

**HUMAN RESOURCE MANAGEMENT, INSTITUTIONALISATION AND  
ORGANISATIONAL PERFORMANCE: A COMPARISON OF HOSPITALS, HOTELS  
AND LOCAL GOVERNMENT**

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Abstract	<p>The relationship between Human Resource Management (HRM) and firm performance has been a hotly debated topic over the last decade, especially in the United States (e.g. Osterman, 1994; Huselid, 1995; MacDuffie, 1995). The question arises whether the domination of USA oriented models, however appropriate they might be for, say, the USA, hold in other for example more institutionalised contexts. Now we have the opportunity to study recent empirical data on the effectiveness of human resource management in the Netherlands, using Control versus Commitment HR Theory (Walton, 1985; Arthur, 1994) in combination with New Institutionalism (Dimaggio and Powell, 1983). We were able to include three different Dutch sectors/branches of industry i.e. Health care, Local Government and Tourism. Empirical results suggest that the effect of HRM is lower in highly institutionalised sectors (hospitals and local governments) than in a less institutionalised sector like hotels.</p>	
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# **Human Resource Management, Institutionalisation and Organisational Performance: a comparison of hospitals, hotels and local governments**

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## **Abstract**

The relationship between Human Resource Management (HRM) and firm performance has been a hotly debated topic over the last decade, especially in the United States (e.g. Osterman, 1994; Huselid, 1995; MacDuffie, 1995). The question arises whether the domination of USA oriented models, however appropriate they might be for, say, the USA, hold in other for example more institutionalised contexts. Now we have the opportunity to study recent empirical data on the effectiveness of human resource management in the Netherlands, using Control versus Commitment HR Theory (Walton, 1985; Arthur, 1994) in combination with New Institutionalism (DiMaggio and Powell, 1983). We were able to include three different Dutch sectors/branches of industry i.e. Health care, Local Government and Tourism. Empirical results suggest that the effect of HRM is lower in highly institutionalised sectors (hospitals and local governments) than in a less institutionalised sector like hotels.

## Introduction

The majority of empirical scientific research in the area of HRM and performance stems from the USA<sup>1</sup> and, to a lesser extent, from the UK<sup>2</sup>. Empirical results on HRM and performance are presented in special issues of international journals like *The Academy of Management Journal* (4:39, 1996), *Industrial Relations* (1996), *The International Journal of Human Resource Management* (3:8, 1997; and 7:12, 2001), *Human Resource Management* (Fall, 1997), and *The Human Resource Management Journal* (Fall, 1999). Global seminars and conferences<sup>3</sup> all demonstrate lasting attention for the topic. The outcomes of worldwide research suggest significant impact of HRM on the competitive advantage of organisations. Prior empirical research, summarised and classified in the work of Delery and Doty (1996), Guest (1997) and Boselie et al. (2001), suggests significant impact of HRM on the competitive advantage of organisations. The question arises whether the USA oriented models, however appropriate they might be for, say, the USA, hold in other contexts (see debate in special issue of *The International Journal of Human Resource Management*, 7:12, 2001). The mainstream 'best practices approaches', also labelled universalistic mode (Delery and Doty, 1996) and 'high performance' work practices (Guest, 1997), do not seriously take into account differences in culture and institutional settings (Paauwe, 1998).

Research findings from European countries like Germany (e.g. Backes-Gellner, Frick and Sadowski, 1997), France (e.g. d'Arcimoles, 1997), and the Netherlands (e.g. Leijten, 1992; Schilstra, 1998) are interesting because they reflect the so-called Rhineland model of industrial relations, in which legislation, institutions and stakeholders, like trade unions and works councils all play an important role in shaping HRM policies and practices. This study will be built on the theoretical assumptions of Delery and Doty's (1996) configurational mode, represented in the work of Walton (1985) and Arthur (1994). The configurational mode (e.g. Arthur, 1994; MacDuffie, 1995) is rather more complex than the universalistic mode or 'best practices' approach (e.g. Pfeffer, 1994) and the contingency mode (e.g. Schuler and Jackson, 1987). The configurational mode assumes that the optimal organisational design, including human resource management, depends on external (e.g. branch of industry, technology level and market situation) and internal factors (e.g. cultural heritage, structure of ownership and path dependency). Wood (1999) makes a distinction between two fundamental approaches in the HRM and performance debate: (a) the *best-practices stream* and (b) the *best-fit stream*. The universalistic mode corresponds with Wood's (1999) best-practice stream, while the contingency and configurational mode match with the best-fit stream. In the contingency mode 'best-fit' is mainly focused on external fit: fit between organisational design (e.g. HRM) and external contingencies like the market situation. The outside-in approach in strategic management was quite popular in the eighties under the direction of the work of

amongst others Porter (1980) and Miles and Snow (1984), but appears to be overruled by the introduction of the resource based view (e.g. Wernerfelt, 1984; Barney, 1991; Wright et al., 1994; Barney and Wright, 1998), that led to a shift in strategic management thinking from 'traditional' outside-in to 'emerging' inside-out thinking. The configurational mode unites 'traditional' strategic management theory, in terms of taking into account external factors that affect the organisational design (e.g. characteristics of the branch of industry), and resource based elements, in terms of internal factors like the uniqueness of the organisational configuration (in terms of for example organisational structure, culture and systems), and is therefore preferable in our opinion (see for example the human resource based theory of Paauwe, 1994). To do justice to the Dutch Rhineland context it is necessary to add an alternative approach to the configurational mode: new institutionalism (Dimaggio and Powell, 1983). Thus, we set out to partly replicate the US research of Arthur (1994) and partly to modify the model to continental standards with respect to the industrial relations model with the help of new institutionalism (Dimaggio and Powell, 1983).

