TRAINING AND COMPANIES' PERFORMANCE THROUGH THE LENS OF THE HIGH-PERFORMANCE PARADIGM: A CROSS-NATIONAL STUDY OF EUROPEAN COUNTRIES

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Abstract
The high-performance paradigm approach to human resources management argues that the combination of human resources and work organization practices can boost individual and collective performance as well. Among those practices, knowledge is an important dimension in so far it prepares workers to be more participative and more autonomous. Although several studies look at the relation between high-performance systems and companies' performance, there is still a lack of understanding of the importance and contribution of the training and development practices for companies' performance, in the context of the high-performance paradigm. This paper's aim is to contribute to this subject by looking at the differences between companies with and without training and development practices. Are the performance levels really different? To accomplish this goal, we develop a cross-national study of European countries, using data from the last European Company Survey (2009). The main conclusion is that there are differences between companies with and without training and development practices, having the former higher levels of performance than the latter.

Keywords*:* High-performance paradigm; Training and development; Company performance; Europe

Introduction

Training is considered one important dimension of human resources development since early conceptualisations of the field. It is believed that, without training, employees have more difficulties in coping with change, actively participate in the production process and make a valuable contribution to organizations' performance (Swanson, 1995).

The high-performance paradigm (HPP) (Godard, 2004) is a relatively recent approach to the management of human resources and work organization. Based on a set of new forms of work organization combined with flexible human resources (HR) practices (Boxall & Macky, 2007; Boxall & Macky, 2009; Cappelli & Neumark, 2001), the central objective is to increase employees' empowerment, enhance their skills, arranging appropriate incentives, inventing ways to keep them motivated and eventually create a powerful, dedicated workforce that would keep on matching with organizational, market and social requirements (Appelbaum et al., 2000; Boxall & Macky, 2007, Gollan, 2005; Lawler, 2005).

According to several approaches to the HPP (Lawler, 1986; Pfeffer, 1998; Appelbaum et al, 2000), knowledge and skills is an import pillar of a high-performance approach to HR management, since they are the basis of work practices such as autonomy, job enrichment and job rotation. Thus, in this context, companies should have special concerns with the development of employees' skills through training practices. However, although the main goal of the HPP is to promote higher levels of individual and organizational performance, there is little understanding of the specific contribution of training and development practices to companies' performance.

The goal of this paper is to test if the presence of training and development practices makes a difference to companies' performance. This goal is framed by the HPP approach. This means

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that training and development practices are an important part of the "system" and, when combined with other practices, can boost performance at the individual and organizational level. Also, the authors use a cross-national study in order to provide a macro perspective of the European scenario regarding training and development practices.

After the literature review, which frames training and development practices in the HPP, we present the main topics of the methodology, namely the main variables and the data analysis strategy. The data analysis starts with a descriptive analysis of the main variables, giving an idea of the presence of training and development practices across European countries, then moving on to test the main hypothesis of this study.

Literature Review

High-performance work systems (HPWS) can be seen as a set of new forms of work organization combined with flexible HR practices that enhance organizational performance through employee involvement and empowerment (Boxall & Macky, 2007; Boxall & Macky, 2009; Cappelli & Neumark, 2001).

The first references, on this subject, date to the mid 1980's (Lawler, 1986; Walton, 1985) and since then research on this topic kept on growing. This growing interest gave rise to different approaches to this paradigm such as holistic work models (Lindbeck & Snower, 2000), high performance work systems (Applebaum & Batt, 1994; Tomer, 2001), high involvement management (Lawler, 1986) or high-commitment employment practices (Walton, 1985). Due to diversity of expressions related with the same approach, we will use the expression "high-performance paradigm" (HPP) (Godard, 2004).

Underlying Principles

One of the first systematization of high-performance work systems was developed by Lawler (1986). His main concern was the need for high-involvement as means to generate positive results for companies and employees. The theoretical landmark of his thinking was the participative approaches to management, namely quality circles, employee survey feedback, job enrichment, work teams, and gain sharing. When he proposes a high-involvement management, he also calls the attention to the performance benefits that they can bring to the organization.

Lawler (1986) proposes a theoretical framework for the implementation of high-involvement management based on four principles: information, power, knowledge and rewards. He underlies that most of the practices associated with participative management are not new, and indeed have some positive influence on those principles. Nevertheless, the result of a more complete and congruent implementation of a participative management approach leads to jointly maximizes the involvement of employees and organizational effectiveness. Individual practices must fit together and should affect everyone in the same way.

