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**Able, Willing and Knowing**  
**The Effects of HR Practices on Commitment and Effort**  
**in 26 European Countries**

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Abstract

This study extends previous studies of human resource practices by examining how organizational commitment and work effort are related to the use of HR practices enhancing discretion and skills based on international comparative survey data from 26 European countries. By analyzing individual level data instead of the organizational level data that are examined in prior studies, this article allows to investigate whether and how employee perceptions of HR practices are related to their attitudes and behavior. The multilevel analyses largely support the hypotheses that both the intensity and the consistency of these HR practices contribute to organizational commitment and work effort since it enhances the ability of employees, their willingness to cooperate and informs them about the expectations of the organization.

Keywords: comparative HRM; human resource practices; international comparative research; multilevel analysis; organizational commitment, work effort

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Previous studies find a positive relationship between human resource (HR) practices, the actual policies that organizations use to manage their workforce on a day-to-day basis (Kinnie, Hutchinson, Purcell, Rayton and Swart 2005; Kozlowski and Klein 2000; Wright and Boswell 2002), and organizational performance (Arthur 1994; Becker and Gerhart 1996; Huselid, Jackson and Schuler 1997; Paauwe and Boselie 2005). A large share of these empirical investigations provide evidence for the theoretical expectation that both the *intensity* and the *consistency* of these practices improve the functioning of organizations. A common explanation for these findings is that the application of HR practices positively affects the attitudes and behavior of individual employees (Baron and Kreps 1999), either indirectly through increased employee attachment to the organization or directly by increasing employee performance (Batt 2002). Nevertheless, although these studies assume that individual employee attitudes and behavior mediates the link between HR practices and organizational performance, most of them rely on organizational level data and are therefore not able to test whether the intensity and consistency of the practices affect individual performance. This study aims at contributing to these prior studies by empirically investigating the relationship between HR practices and individual outcomes. More specifically, the focus is on employees' perceptions towards HR practices providing them with discretion and enabling to use their skills at work and how this relates to their levels of organizational commitment and work effort, reflecting two distinct employee decisions, namely the decision to participate and the decision to produce (Barnard 1938; March and Simon 1958).

Through the provision of HR practices emphasizing employee discretion and the development and utilization of individual skills, organizations may actively try to influence these two employee decisions. The application of HR practices increases the stock of human capital within the organization as it enables employees to develop and effectively use their

skills at work. This aspect of HR practices focuses on the management of employee capabilities. Besides that, using these practices affects the exchange relationship between organizations and employees (Tsui, Pearce, Porter and Tripoli 1997; Lambooi, Sanders, Koster and Zwiers 2006). Employers' investments in HR practices may be a means of increasing the stock of social capital within organizations (Leana and Van Buren 1999). Social exchange theory offers one of the main theoretical underpinning of this relational aspect of HR practices (Cropanzano and Mitchell 2005). The core expectation of social exchange theory is that HR practices help to build effective exchange relationships between organizations and employees based on mutual trust and commitments in which employees offer something in return for the investments they receive from the organization. Finally, there is an informational aspect related to the application of HR practices. Here the assumption is that HR practices provide employers with a means to signal what they expect from their employees. The signaling function is believed to be more effective the more consistent the HR practices are applied (Baron and Kreps 1999).

Data from the *European Social Survey (ESS)* (ESS 2004) are analyzed to investigate the relationship between the use of HR practices and the organizational commitment and work effort of employees. The questionnaire of the second round of this biannual research project includes a number of items measuring different aspects of people's situation at work, such as the HR practices they experience in their daily work, characteristics of the job they hold, and several of their work attitudes and behavior. These individual employees are the key informants of the present study. Their responses provide information forming the basis for the construction of measures for the intensity and the consistency of the HR practices that are related to their organizational commitment and work effort. In total, data from 18.522 employees living in 26 European countries are included in the analyses. Multilevel analyses are applied to deal with the nested structure of these data. As a result, the analyses also

generate insights into cross national variation in the use of HR practices. Studies aimed at understanding such differences are scarce (Clark, Grant and Heijltjes 2000), despite the notion that multilevel studies will increase our knowledge about the interrelationships between national, organizational, team, and individual factors (Brewster and Larsen 1992; Clark, Gospel and Montgomery 1999; Tsui, Nifadkar and Ou 2007; Wright and Boswell 2002). To account for the possibility that cross national differences affect the findings regarding the HR practices, several country level control variables are included in the multilevel analyses.