### **Theorising: Control and Commitment HR Systems**

The operationalisation of commitment oriented systems in our study is based on the work of Walton (1985) and Arthur (1994). Together with the work of Huselid (1995) and MacDuffie (1995), Arthur's (1994) study is one of the most quoted articles on the added value of HRM in the nineties. Arthur's (1994) approach is theoretically rooted in the classical work of McGregor (1960) on theory X and theory Y, and the *Harvard Business Review* article of Walton (1985) on control versus commitment strategies of organisations. Walton's (1985) conceptual model hypothesises that commitment work systems outperform traditional work systems in organisations. Traditional (control) work systems are characterised by narrowly defined jobs, specialisation of employees, close supervision and monitoring of employees by management, hierarchical structure, centralisation of power and a focus on cost reduction strategies. In contrast, the commitment work systems encompass broadly defined jobs, job rotation, evaluation by peers, non-hierarchical structure, decentralisation of power and a focus on differentiation strategies (see table 1).

**Table 1      Traditional- versus High-Commitment Work Systems**

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<b>‘Traditional Work System’</b>	<b>‘High-Commitment Work System’</b>
narrowly defined jobs	broadly defined jobs
specialization of employees	rotation of employees through jobs
pay by specific job content	pay by skills mastered
evaluation by direct supervision	evaluation by peers
work is under close supervision	evaluation by peers
assignment of overtime or transfer	team assigns members to cover
by rule book	vacancies in
	flexible fashion
no career development	concern for learning and growth
employee as individuals	employee in a team
employee is ignorant about business	teams runs a business; business data
	shared widely
status symbols used to reinforce hierarchy	status differences minimized
employees have input on few matters	broad employee participation

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Source: Walton in Beer et al. (1984)

Arthur's (1994) control- and commitment HR systems are based on the idea that "the closer an organisation's HR practices resemble the correct prototypical system (for its business strategy), the greater the performance gains (Delery and Doty, 1996)". The two systems in Arthur's (1994) approach are labelled commitment- and control human resource systems. The correct HR system or bundle from a 'best practice approach' (e.g. Osterman, 1994; Pfeffer, 1994) is presumed to be the commitment variant. Low scores on direct supervision, individual bonus or incentive payments in combination with high scores on decentralisation, employee participation, general training, skill development, social activities, due processes, high wages and employee benefits represent commitment HR systems in this approach. The opposite applies for control HR systems (see table 2).

**Table 2      Control- versus Commitment HR Systems**

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<b>‘Control HR Systems’</b>	<b>‘Commitment HR Systems’</b>
centralisation	decentralisation
no participation	participation
no general training	general training
no skills training	skills training
no social activities	social activities
no due process	due process
low wages	high wages
no employee benefits	employee benefits
direct supervision	no direct supervision
individual bonus or incentive payments	group bonus or incentive payments

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Source: Arthur (1994)

Arthur's (1994) empirical results on the effectiveness of HR control- versus HR commitment systems suggest that commitment systems outperform control systems in USA steel mills. Organisations with a commitment oriented HR system have significant higher scores on productivity and lower scores on employee turnover than the control oriented steel mills. Arthur's (1994) analysis however is on organisational level. The study was based on data of 30 USA steels mills and the data stem from HR managers. The work of Wallace (1995) covers corporatist control and organisational commitment among lawyers working in law firms, with the analysis on employee level. Activities in Wallace's research, that fit the commitment HR system of Arthur (1994) like co-worker support, promotional opportunities and employee autonomy, have a positive effect on employee satisfaction. The basic assumptions in these approaches have their roots in McGregor's (1960) theoretical distinction between Theory X and Theory Y. The traditional management view (Theory X) assumes that employees dislike work, avoid responsibility, lack ambition, and the only way to motivate people is the application of external control and punishment. In this view 'poor performance' of an organisation is presumed to be a result of the human nature of an employee. Since the sixties this view is overruled, at least in contemporary science, by what McGregor (1960) calls Theory Y. This perspective has a different starting point. Poor performance of employees is not the result of their human nature but an outcome of an imperfect work system. By nature each individual wants self-direction and self-control, seeks and accepts responsibility, perceives work as a source of satisfaction, and needs self-direction and self-



control. In our opinion Theory Y incorporates a strong argument for the application of a commitment oriented work system.