Knowledge and skills are at the heart of every attempt to promote participation and involvement. A deficit in knowledge and skills can compromise any attempt to involve lower-levels of the organization, because the lack of knowledge and skills can impoverish participation and decisions. Organizations can enhance the skills and knowledge of their employees through training, either on how to do their own jobs (including technical skills) or on how to work and participate in a work team (including interpersonal and leadership skills) (Lawler, 1986).

Several years later, Pfeffer (1998) presented his view of this innovative management approach in the well known and widely cited book "The human equation. Building profits by putting people first". Drawing on various studies, related literature and personal observation, Pfeffer points out seven dimensions that, in his opinion, characterize innovative management practices: Employment security; Selective hiring of new personnel; Self-managed teams and decentralization of decision making; Comparatively high compensation contingent on organizational performance; Extensive training; Reduced status distinctions and barriers; Extensive sharing of information (financial and performance).

Pfeffer (1998) also emphasizes the importance of training. In fact, when opposed to control-oriented management systems, the level of investment in training is higher in commitment-oriented management systems, such as HPWS. This is mainly due to its employee-centric approach that relies on employee skills and initiative to identify and solve problems, to initiate changes in work methods and to take responsibility for quality. This approach requires knowledge and capability to perform these tasks. Once again, training should be understood in the context of mutually supporting practices. For example, the practice of employment security is highly compatible with training, because companies can make the most of the knowledge and capabilities acquired by their employees; they are able to use it as a source of competitive advantage and measure the return on investment, although this is not done very often.

More recently Appelbaum et al (2000), pointed three drivers of high-performance work systems: involvement, training, and incentives. The aim is to open and maintain a new avenue for employees, which would enable them share their views with management and in the process would care more for the company. Thus the first task of HPWS is usually to create a culture of information sharing, where they would share the information for the greater interest of the company.

Training is also an important dimension of High-Performance Work Systems for Appelbaum et al (2000). The aim is to develop among employees a knowledge and skill base on the subjects that are related to their production processes. Accordingly HPWS attempts to create and maintain a culture of 'on-site' or 'real-time' training rather than only banking on theoretical knowledge. It encourages the employees to be innovative and eager to accommodate and apply new ideas and approaches to their work. The underlying theme behind it is to enrich the organisational knowledge and to exploit it in the future.

The seminal works of Lawler (1986), Pfeffer (1998) and Appelbaum et al (2000), although may differ in the expressions used, are very similar in terms of conceptual approach. In fact, the idea in which rests their approach is that, in any case, worker's involvement should be achieved through more empowerment, and that performance should be promoted through intrinsic (job enrichment and enlargement) and extrinsic motivation (incentives and rewards). More specifically, they all agree that incentives and rewards, but also knowledge and training, should be an important part of HPP.

Table 1 ***Comparison of the Main Theoretical References of HPP***

Lawler (1986)	Pfeffer (1998)	Appelbaum et al (2000)
High-Involvment Management	**Innovative Management Practices**	**High-Performance Work Systems**
Power	Self-managed teams & decentralization of decision making	Involvement
	Reduced status distinctions	
Information	Information sharing	
Rewards	High compensation contingent to organizational performance	Incentives
Knowledge and Skills	Extensive training	Training
	Employment security	
	Selective hiring	

Training and Development in Recent Studies

As several authors have mentioned, there is no consensus on what practices constitute HPP (Harley, 2002; Kalmi & Kauhanen, 2008; Boxall & Macky, 2009). Wood's (1999) review indicates there is an array of definitions and assertions which creates some confusion when approaching HPP.

Although the practices of the HPP are designed to enhance participation and empowerment they can also be very demanding for workers. Participation in teamwork, problem solving or job rotation demands knowledge of the tasks to be performed but also of the organization as a whole. Job enrichment and enlargement presupposes that workers have the ability to perform several jobs and tasks, sometimes with diversified content. If information can be considered as the basis of a good decision process, knowledge and skills can be understood as the basis for doing the work well done. According to the literature, organizations can promote the knowledge and skills necessary for any job essentially by two means: recruitment and selection processes and training.

The reference to recruitment and selection processes is not always very specific. Several authors make reference to recruiting and selection practices without specifying what those practices are. Several expressions are often used such as selection processes (Huselid, 1995), staffing selectivity (Delaney & Huselid, 1996; Beltrán-Martín et al., 2008), recruiting and selection (Ichniwoski, Shaw & Prennushi, 1997; Tsai, 2006), sophisticated recruitment and selection (Ramsay, Scholarios & Harley, 2000), staffing (Camps & Luna-Arocas, 2009; Tapia, Correa & Guthrie, 2009), or selective hiring (Zacharatos, Barling & Iverson, 2005). Another indicator of the importance given by organizations to recruitment and selection can be measured by the resources devoted to employee selection (Harley, Allen & Sargent, 2007).

