Test of a Causal HRM-Performance Linkage Model: Evidence from the Greek Manufacturing Sector

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Although several studies have recognized the relationship between HRM policies and organizational performance, the mechanisms through which HRM policies lead to organizational performance remain unexplored. This paper investigates the pathways leading from HRM policies to organizational performance by using structural equation modelling. Specifically, we used SEM to test a research framework that is constituted by a set of causal relationships between organizational and other contingencies, business strategies, HRM policies, HRM outcomes, and organizational performance. Employing data from 178 organisations operating in the Greek manufacturing sector, results indicate that the impact of HRM policies on organizational performance is mediated through the HRM outputs of skills, attitudes and behaviour, and moderated by business strategies, organizational context and other contingencies. Thus, the paper not only supports that HRM policies have a positive impact on organizational performance but also explains the mechanisms through which HRM policies improve organizational performance.

In today’s global and highly competitive environment, organisations are turning to the human resource management (HRM) function to facilitate the development of a competitive strategy that will help the development of the organisation’s core competencies, which in turn will advance performance. The universalistic, contingency, configuration (Delery & Doty, 1996) and fully integrated (Hall & Torrington, 1998) perspectives are identified among existing theories that investigate the relationship between HRM and performance. The universalistic perspective, or HRM as an ideal set of practices, suggests that a specified set of HR practices (the so called “best practices”) will always produce superior results, regardless of the accompanying circumstances (Pfeffer, 1994). The contingency perspective, or HRM as strategic integration, argues that an organisation’s set of HRM policies and practices will be effective if it is consistent with other organizational strategies (Fombrun, Tichy, & Devanna 1984). The configurational perspective, or HRM as bundles, makes use of the so-called “bundles” of HR practices, which imply the existence of specific combinations, or configurations of HR practices depending on corresponding organizational contexts, where the key is to determine which are the most effective in terms of leading to higher business performance (Guest & Hoque,
The fully integrated perspective argues that HRM strategy does not exist as a separate functional strategy but both HRM strategy and business strategy are developed together rather than separately (Hall & Torrington, 1998).

Although each of the four perspectives - universalistic, contingency, configurational, fully integrated - complements the others by adding constructs, variables or relationships (Alcazar, Fernadez, & Gardey, 2005), a serious limitation that recent reviews of the literature point out is that the link between HRM and business performance is considered like a ‘black box.’ That is, there is a lack of clarity regarding what exactly leads to what (Gerhart, 2005). In empirically investigating the four perspectives, most studies analysed cross-sectional data using either hierarchical regression models (Youndt, Snell, Dean & Lepak, 1996) or competing regression models (Baron & Kenny, 1986), neither of which can infer causality. Thus, Becker and Gerhart (1996) and Fey, Bjorkman and Pavlovskaya (2000) exhorted researchers to use structural equation modelling (SEM) to illuminate the ‘black box’ (Wright, Gardner & Moynihan, 2003) between HRM systems and organizational performance. SEM was recommended because it is particularly appropriate when testing direct and indirect relationships between HRM policies and organizational performance (Dyer & Reeves, 1995) and when testing theoretically derived paths among various exogenous and endogenous variables (Guthrie, Datta, & Wright, 2004). However, although the use of a particular well-established data analytic technique may not represent a contribution to the literature, the primary advantage of SEM compared to regression is that the former allows separating unique variance (“error”) from common variance (“latent variable”) prior to testing relationships among composite variables, considering that causal inferences depend on the nature of the variables being investigated, and not the data analytic methods used (Shadish, Cook, & Cambell, 2002).

