

Does Leadership Style Make a Difference? Linking HRM, Job Satisfaction, and Organizational Performance

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Abstract

With the rise of New Public Management, public organizations are confronted with a growing need to demonstrate efficiency and cost-effectiveness. In this study, we examine the relationship between public organizational performance and human resource management (HRM). Specifically, we focus on job satisfaction as a possible mediating variable between organizational performance and HRM, and on the influence of a supervisor's leadership style on the implementation of Human Resource (HR) practices. Drawing on a secondary analysis of data from a national survey incorporating the views of 6,253 employees of Dutch municipalities, we tested our hypotheses using structural equation modeling. The findings indicate that (a) job satisfaction acts as a mediating variable in the relationship between HRM and organizational performance and (b) a stimulating leadership style has a positive effect on the amount of HR practices used, whereas (c) a correcting leadership style has no effect on the amount of HR practices used.

Keywords

HRM, leadership style, job satisfaction, organizational performance, public sector, Dutch municipalities

Introduction

During the last three decades, public sector performance has become an increasingly important issue. With the rise of New Public Management, targets, performance, and

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a more business-oriented management approach have come to play central roles within the public sector (Boyne, Meier, O'Toole, & Walker, 2006; Osborne & Gaebler, 1992; Pollitt & Bouckaert, 2004). Several innovations in the field promised to increase the quality of public service while reducing its costs. However, research into human resource management's (HRM) contributions to these developments in the public sector has been scarce (Boyne, Poole, & Jenkins, 1999; Gould-Williams, 2003). This neglect persists despite the fact that employees (those who deliver public services) are crucial to achieving superior public performance. High-quality services require highly qualified and motivated personnel (Batt, 2002).

Based on numerous studies in the private sector, we can conclude that human resource (HR) practices and organizational performance are at least weakly related (Boselie, Dietz, & Boon, 2005; Guest, 2011; Paauwe, 2009). However, research comparing HRM in the public and private sectors suggests that the HR policies and practices in these sectors differ in many important areas (Boyne et al., 1999). In particular, public organizations are more likely than private organizations to engage in activities associated with the role of model employer. Such activities imply commitment to staff training, trade union, and workforce participation in decision making, promotion of equal opportunities, and a concern for the welfare of employees to meet their personal and family needs. Given these empirical findings, we cannot simply assume that the relationship between HRM and performance will be the same in the public sector.

In private sector-based research on HRM and performance, the assumption is that an underlying causal link that runs through employee outcomes (in the form of employee attitudes and behavior) connects HR practices with organizational performance (Boselie et al., 2005; Guest, 2002; Paauwe & Richardson, 1997). In other words, HR practices are implemented to influence employees, with the ultimate aim to positively influence the organization's performance. Job satisfaction is conceptualized as one of the key indicators of employee outcomes in HRM and performance research (Guest, 2002; Purcell & Hutchinson, 2007). Previous research has demonstrated a positive relationship between HRM and job satisfaction (e.g., Guest, 2002; Steijn, 2004) and between job satisfaction and performance (e.g., Hackman & Oldham, 1975; Judge, Thoresen, Bono, & Patton, 2001; Taris & Schreurs, 2009). These findings support the idea that job satisfaction acts as a mediating variable in the relationship between HRM and performance. At this time, only a few studies have examined that mediating relationship (e.g., Ahmad & Schroeder, 2003; Gelade & Ivery, 2003), but more research is needed to understand how HRM and organizational performance are related. Such research is even more important in the context of the public sector, as previous research showed differences in job satisfaction between public and private sector employees (DeSantis & Durst, 1996).

In general, in the HRM literature is stated that the HR practices perceived or experienced by employees will be those enacted by their supervisors (Bowen & Ostroff, 2004; Paauwe, 2009; Purcell & Hutchinson, 2007; Wright, Gardner, Moynihan, & Allen, 2005). To influence employee outcomes positively, supervisors require well-designed HR practices for use in their management activities. Den Hartog, Boselie, and Paauwe (2004) stressed the important role that supervisors play in implementing

an intended HRM policy, as differences in implementation at this level may be attributable to supervisors' different leadership styles. Such differences in implementation and communication may lead to variation in employees' HR perceptions. However, scholars have uncovered little empirical evidence that bears on the role of supervisors' leadership styles in HRM implementation. Focusing on leadership style can provide additional insight into how supervisors influence the implementation of HR practices.

This study adds to prior research in three ways. First, we focus specifically on the relationship between HRM and organizational performance in the public sector. Second, we test whether job satisfaction acts within a public context as a mediator between HRM and organizational performance. Third, we focus on the influence of a supervisor's leadership style on the implementation of HR practices. Thus, our main research question is as follows:

Research Question: To what extent is the relationship between HRM and the performance of public organizations mediated by job satisfaction and what is the influence of a supervisor's leadership style on the implementation of HR practices?

After a theoretical exploration of the literature on HRM, job satisfaction, organizational performance, and leadership, we will formulate several hypotheses and test them using survey data from 6,253 employees of Dutch municipalities. We perform these tests using structural equation modeling (SEM). We will then discuss our findings. Finally, we conclude by describing suggestions for future research and implications for theory and practice.

Literature Review

The increased focus on performance in the public sector has encouraged a large amount of research (Boyne et al., 2006; Halachmi & Bouckaert, 1996). In particular, the impact of management on performance in public organizations has been frequently studied (Meier, O'Toole, Boyne, & Walker, 2007; Nicholson-Crotty & O'Toole, 2004). The O'Toole and Meier (1999) model of management is well known and has often been used to test the impact managers may have on the performance of public organizations. In one of their articles, O'Toole and Meier (2008) focused on the internal side of management and, in particular, on the contribution of "the human side" of public organizations to organizational performance in public education. Their results indicate that the power of HRM in attracting and developing an organization's human capital is important to organizational performance. Gould-Williams (2003), in turn, examined the relationship between HRM and performance in local government in the United Kingdom. He found, the more HR practices are used within an organization, the greater the impact on organizational performance. In both articles, the authors stated that more research is needed to explore the relationship between HRM and organizational performance in the public sector.