Training practices are a widely referred indicator of the HPP in the literature. Skills acquisition is often referred to in general terms as training (Huselid, 1995; Delaney & Huselid, 1996; Ichniwoski, Shaw & Prennushi, 1997; Scotti, Harmon and Behson, 2007; Camps & Luna-Arocas, 2009; Tapia, Correa & Guthrie, 2009) or skills development (Guerrero & Barraud-Didier, 2004; Tsai, 2006; Harley, 2002). Also, the amount of training

provided to workers is, according to Guthrie, Spell & Nyamori (2002), an important indicator of the presence and importance given to training practices.

Others however are more specific in approaching skills' development. For example, Ramsay, Scholarios & Harley (2000) and Macky & Boxall (2007) emphasize the formal nature of training which shows the employers' commitment to invest in human capital. In order to set up practices such as teamwork, problem solving or job rotation there is a need for a more holistic approach to training. This line of reasoning is followed by several studies that emphasize the importance of cross-skills development measuring the use of cross-training (Guthrie, Spell and Nyamori, 2002), extensive training (Zacharatos, Barling & Iverson, 2005) or comprehensive training (Whitener, 2007; Beltrán-Martín et al., 2008). Others emphasize the strategic and planning approach to training, as a way to prepare the workforce to future changes which may require new skills (Guthrie, Spell and Nyamori, 2002).

Wood & de Meneses (2008) emphasize the existence of "skill acquisition support" schemes, which includes training practices, but also team briefing and induction. On the other hand, but in a similar way, Yalabik et al (2008) look at the "Human Resources flow", which comprises recruitment, selection, training and development.

The identification of specific practices associated with the development of employees knowledge base, but also the articulation with other practices, reinforces the idea that "knowledge" (associated with training and development) can be understood as an important asset in that it allows employees to perform more tasks (horizontally and vertically) with better outcomes; in this context, training practices are of particular relevance.

Methods

The main goal of this study is to test if companies with training and development practices have a better performance than companies without training and development practices. Before doing this, we will describe the current state of training and development practices in European countries.

Data used in this research is drawn from the European Company Survey (2009) conducted by the European Foundation for the Improvement of Living and Working Conditions. The unit of analysis of this survey is European companies with, at least, 10 employees, and the respondent is a company representative. The 2009 survey collected data from 30 countries (UE27, plus 3 candidate countries) with a total of 27160 observations). Following several previous studies about high-performance practices (Kintana, Alonso & Olaverri, 2006; Tapia, Correa and Guthrie, 2009) this research focus on companies from the production sector (leaving out private and public services) with a total of 11221 observations.

The variables used to represent "training and development" are based on previous studies that used the HPP approach and includes practices that focus on training needs assessment (e.g. "Is the need for further training periodically checked in a systematic way in your establishment?"), time available for training (e.g. "Have any of your employees been given time off from their normal duties in the past 12 months in order to undergo further training?"), motives of further training (e.g. "Please tell me for each of the following potential motives of further training whether or not it was an important driver behind the application of these training measures?"). Company performance is measured by the so called subjective performance ("Compared with other establishments in the same sector of activity, how would you assess the labour productivity in your establishment").

In terms of data analysis, we first describe the main variables by country. To test the hypothesis of existing differences between companies with and without training and development practices we perform a t-test for independent samples for each country and for the general EU data. This is a common statistical procedure when there is a need to assess differences between two different groups of observations in a given independent variable.

Descriptive Analysis

We started the data analysis by describing the state of the training practices in European countries. In terms of assessment, the systematic checking of the need for further training is made by almost 70% of European companies. Nevertheless, there are some discrepancies among countries. Among the countries with the most companies that systematically assess the need for further training are Czech Republic, but also Slovenia, UK, France, Ireland and Sweden. On the opposite, countries with less companies stating they assess the need for further training are Luxembourg, Macedonia, Lithuania, Romania, Malta and Croatia, with scores around 50%.

Giving time off to employees in order to undergo further training can be understood as a measure to develop the workforce's skills, and thus a training and development practice. This practice is common in about 57% of European companies. Again, the discrepancy among European countries is considerable. The UK, Germany, Ireland, Netherlands and Slovenia are among the countries with more companies giving time off to their employees to undergo further training. On the other hand, Hungary, Latvia, Malta and Croatia resent scores below 35%, with Bulgaria presenting a remarkably low score of 13%.

Worth to note is that, in almost all countries (with the exception of Denmark and Germany), the systematic checking of need for further training is more used than giving time off to employees in order to undergo further training. In some countries, such as France, Czech Republic, Estonia, Hungary and Latvia is bigger than 20%; in Bulgaria the difference reaches an astonishing 59%. Although there are several solutions to solve the need for further training, it seems that there is a lack of congruence between the diagnosis and action. Companies assess their needs of further training, but are not willing to give time to employees to fulfil those needs.