### **Human resource practices**

The application of HR practices in organizations concerns the management of the skills, motivation, and participation of employees (MacDuffie 1995). Empirical studies show that the actual practices that organizations use to manage their human resources can be measured in multiple ways and that there is not a widely agreed upon definition to select the theoretically, empirically, and practically most important ones (Becker and Gerhart 1996; Beugelsdijk 2008). Although the empirical studies differ with regard to the indicators measuring HR practices, they can be classified along two dimensions termed “individual versus organizational level of analysis” and “single versus multiple practices” (Wright and Boswell 2002). The latter dimension contrasts research studying specific human resource instruments, such as selection and compensation, with investigations examining systems of practices. Whether or not researchers incorporate variables at the individual or organizational level largely depends on the question they like to answer: researchers interested in the consequences of HR practices for employees focus on the individual level, whereas the organizational level is more often examined in studies investigating their link with the performance of organizations (e.g. Arthur 1994; Huselid 1995; Noe 1996; Youndt, Snell,

Dean and Lepak 1996). A second distinction between these two streams of research is that organizational level research pays much attention to the role that the intensity and consistency of the practices have in generating organizational outcomes, while both the explanation and the consequences of the intensity and consistency of the practices are not studied by researchers focusing on the individual level.

Nevertheless, there are several reasons for including individual level data on HR practices in the analyses, even when the focus is on organizational outcomes. First, a number of authors stress that there may be a gap between the intended and formalized policies at the organizational level and the way employees experience them (Wright and Boswell 2002). Appreciating this possible gap implies that the HR policies and the organizational level outcomes are mediated by the perceptions that individuals have of these practices (Kinnie et al. 2005; Wright and Nishii 2007). A sheer focus on officially stated organizational policies may not be enough for understanding how human resources are actually managed and how employees experience them. Individual level data measuring employee perceptions of HR practices provide information about these experiences. Secondly, it has been noted that HR practices usually vary within the same organization, since different groups of employees are managed using different kinds of practices (Lepak and Snell 2002). Although organizational level data can capture this intra-organizational variation, for example by investigating how the HR practices are distributed, most of the time the empirical focus in this kind of research involves asking questions about the HR practices of core employees in the organization. For instance, a variable indicating that a share of the workforce receives certain benefits – as is commonly asked in research based on organizational data (Beugelsdijk 2008) – only informs us about that part of the employees in a particular organization. If the HR policies are differentiated within organizations, they may lead to different employee responses and therefore more fine-grained data are necessary to fully understand their effects. Analyses

based on data from individual employees may offer such detailed information. However, although these issues are acknowledged in the literature, it is also clear that it takes a lot of time and effort collecting individual data across a large number of organizations to gather information about the variation within and between organizations regarding their HR practices (Wright and Boswell 2002). The present article attempts to deal with this issue by relying on international comparative data gathered among a representative sample of employees within several countries. This means that the data do not provide information about how much variation there is with regard to the HR practices within an organization, as that would require a data collection strategy in which employees are investigated within a sample of organizations. However, the data analyzed in this study do account for the two issues raised above. First, since the employees answer questions about the HR practices of their organization the information is based on their perceptions and individual experiences. And secondly, since the data are gathered among a representative sample of employees within a country, the information about the HR practices is not restricted to core workers.

### **Consistency of the HR practices**

The assumption that consistent HR practices lead to better outcomes for individuals and organizations has a prominent place in the literature. The importance of internal fit among the practices lies in its potential to increase individual productivity, elicit valuable ideas of employees, and provide incentives for multitasking (Ichniowski and Shaw 2003), because it gives employees a clear signal of what the organization expects from them, reduces the chances of turnover, and promotes feelings of distributive justice within the organization (Baron and Kreps 1999). Incoherent systems are likely to be inefficient because they do not bring the message of the management across and increase the level of uncertainty among the employees (Becker, Huselid, Pickus and Spratt 1997).



There are several ways of assessing the consistency or internal fit of the HR practices. One way is to start from predefined bundles or systems of HR practices (Delery and Doty 1996; Ichniowski and Shaw 1999; MacDuffie 1995; Laursen and Foss 2003) and to classify the organizations according to these ideal types of bundles. Given that this study is based on secondary data, the possibilities for developing an exhaustive list of practices are limited. Therefore, two other approaches to measure consistency are followed that can be investigated with these data. According to the first approach, the level of consistency of the practices can be measured by calculating the effect of the interaction term of the practices on a certain response variable, reflecting the notion that practices complement each other if their mutual contribution is higher when they are applied similarly rather than in isolation (Venkatraman 1989; Holmstrom and Milgrom 1994; Huselid 1995). Since such analyses quickly become too complex if more practices are included, the number of indicators are reduced by combining those practices that measure the same dimension with factor analysis. With this analytical strategy, some valuable information about the level of consistency may be lost. Exploratory factor analysis aims at finding dimensions by grouping together the items that are strongly related and creating scales by adding up these particular items. This results in a summary score from which the initial values on the underlying items cannot be deduced. By doing this, some of the cases of interest, namely the ones with a low internal fit, will be no longer visible as the scale provides a mean score and not the variation between the items of which it consists. Instead of paying attention to deviations within these scales, the focus is on the fit between – two (or more) – relatively independent dimensions (e.g. Huselid 1995). A second approach follows a different course and explicitly focuses on the variation between the practices that an individual employee experiences. In this case, the consistency of the practices is measured by calculating the standard deviation of the human resource practices for each person. By including all underlying items measuring the HR practices, rather than

scales that are constructed using factor analysis and reliability analysis, this approach measures the overall fit of the HR practices. The two measurement strategies each have their own strengths and weaknesses and by including them both in the analyses it is possible to investigate whether the effects of the practices lie in their synergy, their overall consistency, or both.