As the existing literature has paid little attention to the relationship between HRM and performance in a public context, we must turn to the general HRM literature to get more insight. However, that literature contains a very diverse array of theoretical perspectives, definitions, measurements, methodologies, and research fields (Boselie et al., 2005). Nevertheless, following Paauwe (2009), we can conclude that there is at least a weak relationship between HR practices and organizational performance. Yet, despite the fact that several studies indicate a link between HRM and performance, significant challenges to a full understanding of this relationship still exist (Boselie et al., 2005; Bowen & Ostroff, 2004; Guest, 2011; Paauwe, 2009).

In this study, we adopt a micro approach to HRM. This approach reflects a more operational view of HRM by focusing specifically on the effect of multiple HR practices on individuals (Wright & Boswell, 2002). By using this micro approach, we attempt to acquire more insight into the impact of multiple HR practices on individuals (measured through job satisfaction) and, subsequently, on organizational performance. By focusing on job satisfaction as a mediating factor, our aim is to generate a better understanding of what takes place between HRM and performance. Furthermore, scholars frequently identify the leadership style of supervisors (who are increasingly charged with implementing HR practices) as a variable essential to a better understanding of the relationship between HRM and performance (Bowen & Ostroff, 2004; Paauwe, 2009; Purcell & Hutchinson, 2007; Wright et al., 2005). In this respect, Purcell and Hutchinson (2007) used the term “people management” to mark the distinction between a supervisor’s leadership style and the application of HR practices. This distinction is based on the assumption that supervisors require well-designed HR practices to use in their people management activities and that their leadership style will influence the way they enact these practices.

The Mediating Role of Job Satisfaction

Guest stated in 1999 that, given the growing interest in research on the relationship between HRM and performance, a focus on workers’ viewpoints has become increasingly important. An analysis of 104 articles by Boselie et al. (2005) confirms Guest’s impression that the linking mechanisms between HRM and performance have largely been disregarded. To understand how HR practices influence employees and improve worker performance in ways that are beneficial to the organization, research is required that concentrates on employee perceptions of HR practices and establishes relationships between their job satisfaction and organizational performance, to take one example (Purcell & Hutchinson, 2007). One model that takes this focus is the Paauwe and Richardson (1997) model on HRM, HRM outcomes and organizational performance. In this model, the first element consists of HR practices such as recruitment, rewards, and employee participation. This element influences the so-called HRM outcomes, such as job satisfaction and motivation. Both of these elements affect the third element, organizational performance, which involves performance indicators related to the effectiveness, quality, and efficiency of the organization.

A variety of studies have examined separate parts of this model. Focusing specifically on the public sector, a number of studies have explored the relationship between HRM (Element 1) and HRM outcomes (Element 2; for example, Gould-Williams, 2004; Steijn, 2004) and between HRM outcomes (Element 2) and organizational performance (Element 3; for example, Kim, 2005; Ostroff, 1992). The model by Paauwe and Richardson (1997) adds to this research through its explicit focus on the mediating effect of HRM outcomes on the relationship between HRM and organizational performance. Moreover, the Paauwe and Richardson model adds to existing public sector research by promoting an explicit concentration on the concept of HRM itself. This concentration marks an important difference with the aforementioned management model by O'Toole and Meier (2008). Therefore, we use the Paauwe and Richardson model as the starting point for our research. However, while that model offers an exhaustive range of options to consider for each element, we limit ourselves to job satisfaction as the only included HRM outcome.

The introduction of job satisfaction enables us to refine the relationship between HRM and organizational performance. To a large extent, positive employee outcomes depend on employees' perceptions of how much the organization cares about their well-being and values their contributions (Gould-Williams, 2007; Vermeeren, Kuipers, & Steijn, 2011). In this respect, the degree of job satisfaction will depend on the fulfillment of employee's needs and values (Hackman & Oldham, 1975). To increase organizational performance, it is likely important that the organization must not only meet the needs of customers, but also meet those of employees (Schneider & Bowen, 1993). This assertion is based on the assumption that if organizations care for their employees, these employees will care for the organization (and their customers). In other words, this argument is based on the assumption that a happy worker is a productive worker (Taris & Schreurs, 2009). In this respect, the degree to which HR practices are introduced can be conceptualized as a marker of the extent to which an organization values and cares for employees. As noted above, previous research has demonstrated a positive relationship between HRM and job satisfaction (e.g., Guest, 2002; Steijn, 2004) and between job satisfaction and performance (Hackman & Oldham, 1975; Judge et al., 2001; Taris & Schreurs, 2009).¹ These findings support the idea that job satisfaction acts as a mediating variable in the relationship between HRM and performance. However, this relationship is mostly studied in separate parts and seldom examined within one design. We will therefore study the relationships among HRM, job satisfaction, and organizational performance in one model. Following this plan, our first hypothesis is as follows:

Hypothesis 1: Job satisfaction acts as a mediating variable in the relationship between HRM and organizational performance.

The Role of Leadership Style

For many years, HRM and leadership were separate research areas. Gradually, interest in combining these two areas has grown. The connection between these areas is based

on the proposition that employees are likely to be influenced by the HR practices they experience and their supervisor's leadership style (Purcell & Hutchinson, 2007). Supervisors need HR practices to support their management activities, and the way supervisors enact these practices is influenced by their leadership style. However, previous research on the relationship between HRM and performance paid little attention to supervisors' leadership styles. One of the few studies that did attend to leadership style demonstrated that leadership and employee satisfaction with HR practices have a strong and independent impact on such employee attitudes as job satisfaction and commitment (Purcell & Hutchinson, 2007).