Table 2 ***Assessment and Time-off Practices in European Countries***

		Systematic checking procedures of the need for further training				Time off given to employees in the past 12 months in order to undergo further training			
		Yes	No	DK/ NA	Total	Yes	No	DK/ NA	Total
Countries	BE	68,4	30,8	0,7	100,0	51,0	48,3	0,7	100,0
	DK	68,8	31,0	0,2	100,0	72,1	27,2	0,7	100,0
	DE	69,4	30,2	0,3	100,0	79,1	20,8	0,2	100,0
	EL	64,0	35,3	0,7	100,0	53,5	46,3	0,2	100,0
	ES	85,2	14,6	0,2	100,0	68,4	30,9	0,7	100,0
	FI	64,5	35,2	0,2	100,0	53,1	45,4	1,5	100,0
	FR	80,2	19,6	0,2	100,0	48,0	51,5	0,5	100,0
	IE	77,5	22,5		100,0	77,0	22,5	0,5	100,0
	IT	60,8	38,9	0,3	100,0	52,5	46,4	1,1	100,0
	LU	49,7	49,7	0,6	100,0	53,6	46,4		100,0
	NL	75,0	24,3	0,7	100,0	74,0	25,7	0,2	100,0
	AT	66,9	32,2	0,9	100,0	40,5	58,3	1,1	100,0
	PT	71,5	28,1	0,4	100,0	65,0	35,0		100,0
	SE	77,1	22,3	0,6	100,0	63,9	35,5	0,6	100,0
	UK	82,4	16,9	0,7	100,0	81,3	17,6	1,1	100,0
	BG	72,4	26,1	1,5	100,0	13,4	85,8	0,8	100,0
	CY	70,6	28,8	0,6	100,0	65,6	33,8	0,6	100,0
	CZ	84,3	15,7		100,0	65,0	34,8	0,2	100,0
	EE	63,4	36,1	0,5	100,0	54,2	45,8		100,0
	HU	59,1	39,3	1,6	100,0	36,6	61,5	1,9	100,0
	LV	61,0	37,2	1,7	100,0	34,9	64,5	0,6	100,0
	LIT	54,3	45,2	0,5	100,0	46,2	52,9	1,0	100,0
	MT	59,3	39,8	0,9	100,0	29,6	69,4	0,9	100,0
	PL	71,0	28,0	1,0	100,0	61,3	37,3	1,3	100,0
	RO	57,6	39,6	2,8	100,0	52,8	43,6	3,6	100,0
	SK	74,7	24,5	0,9	100,0	65,5	32,3	2,2	100,0
	SI	82,2	17,8		100,0	74,8	24,8	0,4	100,0
	TR	60,8	38,8	0,4	100,0	46,0	52,8	1,2	100,0
	HR	59,5	39,0	1,4	100,0	33,3	65,2	1,4	100,0
	MK	52,7	46,9	0,4	100,0	40,1	59,5	0,4	100,0
Total		69,4	30,0	0,6	100,0	56,9	42,2	0,9	100,0

When looking at the assessment of the need for further training by level of skills, the differences are remarkable. In all countries – with the exception of Netherlands, Sweden and Turkey – the assessment is typically developed for skilled or high-skilled positions. The major differences between high- and low-skilled employees can be found in Estonia, Bulgaria and Hungary (with scores over 30%), but also Cyprus, Lithuania, Italy, and Romania (with scores between 25% and 30%). Worth to mention that in MK, the difference is inexistent and

Portugal and UK, the difference is almost zero (0,57 and 0,65%, respectively). This practice may lead to several consequences. First, companies are not contributing to shorten the gap between high- and low-skilled workers; on the contrary, they may be contributing to a two speed workforce, weakening companies' performance and even countries competitiveness.

