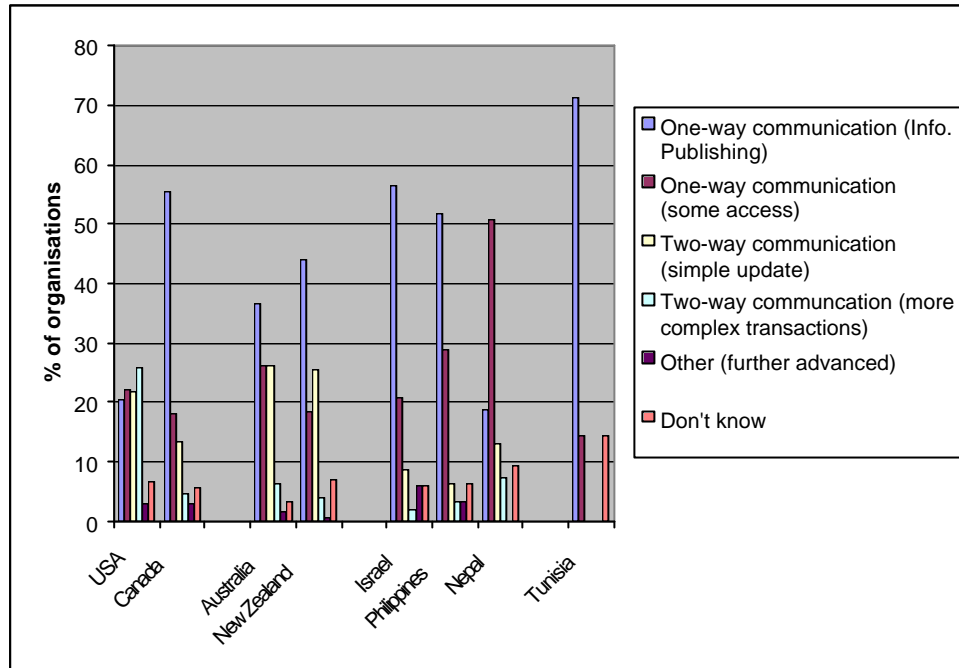


**Figure 47: Stage of EHRM web deployment (Europe, non-EU countries)**





**Figure 48: Stage of EHRM web deployment (Rest of world)**



**Table 2: Does the Head of HR have a place on the Board?**

	1995 (%)	1999 (%)	2003-5 (%)
EU countries	57.9	54.4	56.9
Europe (Non EU)	60.6	50.7	47.1

Table 2 shows the proportion of organisations in which the Head of HR is on the Board of Directors or equivalent. This proportion has remained relatively constant within EU organisations, with just over half of organisations stating that their Head of HR is on the Board. In non-EU European countries however, we can see a steady drop in the proportion of organisation with the Head of HR on the Board over the time period between 1995 and 2005.

## Conclusions

The wide variation in the roles of HR Directors and HR functions described here no doubt reveals both a diversity of cultures and national economic systems, different stages in the development of HR roles, and a variety of models of HR management.

We can see, however, that whether or not HR is represented on the main Board of a business, HRM continues to have an influence on the creation of strategy and its implementation. We can also see a trend towards the formalisation of strategy, with more written business strategies and written HR strategies being frequently in place. Similarly written mission statements imply that most businesses not only have strategic objectives, but also have provided a vision of the future for employees. HR's role in helping the organisations reported here to achieve that mission is found in HRM's primary role for industrial relations policy, and in its significant responsibility in conjunction with line management for recruitment, selection, training, development and rewards.

There are also signs from these results of the growing significance of HR information systems, many of which are integrated with the wider business systems such as SAP. The influence of information technology on HR may well be an area that future surveys should explore more fully, given the potential implications for the structures of the function especially in the transactional areas of its work.

## 2. Flexible Working Arrangements: Divergence and Convergence across Countries

### The rise in flexible working arrangements

Flexible working arrangements (FWAs) have been a major research focus since Atkinson's (1984) 'flexible firm' model<sup>1</sup>. Atkinson's model was followed by a wave of flexibility typologies which attempted to analyse flexible working arrangements across firms, sectors or countries.

This analysis is based on Cranet data regarding the use of FWAs in 30 countries: 18 European Union members, 6 non-members of the European Union and a further 8 countries outside Europe. The Cranet surveys have always provided a wealth of information about flexible working arrangements and this information has influenced both research and public policy agendas. Cranet data has shown changes in flexible working arrangements over the last 15 years (see below).

### Flexible working arrangements – what are we focussing on?

The information is based on answers to the following question:

“Please indicate the approximate proportion of those employed by your organisation who are on the following working arrangement.”

Table 3 below indicates the flexible working arrangements which were covered by this question. After providing a general overview of key findings, we will explore one of the more recent flexibility typologies which focuses on four bundles of FWAs, namely non-standard work patterns, non-standard work hours, work outsourced and work away from the office.

**Table 3: Types of flexible working arrangements**

<b>Working time</b>	<b>Contractual</b>	<b>Externalised</b>
Part-time work	Job sharing	Home-based work
Weekend work	Temporary/casual work	Tele-working
Overtime	Fixed-term employment	
Shift work		
Compressed working week		
Annualised hours		
Flexi-time		

<sup>1</sup> Atkinson, J. (1984). 'Manpower strategies for flexible organisations.' *Personnel Management*, (8): 28-31.

**Table 4: Proportion of companies using FWAs in different regions of the world**

FWAs by Proportions Used	Proportions of Companies by Regions of the World (%)					
	English Speaking	Northern European	Central European	Mediterranean	Former Eastern Block	Asian
Shift Work						
Not Used	30	37	32	24	25	47
0 - 5%	18	14	15	14	13	08
6-10%	10	09	10	10	09	06
11-20%	09	09	08	09	09	08
21-50%	14	16	15	13	20	10
>50%	19	15	20	30	24	21
Annual Hours						
Contract						
Not Used	72	63	66	77	60	92
0 - 5%	12	12	08	06	24	04
6-10%	03	04	03	03	06	02
11-20%	03	03	02	01	04	0
21-50%	03	03	05	03	02	02
>50%	07	15	16	10	04	0
Flexitime						
Not Used	46	22	27	67	45	82
0 - 5%	21	16	09	13	23	10
6-10%	9	11	07	04	11	02
11-20%	06	11	08	04	08	02
21-50%	07	12	12	04	07	01
>50	11	28	37	08	06	03
Teleworking						
Not Used	73	58	69	90	76	92
0 - 5%	20	32	24	07	18	05
6-10%	04	05	03	01	03	01
11-20%	02	02	02	01	01	0
21-50%	01	02	01	0	01	01
>50	0	01	01	01	01	01

## National differences often cut across popular understanding of flexible labour markets

In the debate over labour market flexibility, there has often been a notion that where state regulation is limited, countries – for example, the USA or the United Kingdom – should score high across most flexibility measures. However, this is not the case since the prevalence of certain types of flexible working arrangements varies across countries. As Robinson (1999: 96) has pointed out regarding temporary work: countries with high levels of regulation of standard employment contracts often have high levels of flexible working arrangements.<sup>2</sup> If firms find that certain types of flexible working arrangements are constrained by regulations then they will pursue other, more easily obtained forms of flexibility. Thus, France scores high in terms of annual hours contracts, the Netherlands scores high in terms of part-time work and fixed-term contracts and Spain and Turkey are leaders in shift work.

<sup>2</sup> “So the relationship between regulation and the incidence of temporary employment is exactly the opposite way round from what might be expected. Indeed, a high and rising incidence of temporary employment could be taken as a worrying sign that regulation of standard employment contracts is seen as burdensome and may be distorting the labour market.” (Robinson 1999: 96).

## Traditional patterns of flexible working arrangements are still dominant over 'new' forms of flexibility

In light of the futuristic discussion of the 'end of the job', it has often been expected that annualised hours, job sharing, home-based working and tele-working would become major features of working life. However, this has yet to happen. For example, extensive use of tele-working (that is, more than 10% of a organisation's workforce) covers less than 10% of the responding organisations. Even in countries that are the leaders in this area there is a long way to go before tele-working becomes part of mainstream flexible working arrangements (see Table 5).

**Table 5: Proportion of workforce involved in tele-working (% of organisations)**

Countries	Not used	0-5%	6-10%	11-20%	21-50%	>50%
UK	80	16	3	1	0	0
Germany	56	38	2	1	2	1
Sweden	55	35	5	2	1	2
Denmark	61	31	4	1	2	1
Netherlands	59	29	7	2	2	1
Slovakia	55	30	9	2	2	2
Norway	40	48	5	4	3	0
Iceland	52	31	13	2	1	1
USA	45	37	10	3	2	3

## Bundles of flexible working arrangements

In addition to viewing FWAs as individual arrangements, we may also see them as groups or bundles of arrangements. Research has shown that when combined, these arrangements have better results on organizational effectiveness and performance. Table 6 below indicates how the FWAs covered by the Cranet surveys can be categorised into four different 'bundles'.

**Table 6: Bundles of flexible working arrangements**

Non-Standard Work Patterns	Non-Standard Work Hours	Work Outsourced	Work Away from the Office
Annual Contracts Part-time Work Job Sharing Flextime Fixed-term Contracts Compressed Work-week	Weekend Work Shift Work Overtime	Temporary Employment Subcontracting	Home-based Work Tele-working

The FWA 'bundles' can be used as a starting point for analysing how FWAs vary across the groups of countries. This is done in Table 7. Looking at the four bundles of FWAs, we can see that: (a) non-standard work patterns have become embedded in most regions, though less so amongst Asian countries; (b) the two bundles of non-standard work hours and work away from the office are more common amongst countries in the English speaking, Northern and Central European regions; (c) work outsourced is most common amongst Mediterranean and Asian countries; and (d) working away from the office has yet to take hold in Mediterranean and Asian countries.

**Table 7: Proportion of companies using FWA categories/bundles in different regions of the world**

Flexible Work Arrangements By Category /Bundle	Proportion of Companies by Country Regions (%)					
	English Speaking	Northern European	Central European	Mediterranean	Former Eastern Block	Asian
Non-Standard Work Patterns						
No FWAs	02	0	01	11	05	17
1 FWA	09	05	04	28	18	39
2 FWAs	20	14	18	29	30	25
3 FWAs	26	32	32	19	28	11
4 FWAs	22	28	25	09	13	05
5 FWAs	15	16	15	03	04	02
6 FWAs	06	05	05	01	02	01
Non-Standard Work Hours						
No FWAs	05	06	08	06	07	20
1 FWA	14	21	19	14	16	35
2 FWAs	27	28	31	32	29	27
3 FWAs	54	45	42	48	48	18
Work Outsourced						
No FWAs	08	07	31	24	17	25
1 FWA	55	56	39	35	51	31
2 FWAs	37	37	30	41	32	44
Work Away From the Office						
No FWAs	60	51	64	88	71	92
1 FWA	28	32	28	09	23	07
2 FWAs	12	17	08	03	06	01

**Table 8: Proportion of organisations using annual hours contracts (all countries)**

	1995 (%)	1999 (%)	2003-5 (%)
Not used	71.2	72.8	68.9
0-5%	19.7	7.5	11.5
6-10%	2.1	5.5	3.5
11-20%	1.2	2.1	2.7
>20%	5.8	12.1	13.4

A slightly higher proportion of employees in 2003-5 than in 1995 were on annual hours contracts with 13.4 per cent of organisations stating that more than 20 per cent of their workers are on annual hours contracts, compared to only 5.8 per cent in 1995. Annual hours contracts were also used by a slightly higher proportion of organisations in 2003-5 (31.1%) compared to 1995 (28.8%).

**Table 9: Proportion of organisations using temporary/casual work (all countries)**

	1995 (%)	1999 (%)	2003-5 (%)
Not used	16.9	24.5	26.7
0-5%	60.2	23.8	43.7
6-10%	13.3	29.6	16.8
11-20%	6.3	11.6	8
>20%	3.2	10.6	4.8

The use of temporary/casual work has dropped over the ten-year period. This may be due in part to legislation in some countries that has given temporary workers more rights as employees. Temporary or casual work is generally used by a relatively low proportion of employees.