However, this demonstration does not allow us to say much about the influence of different leadership styles on the use of HR practices within an organization. It is appropriate to assume a relationship exists between different leadership styles and HRM, because the choice of which HR practices to use appears to be linked to leadership style. For example, Zhu, Chew, and Spangler (2005) have shown that transformational leaders influence organizational outcomes by their use of "human-capital-enhancing HRM." Human-capital-enhancing HRM is defined as an approach to managing people that achieves competitive advantage through the strategic development of a highly committed and capable workforce (Zhu et al., 2005). Their assumption is that transformational leaders possess a clear vision of what the organization will be, and what it will do, in the future. HRM plays a critical role in the communication process between leaders and employees, because without such HRM activities as staffing and training the leader's vision will not be transmitted effectively.

Today, scholars in the field of leadership research use many and varied conceptualizations of leadership. Despite differences among these conceptualizations, we can detect a certain commonality. This commonality is not of jargon, but of the ideas that underpin the language used. Many conceptualizations are based on a distinction between an internally and intrinsically directed, people-oriented, and *stimulating* leadership style versus an externally and extrinsically directed, task-oriented and *correcting* leadership style (Howell & Avolio, 1993). For example, this distinction underpins the differentiation made between transformational versus transactional leadership (Bass & Avolio, 1994) and participative versus authoritative leadership (Likert, 1961). With respect to the relationship between leadership style and HRM, Guest (1987) has argued that a more correcting leadership style could be linked to hard HRM and that a more stimulating leadership style could be linked to soft HRM. In his research, he refers to the classic distinction in McGregor (1960) between theory X and theory Y. The "hard" version of HRM is widely acknowledged to place little emphasis on workers' concerns. In contrast, "soft" HRM would be more likely to pay attention to workers' outcomes (Guest, 1987).

We will also use McGregor's distinction between theory X and theory Y. This distinction, despite frequent criticism (Bobic & Davis, 2003), still remains useful for distinguishing between the different leadership styles a supervisor can adopt. Theory X assumes that employees are not self-motivated and will avoid work if possible. Employees, therefore, must be closely supervised and corrected when necessary. Employees are seen as factors in the production process. Theory Y, in contrast, assumes

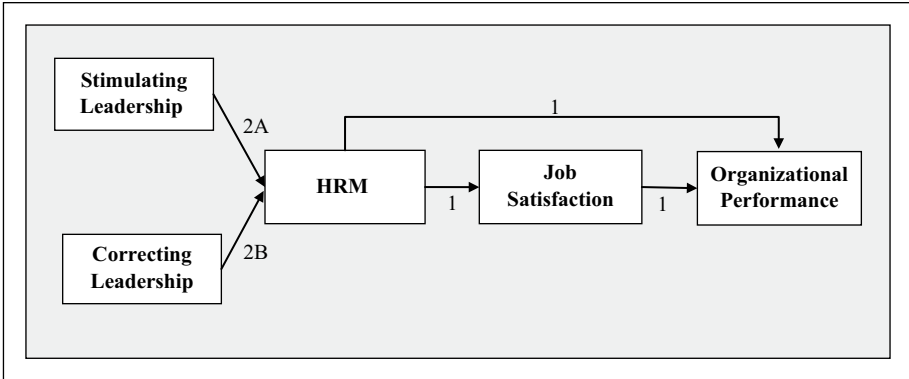


Figure 1. Conceptual model.

that employees are ambitious and self-motivated and can play a crucial role within the organization. Supervisors must ensure that their employees are properly stimulated by paying attention to their values and needs. It is in this context that Guest (1999) stated that if more HR practices are used, the impact on workers will be larger. Based on the idea that an HRM system should be designed to meet employees' needs for skills and motivation and provide them with the opportunity to profile themselves to improve their performance (Appelbaum, Bailey, Berg, & Kalleberg, 2000), we would expect that a stimulating leadership style (theory Y) would be accompanied by the use of a greater number of HR practices tailored to invest in employees and meet their needs than would be the case for a correcting leadership style (theory X), in which employees are seen as factors in the production process. This leads us to our second hypothesis, which consists of two separate parts:

Hypothesis 2a: A stimulating leadership style has a positive effect on the amount of HR practices used within an organization.

Hypothesis 2b: A correcting leadership style has a negative effect on the amount of HR practices used within an organization.

Figure 1 shows the overall theoretical model representing the hypotheses thus developed above. In the following sections, we present the methodology for testing this model and our empirical results.

Research Methods

A quantitative study was carried out to address our research question. This section describes the data and the measurement procedure, including the results of a confirmatory factor analysis using AMOS version 16.

Data

To test our hypotheses about the direct and indirect relationships between the variables we apply a quantitative research design. For our analysis, we used data from a Dutch national survey on well-being among municipal employees. In 2005, a public sector organization representing municipalities approached 29,626 employees of Dutch municipalities in all functional areas (e.g., administrative, sociocultural, legal and information and communication technology functions), asking them to fill out a questionnaire about employee well-being via Internet or mail. Of these employees, 7,918 respondents participated in the research. The respondents with missing data for the analyzed variables were removed from the sample, which resulted in a file with 6,253 respondents. The data for the resulting sample are as follows: 58% are male, the predominant age is 45 to 54 years (37.5%), and the predominant educational level is secondary (vocational) education (43.1%). When compared with general population data (A+O fonds Gemeenten, 2005), the sample's deviation from the general population is small (2%-6%). Despite the response rate of 26.7%, the respondents are generally representative of the population with respect to gender, age, and educational level. The respondents also worked in different municipalities spread across the Netherlands and in organizations of various sizes.