Table 3 ***Assessment of Training Needs by Skill Level***

		Systematic checking procedures of the need for further training (skilled or high-skilled positions)				Systematic checking procedures of the need for further training (low-skilled or unskilled positions)				
		Yes	No	DK/ NA	Total	Yes	No	DK/ NA	Total	Df.
Countries	BE	84,36	15,27	0,36	100,00	80,73	17,45	1,82	100,00	3,64
	DK	93,36	5,24	1,40	100,00	73,43	23,43	3,15	100,00	19,93
	DE	91,87	6,94	1,20	100,00	69,38	29,43	1,20	100,00	22,49
	EL	92,36	7,27	0,36	100,00	69,82	29,82	0,36	100,00	22,55
	ES	91,34	8,45	0,21	100,00	78,56	20,82	0,62	100,00	12,78
	FI	97,31	2,31	0,38	100,00	82,69	11,15	6,15	100,00	14,62
	FR	91,42	8,15	0,43	100,00	89,06	10,30	0,64	100,00	2,36
	IE	96,55	3,45		100,00	88,28	10,34	1,38	100,00	8,28
	IT	85,82	13,66	0,52	100,00	59,28	39,95	0,77	100,00	26,55
	LU	83,33	14,44	2,22	100,00	77,78	21,11	1,11	100,00	5,56
	NL	91,18	8,17	0,65	100,00	92,48	6,21	1,31	100,00	-1,31
	AT	91,25	7,74	1,01	100,00	76,77	20,88	2,36	100,00	14,48
	PT	85,39	13,47	1,15	100,00	84,81	14,90	0,29	100,00	0,57
	SE	90,71	5,36	3,93	100,00	92,14	7,86		100,00	-1,43
	UK	92,44	7,56		100,00	91,79	7,34	0,86	100,00	0,65
	BG	90,48	8,47	1,06	100,00	55,56	41,27	3,17	100,00	34,92
	CY	92,04	7,96		100,00	62,83	36,28	0,88	100,00	29,20
	CZ	90,26	9,74		100,00	83,09	16,62	0,29	100,00	7,16
	EE	90,51	8,03	1,46	100,00	52,55	45,26	2,19	100,00	37,96
	HU	87,11	12,54	0,35	100,00	54,36	43,55	2,09	100,00	32,75
	LV	78,10	20,95	0,95	100,00	69,52	28,57	1,90	100,00	8,57
	LIT	85,96	12,28	1,75	100,00	57,02	41,23	1,75	100,00	28,95
	MT	87,50	12,50		100,00	81,25	17,19	1,56	100,00	6,25
	PL	84,27	14,55	1,17	100,00	60,09	37,56	2,35	100,00	24,18
	RO	84,03	15,28	0,69	100,00	59,03	39,58	1,39	100,00	25,00
	SK	86,55	12,28	1,17	100,00	70,18	25,15	4,68	100,00	16,37
	SI	86,77	13,23		100,00	83,07	15,87	1,06	100,00	3,70
	TR	82,41	17,15	0,45	100,00	82,85	16,26	0,89	100,00	-0,45
	HR	85,60	13,60	0,80	100,00	66,40	32,00	1,60	100,00	19,20
	MK	83,33	16,67		100,00	83,33	16,67		100,00	0,00
Total		88,92	10,33	0,75	100,00	76,00	22,54	1,46	100,00	12,93

The reasons mentioned to support this kind of practices are presented in Table 4. In general terms, the most mentioned reason is the preparation of employees for new tasks, followed by the vocational adjustment of new employees.