**Table 10: Proportion of organisations using fixed-term contracts (all countries)**

	1995 (%)	1999 (%)	2003-5 (%)
Not used	19.4	20.6	26.3
0-5%	57.6	23.5	46.1
6-10%	11.9	29.1	13.1
11-20%	4.6	11.7	6.1
>20%	6.4	15.1	8.4

The use of fixed-term contracts has also dropped marginally overall over the ten-year period. Fixed-term contracts are also typically found in a low proportion of the workforce. This may be due to legal changes which have made the renewal of short term contracts beyond two years less attractive in some EU countries.

## Conclusions

Despite the general rise in FWA's over the last 10 years, there has not been the expected rise in some well established forms of FWA's. Shift work and part time work have been relatively constant, whilst annual hours arrangements have become important for a minority of organisations. However, there are still major variations when it comes to the actual implementation of flexible working arrangements. This may blur some of the averages reported here. There are significant regional and country variations and some countries have experienced stagnation or even reversal in some types of flexible working arrangements. It is also puzzling – in light of the growth in service sector and professional jobs – that the growth in new forms of flexible working arrangements (e.g. teleworking, annual hours contracts) has been less than expected. There are several key findings which have been discussed.

- Growth and stability in some flexible working arrangements, whilst others have diminished
- National and regional differences in flexibility are still pronounced
- National differences often cut across popular understanding of flexible labour markets
- Traditional patterns of flexible working arrangements are still dominant over 'new' forms of flexibility

## Continuous growth in flexible working arrangements?

Part-time work, flexi-time, annual hours contracts and weekend work have now become standard across organisations in many of the participating countries. This is hardly surprising where more women join a labour market dominated by service sector organisations and white-collar, technical or managerial jobs.

While the dominating trend is towards more flexible working arrangements several cautionary remarks are required. First, there is ample room for an increase in flexible working arrangements. Despite the rise in service sector jobs the majority of countries are reporting that more than 60% of responding organisations have under 5% of their workforce employed on weekend work. Second, the growth in new forms of FWAs has been less than expected (see above). Third, there has been stagnation or reversal in the rise of some types of FWAs. For example, there has been a surprising drop in part-time work amongst Danish women over the last two decades (Rasmussen *et al.*, 2004)<sup>3</sup>.

---

<sup>3</sup> Rasmussen, E., Lind, J. & Visser, J. (2004). 'Flexibility meets national norms and regulations: part-time work in New Zealand, Denmark and the Netherlands.' *British Journal of Industrial Relations*. December 2004, 42(4): 637-658.

## **National and regional differences in flexibility are still pronounced**

While debates of convergence versus divergence and the impacts of market forces versus institutional forces rage on, the country surveys show considerable diversity across the individual measures of flexible working arrangements, and well as certain regional practices.

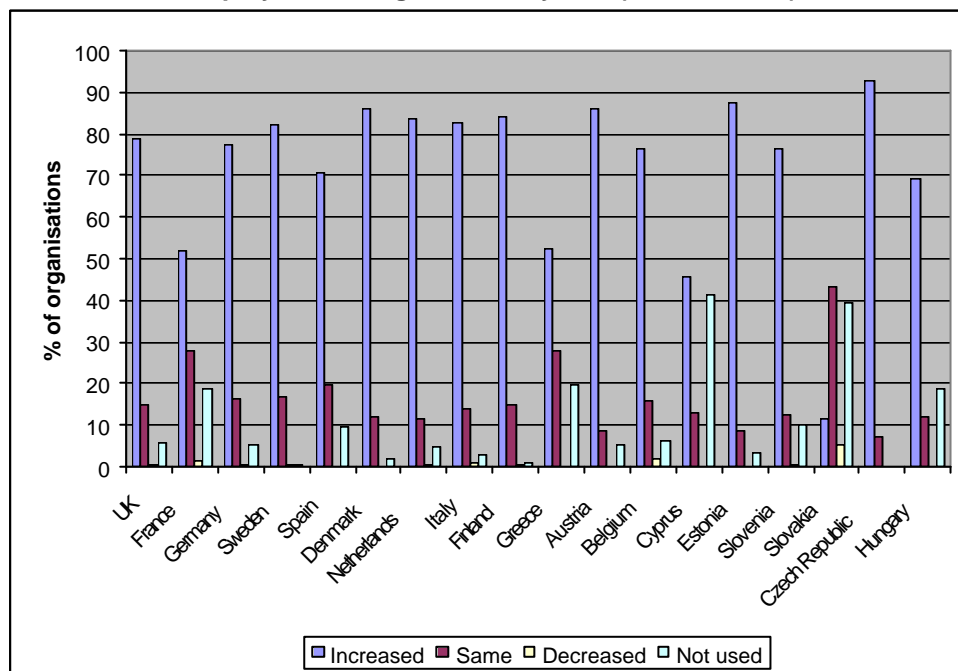
Clearly there are interesting research areas to explore by looking at the reasons for regional and national differences, which are located in labour market pressures, the laws and the practices in many countries reported here, as well as in the expansion and contraction of particular industry sectors and the impact of new technology.

### 3. Employee Relations and Communication

In this first section on employee relations, we chart the rise of the internet and intranet in employee communications. Whilst the use of emails continues to grow around the world, we can see that the patterns of the use of electronic communications with employees are not all the same. We should note that the figures shown do not reveal the current level of this kind of communication, but instead show the rise or fall in its use.

In general the use of electronic methods to communicate major issues to employees has increased significantly during the last three years across nearly all of the countries surveyed. In regard to EU countries we can observe particularly marked increases in the electronic communication of these issues for the Czech Republic, Estonia, Austria, Finland, Italy, the Netherlands, Denmark and Sweden (see Figure 49). The most obvious exception to this trend is Slovakia where some 40 percent of organizations make no use whatsoever of electronic communication and where under 20 percent report any increase in its use. This represents a very different pace of development in comparison with its neighbour, the Czech Republic, where all organizations use electronic communication. Cyprus is also somewhat different from the general trend in that while most of its organizations are increasing their use of electronic communications it also contains a substantial proportion of organizations that make no use of electronic communication.

**Figure 49: Change in the use of electronic methods to communicate major issues to employees during the last 3 years (EU countries)**

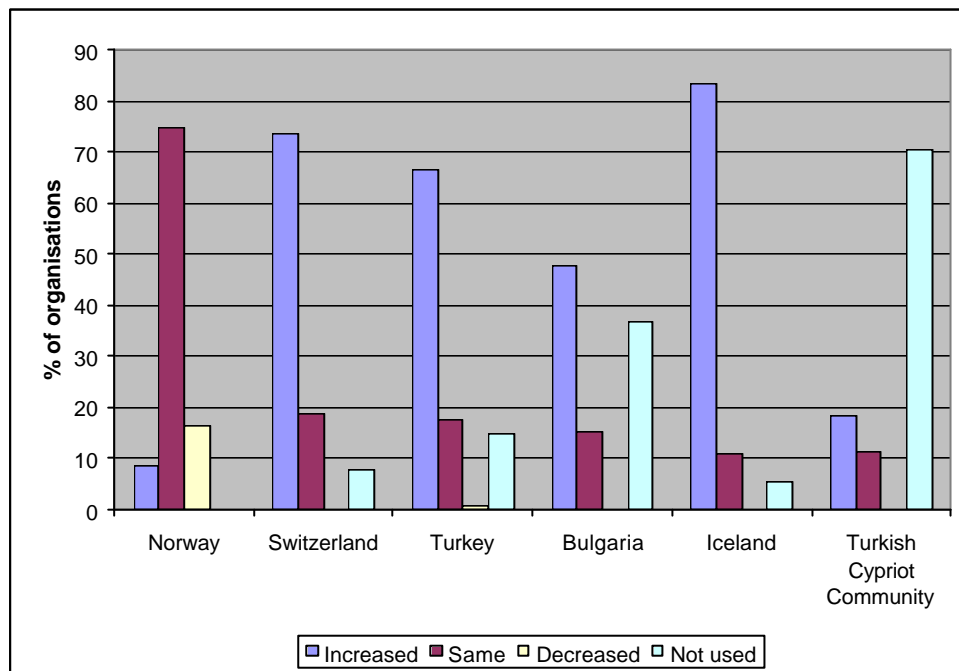




The average number of organisations in EU member countries which were increasing their use of electronic communications was 72%, whilst 16% of organisations remained the same and 8% did not use electronic communications to communicate with their employees, and 1% of organisations on average decreased their use of this method.

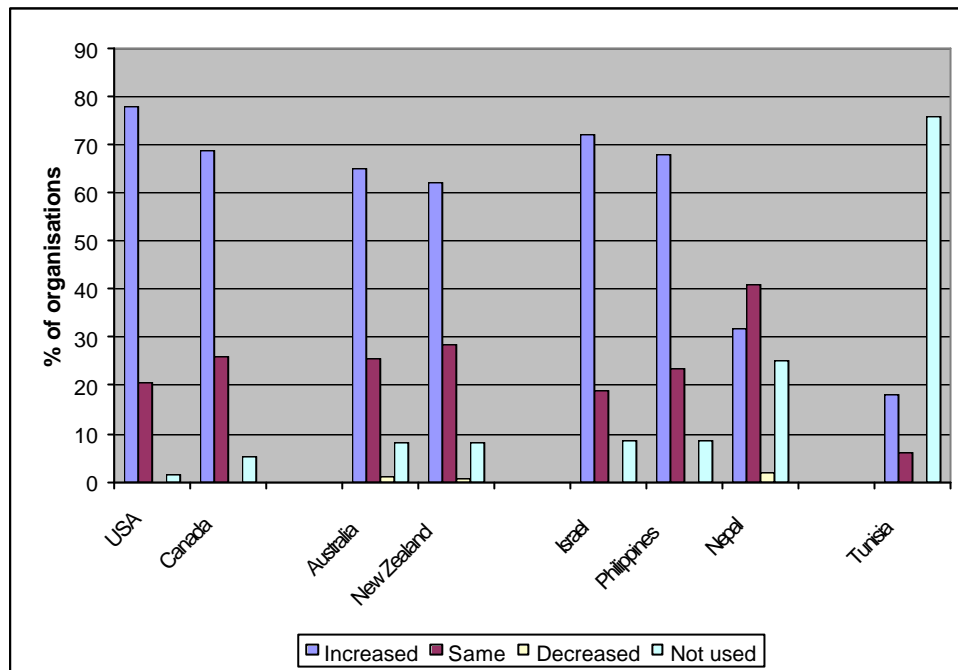
As Figure 50 indicates the non-EU European countries present a somewhat more mixed picture. In particular The Turkish Cypriot Community has a substantial majority of organizations that make no use of electronic communication. In this respect The Turkish Cypriot Community is atypical of Europe. Norway is also somewhat different from the general European trend in that only about 10 percent of its organizations increased their use of electronic communication. However, it should be noted that all Norwegian organizations make some use of electronic communication.

**Figure 50: Change in the use of electronic methods to communicate major issues to employees during the last 3 years (Europe – non EU countries)**



In regard to the non-European countries, Tunisia has a profile that is very similar to The Turkish Cypriot Community in that the vast majority of its organizations make no use of electronic communication (see Figure 51). With the exception of Nepal, all of the other non-European countries show pronounced increases in the use of electronic communication.