Measures

HRM. HRM and performance research exhibits little consistency in the selection of HR practices by which to measure HRM. Boselie et al. (2005) analyzed 104 important HRM and performance studies and identified as many as 26 different HR practices that are used in different studies. No single agreed, or fixed, list of HR practices or systems of practices exists by which to measure HRM (Guest, 2011; Paauwe, 2009). Nevertheless, a certain consensus regarding the measurement of HRM has emerged in the scientific literature on HRM and performance during the past decade. More than half of the articles published after 2000 made use of Ability, Motivation, and Opportunity (AMO) theory (Paauwe, 2009). AMO theory proposes that an HRM system should be designed to meet employees' needs for skills and motivation and, after meeting those needs, provide them with opportunities to use their abilities in various roles (Appelbaum et al., 2000). The underlying idea is that employees will perform well if they have the requisite abilities, when they are motivated and when they obtain the opportunity to profile themselves (Appelbaum et al., 2000).

In our study, an existing data set is used for secondary data analysis. Although this data set can be employed to search for the presence of HR practices within organizations, it was not developed for this specific purpose. The survey only measures 10 different HR practices used to a limited extent, and it is not able to measure all the aspects of HRM proposed by AMO theory. In particular, the survey does not allow us to determine whether an HR system provides employees with opportunities to use their abilities in various job roles. Despite this limitation, we use this list of practices as an indicator of the extent to which HR practices were used in public organizations.

Researchers often advocate the study of an HRM system instead of individual HR practices (Wright & Boswell, 2002). Organizations rarely use HR practices in isolation; they more typically use them in combination. This system approach adheres to the principle “the whole is more than the sum of its parts” and examines a bundle of HR practices. In this study, we have followed the system approach. In the survey, employees were asked about the use of 10 different HR practices within their organization (job evaluation conversations, assessment interviews, personal development plans, training plans, career plans, competency management, population aging HRM policy, mobility management, job rotation, and individual coaching). This particular list has been used in previous research (Steijn, 2004). In accordance with Guest’s suggestion, we counted how many of these practices were present in the organization according to its employees. Cronbach’s alpha is widely used to demonstrate consistency among a set of items and, based on the score, it might be argued that a bundle of HR practices can be observed (Guest, Conway, & Dewe, 2004). The Cronbach’s alpha of the HR bundle is .70. This is within the range for acceptable internal consistency. The assumption is that the use of more HR practices suggests the existence of a better developed HRM policy within an organization. In making this assumption, we can only say something about the surplus value of HRM in general terms. However, we do not know whether some individual practices have stronger effects than others, how each of the individual practices affects performance and whether complementarities or synergistic interdependent relationships among such practices can further enhance organizational performance (Delaney & Huselid, 1996; Guest et al., 2004; Sels et al., 2006).

Job satisfaction. Job satisfaction is measured using one item: “All things considered, how satisfied are you with your job?” The answers were given using a 5-point Likert-type scale ranging from *very dissatisfied* (1) to *very satisfied* (5). Although there is some disagreement regarding how to measure job satisfaction, previous research shows that job satisfaction can reliably be measured using only one item (Nagy, 2002; Wanous, Reichers, & Hudy, 1997).

Organizational performance. To measure organizational performance, perceptions of performance and objective performance indicators can be studied (Delaney & Huselid, 1996; Kim, 2005). In this article, the focus is on employee perceptions of organizational performance because objective performance data are not available in the database. When objective performance data are not available, subjective (perceptual) performance measures may be a reasonable alternative (Delaney & Huselid, 1996; Kim, 2005). There is evidence of a strong correlation between perceptual and objective measures at the organizational level, although there is always some doubt regarding perceptual measures of performance (Kim, 2005). In this study, we used one item to measure performance, “the perception that the organization is doing good work,” utilizing a 5-point Likert-type scale, ranging from *totally disagree* (1) to *totally agree* (5). The use of only one indicator is clearly an important limitation, but at least we are able to characterize how employees assess their organization’s performance.

Leadership style. To measure the influence of leadership style, we used two latent variables that correspond to the distinction between stimulating and correcting leadership (cf. Bass & Avolio, 1994; Likert, 1961; McGregor, 1960). The specific items can be found in the appendix. All answers were given on a 5-point Likert-type scale ranging from *totally disagree* (1) to *totally agree* (5).

Descriptive and reliability statistics were computed for the individual items and the two scales (see Table 1). To show the strength of the associations between the items, Table 1 displays the correlations matrix. The correlations are all significant at the 1% level.

To test whether the distinction between the two leadership styles is supported by the data, we performed confirmatory factor analysis using AMOS version 16. Unlike exploratory factor analysis, in which only the number of factors and observed variables are specified, confirmatory factor analysis permits specification and testing of a more complete measurement model (Byrne, 2001). The simultaneous estimation of the measurement models allows us to examine the relationships between the items and their latent constructs as well as the relationships among the constructs themselves. Furthermore, one also receives information on whether the items load only on their target variable, or whether they load on the other dimension as well (unidimensionality of factors). Based on the results of the confirmatory factor analysis, the measurement model was modified where necessary. The modifications made to enhance the model included the introduction of error correlations.² Reasons for error correlation include respondents' inability to answer questions, a lack of effort on the part of the respondents to provide the correct answers or other psychological factors, or inadequately worded questions on the survey questionnaire (Byrne, 2001).