### **Theorising: New Institutionalism**

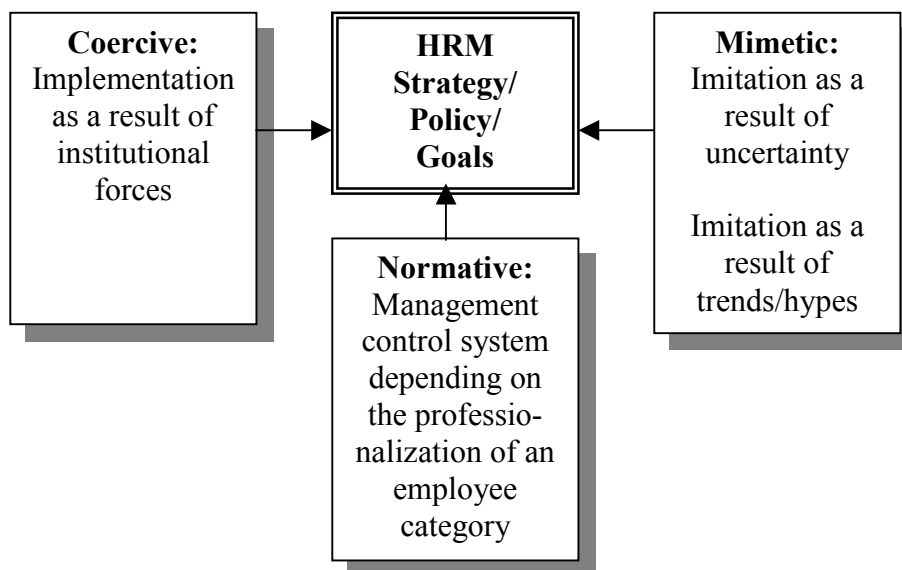
Of course it is possible to apply the theoretical framework of control versus commitment in a Western-European or Dutch setting. At the same time we need to take into account the differences in context from an economic and industrial relations point of view. The Rhineland model is a stakeholder and consultation oriented type of industrial relations system, in which legislation, social partnership, CBA regulations, trade unions and works councils have a major say in the shaping of HR policies and practices (Paauwe, 1998; Schilstra, 1998), whereas the USA based system is more associated with strategic goal orientation towards shareholder value. For this reason we are in need of additional theorising in the area of HRM and performance. The dichotomy of control versus commitment oriented HR work systems needs embeddedment in a theoretical framework, which will enable us to account for the influence of institutions etc. Dimaggio's and Powell's (1983 and 1991) *New Institutionalism* might be able to offer us the indispensable elements for explaining variations in the relationship between HR systems and performance in a Western-European setting. Dimaggio and Powell (1983) state that rational actors make their organisations increasingly similar as they try to change them (homogenisation). The concept that best captures the process of homogenisation is isomorphism. Isomorphism is a constraining process which, say Dimaggio and Powell (1983), forces one unit in a population to resemble other units which face the same set of environmental conditions. There are two types of isomorphism: competitive and institutional. Competitive isomorphism assumes a system of rationality which emphasises market competition, niche change, and fitness measures, and is most relevant where free markets and open competition exists. "It explains parts of the process of bureaucratisation that Weber observed, and may apply to early adoption of innovation, but it does not present a fully adequate picture of the modern world of organisations." (Dimaggio and Powell, 1983). For a full understanding of organisational change the authors focus on an alternative perspective: institutional isomorphism. Three institutional mechanisms are said to influence decision-making in organisations:

- *coercive mechanisms*, which stem from political influence and the problem of legitimacy,
- *mimetic mechanisms*, which result from standard responses to uncertainty, and
- *normative mechanisms*, which are associated with professionalisation.

In the Dutch context, *coercive mechanisms* include the influence of social partners (employers' organisations, trade unions and works councils), labour legislation, and

government; examples are the Law on Works councils (WOR), Law on CBA and the Law on Contingent labour and Security (Flexwet). *Mimetic mechanisms* refer to imitations of the strategies and practices of competitors as a result of uncertainty, or hypes in the field of management. It is difficult to determine whether the implication of a certain practice or policy is the result of pure blind imitation. Implementation of, for example, 360-degree feedback systems, the balanced scorecard, and employability or Learning Organisation principles may either have a strategic foundation or may simply be a result of imitation. *Normative mechanisms* refer to the relation between management policies and the professional background of employees in terms of educational level, job experience and craftsmanship. This mechanism assumes that the degree of professionalisation of employees affects the nature of a management control system and its related practices. In figure 1 the three institutional mechanisms of Dimaggio and Powell (1983) are translated to the field of human resource management. We assume that the mechanisms influence HRM strategy, goals and policies (see figure 1). Based on both a control versus commitment theory and institutional theory we will develop our key issues and hypotheses and research design in the following sections

**Figure 1 HRM and New Institutionalism**



Sources: Dimaggio and Powell (1983) and Boselie et al. (2001)

### **Key issues and Hypotheses**

Referring to USA and UK based research in the area of HRM and performance we first of all would like to find out *whether replicating empirical research with respect to control versus commitment oriented HR systems in a Dutch setting will generate the same kind of results as for example the research done by Arthur (1994)*. Arthur's (1994) results reveal positive

impact of commitment (versus control) oriented HR systems on organisational performance in USA steel mills. Hypothesis 1 is based on Arthur's assumptions and research findings.

***Hypothesis 1:** Organisations with commitment human resource systems will have better organisational performance than organisations with control human resource systems.*

Since we only have one steel mill in the Netherlands we *can* replicate the study, but we will have to include another type of organisations in other branches of industry (see section on Methods). Our second and related key issue involves the role of the institutional context. *Does the context interfere with the relationship between HRM and Performance and what possible effects might the institutional context have on the two different HR systems of control versus commitment.* The institutional context (for example legislation, CBA regulations, works councils with their legal prerogatives, rate of unionisation) might limit the available alternatives for designing and implementing HR policies and practices and will in this way limit the opportunities for differentiation between companies in order to achieve a competitive advantage from a HRM point of view. In this respect it is interesting to note that Pfeffer's so-called 16 best practices, which claim to make a positive difference in an on average 'hire and fire' climate in the USA, hardly contribute to a competitive advantage in the Dutch setting. Due to legislation, CBA regulations and the lasting influence of works councils and trade unions since the seventies ten to twelve of Pfeffer's 'best practices' are quite common in the majority of companies in the Netherlands (Paauwe, 1998) (see table 3).