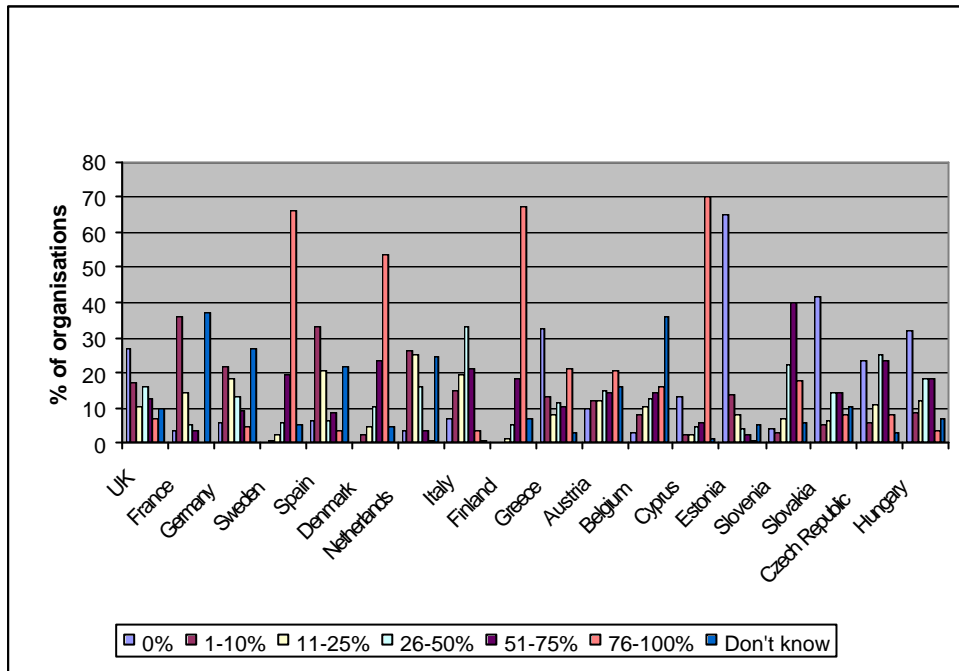
**Figure 51: Change in the use of electronic methods to communicate major issues to employees during the last 3 years (Rest of world)**



## Trade Union Membership

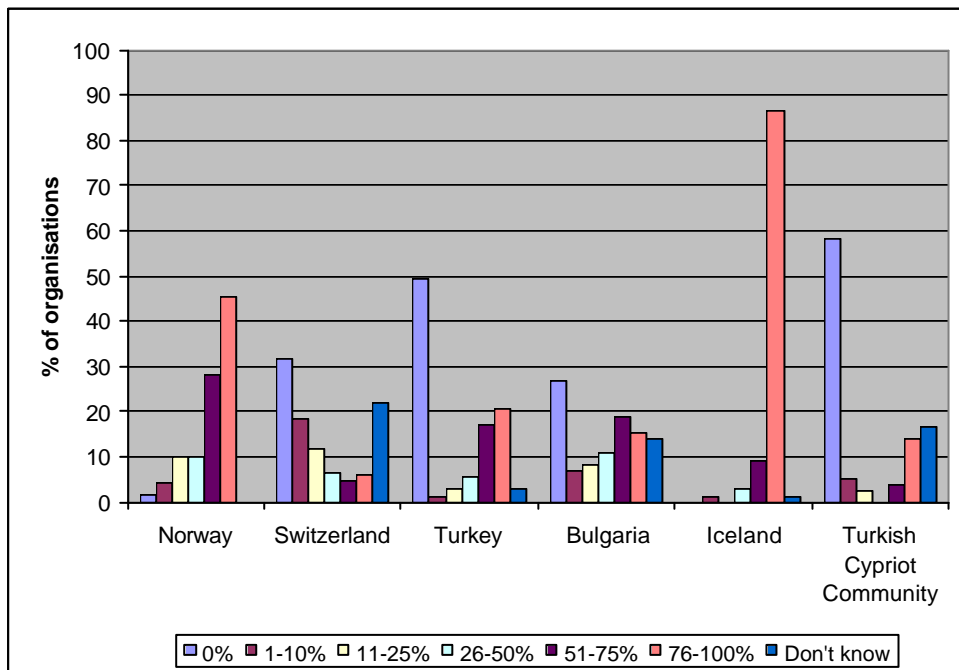
Trade unions have traditionally constituted one significant channel for employer communication with employees. In general in cases of organizations where there is no trade union presence at all it is reasonable to assume that trade unions are not acting as a communication channel. In this regard Figure 52 indicates that EU-countries are to a significant extent bifurcated on the basis of whether they have a communist history or not. That is to say that all of the former communist countries excepting Slovenia have above average proportions of organization with no trade union membership whatsoever. In the case of Estonia this is approaching 70 percent of organizations. In the rest of the EU, i.e. the majority of EU countries, with the exception of Greece and the UK, organizations with no union membership are much less common. The Scandinavian countries of Sweden, Denmark and Finland (and Iceland in the non-EU European countries) showed particularly high unionisation. Cyprus also showed high unionisation, demonstrating the fact that Cyprus uses the same tri-partite model as Scandinavia whereby most decisions are reached between employer associations, unions and the Government.

**Figure 52: Proportion of total number of employees who are members of a trade union (EU countries)**



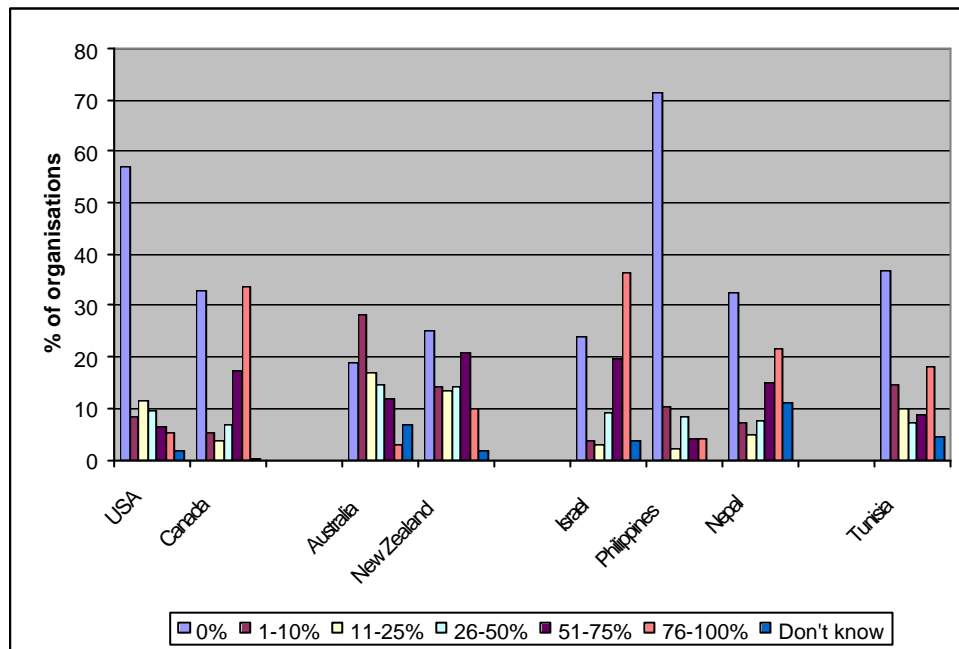
European non-EU countries may also be divided into two. While both Norway and Iceland are very similar to the majority of EU countries, the other non-EU European countries all have substantial proportions of organizations with no union membership (see Figure 53).

**Figure 53: Proportion of total number of employees who are members of a trade union (Europe – non EU countries)**



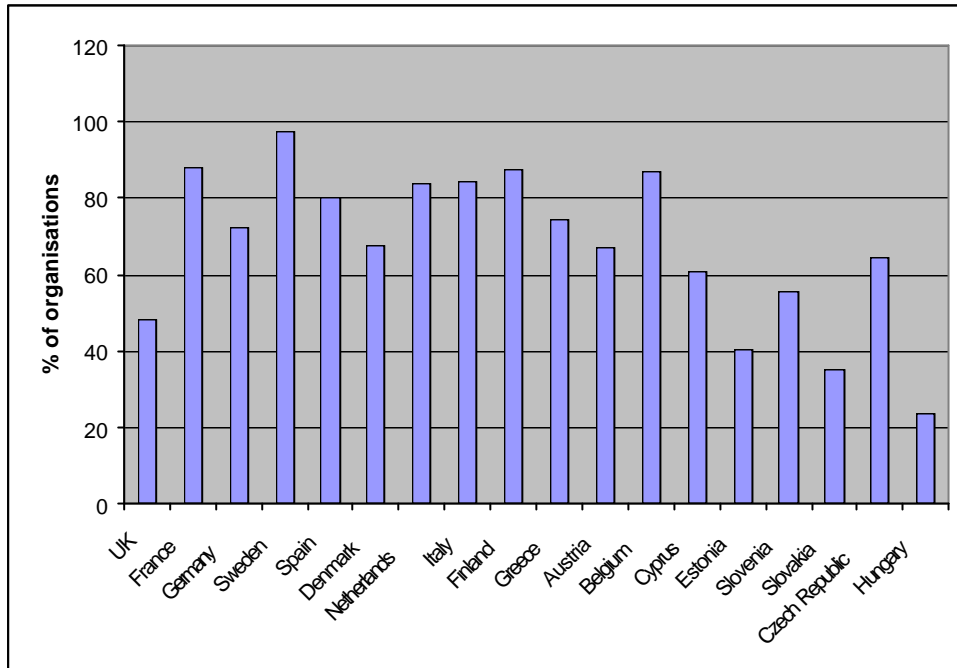
As Figure 54 indicates, the non-European countries we have surveyed are clearly different to the majority of EU countries in that they all contain large proportions of organizations with no union membership. This is particularly the case for the Philippines and the USA. Further analysis of the data showed that, across countries, the proportion of employees that are members of a trade union is higher in the public sector than in the private sector, with about a quarter of private sector organisations (26%) showing no unionisation compared to only seven per cent of public sector organisations.

**Figure 54: Proportion of total number of employees who are members of a trade union (Rest of world)**



**Employers' associations.** A new question was asked in this survey with regard to whether organizations were members of employers' association. No distinction was made here between employers' associations and trade associations. In regard to the EU in the case of 12 out of the 17 countries for which we have data 60 percent or more organizations were members of employers associations (see Figure 55). Of the five countries which had membership frequencies below 60 percent, four were ex-communist countries, with the fifth being the UK. That is to say we find a pattern that is broadly similar to the pattern we observed in regard to union density.

**Figure 55: Organisations reporting to be members of an employers' association (EU countries)**



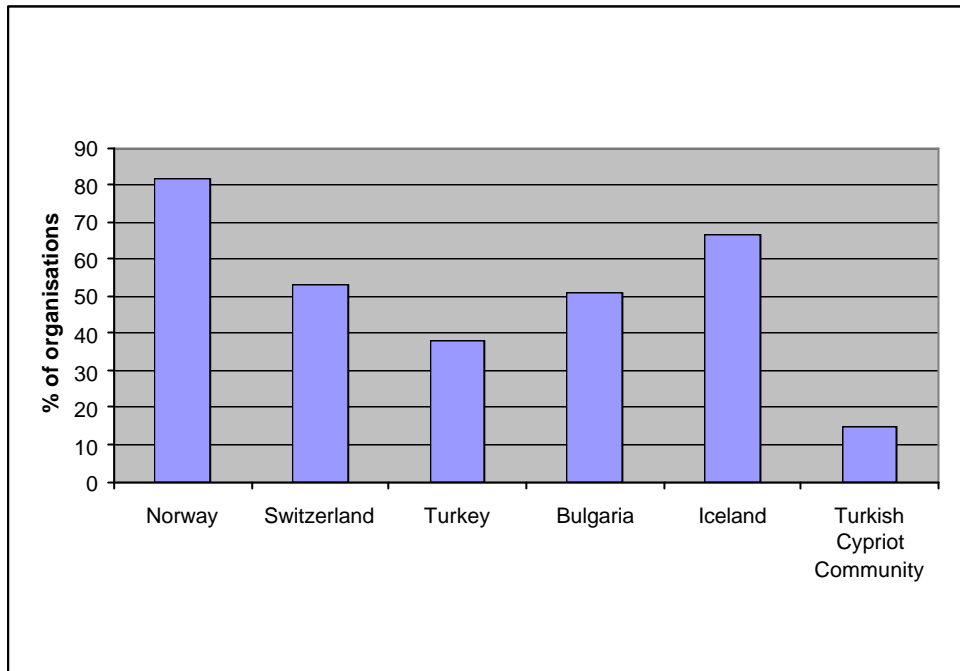
In regard to the non-EU European countries we can observe a pattern for membership of employers' associations that is similar to that of union density in that it is only Norwegian and Icelandic organizations that have membership frequencies above 60 percent and which are therefore similar to the majority of EU countries (see Figure 56)

The average number of organisations in the EU which were members of an employers association was 67%, and of those who were members, around 58% were satisfied entirely or to a large extent with the services they received. This leaves a substantial number who were not entirely satisfied:- 3% were not satisfied at all, and 39% were only satisfied to a small extent. This may reflect the changing nature of employers associations which, according to the ILO are having to change their role from a focus on employee relations to a greater emphasis on human resource advisory services in order to meet the needs of their members (ILO 2003)<sup>4</sup>.

Membership of employers associations across the EU is related to size, the larger the organisation the more likely they are to be members, and membership is common in chemical products, extraction and processing industries, in manufacturing, building and civil engineering. The overall extent of membership has remained similar, between 1999 at around 70% of organisations, as it is in the 2003/5 surveys.