For evaluating the convergent validity of the measurement model, Anderson and Gerbing (1988) suggested examining the construct loading and determining whether each estimator's coefficient is significant. For this model, the regression weights range from .69 to .89 and all are significant (see Table 1). These coefficients may be interpreted as indicators of the validity of the observed variables, that is, how well they measure the latent dimension or factor. For this model, convergent validity has been achieved. With regard to discriminant validity, we note that the items related to the same construct are always more closely correlated with one another than with the items for the other construct. In addition, Bagozzi and Philips (1982) suggested that discriminant validity in SEM is achieved if the unconstrained model has a significantly lower chi-square value than the constrained model. In this study, the chi-square value for the unconstrained model (CMIN 1711.061/df 62) appears to be significantly lower than that for the constrained model (CMIN 2722.621/df 63). Thus, for this model, discriminant validity has been achieved. Finally, the R^2 in Table 1 is a measure of reliability, which indicates how consistently the observed variable measures the latent dimension. The explained variance corresponding to the observed variables indicates that the respective factor explains an adequate portion of the variance (between 47% and 78%; Perry, 1996).

The overall fit of the measurement model was tested using absolute and relative fit indices, which indicated a good fit. In general, a chi-square test is used to assess the

Table 1. Measurement Model Means, Standard Deviations, Correlations, Standardized Estimates, R^2 ($N = 6,253$).

| | M | SD | X1 | X2 | X3 | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 | Y7 | Y8 | Y9 | Y10 | Standardized ML Estimates (SE) | R^2 |
|-------------------------------|------|-------|------|------|------|------|------|------|------|------|------|------|------|------|-----|--------------------------------|-------|
| Correcting leadership | | | | | | | | | | | | | | | | | |
| X1 | 3.38 | 1.032 | — | | | | | | | | | | | | | .726 (.013) | .528 |
| X2 | 3.71 | .980 | .569 | — | | | | | | | | | | | | .687 (.013) | .472 |
| X3 | 3.33 | 1.060 | .560 | .513 | — | | | | | | | | | | | .758 (.013) | .575 |
| Stimulating leadership | | | | | | | | | | | | | | | | | |
| Y1 | 3.56 | 1.091 | .406 | .385 | .429 | — | | | | | | | | | | .841 (.011) | .708 |
| Y2 | 3.50 | 1.116 | .456 | .438 | .486 | .782 | — | | | | | | | | | .885 (.011) | .783 |
| Y3 | 3.19 | 1.091 | .462 | .454 | .504 | .736 | .772 | — | | | | | | | | .865 (.011) | .748 |
| Y4 | 3.64 | 1.103 | .477 | .502 | .457 | .635 | .678 | .651 | — | | | | | | | .774 (.012) | .599 |
| Y5 | 3.54 | 1.067 | .474 | .463 | .481 | .698 | .718 | .735 | .685 | — | | | | | | .844 (.011) | .712 |
| Y6 | 3.51 | 1.123 | .486 | .473 | .499 | .728 | .794 | .748 | .682 | .770 | — | | | | | .878 (.011) | .772 |
| Y7 | 3.13 | 1.165 | .471 | .463 | .484 | .654 | .697 | .715 | .619 | .656 | .681 | — | | | | .800 (.012) | .639 |
| Y8 | 3.76 | 1.070 | .382 | .365 | .426 | .680 | .664 | .656 | .558 | .643 | .656 | .611 | — | | | .757 (.012) | .573 |
| Y9 | 3.77 | 1.056 | .376 | .377 | .434 | .642 | .659 | .631 | .598 | .661 | .650 | .642 | .712 | — | | .755 (.011) | .570 |
| Y10 | 2.94 | 1.092 | .398 | .393 | .511 | .592 | .624 | .613 | .543 | .578 | .623 | .602 | .544 | .533 | — | .711 (.012) | .506 |

sample data in relation to the implied population data. However, there are concerns about using the chi-square test because its probability is sensitive to sample size (Jöreskog, 1993). In larger samples (as in this research), the chi-square test almost always leads to the rejection of the model because the difference between the sample covariances and implied population covariances will lead to a higher chi-square value if the sample size increases.³ As a result, a number of alternative fit measures have been developed (Hu & Bentler, 1999), including the goodness-of-fit index (GFI), the adjusted goodness-of-fit index (AGFI), the normed fit index (NFI), and the comparative fit index (CFI). The values for this model were .959 (GFI), .940 (AGFI), .972 (NFI), and .973 (CFI). In the social sciences, a cutoff value of .95 is the prescribed norm (Hu & Bentler, 1999). Based on these fit indices, one can conclude that the model is a good fit. In addition, the root mean square error of approximation (RMSEA) value of .065 indicates that the model is a reasonable fit (Byrne, 2001).

Finally, a traditional measure of scale reliability is Cronbach's alpha, which measures internal consistency among items on a scale. The Cronbach's alpha for the stimulating leadership scale is .95 and for the correcting leadership scale is .78. Based on these results, one may conclude that the reliability coefficients provide independent corroboration for the results obtained from the use of confirmatory factor analysis. The results show that the distinction between the two leadership styles is supported by the data.

Control variables. Of course, several other variables can affect HRM, job satisfaction, and organizational performance. Therefore, Guest (1999) emphasized that several controls must be in place to take account of individual and organizational factors. Following Guest, our control variables are divided into two groups. In the first group, we controlled for individual characteristics (gender, age, and educational level). These controls are based on the assumption that different groups within organizations may be managed differently with the result that their perceptions will be different. Then, we controlled for one important organizational characteristic: organizational size. This control is based on the assumption that large organizations pursuing improved performance have more resources with which to provide their employees a large HRM policy.