**Table 3** Pfeffer's 'Best Practices' and Paauwe's Comments

<i>Best Practices (Pfeffer, 1994):</i>	<i>HR Practices that are common in the Netherlands since the seventies (Paauwe, 1998):</i>
1) Employment Security	Yes
2) Selectivity in Recruiting	--
3) High Wages	Yes
4) Incentive Pay	--
5) Employee Ownership	Yes
6) Information Sharing	Yes
7) Participation and Empowerment	Yes
8) Self-managed Teams	Yes
9) Training and Skill Development	Yes
10) Cross-utilization and Cross-training	--
11) Symbolic Egalitarianism	--
12) Wage Compression	Yes
13) Promotion from within	Yes
14) Long Term Perspective	Yes
15) Monitoring of Practices	--
16) All-embracing Philosophy	--

Sources: Pfeffer (1994) and Paauwe (1998)

This simply implies that at the level of the individual company the possibilities for achieving a competitive advantage by using these so-called best practices is not feasible or will only have a marginal effect. In this respect, however, it is important to take into account in our research design the differences in the degree of institutionalisation per branch of industry. Some sectors in the Netherlands (e.g. metal industry, construction building, public sector, health care) face a larger institutional impact than other sectors like for example financial services, tourism and those emerging in the so-called new economy (e.g. ICT-business), who have a low degree of institutionalisation. The degree of unionisation, the strength of works council power and the extent of the CBA coverage are possible indicators for institutionalisation. High degrees of unionisation, strong and proactive work councils, and extensive CBA's represent a high degree of institutionalisation. The opposite holds for a low degree of institutionalisation. We will give a more detailed description of the concept of institutionalisation further on in this paper. The research of Klandermans and Visser (1995) in the Netherlands suggests that the following factors lead to high degrees of institutionalisation:

1. *organisational size*; large organisations reveal higher scores on 'degree of unionisation' and 'works council installed' than small and medium-sized organisations
2. *nature of the sector*; non-profit organisations are more institutionalised than profit organisations

On the basis of the prior research on institutionalisation in the Netherlands (Klandermans and Visser, 1995) we formulate the following hypotheses:

***Hypothesis 2a:*** *Small organisations are less institutionalised than large organisations in the Netherlands.*

***Hypothesis 2b:*** *Profit organisations are less institutionalised than non-profit organisations in the Netherlands.*

When we are capable of determining which organisations are 'high institutionalised' and which of them are 'low institutionalised', we are able to study possible moderating effects on the relationship between HRM and performance. New institutionalism (DiMaggio and Powell, 1983) argues that high institutionalisation affects the relationship between HRM and performance. In this study HRM is defined by Walton's (1985) and Arthur's (1994) concepts on control and commitment systems, which we will label 'work systems'. Homogeneity, the result of institutional mechanisms, of organisations leads to less impact of HRM, here defined as work systems, on the performance of the organisation (see hypothesis 3).

***Hypothesis 3:*** *The impact of a work system (commitment and control human resource systems) on organisational performance is smaller in an institutionalised context than the impact of a work system (commitment and control human resource systems) on organisational performance in a less institutionalised context.*

## **Methods**

Apart from selecting companies and branches of industry in which we expect a variation in the application of control versus commitment HR systems, we also have to include variation in the degree of institutionalisation. As indicators we used the rate of unionisation and the degree of extensiveness of CBA regulations. We were able to include three different sectors/branches of industry (from the Netherlands) i.e. Health care, Local Government and Tourism. Data have been collected by means of questionnaires (N=132). HR managers were asked to fill in the forms for their business unit. All data are collected in the year 2000 and 2001. See table 4 for a more detailed description of our research approach.

**Table 4**

	<b>Hospitals</b>	<b>Hotels</b>	<b>Local Governments</b>
<b>Number of Observations</b>	38	25	69
<b>Response Rate</b>	31%	19%	40%
<b>Focus on Employee Group</b>	nurses	waiters, cleaners, receptionists, and kitchen helps	civil servants
<b>Excluded Employee Groups</b>	managers/ supervisors, staff	managers/ supervisors, staff	managers/ supervisors, staff
<b>Average Size of Organisation in sample (employees)</b>	1605	89	238
<b>Minimum Size</b>	291	23	100
<b>Maximum Size</b>	4270	275	417

Hospitals, representing the health care industry, and local governments are medium-sized to large, non-profit organisations in contrast to hotels, representing the tourism industry in the Netherlands. As a result of the relatively small size of the Netherlands and therefore limited number of organisations in specific branches of industry, we were not able to replicate Arthur's (1994) approach on Dutch steel mills, simply because there is only one steel mill in the Netherlands. 38 hospitals (response rate = 31%), 25 hotels (response rate = 19%), and 69 local governments (response rate = 40%) are included in this analysis. The questions in the survey are aimed at specific groups of employees within the firm in order to control for large variances between employee groups within one organisation. The respondents were asked to fill in the survey list with a focus on employees on 'shopfloor level', more specifically: (a) nurses in hospitals; (b) waiters/cleaners/ receptionists/kitchen helps in hotels; and (c) civil servants in local governments. Managers and staff personnel were excluded.