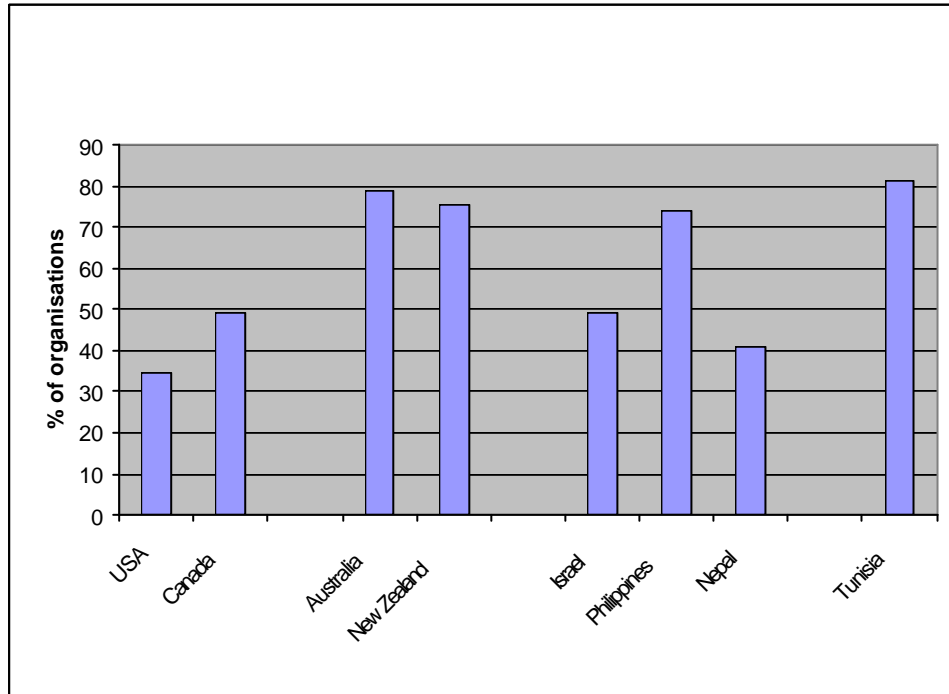
<sup>4</sup> ILO (2003) Employers' organizations and the challenges facing business today. Report for the International Symposium of Employers' Organizations. ILO

**Figure 56: Organisations reporting to be members of an employers' association (Europe – non EU countries)**



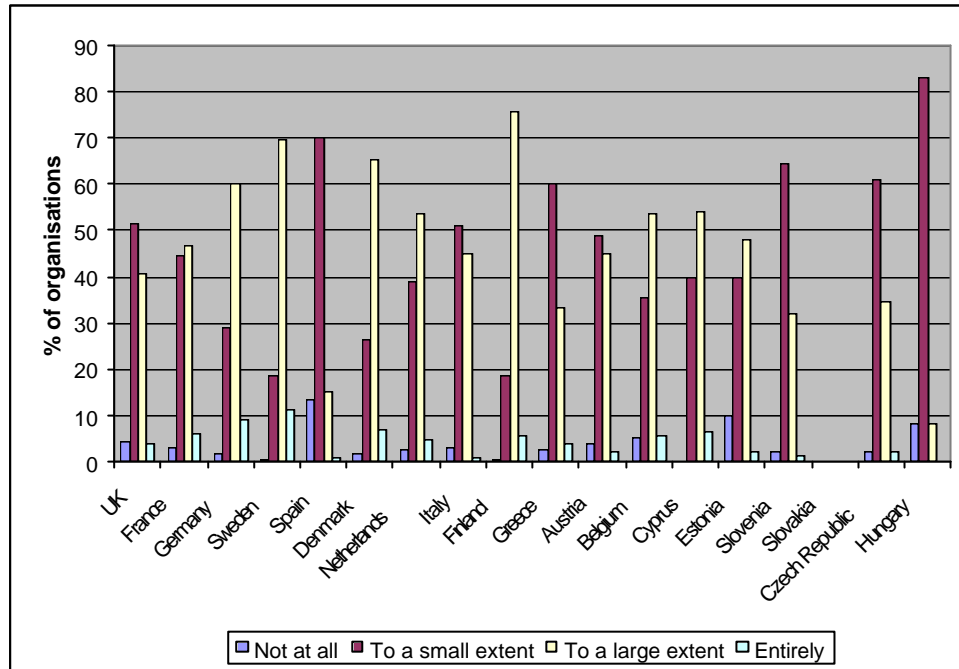
For the remaining countries in our survey, membership of employers' associations is generally high with USA, Canada, Israel and Nepal falling below the 60 percent mark (see Figure 57).

**Figure 57: Organisations reporting to be members of an employers' association (Rest of world)**

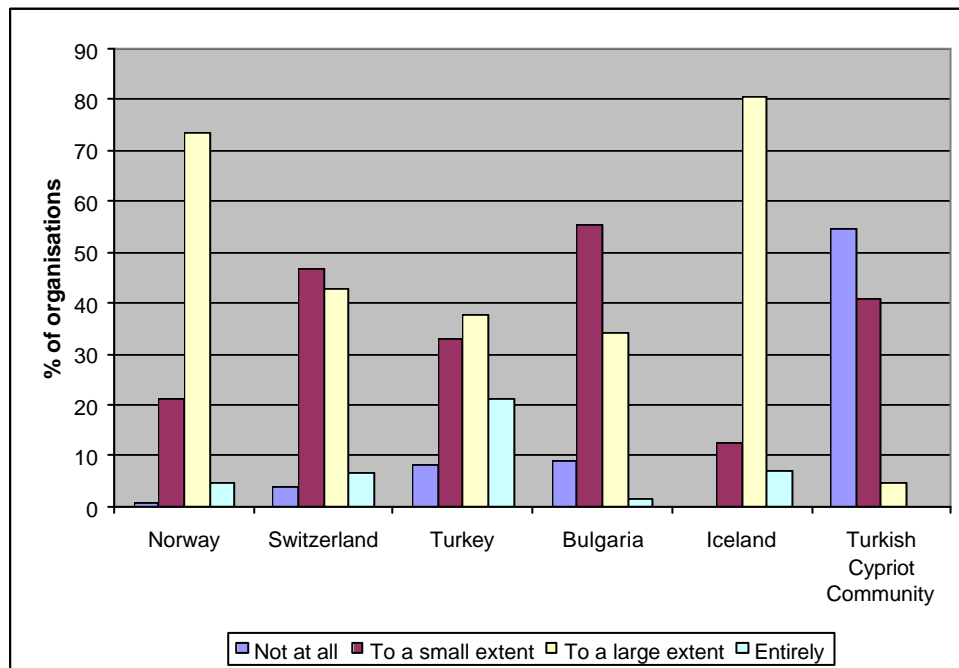


We also asked how satisfied respondents were with the services provided by associations. Looking at both Figures 58 and 59 we can observe a pronounced Nordic cluster, Sweden, Denmark, Finland, Norway and Iceland, where satisfaction levels are overwhelmingly large. The same is also the case, albeit to a much lesser extent, for the Netherlands, Belgium, Cyprus, Estonia and France. In the other countries, including the non-European countries with the exception of Australia (see Figure 60), the largest group of respondents reported that membership met their needs only to a small extent.

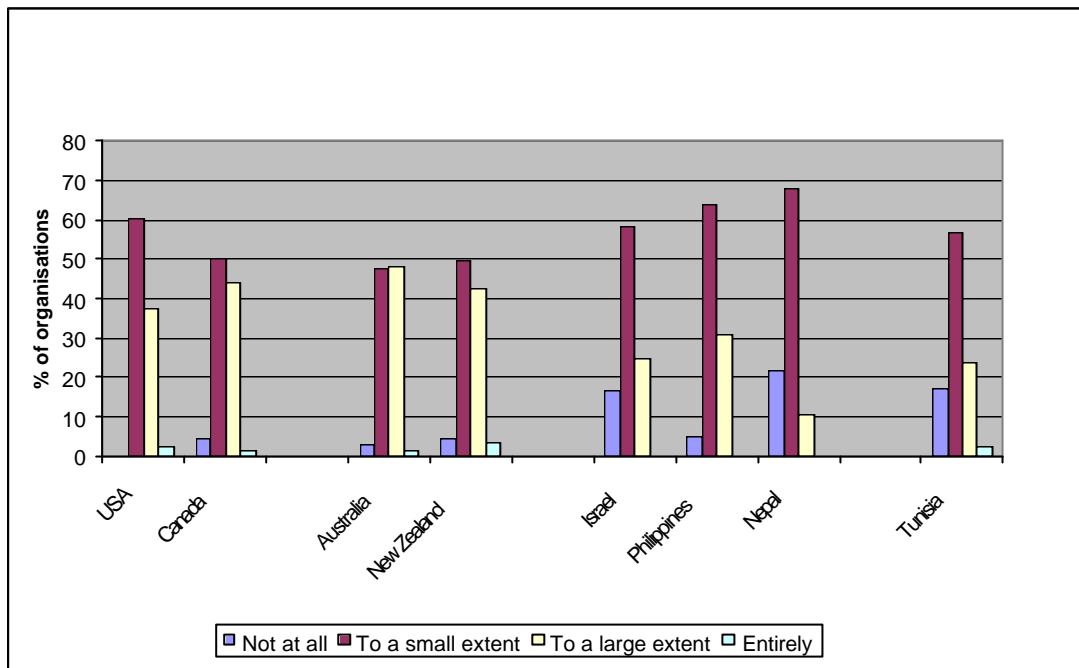
**Figure 58: Extent to which services provided by the employers' association meet organisation's needs**



**Figure 59: Extent to which services provided by the employers' association meet organisation's needs (Europe – non EU countries)**



**Figure 60: Extent to which services provided by the employer's association meet organisation's needs (Rest of world)**



**Table 11: Briefing of employees on business strategy**

	1995 (%)	1999 (%)	2003-5 (%)
Management	94.2	92.4	98.9
Professional/technical	64	55.2	95.5
Clerical	44.1	37.9	91
Manual	35	27.6	86.5

The 2003-5 results show a sharp upward rise in the proportion of organisations that brief levels besides management regarding business strategy.

## Conclusions

Whereas it is commonplace for organizations to make use of verbal and written communication direct to employees this current survey reveals a significant new development in employee communications, i.e. the increasing use of electronic methods of communication. Moreover, organizations are confirming that they are using electronic methods to communicate *major* issues. There is also evidence of an overall increase in the briefing of employees about business strategy.

However, this development does not necessarily mean that unions have lost their role as actual or potential channels of communication between employer and employee. Although non-unionization is widespread in the USA, in Europe in general most unions continue to have a membership presence in most organizations. However, there are exceptions to this "European" model including a number of former communist countries and the UK.

For the first time in the history of this survey organizations were asked whether they were members of employers' association and whether or not they were satisfied by the services provided. Organizations in Nordic countries generally belong to such organizations and they are generally satisfied with them. For the other countries surveyed, while membership levels are also generally high, fairly low levels of satisfaction are commonplace.



## 4. Pay

Under the heading of pay in the survey three topics are covered. The first topic concerned the importance of performance related pay. The increasing use of variable pay related to the performance of the individual, the team or the organisation as a whole is a major trend in HRM today. The second topic which is related to performance oriented HRM is for some countries and companies the new phenomenon of financial participation, employee share ownership, stock options and profit sharing. The third topic is the level of bargaining where decentralisation to lower levels, from nation/industry wide to company and individual level, is seen as a major trend.

Table 12 presents an overview of the use of performance related pay by organisations by country. In general, variable pay based on the performance of the group or team is less common than individual performance rating and pay based on collective organizational level performance. It is clear that there is large diversity between countries. This diversity is based on cultural differences in the acceptance of this type of variable pay as well as differences in business regimes. We may expect these forms of pay to appear in more voluntary regimes where the discretion of management to model the employment relationship is the largest. In this case it is interesting to note that countries like Hungary, Slovenia and Slovakia have higher scores than the USA. Apparently these post-communist States offer ample opportunity to model the employment relationship to performance oriented arrangements. An outlier is Spain, which also frequently uses performance related pay on all levels.

Table 12 presents also an overview of the use of forms of financial participation. In general the use of schemes is higher for management and professional staff and lower for clerical staff and manual work. In the case of profit sharing, there is even more distribution among categories of personnel. In general there are lower levels of use in case of stock options. This may also be the result of the new international bookkeeping standards that require the expensing of stock options in the profit and loss account.