Table 4 ***Reasons for Implementing Training Practices***

		The vocational adjustment of new employees				To prepare employees for new tasks				Training after long absence			
		Yes	No	DK/ NA	Total	Yes	No	DK/ NA	Total	Yes	No	DK/ NA	Total
Countries	BE	72,68	27,32		100,00	82,44	17,56		100,00	15,61	84,39		100,00
	DK	41,67	57,33	1,00	100,00	79,00	20,67	0,33	100,00	7,33	92,00	0,67	100,00
	DE	58,40	41,39	0,21	100,00	82,77	17,23		100,00	**30,67**	68,70	0,63	100,00
	EL	74,78	23,91	1,30	100,00	72,17	25,65	2,17	100,00	15,22	83,91	0,87	100,00
	ES	62,21	37,28	0,51	100,00	85,09	14,65	0,26	100,00	19,79	80,21		100,00
	FI	44,39	54,67	0,93	100,00	69,63	29,44	0,93	100,00	14,49	82,71	2,80	100,00
	FR	62,72	37,28		100,00	79,93	20,07		100,00	15,77	83,87	0,36	100,00
	IE	66,67	33,33		100,00	**91,67**	8,33		100,00	27,08	72,92		100,00
	IT	72,84	26,27	0,90	100,00	66,87	32,84	0,30	100,00	10,45	87,76	1,79	100,00
	LU	43,30	55,67	1,03	100,00	76,29	23,71		100,00	11,34	86,60	2,06	100,00
	NL	76,82	22,19	0,99	100,00	83,77	15,89	0,33	100,00	4,97	93,38	1,66	100,00
	AT	53,89	43,89	2,22	100,00	85,00	13,33	1,67	100,00	**31,67**	64,44	3,89	100,00
	PT	67,82	31,86	0,32	100,00	78,86	20,19	0,95	100,00	21,14	77,60	1,26	100,00
	SE	44,83	54,31	0,86	100,00	74,14	25,00	0,86	100,00	15,52	82,33	2,16	100,00
	UK	**80,09**	17,94	1,97	100,00	89,50	9,63	0,88	100,00	**32,82**	58,21	8,97	100,00
	BG	57,14	42,86		100,00	77,14	22,86		100,00	25,71	68,57	5,71	100,00
	CY	77,14	20,95	1,90	100,00	71,43	26,67	1,90	100,00	24,76	74,29	0,95	100,00
	CZ	**81,04**	18,96		100,00	74,35	24,91	0,74	100,00	11,52	88,48		100,00
	EE	34,19	64,96	0,85	100,00	80,34	19,66		100,00	13,68	84,62	1,71	100,00
	HU	64,04	35,96		100,00	82,02	15,73	2,25	100,00	28,09	67,98	3,93	100,00
	LV	56,67	43,33		100,00	71,67	26,67	1,67	100,00	6,67	93,33		100,00
	LIT	69,07	27,84	3,09	100,00	76,29	18,56	5,15	100,00	29,90	62,89	7,22	100,00
	MT	53,13	46,88		100,00	81,25	18,75		100,00	15,63	81,25	3,13	100,00
	PL	48,64	51,09	0,27	100,00	81,52	17,93	0,54	100,00	14,13	85,60	0,27	100,00
	RO	77,27	19,70	3,03	100,00	**90,91**	9,09		100,00	**31,82**	66,67	1,52	100,00
	SK	79,33	20,00	0,67	100,00	86,67	13,33		100,00	19,33	79,33	1,33	100,00
	SI	45,35	54,07	0,58	100,00	86,05	13,37	0,58	100,00	8,14	90,70	1,16	100,00
	TR	**85,59**	13,82	0,59	100,00	85,59	13,53	0,88	100,00	22,35	77,06	0,59	100,00
	HR	60,00	40,00		100,00	**91,43**	7,14	1,43	100,00	5,71	92,86	1,43	100,00
	MK	**90,48**	9,52		100,00	**93,33**	5,71	0,95	100,00	27,62	71,43	0,95	100,00
Total		64,65	34,59	0,77	100,00	80,98	18,32	0,70	100,00	18,99	79,21	1,80	100,00

Hypothesis Testing

According to the HPP literature, training and development practices are conducive to better performance. Thus, we test the hypothesis that companies with training and development practices have a better performance than companies without training and development practices.

As a proxy to training and development practices we use the variable "Systematic checking procedures of the need for further training". For companies' performance, we use the so-called subjective performance as proxy variable ("Compared with other establishments in the same sector of activity, how would you assess the labour productivity in your establishment? Is it a lot better, somewhat better, about average, or below average for this sector?").

Thus, we test the following hypothesis:

H_1: there are differences between companies with training and development practices and without training and development practices in terms of subjective company performance

H_0: there are no differences between companies with training and development practices and without training and development practices in terms of subjective company performance

The independent-samples t-test for all countries was conducted to compare the subjective performance for companies with systematic checking procedures of further training needs and companies with no systematic checking procedures of further training needs. There is a significant difference [t(11221)=9,567, p= 0,000] in scores for companies with further training assessment (M=2,35, SD=0,775) and companies with no further training assessment (M=2,51, SD=0,762). This means that companies that have practices of assessing further training needs, have higher subjective performance levels than companies that do not assess their own training needs. Thus, the general hypothesis of the study is confirmed.

When looking at the differences in subjective performance in countries with significant scores, the general conclusion is that companies with systematic checking procedures for further training present higher levels of subjective performance than companies with no systematic checking procedures. The only exception is Malta. This result supports the general idea in the HPP that training practices are important for higher levels of performance.