### **The effects of HR practices on organizational commitment and work effort**

Organizational commitment – the decision to participate – and work effort – the decision to produce – are expected to be influenced by employees' perceptions of the intensity and consistency of HR practices aimed at employee discretion and skill enhancement based on the following assumptions. First, using these practices strengthens the ability of employees to carry out their work and to be productive. Allowing employees to direct their work and use their skills are means through which organizations can fully benefit from the capabilities of the workforce. Secondly, offering HR practices can be regarded as an investment from the part of the employer and which employees can reciprocate by being more committed to the organization and by being more productive. This expectation is based on the employees' willingness to contribute to the goals of the organization. And, thirdly, by applying the HR practices consistently, employers signal their expectations about the employees more clearly. This means that consistent practices enhances the knowledge of employees. These considerations lead to the following two hypotheses:

*Hypothesis 1. The intensity and consistency of perceived HR practices are positively related to organizational commitment.*

*Hypothesis 2. The intensity and consistency of perceived HR practices are positively related to work effort.*

## **Methods**

### ***Data***

Data from several sources are combined to test the hypotheses. The *European Social Survey (ESS)* provides the individual level data for this study. The ESS is a large scale survey investigating the attitudes, beliefs, and behavior patterns of people in Europe and has been held every two years since 2002. The questionnaire consists of a core module – repeated each round covering topics like education, occupation, and financial circumstances – and rotating modules containing questions that change each round. Round 2 of the ESS (held in 2004) includes the module “Family, work and wellbeing” with questions about people’s work. The individual level data are complemented with data measuring the economic situation and the level of social spending in a country. These data are available through the *International Monetary Fund (IMF 2001)*, the *World Development Indicators Database (World Bank 2002)* and the *The World Factbook (CIA 2002)*. The total dataset includes information about 18.522 employees living in 26 European countries. On average 680 respondents are included per country, ranging from 235 in Italy to 1042 in Germany<sup>1</sup>.

### ***Measures***

Dependent variables: organizational commitment and work effort. *Organizational commitment* is measured with the question asking whether a respondent would turn down a job with higher pay to stay with the current organization. This measure indicates an employee’s overall attachment to the organization, instead of focusing on specific dimensions of organizational commitment as for example proposed in Meyer and Allen’s (1991) three-

component model of commitment. As such, the indicator does not inform us about people's specific motivation to stay with the organization and whether this is over example due to affective, continuance, or normative considerations, but closely reflects a person's overall decision to participate in the near future. The variable *work effort* is measured with an item indicating whether the job of the respondent requires working very hard. This measure reflects the decision to produce by asking employees how much effort they have to put into their work to meet the demands of their organization. Both variables are measured on a scale ranging from 1 "strongly disagree" to 5 "strongly agree". The organizational commitment variable is reverse-coded and therefore a higher score on this variable indicates a higher level of organizational commitment.

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Insert Table 1 about here  
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Independent variables: HR practices. The ESS includes several variables measuring the employees' perception of the HR practices they experience. Respondents are asked to indicate on a scale from 0 "no influence" to 10 "complete control" to what extent they are *allowed to decide how their daily work is organized, to choose or change the pace of work, and to influence the policy decisions about the activities of the organization.* On a scale from 1 "strongly agree" to 5 "strongly disagree" they are asked if their work is *closely supervised* (the item is reverse-coded) and on a scale from 1 "not at all true" to 4 "very true" whether *their job requires learning new things* and the extent to which *their work is varied*. The dimensionality of the items is investigated using principal component factor analysis with

varimax rotation. Table 1 shows that the items measure two dimensions of HR practices termed *discretion* and *skills*.

*Intensity.* The measurement scales of the items indicating the HR practices differ. To make them comparable the items are first standardized by computing z-scores before constructing the two scales for discretion and skills. *Consistency.* The consistency of the practices is investigated in two ways. First, by examining the interaction effect and secondly by examining the extent to which the six items fit together. The interaction effect is included in the analyses by multiplying the two scales measuring discretion and skills, providing a similar measure as was used in Huselid (1995). The overall fit of the HR practices is computed for each individual by calculating the standard deviation of the six items. The resulting variable provides a measure of the inconsistency of the HR practices that a person experiences. This variable ranges from 0 (maximal consistency) to 1 (maximal inconsistency). The consistency of the HR practices is computed by subtracting the standard deviation from 1.