## **Measures**

***Human Resource Systems.*** The application of Arthur's (1994) model in the Netherlands implies some practical problems. As stated before (see table 3), a lot of USA oriented 'best practices' are common in the Netherlands since the seventies. Arthur's (1994) research concepts like (employee) participation, due processes, high wages, and employee benefits are institutionalised by collective bargaining agreements and other labour laws. Performance related pay, related to Arthur's (1994) concept of incentive payments, is not very common in most Dutch sectors as a result of trade union resistance. The operationalisation of the human resource systems in this research is therefore focused on: employee influences, general training, participation in seminars, skill training, social activities, job rotation, and direct supervision (see table 5 for detailed descriptive information on the HRM items in this analysis).

**Table 5 Descriptives (N=132)**

Name	Description	Means	Standard Deviation
Infl_1	Degree to which employees monitor quality, costs, productivity, and execution of work	3.06	0.70
Infl_2	Degree to which employees determine order of tasks among each other	3.10	0.79
Infl_3	Degree to which an employee has room to invest in new materials and technology	2.07	0.74
Infl_4	Degree to which employees have influence over their own activities	3.39	0.76
Training	Degree to which employees participate in general training programs in social skills such as a presentation and communication training	2.65	0.94
Seminar	Degree to which employees participate in seminars and conferences every year	2.90	0.85
Skill	Degree to which employees are offered opportunities for further development of specific skills	3.58	0.71
Social	Degree to which the employer organizes social events for employees	2.96	1.01
Rotation	Degree to which employees are in a job rotation program	1.87	0.82
Superv_1	Degree to which the supervisor monitors the activities of the employees	3.11	0.74
Superv_2	Degree to which the supervisor gives orders to employees on a daily basis	2.93	0.88
Superv_3	Degree to which the supervisor influences an employee's planning	3.11	0.80
Part_1	Degree to which employees are involved in decision-making with respect to selection of new colleagues	3.69	0.97
Part_2	Degree to which employees are involved in policy making	3.23	0.80
Team	Degree to which employee operate in autonomous teams	2.26	1.09
Reward_1	Degree to which employees can earn individual performance related pay	2.25	1.07
Reward_2	Degree to which employees are rewarded for participation in teams	1.81	0.86
Reward_3	Degree to which employees have the opportunity to participate in profit sharing	1.14	0.61
Qual_1	Degree to which employees have to deal with external quality control, for example ISO certificates	2.08	1.24
Qual_2	Degree to which employees have to deal with internal quality control or peer evaluation	2.63	1.05

Scale: 1 = very little      2 = little      3 = reasonable      4 = much      5 = very much

Principal component analysis was used to determine underlying factors. The application of principal component analysis on the 20 HRM items leads to 6 underlying factors on the basis of eigenvalues > 1.000. But if we look more closely at the percentage of variance explained by each component (or factor) we find that component 1 explains 23% of the variance, component 2 explains over 17% of the variance, and the following components explain each less than 8% of the variance (see table 6).



**Table 6 Principal Component Analysis on HRM items**

Component	Initial Eigenvalues: Total	Percentage of Variance Explained	Cumulative Percentage of Variance Explained
1	4.658	23.292	23.292
2	3.481	17.407	40.699
3	1.602	8.008	48.707
4	1.171	5.856	54.563
5	1.048	5.239	59.802
6	1.034	5.169	64.971
7	0.878	--	--
8	0.782	--	--
9	0.737	--	--

Principal Component Analysis, Varimax rotation, rotation converged in 31 iterations

These findings suggest a possible 2-factor-solution. If we remove the items 'social', 'rotation' and 'part\_1' we find strong statistical evidence for a 2-factor-solution. Factor 1 represents employee influence, employee training, attendance of seminars, skill development, employee participation, teamwork and reward systems with a Cronbach  $\alpha$  of 0.80 (see table 7).

**Table 7 Rotated Component Matrix of a 2-factor-solution on HRM**

Name	Component/Factor 1 "commitment HR systems"	Component/Factor 2 "control HR systems"
Infl_1	<b>0.53</b>	0.16
Infl_2	<b>0.37</b>	0.25
Infl_3	<b>0.64</b>	0.05
Infl_4	<b>0.55</b>	0.00
Training	<b>0.58</b>	0.11
Seminar	<b>0.61</b>	-0.39
Skill	<b>0.54</b>	-0.02
Superv_1	-0.11	<b>0.73</b>
Superv_2	-0.18	<b>0.81</b>
Superv_3	-0.13	<b>0.73</b>
Part_2	<b>0.59</b>	-0.31
Team	<b>0.60</b>	-0.10
Reward_1	<b>0.60</b>	-0.05
Reward_2	<b>0.77</b>	0.16
Reward_3	<b>0.48</b>	0.41
Qual_1	0.20	<b>0.49</b>
Qual_2	0.32	<b>0.63</b>
<b>Cronbach <math>\alpha</math></b>	<b>(0.80)</b>	<b>(0.72)</b>

Principal Component Analysis (varimax – 2-factor solution)

Factor 2 represents direct supervision and quality control with a Cronbach  $\alpha$  of 0.72 (see table 7). These (statistical) findings tend to reject the idea the existence of one dimension (control-versus commitment strategies in the approach of Walton and control- versus commitment HR systems in the approach of Arthur). Prior (conceptual and theoretical) work of Fleishman and

Peters (1962), Blake and Mouton (1964), Karasek (1979) and Simons (1995) also suggest a multidimensional reality with respect to management control of employees. Blake and Mouton's (1964) Managerial Grid focuses on leadership style, using a 2-dimensional framework with on the x-axis "attention for (production) tasks" and on the y-axis "attention for human relations". Karasek (1979) makes a distinction between the two dimensions "job control" (e.g. possibilities for self-control, autonomy, job decision latitude) and "job demands" (e.g. workload, responsibilities). We now claim to have both statistical- and theoretical arguments to build on a 2-factor-solution with respect to HRM in this study. Further analyses with respect to the HR bundles/systems are built on the two constructed factors labelled commitment HR systems (factor 1) and control HR systems (factor 2). These findings however might lead to problems with respect to hypothesis 1, as a result of the fact that hypothesis 1 assumes a 1-dimensional construct with respect to HRM.