Table 5 ***T-test for Independent Samples***

	t-test for independent samples	With systematic checking procedures		With no systematic checking procedures	
	Sig	Mean	SD	Mean	SD
EU	**0,000**	**2,35**	**0,775**	**2,51**	**0,762**
BE	0,485	2,48	0,653	2,51	0,694
DK	0,411	2,32	0,727	2,38	0,719
DE	**0,005**	**2,26**	**0,740**	**2,45**	**0,697**
EL	**0,035**	**1,91**	**0,892**	**2,12**	**0,900**
ES	0,940	2,47	0,772	2,47	0,785
FI	0,111	2,50	0,669	2,61	0,667
FR	0,085	2,56	0,736	2,70	0,687
IE	0,085	2,13	0,745	2,35	0,700
IT	0,685	2,59	0,732	2,62	0,688
LU	**0,021**	**2,34**	**0,753**	**2,61**	**0,728**
NL	0,157	2,29	0,719	2,42	0,795
AT	**0,000**	**2,21**	**0,748**	**2,52**	**0,713**
PT	**0,006**	**2,52**	**0,697**	**2,73**	**0,661**
SE	0,808	2,38	0,696	2,40	0,678
UK	0,277	2,31	0,791	2,41	0,785
BG	0,093	2,31	0,839	2,25	0,796
CY	0,162	1,99	0,838	2,20	0,687
CZ	0,979	2,38	0,672	2,38	0,623
EE	0,414	2,59	0,715	2,67	0,613
HU	**0,000**	**2,51**	**0,721**	**2,78**	**0,671**
LV	0,223	2,37	0,808	2,53	0,799
LIT	**0,000**	**2,36**	**0,796**	**2,79**	**0,698**
MT	**0,012**	**2,78**	**0,531**	**2,45**	**0,724**
PL	**0,033**	**2,42**	**0,815**	**2,59**	**0,776**
RO	**0,005**	**2,11**	**0,722**	**2,39**	**0,748**
SK	**0,041**	**2,26**	**0,706**	**2,54**	**0,751**
SI	**0,027**	**2,48**	**0,717**	**2,76**	**0,714**
TR	**0,000**	**1,98**	**0,860**	**2,39**	**0,896**
HR	0,186	2,36	0,779	2,51	0,772
MK	**0,022**	**2,08**	**0,841**	**2,32**	**0,839**

Note: Companies' subjective performance codes: 1-A lot better; 2-Somewhat better; 3-About average industry; 4-Below average
Sig. <0,5; Significant differences in bold
Confidence interval: 95%

However, an analysis by country reveals that the confirmed hypothesis is not supported in several countries. For example, the majority of countries from central – such as Belgium, France, Netherlands – and northern Europe – such as Denmark, Finland, Sweden, Ireland, UK, Estonia and Latvia – do not show significant differences between companies who assess and do not assess further training needs.

On the other hand, the differences are significant among companies who assess and do not assess further training needs in some countries from eastern and southern Europe, such as Greece, Portugal, Hungary, Malta, Poland, Romania, Slovakia, Slovenia and Turkey. In these cases, companies with assessment of further training needs have a higher subjective performance. There are, nevertheless, some exceptions to this geographical trend, such as Germany, Luxembourg, Austria and Lithuania that also present significant differences.

The major gap in terms of performance can be found in Lithuania and Turkey, where companies with systematic checking procedures have levels of subjective performance 10% better than their counterparts with no systematic checking procedures.

Conclusions

The goal of this paper was to understand if the presence of training and development practices could be an enhancer of companies' performance. The analysis was based on European companies from 31 countries.

Concern about training and development seems to be a common practice of European companies, since about 70% systematically check needs of further training, but only 57% give time off to employees in order to undergo further training. However, the gap between high- and low-skilled workers assessment needs is huge. European companies are more concerned with high-skilled workers, especially in eastern countries.

The main conclusion is that, in fact, the presence of training and development practices can have a positive contribution for companies' performance. However, this is not true for about half of countries. Although, the large majority of countries have companies in which the presence of training and development practices mean higher levels of performance, the statistical significance was not possible to prove for all countries. This may reveal that each country has its own specificities that may influence the way companies look at training practices, and how the solutions they find to enhance their performance.

There are some limitations to point out. First, the data was not specifically produced for the purpose of this paper, which may diminish the understanding of the phenomena. Second, training and development was measured by only one variable. According to the HPP, practices should be combined and analysed as bundles. Also, companies' performance was measured using a proxy that reveals the perception of the respondent and not an objective indicator. Another limitation is related with the potential impact of other factors than training in influencing the differences found. The goal of this paper was not to isolate training assessment from the influence of other factors but to test if there is a difference in performance between companies that assess the need of training and those who don't. However, this aspect should be taken in consideration in future research.

The main implication of these findings for human resources development is that training practices are seen and valued differently from country to country, reinforcing the assumption that the HPP should be implemented using a contingent approach (Brewster, 2007). This means that there is not a universal set of training and development practices; instead, human resources professionals should have a broad cultural and situational understanding of the country and the company in order to implement the more suitable set of practices.

References

Appelbaum, E., & Batt, R. (1994) The new American workplace: transforming work systems in the United States. Ithaca, New York: ILR Press

Applebaum, E., Bailey, T., Berg, P., and Kalleberg, A. (2000) Manufacturing Advantage: Why high-performance work systems pay off, Ithaca: ILR Press

Beltrán-Martín, I.; Roca-Puig, V.; Escrig-Tena, A.; Bou-Llusar, J.C. (2008) Human Resource Flexibility as a Mediating Variable Between High Performance Work Systems and Performance, *Journal of Management*, 34(5), 1009-1044

Boxall, P., and Macky, K. (2007) High-performance work systems and organisational performance: bridging theory and practice, *Asia Pacific Journal of Human Resources*, 45(3), 261-270.