Table 2 shows the mean levels of the raw scores measuring the intensity and consistency of the HR practices per country. From Table 2 it can be read that there is considerable variation in the application of the practices. Employees living in Norway and Denmark report the highest levels of discretion ( $m = 6.00$  and  $m = 5.98$ , respectively). The lowest levels of discretion are found in Czech Republic and Greece ( $m = 2.92$  and  $m = 3.34$ ). A general finding with regard to this HR practice is that the Western and Northern European countries have an above average score on discretion, whereas the mean levels are below average in the Southern and Eastern European countries. This pattern also holds for the HR practices aimed at the use of employee skills. On average, this practice has the highest value in Norway and Switzerland ( $m = 3.25$  and  $m = 3.16$ ) and the lowest value is found in Portugal and Spain ( $m = 2.35$  and  $m = 2.46$ ). The mean level of consistency also varies considerable across countries. Employees in Norway and Sweden report the highest level of consistency

(both countries have a mean consistency score of 0.32). Luxembourg and Turkey have the lowest levels of consistency ( $m = 0.11$  and  $m = 0.12$ ). Notably, there is no clear distinction between the countries belonging to different regions with regard to the consistency of HR practices.

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Insert Table 2 about here  
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Control variables. The individual responses to the questions about organizational commitment and work effort as well as the relationship with the intensity and consistency of the HR practices may be affected by other variables. Since this study analyzes international comparative data, contextual variables at the national level are included to control for the possible influence of country characteristics. Besides that, individual level control variables are included.

National level control variables. The data are gathered among European Union members and non-EU members. To account for differences between these countries, a dummy variable called *EU member* is added to the analyses. The economic situation in a country is controlled for by including the level of *income inequality* (measured with the gini coefficient) and the level of *GDP per capita*. Finally, organizational commitment and work effort may be related to the level of social spending within a country. To control for this, the variable *welfare state effort* (measured with public spending on social protection as share of GDP) is added to the dataset.

Individual level control variables. Control variables at the individual level include items measuring the individual characteristics *age* (in years), *gender* (0 = male; 1 = female), and

*years of education* (the number of years of fulltime education completed), the work related variables *tenure with the organization* (the number of years working for the current employers), *supervisor* (a dummy variable indicating that the respondent supervises employees), *work-life balance* (a five-point scale asking the respondents to indicate how often they are too tired after work to enjoy things they like to do at home), *skill level* (a dummy variable indicating whether someone applying for the job needs education beyond compulsory), *hours of work* (the total contracted hours per week in main job, overtime excluded), *employability* (how easy the respondent can get a similar job with another employer, ranging from 0 = extremely difficult to 10 = extremely easy), *replaceability* (how difficult or easy it is for the employer to replace the respondent after leaving, ranging from 0 = extremely difficult to 10 = extremely easy), whether the respondent is a *trade union member* (0 = no; 1 = yes), and the organizational characteristics *establishment size* (1 = under ten; 5 = 500 or more). All of the independent variables are standardized.

### ***Multilevel analysis***

The dataset includes information at two different levels – the individual (level 1) and the national (level 2) – and therefore Ordinary Least Square (OLS) regression analysis cannot be used (e.g. DiPrete and Forristal 1994). Multilevel modeling is a suitable method to investigate nested data structures and is applied here. The basic multilevel model consists of a fixed part – the linear function of the independent variables – and a random part (Snijders 2003). The random part consists of the unexplained variation at the individual level and the unexplained variation between the countries. In this study, a full random intercept and slopes model is estimated, allowing for complex variation at the highest level (Rasbash, Steele, Browne and Prosser 2005).

The models testing the hypothesized effects of HR practices on organizational commitment and work effort include the same independent variables. The multilevel analyses are performed in subsequent steps starting with an empty model (Model 0) that serves as a baseline to investigate changes in the fit of the model when additional variables are included by computing the deviance using full information maximum likelihood (Snijders and Bosker 1999). In Model 1 the national and individual level control variables are added to the model. Model 2 examines the effects of the intensity of the HR practices discretion and skills. Models 3 and 4 test two different conceptions of the consistency of the practices. Model 3 includes the interaction effect between the two practices. Model 4 includes the overall level of fit of the practices (in this model, the direct effects of the intensity of the two practices are not included as they are redundant). The parameters in these models are estimated by the maximum likelihood method (Goldstein 2003) and the regression coefficients are tested by Wald tests (Snijders 2003).

## **Results**

### *Descriptive results*

The mean levels of organizational commitment and work effort for each country are reported in Table 2. The overall mean of organizational commitment is 2.76. Some countries have an average score higher than 3, namely Portugal, Belgium, Switzerland, Germany, and Denmark. In Estonia, Slovakia, and Czech Republic employees report that they are less committed to their organizations. For these countries the average levels of organizational commitment are 2.29, 2.30, and 2.33 respectively. The overall average score on the work effort variable is 3.62. Countries scoring high on this variable (close to 4 or above) are Ukraine, Slovakia, United Kingdom, Iceland, and Hungary. And the lowest level of work effort is found in Luxembourg ( $m = 2.95$ ), France ( $m = 3.28$ ) and Belgium ( $m = 3.39$ ).



***Results of the multilevel analyses***

Table 3 shows the multilevel analysis results for organizational commitment. Starting with the baseline model, it is noteworthy that there is little cross national variation regarding the employees' level of commitment to the organization. Only 3 percent of the total variation in organizational commitment is due to country level variation ( $ICC = 0.03$ ). This implies that the national level variables will not explain a great deal of organizational commitment.