***Institutional- or Coercive Mechanisms.*** The concept of coercive mechanisms was operationalised with the help of 6 items that reflect the influence of works councils and trade unions on conditions of employment and employees' development. Three other items on the impact of labour legislation (collective bargaining agreements and other labour laws) were excluded because of a lack of consistency and correlation between the different items. Again, principal component analysis (varimax rotation) was applied to construct two new factors:

- 'works councils' (Cronbach  $\alpha = 0.74$ )
- 'trade unions' (Cronbach  $\alpha = 0.75$ )

The means and standard deviations of all individual HR items are summarised in table 8.

**Table 8**      **Descriptive Institutional Mechanisms**

	Means	s.d.	$\alpha$
<b>Works Councils</b>			<b>0.74</b>
Degree to which working conditions such as safety, hygiene and quality of work are influenced by the works council (wc_1)	3.02	0.92	
Degree to which labor conditions such as wages and rewards are influenced by the works council (wc_2)	2.16	0.90	
Degree to which the employees' development is influenced by the works council (wc_3)	2.52	0.80	
<b>Trade Unions</b>			<b>0.75</b>
Degree to which working conditions like safety, hygiene and quality of working life are influenced by trade unions (trad_1)	1.79	0.84	
Degree to which labor conditions like wages and rewards are influenced by trade unions (trad_2)	2.69	1.20	
Degree to which the employees' development is influenced by trade unions (trad_3)	1.78	0.74	

scale: 1 = very little; 2 = little; 3 = reasonable; 4 = much; 5 = very much

**Control variables.** The research design of this study controls for a lot of issues, but the two major control variables in this study are: sector and size of the organisation. Sector is controlled by the distinction between hotels, hospitals, and local governments. Size is measured by the number of employees working in the organisation (see table 9).

**Table 9**      **Control Variables**

	Means	s.d.
Size of the organisation: (number of employees)	607	826
Hotel (dummy: yes = 1, no = 0): n = 25		
Hospital (dummy: yes = 1, no = 0): n = 38		
Local Government (dummy: yes = 1, no = 0): n = 69		

**Dependent variables.** In this analysis we use 'typical' HRM outcomes as performance indicators: (1) absence due to illness; (2) average duration of absence due to illness; and (3)

employee turnover rate (see table 10). In the framework of Paauwe and Richardson (1997) HRM activities like recruitment, selection, planning and rewards affect HRM outcomes like employee satisfaction, motivation and retention. HRM outcomes affect firm performance like profit, market value and market share. There are some direct effects of HRM activities on firm performance (see for example Huselid, 1995), but the distance between HRM activities and firm or organisational performance is generally too large (Kanfer, 1994; Guest, 1997).

## Results

**Descriptive Statistics.** The means on several of the individual HR items (employee influence, training, seminar, social, and rotation) are relatively low (see table 5). The same applies for the impact of trade unions and works councils on different conditions of employment and employees' development in organisations (see table 8). The organisations in the sample differ on size (number of employees). Hospitals have an average of 1605 employees, local governments an average of 238 employees, and hotels are relatively small with an average of 89 employees. See table 4 for more detailed information. Hospitals and local governments are basically non-profit organisations with traditionally a high degree of institutionalisation in terms of works councils' and trade unions' influence in combination with a strict observance of labour laws. Hotels are profit organisations, characterised by a relatively limited influence of trade unions together with frequently occurring absence of a works council. Only 50% of the hotels in this sample have a works council. All hospitals and local governments in this sample have a works council installed. There's a negative relationship between hotels (in comparison to both hospitals and local governments) and "the impact of a works council" ( $t = -2.51^*$ ) and "the impact of trade unions" ( $t = -2.58^*$ ). In other words, the respondents of hotels perceive less trade union and works council influence than the respondents of local governments and hospitals. Thus, we assume hospitals and local governments to be highly institutionalised in contrast to hotels with respect to the impact of institutional mechanisms on the shaping of human resource management. Both hypothesis 2a on *size of the organisation* and the degree of institutionalisation and hypothesis 2b on *nature of the sector* (non-profit versus profit organisations) are accepted with respect to Dutch hospitals, local governments and hotels. In further analyses the variable 'high institutions' is a dummy with value '1' in case of an hotel and value '0' in case of a hospital or local government. On average the organisations in the sample have an absence due to illness of 7%, an average duration of absence due to illness of 13.67 days, and an average employee turnover rate of 12% (see table 10).