There is considerable diversity in the use of these schemes between countries. Higher levels of use of share plans are found in the UK and France (supported by promotion policies and tax concessions), Norway and the USA. Here again the former post-communist regimes of Hungary and Slovakia have relatively high levels of use. These countries frequently show the other forms of financial participation. Profit sharing is very common in France and Finland due to specific provisions and tax concessions in those countries. High levels are also found in the USA, the Netherlands, Spain and Norway. As expected a high level of use of stock options is found in the USA. Outliers are Spain and Iceland.

**Table 12: Proportion of companies with types of financial participation and performance related pay per country**

	Financial Participation (only private sector)			Performance Related Pay		
	Shareplan	Profit sharing	Options	Team	Individual	Collective organization
United Kingdom	18	12	2	4	9	13
France	19	73	3	11	18	16
Germany	8	24	1	4	16	15
Sweden	7	16	3	5	3	11
Spain	12	35	19	61	72	79
Denmark	7	4	2	4	15	5
The Netherlands	12	36	4	6	20	15
Italy	5	2	1	10	21	33
Norway	50	30	11	21	34	18
Switzerland	5	23	3	8	29	20
Turkey	2	7	1	2	5	6
Finland	4	48	5	6	11	15
Greece	8	5	11	8	16	15
Czech Republic	7	14	3	15	28	38
Austria	5	18	2	3	15	14
Belgium	11	8	2	3	13	7
Bulgaria	9	14	14	10	28	20
Hungary	20	22	27	41	59	56
Australia	12	7	1	5	8	10
New Zealand	7	12	1	4	10	12
Cyprus	4	4	4		11	5
Israel	3	18	4	3	5	6
USA	16	37	30	26	43	40
Canada	11	13	3	4	7	9
Tunisia	4	3	1	9	39	21
Iceland	1	9	18	3	5	5
Turkish Cypriot Community	3	12	1	2	8	6
Estonia	2	3	2	8	11	10
Slovenia	11	18	4	23	52	42
Philippines	8	6	2	11	18	25
Slovakia	19	49	10	58	72	69
Nepal	1	26	0	5	10	3

Table 13 presents the findings of pay determinacy levels for manual personnel. Note that respondents indicated a number of different levels of bargaining. That is, in some cases organizations have company level bargaining as well as national, industry wide or regional bargaining. It appears that, in general, nation/industry wide bargaining for manual personnel is still more common in most of the countries than the other levels. Not presented here, to a great extent the distribution of the level of pay settlement for clerical staff follows the same patterns as for manual personnel. A higher proportion of organizations indicate that they settle pay for professionals on company and individual level. Pay settlement for management is done largely on individual and company level; in most countries more than 70% of organizations.

Centralised bargaining for manual and clerical staff is found mainly in Germany, The Netherlands, Italy, the Scandinavian countries, Tunisia and Slovenia while lower levels of bargaining is found in the USA, UK, and France. Also in post communist countries Czech Republic, Bulgaria, Estonia and Hungary company level agreement appears more common. Individual level bargaining is especially done in Switzerland, Israel, New Zealand, Sweden and Denmark. In these latter two countries different levels of pay settlement are combined.

**Table 13: Proportion (%) of organizations covered by pay determinacy level for manual personnel per country**

	Other	Individual level	Company/ establishment level	Regional/national/ industry wide
United Kingdom	9	11	52	31
France	-	24	64	28
Germany	-	4	45	67
Sweden	3	32	35	61
Spain	-	10	26	68
Denmark	6	32	30	69
The Netherlands	4	12	30	73
Italy	1	10	44	74
Norway	-	19	47	70
Switzerland	7	40	25	26
Turkey	3	8	39	39
Finland	2	12	32	75
Greece	0	8	30	60
Czech Republic	1	14	65	15
Austria	9	19	35	59
Belgium	3	16	45	65
Bulgaria	0	26	60	23
Hungary	0	22	59	10
Australia	3	14	22	58
New Zealand	5	33	41	32
Cyprus	1	9	15	67
Israel	1	23	28	37
USA	10	13	37	29
Canada	8	9	39	47
Tunisia	-	2	10	75
Iceland	1	25	29	66
Turkish Cypriot Community		16	41	18
Estonia	4	25	48	8
Slovenia		5	45	73
Philippines	1	20	29	29
Slovakia	6	26	38	32
Nepal	17	7	31	21

**Table 14: Use of financial incentives (All countries)**

	1995 (%)	1999 (%)	2003-5 (%)
Employee share schemes for management	15	23.9	61.7
Employee share schemes for professional/technical	9.7	16.5	52.3
Employee share schemes for Clerical	8.8	14.7	48.3
Employee share schemes for manual	7.4	12.1	43.3
Profit sharing for management	24.8	28.9	76.1
Profit sharing for professional/technical	18.7	21.3	67.3
Profit sharing for Clerical	17.1	18.5	63.8
Profit sharing for manual	14.2	15.8	56.7

Table 14 shows that the use of financial incentives has risen across all employee levels, in terms of employee share schemes and profit sharing schemes. This is indicative of a general trend within organisations to encourage employee commitment and motivation by allowing them a stake in the financial profits of the organisation.

## Conclusions

There is still quite some diversity in the use of performance related pay and financial participation. Also the diffusion of these schemes is still limited; in most countries only a minority of organisations use these schemes. The situation is interesting in the former communist East European countries like Hungary, Slovenia and Slovakia where variable pay became more important than in the USA. National, regional or industry wide bargaining are still the main forms of pay settlement in many countries although in some countries (especially in post-communist countries) company level agreements are important.

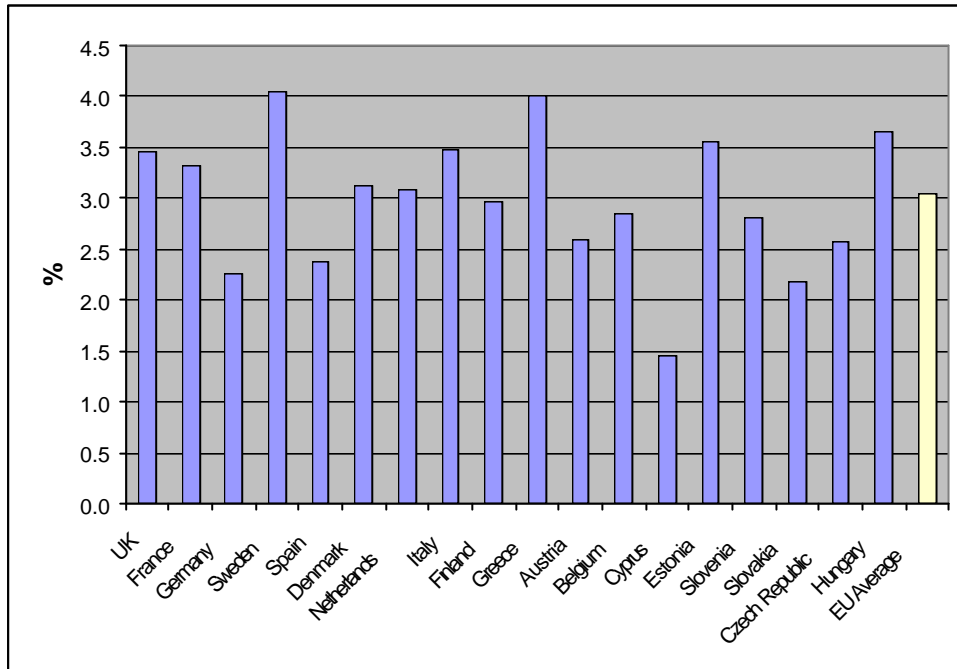
## 5. Training and Development

### Training and development

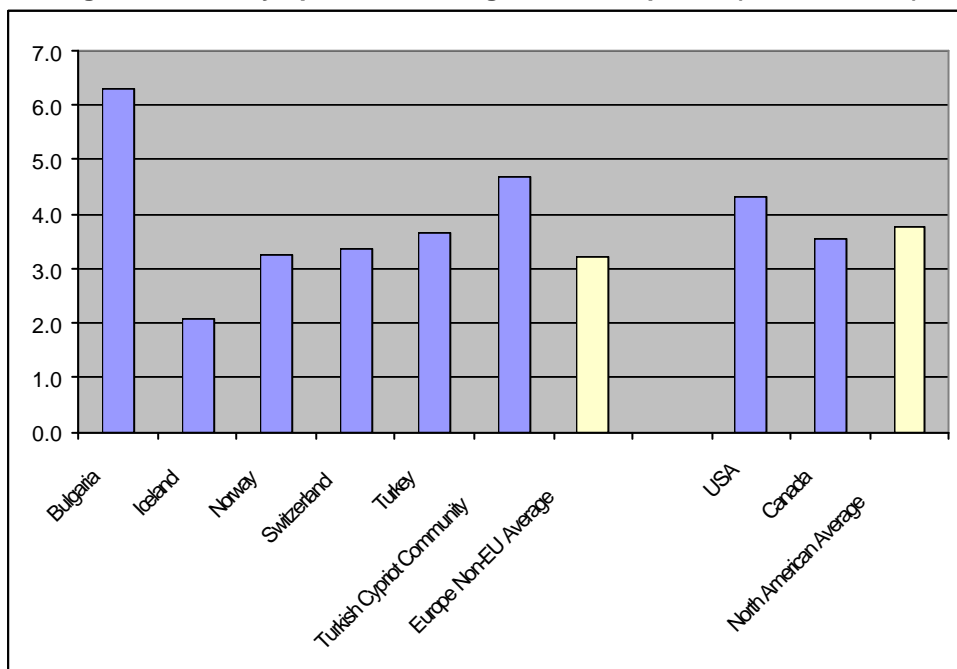
#### *Amount of investment in people*

Organisations' expenditures on training and development are located in a band between 2% and 4% of annual payroll costs in most countries (see Figure 61).

**Figure 61: Money spent on training and development (EU countries)**



**Figure 62: Money spent on training and development (Rest of world)**



In terms of yearly days used for training, most countries report six days for managers and professional/technical employees and four days for clerical and manual employees. Looking at the overall picture, there is a significant correlation between money spent and training days used. However, this is not true for all countries. For example, organisations in Denmark and Italy spend less than organisations in France on training but report a higher average number of days devoted to training for all categories of employees. In addition, the link between training days and money spent differs according to categories of employees. While the link is strongest for manual and clerical staff, it is weaker for managers and professional/technical employees. Little change can be observed since the last Cranet-survey 1999 both for the amount of investment and for the link between different types of investment. Table 15 gives an overview.

**Table 15: Investment in people**

	Money spent (% of annual payroll costs)	Average training days/year			
		Management	Professional/ Technical	Clerical	Manual
<b>EU</b>					
UK	3.45	5.13	5.54	3.68	4.05
France	3.32	4.44	4.17	3.45	3.54
Germany	2.26	4.85	3.86	2.92	2.33
Sweden	4.04	6.62	6.84	4.86	3.91
Spain	2.39	6.55	7.20	5.19	5.76
Denmark	3.13	6.47	6.11	4.04	4.06
Netherlands	3.09	5.02	5.75	3.48	4.58
Italy	3.48	5.23	6.39	4.86	3.42
Finland	2.96	6.93	6.37	4.55	3.23
Greece	4.02	7.74	9.47	6.10	6.46
Austria	2.60	5.88	5.05	3.70	2.91
Belgium	2.85	5.90	5.17	3.07	2.96
Cyprus	1.46	7.29	7.04	4.29	3.12
Estonia	3.55	8.11	7.65	5.88	4.39
Slovenia	2.82	6.72	6.50	2.71	2.75
Slovakia	2.19	6.10	4.94	4.21	1.75
Czech Republic	2.58	7.98	8.00	3.67	3.21
Hungary	3.65	5.75	5.86	3.80	3.62
<i>EU Average</i>	<i>2.99</i>	<i>6.24</i>	<i>6.22</i>	<i>4.14</i>	<i>3.67</i>
<b>Non-EU Europe</b>					
Bulgaria	6.32	10.65	9.93	6.39	9.66
Iceland	2.07	5.10	4.89	3.11	2.94
Norway	3.26	6.22	6.78	3.40	3.77
Switzerland	3.38	6.18	4.72	4.19	3.47
Turkey	3.66	5.64	7.12	4.86	6.84
Turkish Cypriot Comm.	4.68	6.00	5.13	7.87	8.21
<i>Non-EU Average</i>	<i>3.89</i>	<i>6.63</i>	<i>6.43</i>	<i>4.97</i>	<i>5.82</i>
<b>North America</b>					
USA	4.32	6.17	6.18	3.82	4.66
Canada	3.70	5.78	5.55	3.48	4.23
<i>North American Average</i>	<i>4.01</i>	<i>5.98</i>	<i>5.87</i>	<i>3.65</i>	<i>4.45</i>

Looking at country differences, a few specifics emerge. Legal regulations enforcing training seem to have only limited effects. For example, in France organisations with more than 10 employees are required by law to spend at least 1.6% of their payroll costs on training. However, this does not lead to higher training expenses in the international comparison. Indeed, France lags behind the U.S.A, Greece, Sweden or UK in this respect.