Models 1 through 3 reported in Table 3 confirm this expectation. None of the national level variables is significantly related to organizational commitment at the individual level. Since there is very little variation to explain at this level, it is unlikely that other national level variables, not accounted for in this model, would add much to our understanding of organizational commitment. At the individual level, it turns out that organizational commitment is related to some of the person-related and work-related factors. Employees who are older and those with more years of schooling report higher levels of organizational commitment. With regard to the variables measuring the work situation of the employee, the results show that organizational commitment is higher among people who have been with the organization for more years, supervisors, those who are able to combine work and other activities more easily, and those doing skilled work. Employees who are more easily replaced, those belonging to a trade union, and the ones employed in larger organizations report lower levels of organizational commitment. In Model 2 the variables measuring the intensity of the HR practices discretion and skills are added to the analysis. Including these variables increases the fit of the model significantly ( $Deviance = 1,095.53; p < 0.01$ ), thus indicating that they contribute to the explanation of organizational commitment. Both discretion and skills are positively and significantly related to organizational commitment, providing evidence for the expectation that applying these practices is positively related to the decision to participate. With respect to the individual level control variables, the inclusion of these two

HR practices affects some of the findings reported in Model 1. First, the effect of education switches from positive to negative. A possible explanation for this is that discretion and skills are strongly related to years of schooling and that the effect of the HR practices suppresses this educational effect on organizational commitment. The effects of the variables supervisor and skill level drop considerably and the variable establishment size is no longer significant, showing that the HR practices mediate these variables. The effects of consistency of the HR practices are investigated in Models 3 and 4 using the interaction effect and the overall consistency measure. Although adding the interaction between discretion and skills improves the fit of the model significantly, the effect itself is not statistically significant. Therefore, there is no evidence for synergetic effects of discretion and skills on organizational commitment. The other indicator of consistency, based on the internal fit of both practices turns out to be positively related to organizational commitment. This means that there is partial support for the hypothesized relationship between organizational commitment and consistency of the HR practices.

The results for work effort are reported in Table 4. The baseline model shows that there is more cross national variation in work effort than in organizational commitment. Of the total variation in work effort, 7 percent is due to variation between the countries ( $ICC = 0.07$ ). In Model 1 the national and individual level control variables are included. According to this model, the level of GDP is the most important national level variable explaining part of the variation in work effort. GDP is negatively related to work effort. At the individual level, no effects of the age, gender and years of schooling of the respondents were found, while most of the work-related variables are positively related to work effort. Work effort is higher among supervisors, those who are able to balance work and other activities, employees with higher skill levels, those who work more hours, employees who are better employable elsewhere, and those employed in larger companies. Furthermore, work effort is lower among

employees who are more easily replaced. Adding the intensity of the two HR practices discretion and skills significantly improves the model ( $Deviance = 982.92; p < 0.01$ ). Both practices are related to work effort, but the sign of discretion is negative and therefore this outcome is the opposite of what was hypothesized. This effect shows that employees having more discretion over their work report lower levels of work effort. The effect of skills is in the expected direction: employees experiencing this HR practice put more effort into their work. The control variables skill level and establishment size are no longer significant after adding the HR practices to the model. Models 3 and 4 investigate the effects of the two distinct approaches consistency. These models show that there is a positive interaction effect of discretion and skills on work effort (Model 3) and that employees report higher levels of work effort if they experience higher levels of overall consistency (Model 4). Figure 1 depicts the interaction effect of discretion and skills. The graph includes the following information about the simultaneous effect of the two HR practices on work effort. In case an employee experiences low levels of discretion, the use of the HR practice skills does not make much difference for the level of work effort. However, if levels of discretion are high, the resulting work effort depends on the use of the HR practice skills. Combining high levels of both HR practices is associated with higher levels of work effort.

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Insert Figure 1 about here  
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These results lead to the following conclusions about the two hypotheses formulated in this article. Hypothesis 1 states a positive relationship between organizational commitment and the intensity and consistency of the HR practices. Apart from the interaction effect of

discretion and skills on organizational commitment, the empirical findings support this hypothesis. Hypothesis 2 states similar expectations for the work effort of employees. With regard to this outcome variable, the negative relationship between discretion and work effort was unexpected and refutes the hypothesis. Nevertheless, the empirical results regarding the HR practice skills and the two approaches measuring consistency of the practices support Hypothesis 2.

### **Conclusion and discussion**

This study investigates the relationship between employee attitudes and behavior and their perceptions of the HR practices using international comparative data. The analyses confirm the expectation that the intensity and consistency of these practices contribute to the individual performance of employees, with a few exceptions. Combined with the outcomes of prior studies investigating the effects of HR practices on organizational performance, it may be concluded that the findings support the assumption that the link between the HR practices and the functioning of organizations can be explained by individual attitudes and behaviors. Some of the results require further attention and raise questions for future research.