**Table 10**      **Dependent Variables**

	<b>Means</b>	<b>s.d.</b>
Absence due to illness (ill): (percentage absence due to illness of last year)	0.07	0.02
Duration of absence (dur_ill): (average number of days of absence due to illness in days)	13.67	7.71
Employee turnover (turn): (percentage employee turnover of last year)	0.12	0.11

**Correlation matrix.** The correlations between the relevant variables are summarised in table 11. Absence due to illness has a positive correlation with duration of absence due to illness (0.40\*\*\*) and negative correlation with control HR systems (-0.21\*). Control HR systems also negatively related to average duration of absence due to illness (-0.32\*\*). Employee turnover is positively related to control HR systems (0.43\*\*\*). Hotels seem to have a negative relation with duration of absence (-0.23\*) and a positive relation with employee turnover (0.63\*\*\*). Local governments reveal a negative relation with employee turnover (-0.40\*\*\*) and a negative relation with control HR systems (-0.58\*\*\*). Hotels have a positive relation with control HR systems (0.65\*\*\*) and hospitals reveal a negative relation with commitment HR systems (-0.25\*\*). Commitment HR systems are positively related to both the impact of works councils (0.24\*) and the impact of trade unions (0.21\*). It is hard to make any statement about the causal relationship of this latter remark. Do coercive mechanisms (like the impact of works councils and trade unions) affect the factor commitment HR systems positively, or does it work the other way around? Overall, there is some evidence that HR systems (more specifically "control HR systems") affect HR outcomes like absence due to illness and employee turnover.

**Table 11 Correlations**

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
<b>1.Illness</b>	1.00										
<b>2.Duration Illness</b>	0.40***	1.00									
<b>3.Turnover</b>	0.02	-0.16	1.00								
<b>4.Hotel</b>	0.00	-0.23*	0.63***	1.00							
<b>5.Hospital</b>	-0.04	0.02	-0.11	-0.31**	1.00						
<b>6.Local Governm.</b>	0.04	0.18	-0.40***	-0.51***	-0.67***	1.00					
<b>7.Size</b>	0.02	0.15	-0.17	-0.30**	0.77***	-0.48***	1.00				
<b>8.Commit. HR systems</b>	-0.03	-0.11	0.05	0.11	-0.25**	0.12	-0.28**	1.00			
<b>9.Control HR systems</b>	-0.21*	-0.32**	0.43***	0.65***	0.05	-0.58***	-0.02	0.00	1.00		
<b>10.Works Council</b>	-0.01	-0.07	-0.10	-0.24*	0.08	0.08	0.05	0.24*	-0.12	1.00	
<b>11.Trade Union</b>	0.16	0.07	-0.26	-0.24*	-0.17	0.31**	-0.04	0.21*	-0.11	0.00	1.00

N=132

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

**Table 12 Regression Analysis**

	<b>Ill</b> "absence due to illness"		<b>Dur_ill</b> "average duration absence"		<b>Turn</b> "employee turnover"	
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	0.07***	0.07***	14.98***	20.18***	0.13***	0.13***
<b>Commitm. HR systems</b>	0.00	0.00	-0.65	-1.45	0.00	0.00
<b>Control HR systems</b>	<b>-0.01*</b>	<b>-0.04***</b>	<b>-2.36*</b>	<b>-6.36**</b>	0.00	0.00
Size	0.00	0.00	2.32†	2.83*	-0.01	-0.01
Hotel	0.02*	0.06***	--	--	0.14**	0.13***
Hospital	--	--	-4.37	-10.32*	--	--
Local Government	0.00	0.01	-0.03	-4.52	-0.06†	-0.06†
<b>Commitm. HR systems x</b>						
<b>High Institutions</b>	--	0.00	--	2.12	--	0.01
<b>Control HR systems x</b>						
<b>High Institutions</b>	--	<b>0.04***</b>	--	<b>5.40*</b>	--	0.00
N	132	132	132	132	132	132
Adj.R <sup>2</sup>	0.04	0.23	0.10	0.14	0.38	0.37
F	1.86	5.68***	2.92*	3.01*	13.98***	9.98***

† < 0.10, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

all variables in the analyses are standardized

**Regression Analyses.** We have already mentioned the consequences for hypothesis 1 when building a model based on a 2-factor-solution with respect to HRM. Actually, building on a 2-factor-solution on HRM makes it methodologically impossible to test hypothesis 1. We therefore focus on explorative empirical results with respect both control- and commitment HR systems, and testing hypothesis 3 about possible moderating (institutional) effects. In table 12 the results of simple ordinary least squares (OLS) are presented. In regression (1) we find a negative relationship between control HR systems and absence due to illness, although the F-statistic (1.86) reveals a poor model fit. In regression (2) we added an interaction term to look for mediating effects as stated in hypothesis 3. Again we find a negative relationship between control HR systems and absence due to illness, but we also find a significant interaction effect (control HR systems x high institutions). Regression (2) shows a better model fit ( $F = 5.68^{***}$ ). The dummy hotel is significant in both regressions indicating significant differences between hotels versus hospitals and local governments with respect to absence due to illness.