Therefore, the aim of this study is to propose a research model that includes the core constituents of the HRM-performance linkage perspective, and to empirically test it by employing the structural equation modelling methodology, instead of the usual regression equation methodology. Furthermore, except for the different analytical tool that we use in this study, we consider the path of several contextual variables on organizational performance, such as management style, organizational culture, translation of HRM strategy into clear set of work programmes and deadlines, and the proactiveness of HRM in strategy making. Considering further, that there are no studies that test theoretically derived paths among various exogenous and endogenous variables in the Greek context, an attempt has been made in this paper to investigate how HRM influences organizational performance in the Greek context.
Research Model and Hypotheses

Although the resource-based-view (RBV) literature had a significant impact on strategic human resource management (SHRM; Barney and Arikan, 2000), few empirical studies have tested the complex manner in which HRM policies create organizational value in the form of a sequence of linked variables (Boselie, Paauwe, & Jansen, 2001). The usual causal pathway suggested by theorists depicts the following sequence:

\[ \text{HRM (individual policies or systems)} \rightarrow \text{HRM outcomes (skills, attitudes, behaviour)} \rightarrow \text{performance (organizational or financial)} \]

Considering this causal pathway, the general framework of mediating models refers to an indirect linkage through HRM outcomes, between HRM and business performance. In these models, we may also see a direct linkage between individual HRM policies, as well as internally consistent systems of HRM policies, and business performance. However, it is not required these linkages to be simultaneously present. It is very possible even in the absence of a direct linkage, some policies to significantly contribute to business performance through the intervening process.

Furthermore, this intervening process may be ‘moderated’ according to business strategies relationship between individual HRM policies, as well as internally consistent systems of HRM policies, and business performance (Youndt et al., 1996). The moderation process is implied by the contingency perspective, which as we said supports that business strategies are followed by HRM policies in determining business performance. However, organizational contextual variables and other contingencies may also moderate this intervening process.

The major objective of mediating-moderating models has been to determine the extent to which individual HRM policies and/or HRM systems directly or indirectly enhance business performance (Katou & Budhwar, 2006). Such a model is presented in Figure 1, which is constituted by two parts: The mediating part refers mainly to the variables (circles) of HRM policies, HRM output, and Organizational performance. The moderating part refers mainly to the variables of Business strategies, Organizational context, and other Contingencies. The arrows connecting two circles (variables) indicate the hypotheses to be tested, as follows:

\[ \begin{align*}
H1a: \text{Organizational context will be associated with Business strategies} \\
H1b: \text{Organizational context will be associated with Organizational performance} \\
H1c: \text{Organizational context will be associated with HRM output} \\
H1d: \text{Organizational context will be associated with HRM policies} \\
H2a: \text{Contingencies will be associated with Business strategies} \\
H2b: \text{Contingencies will be associated with Organizational performance}
\end{align*} \]
H2c: Contingencies will be associated with HRM output
H2d: Contingencies will be associated with HRM policies
H3a: Business strategies will be positively associated with organizational performance
H3b: Business strategies will be positively associated with HRM output
H3c: Business strategies will be positively associated with HRM policies
H4a: HRM policies will be positively associated with Organizational performance
H4b: HRM policies will be positively associated with HRM output
H5: HRM output will be positively associated with Organizational performance

Figure 1
The Research Model

Specifically, although it is expected organizational context and contingencies to be associated with business strategies, organizational performance, HRM output, and HRM policies, the sign of this association depends on the specific variables constituting the organizational context and contingencies constructs. For example, capital intensity and employment size that are two of the major variables constituting contingencies, it is expected to positively be associated with organizational performance (Youndt et al., 1996). On the contrary, life cycle stage and union intensity may not be positively associated with organizational performance (Christensen Hughes, 2002). Similarly, the translation of HRM strategy into clear set of work programmes and deadlines, and the proactiveness of HRM in strategy making
that are two of the major variables constituting organizational context, it is expected to positively be associated with HRM output (Budhwar & Sparrow, 1997; Budhwar, 2000). On the contrary, management style and organizational culture may not be positively associated with HRM output (Miles & Snow, 1984; Trompenaars, 1993), depending on the specific constructs used.