Regarding the analysis of organizational commitment there are two points worth mentioning. First, the interaction effect of the two HR practices turned out not to be significant. Therefore, no evidence was found for a synergetic effect of discretion and skills on organizational commitment. The level of employee commitment is not higher among employees experiencing both practices. However, since the overall consistency measure is associated with organizational commitment, it may be concluded that organizations can create organizational commitment through the application of HR practices that fit together. Another point worth mentioning is that there is very little cross national variation in organizational commitment. An implication of this finding is that this employee attitude

mainly results from individual and organizational circumstances rather than from characteristics of the national economy, public policies, or other institutional differences between countries. An implication of this finding is that HR practices play a central role in organizational commitment and that employers can actively try to influence it.

At first sight, the results for work effort are somewhat different than expected. In particular the negative relationship between discretion and work effort is not in line with the hypothesis. There are two possible explanations for this finding, namely one related to the employees' actual work effort and one focusing on the perceptions of work effort. Regarding the actual level of work effort that employees show, the interpretation of the negative relationship is that giving employees more discretion leads to agency problems because it decreases the organization's possibility to control the work behavior of the employee directly. If this interpretation is correct, the finding shows that discretion enhances employee shirking. A different interpretation, however, focuses on the perception of work effort. In the ESS respondents were asked to indicate whether the job requires working very hard. It is very well possible that the employees with more discretion do work hard, but that they do not experience a heavy work load as they can control the organization and pace of the work. Theories of stress in organizations, such as the Job Demand Control Model (Karasek and Theorell 1990), argue that being able to exercise control over the work situation is of vital importance for preventing work stress. As such, the employees having more discretion may find their work less demanding. The two interpretations are completely different and lead to contrasting views concerning the effects of employee discretion. According to the first interpretation, providing discretion does not seem to be a good idea from the organization's point of view since it leads to lower levels of individual performance, whereas the second interpretation argues that employee discretion is a good idea because it lowers the risk of stress. With the current study it cannot be decided which of the two interpretations holds.

However, given the interaction effect of discretion and skills on work effort, there may be reason to suspect that discretion decreases the actual level of employee effort. From the graphs presented in Figure 1 it becomes evident that a higher level of discretion combined with low levels of the HR practices skills is associated with the lowest level of work effort and that the effort reported by employees experiencing both discretion and skills is considerably higher. A likely reason for this difference is that the first group of employees find their work far less challenging than those belonging to the second group. Nevertheless, additional research may be aimed at further investigating the relationship between discretion and work effort. Whichever the outcome of these future studies, the one aspect that the multilevel analysis of work effort underline is that HR practices have a combined effect on employee behavior. Both measures of consistency provide evidence for that. The interaction effect of the two HR practices on work effort are of particular interest since it shows that the mutual application of the practices has other outcomes than the isolated effects of the practices.

Finally, it should be noted that this study has the following limitations that should be taken into account and that may receive attention in future studies. First, the data are cross sectional and do therefore not allow to draw conclusions about the causality of the effects found in the empirical analysis. Investigating whether HR practices cause certain employee attitudes and behaviors at least requires longitudinal data and at best includes experimental data. Secondly, the data do not include information about organizational performance and therefore this study lacks a test of how this is related to the intensity and consistency of the HR practices that employees experience. Having such data would be valuable as it would enable us to investigate to what extent human resource practices contribute to the functioning of organizations in a cross national perspective. However, this is a shortcoming that cannot be solved when using individual level data since employees usually do not have the necessary

information about the financial situation of their company. Ideally, future studies could use data at the individual, organizational, and national level bringing together the different levels into one integrative analysis. Finally, the choice concerning the question what HR practices to include in the study is restricted because secondary data are analyzed. This limits the scope of the practices that could be investigated. Again, additional data gathering effort are needed to overcome this shortcoming. Keeping these limitations of the present study in mind, the present study shows the added value of multilevel analysis using cross national data for research into HR practices.

Notes

<sup>1</sup> That the number of respondents differs between the countries does not have to be problematic as they are supposed to be representative for the workforce of each country. However, to be sure that these differences do not affect the outcomes, sensitivity tests are conducted by investigating multilevel models on subsets of countries. In these analyses 25 countries are included while one of the countries is excluded. This procedure is repeated for all countries. The results from these analyses are similar to those reported in this article.



## Tables

Table 1. Factor structure of human resource practices<sup>(a)</sup>

Item	1	2
<b>Discretion</b>		
Allowed to decide how daily work is organized	<b>0.83</b>	0.27
Allowed to choose/change pace of work	<b>0.81</b>	0.20
Allowed to influence policy decisions about the activities of the organization	<b>0.71</b>	0.29
Work is closely supervised <sup>(b)</sup>	<b>0.60</b>	-0.15
<b>Skills</b>		
Job requires learning new things	0.19	<b>0.88</b>
Variety in work	0.07	<b>0.82</b>
Eigenvalue	2.72	1.19
Proportion of variance accounted for	37.30	27.82

<sup>(a)</sup> Bold type indicates that the question loads at 0.30 or greater on a single factor.