With regard to the amount of investment in people, Slovakia, Austria and Germany are at the bottom of the league for both money spent on training and overall training days for all employees while Greece, Sweden and Estonia are among the top members for both indicators within Europe.

In terms of differentiation between employee groups, in most countries managers and technical/professional employees get more training days than manual or clerical/administrative staff. Beyond that, some countries such as France, Germany, Denmark or Finland have a relative focus on managers. Other countries such as Greece, UK, Spain or Sweden have an emphasis on professional/technical employees. It is also noteworthy that the U.S. report almost the same number of days for managers and technical/professional staff. Likewise, while training for clerical and administrative staff seems quite infrequent all over the world, firms in some countries such as Greece, Spain, Bulgaria or Tunisia pay more attention to the development of manual employees.

## **Decision making**

Concerning the definition of training needs, typically the HR department and the line managers play a crucial role while the individual and the Unions are less important. In most countries, the number of organisations where the HR department plays a role is in the 40-60% band; line managers are reported to play the key role in 30-50% of the organisations. Two configurations emerge. In some countries such as Germany, Greece, France, the HR department, together with the line management, is by far most influential for defining training needs. In other countries such as the UK, the Nordic countries of Sweden, Denmark, Finland, and the Netherlands, the individual plays a significant role in addition to HR department and line management.

In most countries outside Scandinavia, individuals and line managers are not very influential in the design of training activities compared to the HR department. This is particularly the case in the UK, Spain and Italy. Roughly, the same is true for the implementation of training activities.

## **Methods beyond formal training**

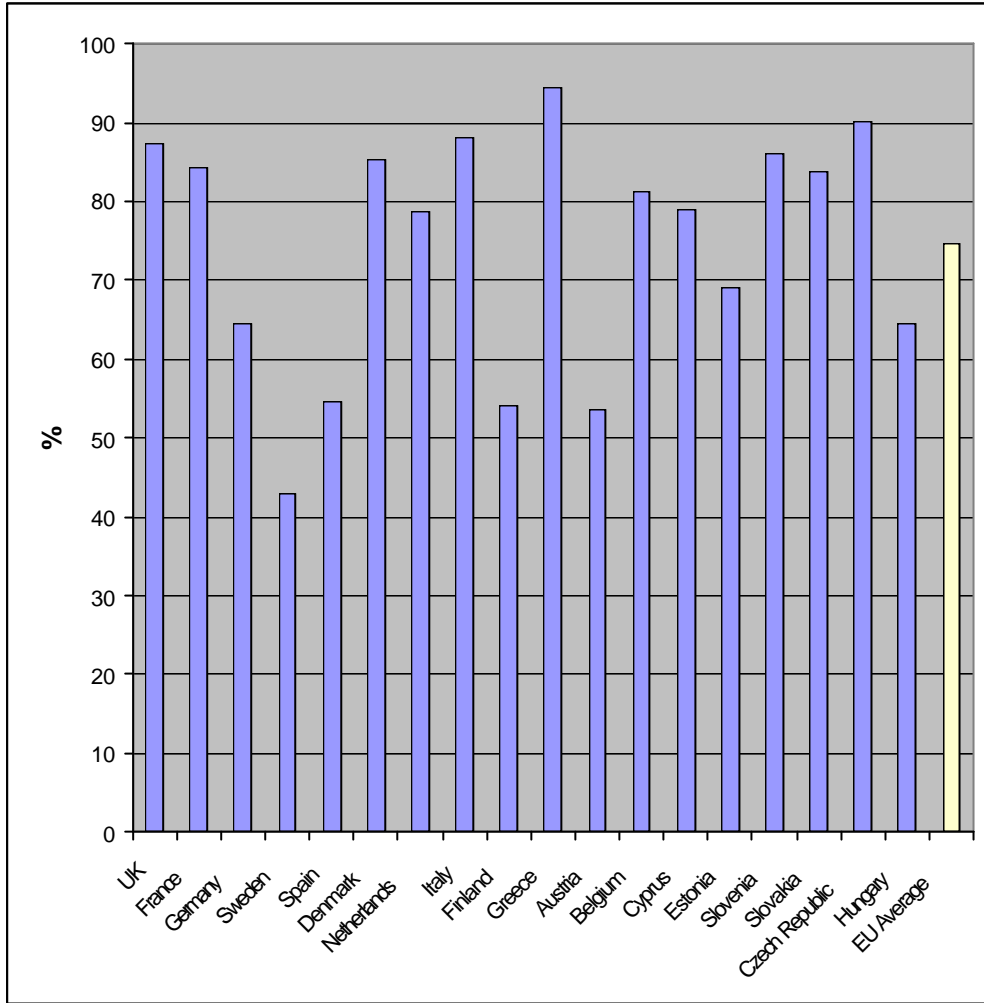
In all countries, managers' development techniques beyond formal training most often consist of teamwork and task-assignments. In addition, the participation in project teams and the involvement in cross-organizational tasks or tasks aiming to stimulate learning are used. Networking is especially frequent in Norway, Estonia and Sweden. Interestingly enough, assessment centres, high flyers schemes and succession plans are less frequently used as development measures in all countries. For non-managers, project teamwork, cross-organizational tasks and special tasks to stimulate learning play an important role too.

## **Appraisal**

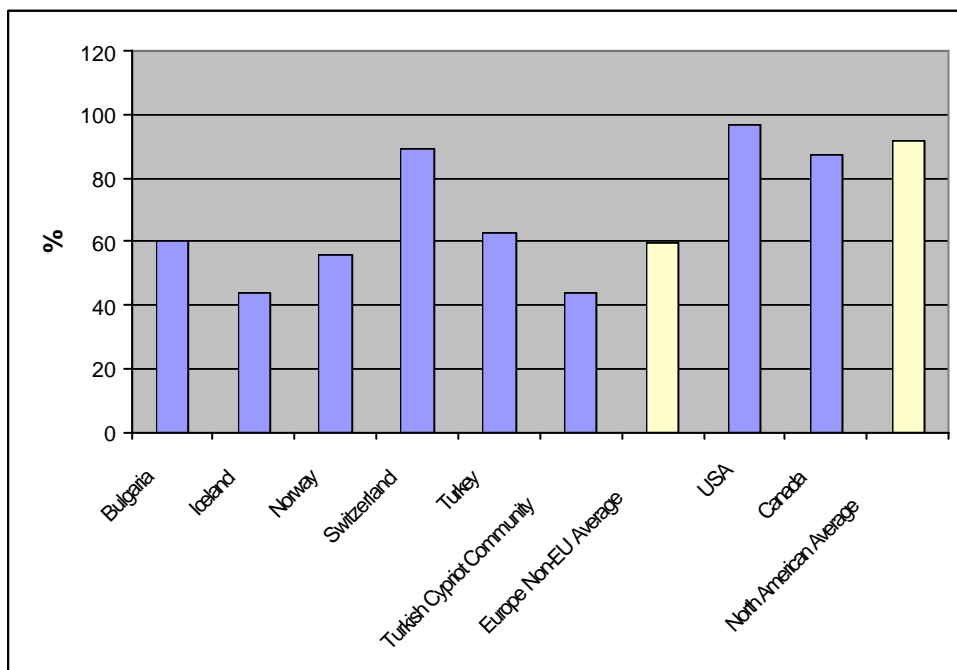
### *Use of appraisal systems*

Internationally, there are quite distinct approaches towards the use of appraisal systems. On the one hand, in a considerable number of countries the large majority of organisations use appraisal systems across all employee categories. In nine countries, i.e. Denmark, Slovenia, Switzerland, the UK, Italy, New Zealand (92%), the Philippines (92%), Greece, and the U.S.A, more than 85% of organisations use appraisal systems (mean values over all employee categories). On the other hand, in six countries, i.e. Iceland, Spain, Finland, Austria, Norway and Sweden, less than 45% of organizations use appraisal systems (see Figures 62, 63 and 64).

**Figure 63: Average use of appraisal across employee categories (EU countries)**



**Figure 64: Average use of appraisal across employee categories (Non-EU European and North America)**





## *Purpose*

In most countries, defining training needs, informing future career decisions and pay determination are the major purposes of appraisal systems. Pay determination is the main output of appraisal systems only in Italy, Slovenia, Sweden, Norway, the Turkish Cypriot community, Bulgaria and the U.S.

## **Sources used**

Supervisors and the employees themselves have the major voice in the appraisal process in nearly all countries. However, organisations in Germany, Spain and Italy use the input of supervisor's superior more than the input of the employee. Generally, not all possible sources are used for the appraisal process. For example, only in Sweden, Finland, the U.S. and Canada more than 20% of organisations use inputs from subordinates, peers and customers.

**Table 16: Use of appraisal systems (EU countries only)**

	<b>1995 (%)</b>	<b>1999 (%)</b>	<b>2003-5 (%)</b>
Management	66	71.6	77.1
Professional/technical	66.7	72.1	94.6
Clerical	60.5	67.2	74.5
Manual	46.8	56.4	73.6

Table 16 shows a clear upward trend in the use of appraisal systems within EU countries. This is true across all levels in the organisational hierarchy from management down to manual workers.

## **Conclusions**

### *Investment in people*

- Between 2 and 4 per cent of annual payroll costs are spent on T&D (EU-average: 3 per cent)
- On average, managers and professional/technical employees receive 6 days of T&D per year; clerical and manual employees receive 4 days of T&D
- Teamwork, special task-assignments, project teams and involvement in cross-organisational tasks emerge as the major development measures beyond formal training

### *Appraisal*

- Large differences are observed between countries in the use of appraisal systems
- Appraisal systems are most frequently used for defining training needs, informing future career decisions and pay determination
- Pay determination is a major purpose of appraisal only in few countries
- Supervisors and employees have a major voice in the appraisal process, while other sources are used less

## APPENDIX 1 – The Questionnaire

### **HOW TO COMPLETE THIS QUESTIONNAIRE**

This questionnaire is designed to make completion as easy and fast as possible. Most questions can be answered by simply ticking boxes. Very little information will need to be looked up.

This questionnaire asks you about the Personnel/Human Resource (HR) policies and practices in the organisation or part of the organisation (Division, Business Unit, Department etc) for which you have Human Resource Management responsibility.