We coded gender as a dummy variable (1 = female). The category of age was subdivided into five categories (1 = 15-24 years; 2 = 25-34 years; 3 = 35-44 years; 4 = 45-54 years; and 5 = 55 years and older). Educational level was also subdivided into five categories (1 = primary education; 2 = lower vocational education; 3 = higher general secondary education, preparatory academic education; 4 = higher vocational education, candidate exam; and 5 = scientific education). Finally, the category of organizational size was subdivided into seven categories (1 = fewer than 100 employees; 2 = 101-500 employees; 3 = 501-1,000 employees; 4 = 1,001-5,000 employees; 5 = 5,001-10,000 employees; 6 = 10,001-20,000 employees; 7 = more than 20,000 employees). Because we used secondary data analysis, we were restricted to these categories in measuring the control variables.

Table 2. Means, Standard Deviations, and Correlations ($N = 6,253$).

| | M | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|--------------------------------|------|-------|---------|---------|---------|--------|--------|--------|--------|--------|---|
| (1) Gender | .42 | .493 | — | | | | | | | | |
| (2) Age | 3.57 | .958 | -.223** | — | | | | | | | |
| (3) Educational level | 3.18 | 1.169 | .071** | -.116** | — | | | | | | |
| (4) Organizational size | 2.76 | 1.269 | -.009 | .007 | .159** | — | | | | | |
| (5) HRM | 3.73 | 2.04 | .004 | .045** | .093** | .175** | — | | | | |
| (6) Job satisfaction | 3.78 | .933 | .037** | -.014 | .008 | -.016 | .150** | — | | | |
| (7) Organizational performance | 3.48 | .956 | -.011 | .005 | .040** | .043** | .206** | .319** | — | | |
| (8) Stimulating leadership | 3.46 | .914 | .008 | -.002 | -.008 | .000 | .251** | .416** | .443** | — | |
| (9) Correcting leadership | 3.47 | .854 | -.007 | .014 | -.045** | .016 | .188** | .240** | .325** | .649** | — |

Note. HRM = human resource management.

** $p < .01$.

Results

The hypothesized relationships among the variables were analyzed using SEM. This statistical methodology allows us to test the full conceptual model in a simultaneous analysis. In addition, SEM enables us to analyze simultaneously the direct and indirect relationships among the dependent and independent variables. Finally, SEM also enables us to compare different models (Byrne, 2001). We built our SEM model using AMOS version 16. To examine whether the data were normally distributed, the index of multivariate kurtosis was considered. Bentler (2005) has suggested that, in practice, values above 5.00 are indicative of nonnormality. Our data have a score of 4.94, which indicates that it is normally distributed.

In Table 2, the means, standard deviations, and correlations of the study variables are presented. The results show that, of the 10 HR practices, employees observed, on average, the use of 4 HR practices within their organizations. The most frequently observed HR practice was job evaluation conversations, and the least frequently observed practice was job rotation. Employees were generally satisfied with their jobs. The average score for this variable on a 5-point scale was 3.78. Moreover, employees perceive the organization to be doing good work, with the average score on a 5-point scale being 3.48. Finally, the average score for the stimulating leadership style was 3.46 on a 5-point scale; the average score for the correcting leadership style was 3.47.

To test the proposed relationships, a causal structure was posited that resulted in a structural equation model. First, we tested the hypothesis that job satisfaction acts as a mediating variable in the relationship between HRM and organizational performance. A distinction can be made between fully mediated and partially mediated models (Wood, Goodman, Beckman, & Cook, 2008). Therefore, in SEM, two different models must be created. In the first model, the direct relationship between HRM and organizational performance was fixed at zero. In the second model, the direct relationship and indirect relationship between HRM and organizational performance were estimated. By using the chi-square difference test and other global-fit measures, one can test the models against each other. In Table 3, the fit indices are presented. The chi-square difference test implies that the relationship between HRM and organizational

Table 3. Fit Indices for the Fully and Partially Mediated Models.

| Model | χ^2 | df | GFI | AGFI | NFI | CFI | RMSEA |
|--------------------------|----------|----|------|------|------|------|-------|
| Fully mediated model | 189.389 | 7 | .990 | .970 | .874 | .877 | .065 |
| Partially mediated model | 8.670 | 6 | .999 | .998 | .994 | .998 | .008 |

Note. GFI = goodness-of-fit index; AGFI = adjusted goodness-of-fit index; NFI = normed fit index; CFI = comparative fit index; RMSEA = root mean square error of approximation.

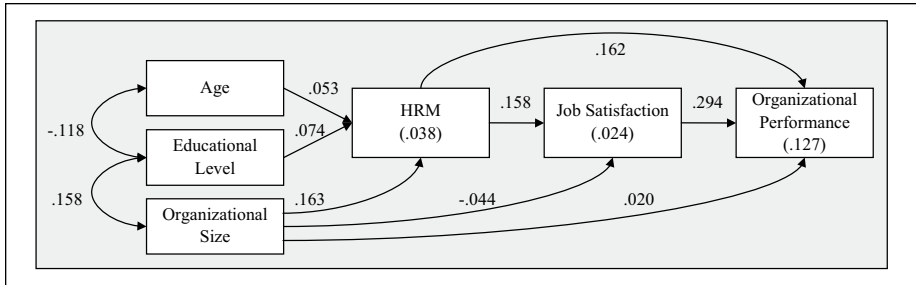


Figure 2. Result of structural equation modeling.

performance is partially mediated by job satisfaction. Furthermore, the partially mediated model shows a better model fit than the fully mediated model. In Figure 2, the partially mediated model is shown. Only the statistically significant relationships are described (with a significance level of .01). The numerical scores on all lines indicate standardized regression coefficients (β), and the scores in brackets are the explained variances.