<sup>(b)</sup> Item was reverse-coded.

Table 2. Country level means<sup>a</sup>

	<b>Organizational commitment</b>	<b>Work effort</b>	<b>Discretion</b>	<b>Skills</b>	<b>Consistency</b>
Austria	2.99	3.47	4.95	2.91	0.25
Belgium	3.09	3.39	4.81	2.89	0.19
Switzerland	3.09	3.48	5.11	3.16	0.28
Czech Republic	2.33	3.52	2.92	2.83	0.23
Germany	3.04	3.68	4.60	2.82	0.27
Denmark	3.05	3.44	5.98	3.05	0.26
Estonia	2.29	3.44	3.94	2.63	0.26
Spain	2.71	3.64	4.31	2.46	0.19
Finland	2.75	3.59	5.70	3.07	0.31
France	2.70	3.28	5.26	2.93	0.16
United Kingdom	2.69	3.99	4.95	2.98	0.24
Greece	2.84	3.50	3.34	2.72	0.22
Hungary	2.82	3.94	3.64	2.68	0.27
Ireland	2.86	3.91	4.00	2.87	0.20
Iceland	2.71	3.96	5.69	3.06	0.24
Italy	2.51	3.82	3.73	2.73	0.18
Luxembourg	2.88	2.95	4.01	3.00	0.11
Netherlands	2.74	3.51	5.39	2.99	0.30
Norway	2.88	3.51	6.00	3.27	0.32
Poland	2.46	3.74	3.73	2.70	0.18
Portugal	3.10	3.75	4.05	2.35	0.25
Sweden	2.74	3.59	5.68	3.10	0.32
Slovenia	2.64	3.87	3.94	3.04	0.17
Slovakia	2.30	3.99	3.60	2.74	0.24
Turkey	2.67	3.71	3.41	2.51	0.12
Ukraine	2.53	4.22	3.63	2.51	0.17
Total	2.76	3.62	4.55	2.87	0.24

<sup>a</sup> Employee  $n = 18.522$ ; country  $n = 26$ .

Table 3. Multilevel analysis results of organizational commitment<sup>a</sup>

Variables	(1)		(2)		(3)		(4)	
	$\beta$	s.e.	$\beta$	s.e.	$\beta$	s.e.	$\beta$	s.e.
<i>HR practices</i>								
Discretion			0.12 ***	0.01	0.12 ***	0.01		
Skills			0.16 ***	0.01	0.16 ***	0.01		
Discretion X skills					0.01	0.01		
Consistency							0.03 ***	0.01
<i>National level</i>								
EU member	0.14	0.10	0.15	0.09	0.15	0.09	0.14	0.10
Income inequality (Gini)	0.05	0.05	0.05	0.04	0.05	0.04	0.05	0.05
GDP per capita	0.07	0.05	0.04	0.04	0.04	0.04	0.07	0.04
Welfare state effort	0.01	0.05	-0.02	0.05	-0.02	0.05	0.01	0.05
<i>Person</i>								
Age	0.09 ***	0.01	0.08 ***	0.01	0.08 ***	0.01	0.09 ***	0.01
Female	0.01	0.02	0.01	0.02	0.03	0.02	0.03	0.02
Years of education	0.02 ***	0.01	-0.02 ***	0.01	-0.02 ***	0.01	0.02 ***	0.01
<i>Work</i>								
Tenure with organization	0.15 ***	0.01	0.14 ***	0.01	0.14 ***	0.01	0.15 ***	0.01
Supervisor	0.16 ***	0.02	0.05 ***	0.02	0.05 ***	0.02	0.16 ***	0.02
Work life balance	0.13 ***	0.01	0.13 ***	0.01	0.13 ***	0.01	0.13 ***	0.01
Skill level	0.21 ***	0.02	0.08 ***	0.02	0.08 ***	0.02	0.21 ***	0.02
Hours of work	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01
Employability	-0.01	0.01	-0.03 ***	0.01	-0.03 ***	0.01	-0.02	0.01
Replaceability	-0.06 ***	0.01	-0.04 ***	0.01	-0.04 ***	0.01	-0.06 ***	0.01
Trade union member	-0.05 ***	0.02	-0.06 ***	0.02	-0.05 ***	0.02	-0.05 ***	0.02
Establishment size	-0.03 ***	0.01	-0.02	0.01	-0.02	0.01	-0.03	0.01
Intercept	2.45 ***	0.08	2.57 ***	0.07	2.56 ***	0.07	2.45 ***	0.08
Deviance	8,736.59***		1,095.53***		2.18***		2.92***	
ICC	0.02		0.02		0.02		0.02	

<sup>a</sup> Employee  $n = 18,522$ ; country  $n = 26$

<sup>b</sup> Empty model: Intercept = 2.75\*\*\*(0.05); -2 Log Likelihood = 59,969.99; Intraclass Correlation Coefficient = 0.03.