Please indicate below the organisational unit to which the answers on the questionnaire refer

a. Is your organisation part of a larger Group of companies/institution?      1  Yes      0  No

b. If yes, are you answering for the Group as a whole?      1  Yes      0  No

*The questionnaire has been created for simultaneous use by private and public sector employers in 34 countries; some questions may therefore be phrased in a slightly unfamiliar way.*

**THANK YOU FOR YOUR CO-OPERATION**

© CRANET, 2003

# SECTION I: HRM ACTIVITY IN THE ORGANISATION

1. **Approximately how many people are employed in the personnel/human resources (HR) department by your organisation?**

Male \_\_\_\_\_ Female \_\_\_\_\_  No personnel/HR dept. (if no, go to question 3)

2. **If you do have a personnel/HR department, does the head of the personnel/HR department have a place on the main Board of Directors or the equivalent?**

1  Yes      0  No

3. **From where was the most senior personnel or HR Director recruited? (Please tick only one).**

- A. From within the personnel/HR department  1  
 B. From non- personnel/HR specialists in your organisation  2  
 C. From personnel/HR specialists outside of the organisation  3  
 D. From non- personnel/HR specialists outside of the organisation  4  
 E. Other, please specify \_\_\_\_\_

4. **How has your use of external providers in the following areas changed over the last three years?**

	Increased	Decreased	Same	External Providers Not used
A. Payroll	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
B. Pensions	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
C. Benefits	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
D. Training and development	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
E. Workforce outplacement/reduction	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
F. HR Information systems	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
G. Other, please specify _____	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4

5. **Does your organisation have a:**

	Yes, written	Yes, unwritten	No	Don't know
A. Mission statement	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
B. Business strategy	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
C. Personnel/HRM Strategy	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
D. Corporate values statement	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4

6. **If your organisation has a business strategy, at what stage is the person responsible for personnel/HR involved in its development? (Tick only one)**

- A. From the outset  1  
 B. Through subsequent consultation  2  
 C. On implementation  3  
 D. Not consulted  4

**7. Who has primary responsibility for major policy decisions on the following issues?**

	Line Mgt.	Line Mgt. in consultation with HR dept	HR dept in consultation with line mgt	HR dept
A. Pay and benefits	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
B. Recruitment and selection	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
C. Training and development	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
D. Industrial relations	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
E. Workforce expansion/reduction	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4

**8. What do you consider to be the major challenges for personnel/HRM in your organisation over the next 3 years? (Please list them)**

---



---



---

**9. What type of HR Information System (computer-based tool) do you have?**

- A. Do not have a computerised HR information system 1 \* (Please go to Section II)
- B. Primarily independent HR system 2
- C. Primarily interfaced/integrated into a wider management information system 3

**10. If you are using a computerised HR information system, how do you access it?**

- |   | Yes                        | No                         |
|---|----------------------------|----------------------------|
| A. World Wide Web   | <input type="checkbox"/> 1 | <input type="checkbox"/> 0 |
| B. Client Server network (local server for organisation access) | <input type="checkbox"/> 1 | <input type="checkbox"/> 0 |

**11. If you have E-HRM facilities, please indicate at which of the stages below you believe your level of HR web deployment is: (tick only one)**

- A. One-way communication: (e.g. information publishing for general scrutiny) 1
- B. One-way communication, but allows employee to access some personal information (e.g. work schedules, current benefit coverage) 2
- C. Two-way communication: employee is able to update simple personal information such as bank details. 3
- D. Two-way communication: employee is able to perform complex transactions and select items (such as composition of benefits) which can be calculated by the system, approved/declined and confirmed to the employee. 4
- E. Other: if your system allows for more complex transactions, please detail below: 5
- F. Don't know 6

**12. In which of the following areas is the computerised HR Information System used?**

	Yes	No	Don't know
A. Individual personnel records	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> 9
B. Payroll	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> 9
C. Benefits	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> 9
D. Time-registration and attendance	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> 9
E. Recruitment and selection	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> 9
F. Training and development	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> 9
G. Performance management	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> 9
H. Career planning/Succession planning	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> 9
I. Work scheduling	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> 9
J. Health and safety	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> 9
K. Other, please specify _____	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> 9

**13. To what extent does this system meet your current needs?**

Not at all	To a small extent	To a large extent	Entirely
<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4

## SECTION II: STAFFING PRACTICES

**1. How has the total number of employees (full time equivalents) in your organisation changed in the last three years?**

- 1  Increased by \_\_\_%     } If you tick boxes 1 or 2, please go to question 3  
 2  Same                             }  
 3  Decreased by \_\_\_%  
 4  Don't know

**2. If the number of employees has decreased, have any of the following methods been used to reduce the number of people employed? (Tick all that apply)**

	Yes	No	Don't know
A. Recruitment freeze	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> 9
B. Early retirement	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> 9
C. Voluntary redundancies	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> 9
D. Compulsory redundancies	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> 9
E. Internal transfer (redeployment)	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> 9
F. No renewal of fixed term / temporary contracts	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> 9
G. Outsourcing	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> 9
H. Other, please specify _____			

**2a If you have used outsourcing to reduce the number of employees in the last three years, by what percentage has outsourcing reduced your workforce?**

0-5%	6-10%	11-20%	21-50%	>50%	N/A
<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6

**3. Please indicate how positions under each staff category are *most frequently* filled (Please tick only one option per staff category)**

	Management	Professional/ Technical	Clerical	Manual
A. Internally	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
B. Recruitment agencies/ consultancies	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2
C. Advertisement	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3
D. Word of Mouth	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4
E. Vacancy page on company website	<input type="checkbox"/> 5	<input type="checkbox"/> 5	<input type="checkbox"/> 5	<input type="checkbox"/> 5
F. Vacancies on commercial job websites	<input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="checkbox"/> 6
G. Direct from educational institution	<input type="checkbox"/> 7	<input type="checkbox"/> 7	<input type="checkbox"/> 7	<input type="checkbox"/> 7
H. Other, please specify _____	<input type="checkbox"/> 8	<input type="checkbox"/> 8	<input type="checkbox"/> 8	<input type="checkbox"/> 8

**4. Please indicate which of the following selection methods are used for each staff category (Please tick all that apply)**

	Management	Technical	Professional/ Clerical	Manual
A. Interview panel	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
B. One-to-one interviews	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
C. Application forms	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
D. Psychometric test	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
E. Assessment centre	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
F. Graphology	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
G. References	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
H. Other, please specify : _____	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1

**5. Does your organisation have action programmes covering any of the following groups:**

	Yes	No
A. Minority ethnics	<input type="checkbox"/> 1	<input type="checkbox"/> 0
B. Older workers (aged 50 plus)	<input type="checkbox"/> 1	<input type="checkbox"/> 0
C. People with disabilities	<input type="checkbox"/> 1	<input type="checkbox"/> 0
D. Women	<input type="checkbox"/> 1	<input type="checkbox"/> 0
E. Others, please specify _____		

**6. Please indicate the approximate proportion of those employed by your organisation who are on the following working arrangements.**

	Not used	0-5	6-10%	11-20%	21-50%	>50%
<b>A. Weekend Work</b> (working Saturday and/or Sunday)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
<b>B. Shift work</b> (working one of a set of consecutive periods into which a 24 hour working day is divided)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
<b>C. Overtime</b> (extra time beyond employees' normal time, added on to a day or shift)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
<b>D. Annual hours contract</b> (Agreement to work number of hours annually)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
<b>E. Part-time work</b> (hours of work defined as part-time by employer or legislation)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
<b>F. Job sharing</b> (dividing up one job between two or more employees)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
<b>G. Flexi-time</b> (some working hours may be determined by employees, around a fixed 'core' time)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
<b>H. Temporary/casual</b> (workers employed on a temporary basis for a number of hours, weeks or months).	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
<b>I. Fixed-term contracts</b> (workers employed for a fixed number of months or years)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
<b>J. Homebased work</b> (workers whose normal workplace is home but who do not have permanent electronic links to a fixed workplace)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
<b>K. Teleworking</b> (technology-based) (workers who can link electronically to a fixed workplace)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
<b>L. Compressed working week</b> (workers whose working week totals a standard number of hours compressed into a reduced number of shifts)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6

## SECTION III: EMPLOYEE DEVELOPMENT

1. **What proportion of the workforce is actually assessed via a regular formal appraisal system?**

	Proportion	No Performance Appraisal System
A. Management	about ___%	<input type="checkbox"/> 0
B. Professional/Technical	about ___%	<input type="checkbox"/> 0
C. Clerical	about ___%	<input type="checkbox"/> 0
D. Manual	about ___%	<input type="checkbox"/> 0

2. **If you have an appraisal system, who formally is expected to make an input/provide data for the appraisal process? (Tick all that apply)**

	Yes	No
A. Immediate supervisor	<input type="checkbox"/> 1	<input type="checkbox"/> 0
B. Supervisor's superior	<input type="checkbox"/> 1	<input type="checkbox"/> 0
C. The employee himself/herself	<input type="checkbox"/> 1	<input type="checkbox"/> 0
D. Subordinates	<input type="checkbox"/> 1	<input type="checkbox"/> 0
E. Peers	<input type="checkbox"/> 1	<input type="checkbox"/> 0
F. Customers	<input type="checkbox"/> 1	<input type="checkbox"/> 0
G. Other, please specify	<input type="checkbox"/> 1	<input type="checkbox"/> 0

\_\_\_\_\_

3. **Is the appraisal system used to inform any of the following? (Tick all that apply)**

	Yes	No
A. HR planning	<input type="checkbox"/> 1	<input type="checkbox"/> 0
B. Analysis of training and development needs	<input type="checkbox"/> 1	<input type="checkbox"/> 0
C. Career	<input type="checkbox"/> 1	<input type="checkbox"/> 0
D. Pay determination	<input type="checkbox"/> 1	<input type="checkbox"/> 0
H. Organisation of work	<input type="checkbox"/> 1	<input type="checkbox"/> 0

4. **Who has most influence over the following: (Tick only one for each option)**

	The Individual	Line Managers	HR Department	Trade Union(s)
A. Defining training needs	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
B. Designing training activities	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
C. Implementing the training activities	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4

5. **Approximately what proportion of the annual payroll costs is currently spent on training?**

\_\_\_\_\_ %      1  don't know

6. **Approximately what percentage of employees have received training (internal, external or both) within the last year?**

Internal    \_\_\_%      1  don't know  
 External    \_\_\_%      1  don't know  
 Both        \_\_\_%      1  don't know



**7. How many days training per year does each employee in each staff category below receive on average?**

		Don't know
A. Management	__days per year per employee	<input type="checkbox"/> 1
B. Professional/technical	__days per year per employee	<input type="checkbox"/> 1
C. Clerical	__days per year per employee	<input type="checkbox"/> 1
D. Manual	__days per year per employee	<input type="checkbox"/> 1

**8a. To what extent do you use the following methods for managerial career development:**

	Not at all	To a small extent	To a large extent	Entirely
a. Special tasks/projects to stimulate learning	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
b. Involvement in cross-organisational / disciplinary/functional tasks	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
c. Participation in project team work	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
d. Networking	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
e. Formal career plans	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
f. Assessment centres	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
g. Succession plans	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
h. Planned job rotation	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
i. "High flier" schemes	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
j. Experience schemes (internal movement to another department, whether in the same country or abroad)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
k. Secondments to other organisations (external movement to another organisation for a temporary period of time)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4

**8b. To what extent do you use the following methods for non-managerial career development:**

	Not at all	To a small extent	To a large extent	Entirely
a. Special tasks/projects to stimulate learning	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
b. Involvement in cross-organisational / disciplinary/functional tasks	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
c. Participation in project team work	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
d. Networking	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
e. Experience schemes	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4

**9. Which are the three most important areas of training need for your organisation over the next three years?**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

## SECTION IV: COMPENSATION AND BENEFITS

1. At what level(s) is basic pay determined? (Please tick as many as are applicable for each category of staff).

	Management	Professional/ Technical	Clerical/ Administrative	Manual
A. National/industry-wide collective bargaining	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
B. Regional collective bargaining	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
C. Company/division, etc.	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
D. Establishment/site	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
E. Individual	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
F. Other, please specify _____				

2. Do you offer any of the following: (Please tick as many as are applicable for each category of staff).

	Management	Professional Technical	Clerical/ Administrative	Manual
A. Employee share schemes	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
B. Profit sharing	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
C. Stock options	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1

3. Do you offer variable pay (pay that varies at intervals, eg. annually/monthly/weekly) based on the following (please tick all that apply)

	Management	Professional Technical	Clerical/ Administrative	Manual
A. Team/department performance	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
B. Individual performance	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
C. Company-wide performance	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1

## SECTION V: EMPLOYEE RELATIONS AND COMMUNICATION

1. **What proportion of the total number of employees in your organisation are members of a trade union?**

- 1  0%      2  1-10%      3  11-25%      4  26-50%
- 5  51-75%      6  76-100%      7  Don't know

2. **Has the influence of trade unions on your organisation changed during the last three years?**

- 1  Increased      2  Same      3  Decreased      4  No influence

3. **Do you recognise trade unions for the purpose of collective bargaining?**

- 1  Yes      0  No

4. **Do you have a joint consultative committee or works council?**

- 1  Yes      0  No

5. **Has there been a change in how you communicate major issues to your employees during the last 3 years?**

- |   | Increased                  | Same                       | Decreased                  | Not used                   |
|---|----------------------------|----------------------------|----------------------------|----------------------------|
| A. Through representative staff bodies<br>(eg. Trade unions ) | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 |
| B. Verbally, direct to employees                              | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 |
| C. Written, direct to employees                               | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 |
| D. Electronic communication                                   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 |
| E. Team briefings   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 |
| F. Other, please specify _____                                |                            |                            |                            |                            |