Boxall, P., and Macky, K. (2009) Research and theory on high-performance work systems: progressing the high involvement stream. *Human Resource Management Journal*, 19(1), 3-23.

Brewster. C. (2007) Comparative HRM: European views and perspectives, *The International Journal of Human Resource Management*, 18(5), 769-787

Camps, J. & Luna-Arocas, R. (2009) High involvement work practices and firm performance, *International Journal of Human Resource Management*, 20(5), 1056-1077

Cappelli, P., and Neumark, D. (2001) Do 'high-performance' work practices improve establishment level outcomes?, *Industrial and Labor Relations Review*, 54, 737–76.

Delaney, J.T., & Huselid, M.A. (1996) The impact of human resource management practices on perceptions of organisational performance, *Academy of Management Journal*, 39(4), 949-969.

Guerrero, S. & Barraud-Didier, V. (2004) High-involvement practices and performance of French firms, *The International Journal of Human Resource Management*, 15(8), 1408-1423

Godard, J. (2004) A critical assessment of the high-performance paradigm. *British Journal of Industrial Relations*, 42(2), 349–378.

Guthrie, J.P., Spell, C.S., and Nyamori, R.O. (2002) Correlates and consequences of high involvement work practices: the role of competitive strategy, *International Journal of Human Resource Management*, 13(1), 183–197

Harley, B. (2002) Employee responses to High-Performance Work System Practices: an analysis of the AWIR95 data, *The Journal of Industrial Relations*, 44(3), 418-434

Harley, B., Allen, B.C., & Sargent, L.D. (2007) High performance work Systems and Employee Experience of Work in the Service Sector: the case of aged care. *British Journal of Industrial Relations*, 45(3), 607-633.

Huselid, M. (1995) The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal*, 38(3), 635-672.

Ichniowski, C.; Shaw, K.; Prennushi, G. (1997) The effects of human resources management practices on productivity: a study of steel finishing lines. *The American Economic Review*, 87(3), 291-313.

Kalmi, P. & Kauhanen, A. (2008) Workplace Innovations and Employee Outcomes: Evidence from Finland, *Industrial Relations*, 47(3), 430-459

Kintana, M.L.; Alonso, A.U. & Olaverri, C.G. (2006) High-performance work systems and firms' operational performance: the moderating role of technology, *The International Journal of Human Resource Management*, 17(1), 70-85

Lawler, E. (1986) High-Involvement Management, New Jersey, Jossey-Bass

Lindbeck, A. & Snower, D. J. (2000). Multi-task learning and the reorganization of work: from tayloristic to holistic organization, *Journal of Labour Economics*, 18(3), 353-376

Pfeffer, J. (1998) The Human Equation: Building Profits by Putting People First, Boston: Harvard Business School Press

Ramsay, H, Scholarios, D., and Harley, B. (2000) Employees and High-Performance Work Systems: Testing inside the Black Box. *British Journal of Industrial Relations*, 38(4), 501-531.

Scotti, D.J.; Harmon, J. & Behson, S.J. (2007) Links Among High-Performance Work Environment, Service Quality, and Customer Satisfaction: An Extension to the Healthcare Sector, *Journal of Healthcare Management*, 52(2), 109-124

Swanson, R. (1995)Human resource development: performance is the key, *Human Resource Development Quarterly*, 6(2), 207-213

Tapia, I.; Correa, J.A; & Guthrie, J.P. (2009) High performance work systems and export performance, *The International Journal of Human Resource Management*, 20(3), 633-653

Tomer, J.F. (2001). Understanding high-performance work systems: The joint contribution of economics and human resource management, *Journal of Socio-Economics*, 30, 63-73

Tsai, C. (2006) High performance work systems and organizational performance: an empirical study of Taiwan's semiconductor design firms, *The International Journal of Human Resource Management*, 17(9), 1512-1530

Whitener, E.M. (2007) Do "high commitment" human resource practices affect employee commitment? A cross-level analysis using hierarchical linear modelling, *Journal of Management*, 27, 515-535

Yalabik, Chen, Lawler & Kim, (2008) High-Performance Work System and Organizational Turnover in East and Southeast Asian Countries, *Industrial Relations*, 47(1), 145-152

Zacharatos, A.; Barling, J. & Iverson, R.D. (2005) High-Performance Work Systems and Occupational Safety, *Journal of Applied Psychology*, 90(1), 77–93