Second, we analyzed the effect of leadership style on HRM. We assumed that the amount of HR practices perceived by employees would be influenced by their supervisors' leadership styles. We distinguished between stimulating and correcting leadership to test our hypotheses that (a) a stimulating leadership style has a positive effect on the amount of HR practices used within an organization and (b) a correcting leadership style has a negative effect on the amount of HR practices used within an organization. The overall model fit was tested using several fit indices. The model fit values were .999 (GFI), .997 (AGFI), .996 (NFI), and .998 (CFI), implying that the model was a very good fit. In addition, the RMSEA, with a value of .015, also indicated that the model is a good fit. The model in Figure 3 is the result. Only the statistically significant relationships are shown (with a significance level of .01). The numerical scores on all lines indicate standardized regression coefficients (β), and the scores in brackets are the explained variances. The results show that a stimulating leadership style has a significantly positive effect on the implementation of HR practices, supporting Hypothesis 2a, whereas a correcting leadership style appears to have no effect on the amount of HR practices used, rejecting Hypothesis 2b.

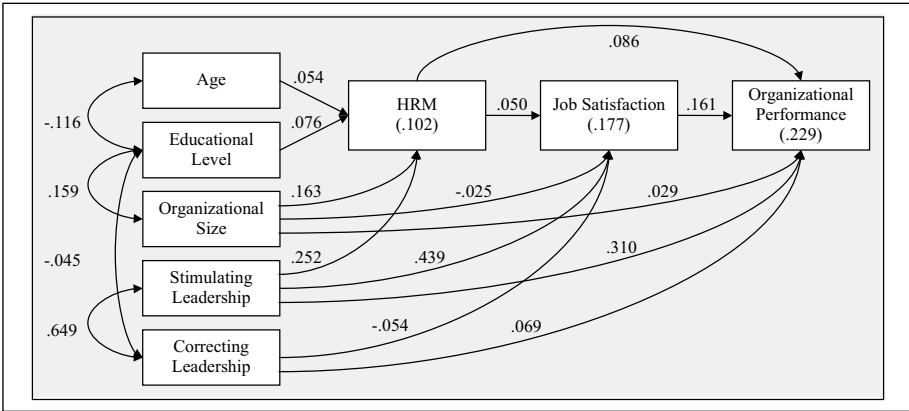


Figure 3. Result of structural equation modeling.

Table 4. Results of Cross-Model Validation Showing R² for the Three Samples.

| Predicted variable | Full sample | 20% sample | 80% sample | Difference in R ² for 20%-80% sample |
|----------------------------|-------------|------------|------------|---|
| HRM | .102 | .109 | .100 | .009 |
| Job satisfaction | .177 | .197 | .173 | .024 |
| Organizational performance | .229 | .240 | .231 | .009 |

Note. HRM = human resource management.

When we compare the model in Figure 2 with the model in Figure 3, we see that the first model shows a statistically significant and positive relation between HRM and organizational performance. However, the model in Figure 3 shows that this relation becomes weaker when the variables related to leadership style are included. Therefore, we also examined whether supervisors’ leadership style influences the relationship between HRM and performance (moderating effect). However, these effects do not appear to be significant. These results imply that leadership style has its own, independent, effect.

Finally, model validity was achieved through cross-model validation. Camilleri (2006) suggested attaining cross-validation in three phases. In the first phase, data are divided into two data sets. One data set consists of a random selection of 20% of the data collected from respondents; the second data set consists of a random selection of 80% of the data collected. In the second phase, SEM by means of a path analysis that calculates the structural fit index (measured by R²) is conducted for both the data sets. The third phase consists of examining the differences between the calculated structural fit indices obtained for each data set. The extent of model validity is determined by the similarity in the variance accounted for by each data set. The results of the cross-model validation are presented in Table 4. Given the fact that the differences in the explained variances are small, the cross-model validation provided satisfactory results.

Discussion

Looking at the main independent and dependent variables, we expected that a supervisors' leadership style has an influence on the implementation of HR practices. Our research provides empirical evidence that a supervisor's leadership style, and specifically a stimulating leadership style, is important to the HRM–performance relationship within an organization. When we compare Figure 2 with Figure 3, we see that adding “leadership” importantly increases explained variance. As such, the results of this study emphasize the important role of supervisors in the HRM and performance model, as was previously suggested by Wright et al. (2005) and Paauwe (2009), among others. When we look at the results in greater detail, we find evidence of the positive relationship between a supervisor's leadership style and the HR practices conducted within the organization, as previously shown by Purcell and Hutchinson (2007) and Zhu et al. (2005). More specifically, a stimulating leadership style is demonstrated to have an important effect on the implementation of HR practices. In contrast, a correcting leadership style appears to have no effect on the amount of HR practices used. Thus, our hypothesis that a stimulating leadership style has a positive effect on the amount of HR practices used within an organization is confirmed, whereas our hypothesis that a correcting leadership style has a negative effect on the amount of HR practices used within an organization must be rejected. Nevertheless, the results are in line with the research discussed by Guest (1987), which argued that a stimulating leadership style (theory Y) could be linked to soft HRM (HRM focusing on the development, motivation, and commitment of employees). Furthermore, it would be interesting in future research to test Guest's (1987) idea that theory X (with a correcting role for the supervisor) is linked to hard HRM (a focus on rewards and determinations of whether employees do what the organization requires). To study this relationship, data must include such elements of HRM as performance-related pay. An additional interesting result is that a stimulating leadership style appears to be very important to employees' degree of satisfaction, while the correcting leadership style has a negative influence on job satisfaction. Finally, a stimulating leadership style and a correcting leadership style have a positive effect on organizational performance, although the effect of the stimulating leadership style is much larger.