\*  $p < 0.10$

\*\*  $p < 0.05$

\*\*\* $p < 0.01$

Table 4. Multilevel analysis results of work effort<sup>a</sup>

Variables	(1)		(2)		(3)		(4)	
	$\beta$	s.e.	$\beta$	s.e.	$\beta$	s.e.	$\beta$	s.e.
<i>HR practices</i>								
Discretion			-0.10 ***	0.01	-0.10 ***	0.01		
Skills			0.15 ***	0.01	0.16 ***	0.01		
Discretion X skills					0.06 ***	0.01		
Consistency							0.01 **	0.01
<i>National level</i>								
EU member	0.09	0.11	0.11	0.11	0.12	0.11	0.09	0.11
Income inequality (Gini)	-0.02	0.05	-0.02	0.05	-0.02	0.05	-0.02	0.05
GDP per capita	-0.14 ***	0.06	-0.15 ***	0.05	-0.15 ***	0.05	-0.14 ***	0.06
Welfare state effort	-0.08	0.06	-0.06	0.06	-0.06	0.06	-0.08	0.06
<i>Person</i>								
Age	-0.00	0.01	-0.01	0.01	-0.01	0.01	0.00	0.01
Female	0.01	0.02	0.02	0.02	0.01	0.02	0.01	0.02
Years of education	0.01	0.01	0.00	0.01	0.00	0.01	0.01	0.01
<i>Work</i>								
Tenure with organization	-0.01	0.01	-0.01	0.01	-0.01	0.01	-0.01	0.01
Supervisor	0.13 ***	0.02	0.13 ***	0.02	0.12 ***	0.02	0.13 ***	0.02
Work life balance	0.24 ***	0.01	0.23 ***	0.01	0.23 ***	0.01	0.24 ***	0.01
Skill level	0.07 ***	0.02	0.01	0.02	0.02	0.02	0.07 ***	0.02
Hours of work	0.09 ***	0.01	0.09 ***	0.01	0.08 ***	0.01	0.09 ***	0.01
Employability	0.03 ***	0.01	0.03 ***	0.01	0.03 ***	0.01	0.03 ***	0.01
Replaceability	-0.03 ***	0.01	-0.03 ***	0.01	-0.03 ***	0.01	-0.03 ***	0.01
Trade union member	0.01	0.02	0.00	0.02	0.00	0.02	0.01	0.02
Establishment size	0.02 **	0.01	0.01	0.01	0.01	0.01	0.02 ***	0.01
Intercept	3.48 ***	0.08	3.51 ***	0.08	3.49 ***	0.08	3.49 ***	0.08
Deviance	8,043.39***		982.92***		59.65***		3.29***	
ICC	0.04		0.04		0.04		0.04	

<sup>a</sup> Employee  $n = 18,522$ ; country  $n = 26$

<sup>b</sup> Empty model: Intercept = 2.75\*\*\*(0.05); -2 Log Likelihood = 51,649.81; Intraclass Correlation Coefficient = 0.07.

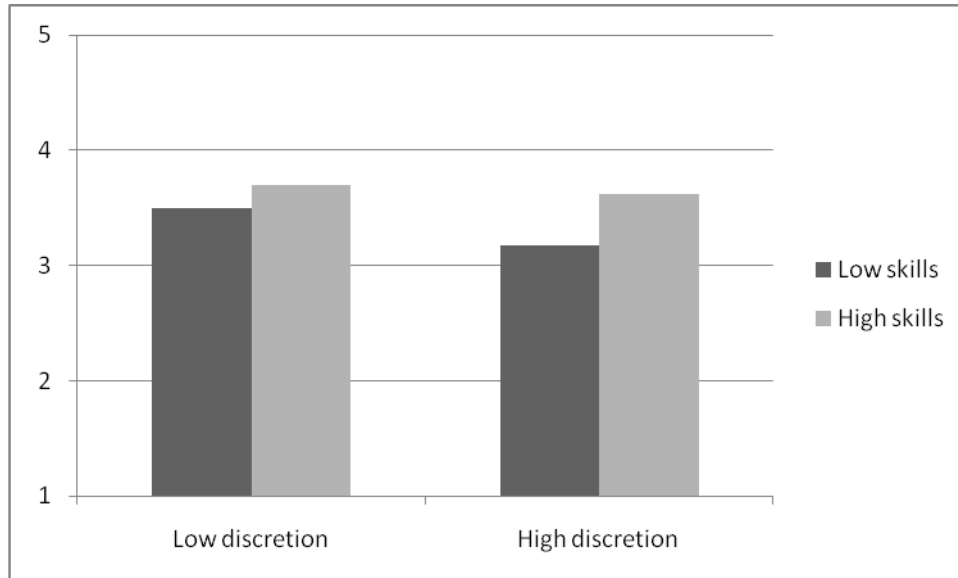
\*  $p < 0.10$

\*\*  $p < 0.05$

\*\*\* $p < 0.01$

Figures

Figure 1. Interaction effect of discretion and skills on work effort



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