6. **Is your organisation a member of an employers' association?**

- 1  Yes      2  No

7. **If yes, to what extent do the services provided by the association meet your needs?**

- Not at all      To a small extent      To a large extent      Entirely
- 1       2       3       4

8. **Which employee categories are formally briefed about the following issues? (Please tick as many as applicable).**

- |                           | Business Strategy          | Financial Performance      | Organisation of work       |
|---------------------------|----------------------------|----------------------------|----------------------------|
| A. Management             | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 |
| B. Professional/technical | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 |
| C. Clerical               | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 |
| D. Manual                 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 |

**9. Has there been a change in the way employees communicate their views to management in the past three years?**

	Increased	Same	Decreased	Method not used
A. Direct to senior managers	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
B. Through immediate superior	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
C. Through trade union representatives	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
D. Through works council	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
E. Through regular workforce meetings	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
F. Team briefings	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
G. Suggestion schemes	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
H. Attitude surveys	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
I. Electronic communication	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4

## SECTION VI: ORGANISATIONAL DETAILS

### 1a. Is your organisation

1  Private sector    2  Public sector    3  Mixed

4  Other, please specify \_\_\_\_\_

### 1b. If public sector:

1  National            2  Regional            3  Local

### 2. Please indicate the main sector of industry or services in which you operate

- A. Agriculture, hunting, forestry, fishing  1
- B. Energy and water  2
- C. Chemical products; extraction and processing of non-energy minerals  3
- D. Metal manufacturing; mechanical, electrical and instrument engineering; office and data processing machinery  4
- E. Other manufacturing, (eg food, drink and tobacco; textiles; clothing; paper, printing & publishing; processing of rubber and plastics, etc)  5
- F. Building and civil engineering  6
- G. Retail and distribution; hotels; catering; repairs  7
- H. Transport & Communication (eg rail, postal services, telecoms, etc)  8
- I. Banking; finance; insurance; business services (eg consultancies, PR and advertising, Law firms, etc)  9
- J. Personal, domestic, recreational services  10
- K. Health services  11
- L. Other services (eg television and radio, R&D, charities, etc)  12
- M. Education (including universities and further education)  13
- N. Social Services  14
- O. Public administration  15
- P. Other, please specify \_\_\_\_\_

### 3. Approximately how many people are employed by your organisation?

A. In total \_\_\_\_\_            Male \_\_\_\_\_            Female \_\_\_\_\_

B. Part-time \_\_\_\_\_            Male \_\_\_\_\_ Female \_\_\_\_\_

### 4. Please give proportions for the following:

- A. Manual employees            \_\_\_\_\_% of workforce             1 don't know
- B. Clerical employees            \_\_\_\_\_% of workforce             1 don't know
- C. Professional/technical employees            \_\_\_\_\_% of workforce             1 don't know
- D. Managers            \_\_\_\_\_% of workforce             1 don't know
- TOTAL            100%

**5. Please provide the following information about your workforce:**

- A. Annual staff turnover \_\_\_\_\_% turnover per year  1 don't know
- B. Age structure \_\_\_\_\_% of employees under 25 years  1 don't know  
\_\_\_\_\_% of employees over 45 years  1 don't know
- C. Absenteeism/sick leave \_\_\_\_\_ average days per employee per year  1 don't know
- D. Education structure \_\_\_\_\_% of graduates (first degree)  1 don't know  
\_\_\_\_\_% of post graduates (higher degree)  1 don't know

**6. What percentage of the operating costs is accounted for by labour costs?**

\_\_\_\_\_ % of operating costs  1 don't know

**7. If you are a private sector organisation, would you say the gross revenue over the past 3 years has been:**

- A. Well in excess of costs  1
- B. Sufficient to make a small profit  2
- C. Enough to break even  3
- D. Insufficient to cover costs  4
- E. So low as to produce large losses  5

**8. Compared to other organisations in your sector, where would you rate the performance of your organisation in relation to the following ? (Tick only one for each area)**

	Top 10%	Upper half	Lower half	Not applicable
A. Service quality	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
B. Level of productivity	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
C. Profitability	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
D. Rate of innovation	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
E. Stock market performance	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4

**9. How would you describe the main market(s) for your organisation's products or services?**

- A. Local  1
- B. Regional  2
- C. National  3
- D. European  4
- E. World-wide  5

**10. Is the market you currently serve: 1  Growing 2  Same 3  Declining**

**11. Has your organisation been involved in any of the following changes in the last 3 years? (Tick all that apply)**

- A. Acquisition of another organisation  1
- B. Takeover by another organisation  1
- C. Merger  1
- D. Relocation  1
- E. Demerger  1

12. If your answer was yes to any of the above, when was the personnel/HR department involved in the process? (Tick only one)

- A. From the outset  1
- B. Through subsequent consultation  2
- C. On implementation  3
- D. Not consulted  4

13. Where are the corporate headquarters of your organisation based? (Please refer to ultimate parent company if your organisation is part of a larger group).

- A. European Union  1
- B. Europe (outside of EU)  2
- C. North America  3
- D. South-East Asia  4
- E. Africa  5
- F. Other, please specify \_\_\_\_\_

14. If your organisation is part of a larger group of companies/divisions, etc. (including public sector), please indicate where policies on the following issues are mainly determined.

	International HQ	National HQ / Headquarters	Subsidiary/ Dept./division	Site/establishment Local offices
A. Pay and benefits	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
B. Recruitment and selection	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
C. Training and development	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
D. Industrial relations	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
E. Workforce expansion/reduction	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
F. Management development	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4

15. In what year was your organisation established?

\_\_\_\_\_  don't know

## PERSONAL DETAILS

16. Are you the most senior personnel/HR manager in the organisation?

1  Yes      0  No

17. Are you:      1  Male      2  Female

18. If you are a personnel/HRM specialist, how long have you been working in a specialist personnel/HR or training job?

\_\_\_\_\_ years      1  Not applicable

19. Do you have a university degree?

1  Yes      0  No

If Yes, in what academic field did you study for your first degree? (tick main one only).

- |                                   |                            |                                |                            |
|-----------------------------------|----------------------------|--------------------------------|----------------------------|
| A. Business studies               | <input type="checkbox"/> 1 | E. Law                         | <input type="checkbox"/> 5 |
| B. Economics                      | <input type="checkbox"/> 2 | F. Engineering                 | <input type="checkbox"/> 6 |
| C. Social or behavioural sciences | <input type="checkbox"/> 3 | G. Natural Sciences            | <input type="checkbox"/> 7 |
| D. Humanities/Art/Languages       | <input type="checkbox"/> 4 | H. Other, please specify _____ |                            |

# **THANK YOU FOR TAKING THE TIME TO COMPLETE THIS QUESTIONNAIRE**

If you have any queries about this questionnaire or would like further information about this research, please contact:

CRANET Co-ordinator  
Human Resource Research Centre  
Cranfield School of Management  
Cranfield University  
Cranfield  
BEDFORD MK43 0AL

Website address: [www.cranet.org](http://www.cranet.org)



## APPENDIX 2 – Participating Countries

Country	Primary contact(s)	University
Australia	Professor Robin Kramar	Macquarie University, Graduate School of Management
Austria	Professor Dr Wolfgang Mayrhofer	Vienna University of Economics and Business Administration
Belgium	Professor Dr Dirk Buyens Nele Soens Dr. Koen Dewettinck	Vlerick Leuven Gent Management School
Bulgaria	Professor Elizabeth Vatchkova	International Business School, Sofia
Canada	Dr Mila Lazarova	Simon Fraser University
Cyprus	Dr Eleni Stavrou-Costea Maria Mikellides Marina Petridou	University of Cyprus Cyprus Productivity Center Cyprus HRM Association
Czech Republic	Professor Ing. Josef Koubek	The University of Economics, Prague
Denmark	Professor Dr Henrik Holt Larsen Ruth Znaider	Copenhagen Business School Danish Centre for Leadership
Estonia	Professor Ruth Alas	Estonian Business School
Finland	Professor Sinikka Vanhala	Helsinki School of Economics
France	Professor Françoise Dany	EM Lyon
Germany	Prof Rüdiger Kabst	University of Giessen
Greece	Professor Dr Nancy Papalexandris	Athens University of Economics and Business
Hungary	Professor Dr József Poor	University Pecs
Iceland	Dr Asta Bjarnadóttir	Reykjavik University
*India	Professor C S Venkata Ratnam	International Management Institute, New Delhi
*Ireland	Dr Michael Morley Professor Dr Patrick Gunnigle	University of Limerick
Israel	Professor Dr Amnon Caspi	Bar Ilan University
Italy	Professor Francesco Paoletti Professor Ginevra Gravili	Università di Milano Bicocca Università di Lecce
*Japan	Professor Toshitaka Yamanouchi	Osaka Sangyo University
Nepal	Professor Dev Raj Adhikari	Tribhuvan University
New Zealand	Dr Erling Rasmussen	University of Auckland
Norway	Professor Dr. Odd Nordhaug Professor Paul Gooderham	Norwegian School of Economics and Business Administration

Philippines	Dr Vivien T. Supangco	University of the Philippines
*Poland	Professor Dr Czeslaw Szmidt	Business School im. L.Kozminsci
*Portugal	Associate Professor Rita Campos e Cunha	Universidade Nova de Lisboa
Slovakia	Professor Anna Kachanakova	University of Economics Bratislava
Slovenia	Professor Ivan Svetlik	University of Ljubljana
*South Africa	Professor Pieter A Grobler	University of South Africa
Spain	Professor Simon Dolan	ESADE
Sweden	Bo Manson	The IPF Institute, Uppsala
Switzerland	Dr Ursula Knorr	University of St Gallen
The Netherlands	Assistant Professor Drs Bart Dietz Drs Jacob Hoogendoorn Dr Erik Poutsma	RSM Erasmus University University of Nijmegen
Tunisia	Professor Riadh Zghal	University of Sfax
Turkey	Professor Dr. Cavide Uyargil	Istanbul University
Turkish Cypriot Community	Dr Cem Tanova	Eastern Mediterranean University
UK	Dr Emma Parry Professor Shaun Tyson	Cranfield School of Management
USA	Lisa H. Nishii Professor Patrick Wright	Cornell University

\* not included in International Report 2003-5

**Further information about Partners can be found on the Cranet website: <http://www.cranet.org>**

### APPENDIX 3 – Response Rates

	Number of questionnaires sent out	Number of questionnaires returned	%	No. of interviews	Emails sent	Emails read	Emails returned	%
Australia	1284	259	20%	.	.	.	.	
Austria	1877	270	14%	.	.	.	.	
Belgium	1647	230	14%	.	.	.	.	
Bulgaria	200	157	79%	.	.	.	.	
Canada	2424	465	19%	.	.	.	.	
Cyprus	210	85	40%	.	.	.	.	
Czech Republic	2000	100	5%	.	.	.	.	
Denmark	2653	515	19%	.	.	.	.	
Estonia	375	118	31%	.	.	.	.	
Finland	1321	293	22%	.	.	.	.	
France	3000	150	5%	.	.	.	.	
Germany	4000	337	8%	.	.	.	.	
Greece	500	180	36%	.	.	.	.	
Hungary	450	63	14%	.	.	.	.	
Iceland	246	114	46%	.	.	.	.	
Israel	550	175	32%	.	.	.	.	
Italy	200	50	25%	.	.	.	.	
Nepal				204	.	.	.	
New Zealand	3000	292	10%	.	.	.	.	
Norway	2000	303	15%	.	.	.	.	
Philippines	730	56	8%	.	.	.	.	
Slovakia	300	259	86%	.	.	.	.	
Slovenia	523	161	31%	.	.	.	.	
Spain	1042	158	15%	.	.	.	.	
Sweden	1780	383	22%	.	.	.	.	
Switzerland	1426	309	22%	.	.	.	.	
The Netherlands	1052	385	37%	.	.	.	.	
Tunisia	.	.		150	.	.	.	
Turkey	1002	171	17%	.	.	.	.	
Turkish Cypriot	120	87	73%	.	.	.	.	
UK	8780	1101	13%	.	.	.	.	
USA	.	.		.	4522	608	257	6%



Cranfield University  
Cranfield, Bedford, England MK43 0AL

Telephone + 44 (0) 1234 751122  
Fax + 44 (0) 1234 751806

<http://www.cranfield.ac.uk/som>

<http://www.cranet.org>

May 2006