Our research also provides empirical evidence for the mediating relationship between HRM and organizational performance. The results indicate a direct effect and an indirect effect of HR practices on organizational performance, as is already assumed in the Paauwe and Richardson (1997) model. Our analysis shows that when employees perceive a more elaborate use of HR practices, organizations do achieve a better score for their performance. Moreover, when more HR practices are used, employees experience greater satisfaction, which positively influences organizational performance. This study adds to previous research by confirming the hypothesis that job satisfaction acts as a mediating variable in the relationship between HRM and organizational performance. This important finding provides more insight into employees' reactions to HRM and its effect on organization performance. These reactions have been largely disregarded in previous research (Boselie et al., 2005).

Looking at the results in greater detail, we see that older employees and employees with higher education levels perceive a greater use of HR practices. This suggests that different groups within organizations (e.g., younger and older employees) are managed differently. In addition, organizational size has a relatively large effect on HRM, as can be concluded from its high beta weight. In line with Guest's (1999) assumption, this finding indicates that the HRM policy of organizations is influenced by such contextual variables as the size of the organization.

Finally, our study supports the idea that a focus on HRM as a method of increasing organizational performance is also relevant in the public sector. Based on this study, conclusions regarding the relationship between HR practices and organizational performance in private organizations (cf. Paauwe, 2009) also appear applicable to public sector organizations. In line with the results of previous research (e.g., Gould-Williams, 2003; Kim, 2005; O'Toole & Meier, 2008), public organizations appear to be more successful if they value their employees and if they utilize a more extended set of HR practices. In addition, this study illustrates the important role supervisors play in this relationship in the public sector.

Conclusion

In the introduction, we stated that public sector performance has become an increasingly important issue over the past three decades. Several innovations in the field have promised to increase the quality of public service while reducing its costs. However, research into the contributions of HRM to these developments has been scarce. Our main research question, therefore, was "To what extent is the relationship between HRM and the performance of public organizations mediated by job satisfaction, and what is the influence of a supervisor's leadership style on the implementation of HR practices?" Based on the data and arguments presented in this study, one can conclude that a positive relationship exists between HRM and organizational performance in the public sector. Specifically, by studying the relationships among HRM, job satisfaction, and organizational performance in a single model, this research showed that job satisfaction partly mediates the relationship between HRM and organizational performance. Moreover, this study showed that the choice to use HR practices is influenced by a supervisor's leadership style.

Despite these findings, the limits of this article suggest lines of further research. This study used a cross-sectional data set restricted to Dutch municipalities. Its findings, therefore, have limitations with respect to internal and external validity. A longitudinal data set would increase internal validity, as such data enable researchers to make stronger causal claims. HRM-performance research is dominated by cross-sectional research, which generates considerable discussion of questions regarding "what came first?" (Guest, 2011). Are public organizations more successful if they value their employees, or do public organizations value their employees if they are more successful? Or are both propositions true? A similar problem can be observed with respect to the relationship between job satisfaction and performance (Judge et al., 2001; Taris & Schreurs, 2009). For this reason, a longitudinal research design would

be preferable in further research. With respect to external validity, we have examined the HRM and performance relationship in the public sector by focusing on Dutch municipalities. More research is needed to determine whether the HRM–performance relationship holds for different kinds of public sector organizations and different countries. Finally, the selection of the data source (survey) may have influenced some of the results. The use of only one survey instrument may create distortions in the data, in particular regarding common method bias (Podsakoff & Organ, 1986). This is specifically a question with respect to the connection between job satisfaction and organizational performance. The strong relationship between these two variables may be attributable to the fact that employees were asked to rate their job satisfaction and their perceptions of organizational performance. This potential problem highlights the importance of replicating our research, ideally by using objective performance indicators.

This study not only generates recommendations to further enhance HRM and performance research in the public sector. Based on its observations, this study also provides possible starting points for improving the performance of public organizations through their employees. To increase organizational performance, it appears important that organizations invest in employees' needs by implementing HR practices. Moreover, this study suggests that the stimulating leadership style is very important to employee satisfaction, while the correcting leadership style negatively influences job satisfaction. This suggestion further implies that when a public sector organization wishes to acquire an involved and motivated staff, its supervisors must assume a stimulating role. Based on our findings, attention to a supervisor's leadership style appears to be a prerequisite for successfully implementing HRM within an organization. More specifically, this study indicates that there is an important role for supervisors to play in implementing HRM, developing a satisfied workforce, and enhancing organizational performance.

Appendix

Correcting Leadership

- X1: My supervisor keeps an eye on my work to check if I do my work well.
- X2: My supervisor tells me when I do not do my work well.
- X3: My supervisor controls whether work is finished on time.

Stimulating Leadership

- Y1: My supervisor is aware of employees' welfare.
- Y2: I get enough support from my supervisor.
- Y3: My supervisor allows people to cooperate well.
- Y4: My supervisor lets me know if she or he is satisfied with my work.
- Y5: My supervisor consults his staff about issues that are important to them.
- Y6: My supervisor provides support as needed.
- Y7: My supervisor creates a work climate in which I can develop new ideas about my work.

- Y8: My supervisor is accessible.
- Y9: My supervisor lets us participate in conversations that are relevant to me and my colleagues.
- Y10: My supervisor protects me from high work pressure.

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Notes

1. Although there is some disagreement about the precise relationship between job satisfaction and performance, the literature generally assumes that greater job satisfaction is associated with better individual and organizational performance (Judge, Thoresen, Bono, & Patton, 2001; Taris & Schreurs, 2009).
2. Error correlation between X1 and X2 is .137 and between Y10 and Y11 is .326.
3. Chi-square value = $N \times$ difference between sample covariances and implied population covariances.

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