Regression (3) and (4) reveal similar results. Control HR systems are negatively related to the average duration of absence due to illness and we also see a significant interaction effect (control HR systems x high institutions) in regression (4). Hospitals reveal lower scores on average duration of absence due to illness, but this effect might be overestimated because we also see a positive effect between size of the organisation and the dependent variable. And we know that hospitals are significantly larger than both hotels and local governments. Regression (5) and (6) do not reveal any shocking significant results with respect to both commitment- and control HR systems, or any possible significant interaction effect. The analyses show that hotels just score significantly higher on employee turnover than organisations in the other two branches of industry. Overall we come to the conclusion that:

- control HR systems have a negative effect on both absence due to illness (Ill) and average duration of absence due to illness (Dur\_ill)
- commitment HR systems do not reveal any significant relationship with the three HR outcomes in this study
- there are significant interaction effects with respect to control HR systems and institutionalisation (control HR systems x high institutions) in relationship to both absence due to illness (Ill) and average duration of absence due to illness (Dur\_ill)

The latter remark supports hypothesis 3 that *the impact of a work system (commitment and control human resource systems) on organisational performance is smaller in an institutionalised context than the impact of a work system (commitment and control human resource systems) on organisational performance in a less institutionalised context.*



The negative effect of control HR systems on absence due to illness and average duration of employee absence is smaller in high institutionalised organisations (hotels and local governments) than in low institutionalised organisations (hotels) in the Netherlands.

A striking side-effect is the fact that the variable 'size' does not play a (strong) significant role with respect to the performance of the organisation, the degree of institutionalisation, and the type of work systems as you would expect when taking into account prior research on HRM and performance (see overview Paauwe and Richardson, 1997; and Boselie et al., 2001) and existing literature on contingency theory (e.g. Woodward, 1960; Pugh and Hickson, 1976).

### **Discussion and Conclusion**

The most important findings in this study can be summarised as follows. First, we find evidence for a 2-factor-solution with respect to the operationalisation of HR systems instead of Walton's (1985) and Arthur's (1994) assumption that control- and commitment systems can be represented on a 1-dimensional continuum. We can conclude that the supposedly single dimension of control versus commitment in reality consists of two dimensions. Apparently work systems, aimed at strengthening commitment and empowerment, need at the same time to be embedded in a control systems. In this respect we refer to Simon's *Control in an Age of Empowerment* (1995) who demonstrates the necessity to link commitment and belief systems to so-called boundary systems (made up of rules and procedures) and interactive and diagnostic control systems (amongst others by using direct supervision, feedback/evaluation and key performance indicators). In older leadership theories we see these two dimensions as well being represented. For example the managerial grid by Blake and Mouton (1964), who distinguish two dimensions, whereas Fleishman and Peters (1962) make a distinction between the dimensions of initiating structure and consideration. Karasek's (1979) distinction between the two dimensions "job control" (e.g. possibilities for self-control, autonomy, job decision latitude) and "job demands" (e.g. workload, responsibilities) resembles our distinction between the dimensions commitment- and control HR systems.

Secondly, we find evidence for significant effects of control HR systems on two out of three HR outcomes in this study. A form of control, represented by supervision and quality control reveals a positive effect on presence of employees (in contrast to absence of employees).

Thirdly, we find evidence for mediating effects of institutionalisation in the Dutch context. The effects of control HR systems on absence due to illness and average duration of absence due to illness are weaker in a high institutionalised context (hospitals and local governments) than in a less institutionalised context (hotels). Organisations in a less institutionalised context seem to have more leeway with respect to human resource management than organisations in

an institutionalised context. These findings provide strong arguments for future control in research on HRM and performance with respect to the degree of institutionalisation. The degree of institutionalisation might significantly differ between countries like the USA versus the Netherlands (see for example Paauwe, 1998) and between branches of industry with a specific country (for example hotels versus hospitals versus local governments).

A final remark relates to the *research design and methods* we have used. Following Arthur (1994) we have used a survey/questionnaire based quantitative research design. Reflecting on the results and looking back at what we have achieved we can seriously wonder if we should be happy with this kind of research in a setting in which institutions and stakeholders outside the company have such an influence. Probably the level of generated insights would have been far greater if we had stuck ourselves to our tradition of carrying out a number of in-depth case-studies using principles of theoretical sampling and grounded theory (Glaser and Straus, 1967). In this way we could have achieved a distribution of case studies across different sectors (high and low on institutionalisation) and we would have involved the various stakeholders by interviewing them and by making use of document-analysis (for example minutes of the meetings of works council, trade unions etc). In this way in-depth case-studies would have enabled us to establish chains of cause and effects and would have provided ample means for analytical generalisations (Yin, 1989).

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Rotterdam, March 2002

Boselie/Paauwe/Richardson<sup>4</sup>

### Notes

1. USA research on HRM and performance: e.g. Arthur, 1994; Osterman, 1994; Huselid, 1995; MacDuffie, 1995; Koch and McGrath, 1996; Lazear, 1996; Ichniowski and Shaw, 1999.
2. UK research on HRM and performance: e.g. Guest and Peccei, 1994; McNabb and Whitfield, 1997; Guest, 1999; Hiltrop, 1999.
3. Worldwide seminars and conferences on HRM and performance: e.g. the HRM Conference in Rotterdam (Erasmus University/London School of Economics, September 1995), the ESRC seminars in the UK (1996), parallel sessions in the Academy of Management meeting ('Failing to find Fit in SHRM: Problems and Prospects', 1998; 'The Impact of Human Resources on Organisational Performance', 1999; 'Human Resource Management and Firm Performance', 2000; 'Human Resource Systems and Firm Performance', 2001), the first Dutch HRM Network Conference ('Confronting Theory and Reality', Erasmus University Rotterdam, November 1999), and the Global Human Resources Management Conference, track 1 on SHRM, in Barcelona (2001).

4. The authors would like to thank prof.dr. Paul Jansen (VU Amsterdam) for his suggestions with respect to Karasek's (1979) model.

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