The picture with respect to hypotheses referring to business strategies is clear. It is expected business strategies such as cost reduction, quality enhancement, and innovation to positively affect organizational performance (Porter, 1985), HRM policies (Delery & Doty, 1996), and HRM outcomes (Huselid, 1995; Paul & Anamtharaman, 2003). Furthermore, the picture with respect to the interrelationships of primary interest that are depicted by the hypotheses H4a, H4b and H5, is also clear. For example, Doty and Delery (1997) argued that HRM policies positively influence firm performance by creating a workforce that is skilled, motivated, and empowered. Fey et al. (2000) provided some support for the use of HRM outcomes (motivation, retention and development) as mediating variables between HRM policies and firm performance. Guest (2001) used employee satisfaction and commitment, or employee quality, commitment and flexibility, as mediating variables. Boselie et al. (2001) indicated employee satisfaction, motivation, retention, presence, social climate, and involvement as HRM mediating outcomes between HRM policies and firm performance. Bhakta and Nagy (2005) investigated the relationship between rewards and satisfaction. Park et al. (2003) used employee skill, attitudes, and motivation as mediating variables between HRM systems and firm performance. Paul and Anantharaman (2003) indicated that the intervening variables of employee competence, teamwork, organizational commitment, and customer orientation affect the organizational performance variables of employee retention, employee productivity, product quality, speed of delivery, operating cost, which then determine financial performance.

In the following section we present the research methodology that we will employ in order to test the model of Figure 1. The model specifies all the direct and indirect relationships between HRM policies, HRM outcomes and organizational performance, and moderates for business strategies, organizational context, and contingencies that may influence the endogenous variables of interest.

Method

Participants

A large questionnaire survey in 23 sector industries in the Greek manufacturing sector was carried out between March 2002 and September 2002. A sample of 600 Greek organisations was used from the main Greek directory ICAP (2001). The sample was obtained by employing the stratified methodology. The strata were the 23 manufacturing sector industries including
organisations with more than 20 employees. Twenty percent of the approximately 3,000 organisations were randomly chosen from each stratum of the directory. One hundred and seventy eight (178) usable self-administered questionnaires were received, a response rate of approximately 30 percent. The questionnaire was originally developed in English, then, it was translated into Greek, and finally translated back from Greek to English. The translated questionnaire was piloted in ten organisations, and it was handed to the CEO, or Personnel Officers, or Financial Officers of the sample organisations. The survey questionnaire was completed by one person responsible in each firm for the HRM function. Although we acknowledge that this as a limitation, the application of Harman’s single factor test (Harman, 1967) to all the relevant variables in the model, using the eigenvalue greater than one criterion, revealed seven factors, and not just one. Thus, we believe that the common method bias in the data was relatively limited.

Measures

HRM policies. HRM policies were measured by the four key HRM areas of resourcing (recruitment; selection; separation; flexible work arrangements), development (individual and team training and development; monitoring training and development; careers; work design; performance appraisal), rewards (job evaluation; compensation; promotion arrangements; incentive schemes; benefits), and relations (employee participation; employee involvement; communications; health and safety). These 18 items were measured on a five-point scale ranging from 1 = not very effective to 5 = highly effective (Cronbach’s alpha = 0.952).

Business strategies. Business strategies were measured by eight items (cost reduction, customer service, distribution channels, quality enhancement, brand image, innovation, improvement of existing products, wide range of products) that define potential competitive priorities in manufacturing, including cost, quality and innovation. The business strategy items were measured on a scale ranging from 1 = not very important to 5 = totally essential (Cronbach’s alpha = 0.772).

HRM outcomes. We have classified HRM outcomes with respect to skills, i.e., competent and cooperated; attitudes, i.e., motivation, commitment, satisfaction; and behaviour, i.e., employees staying within the organisation (counterpart of turnover) and presence (counterpart of absenteeism). The HRM outcomes items were measured on a scale ranging from 1 = very bad to 5 = very good (Cronbach’s alpha = 0.952).

Organizational performance. Organizational performance is usually indicated by indices such as effectiveness, i.e. if the organisation meets its objectives, efficiency, i.e. if the organisation uses the fewest possible resources
to meet its objectives, development, i.e. if the organisation is developing in its capacity to meet future opportunities and challenges, satisfaction, of all participants – owners and investors, customers, society, other organizations, and organization members, innovation, for products and processes, and quality, % of products of high quality. The organizational performance items were measured on a scale ranging from 1 = very bad to 5 = very good (Cronbach’s alpha = 0.929).

Organizational contextual variables. Several organizational contextual forces may influence the adoption of such business strategies as ‘management style’ (1 = heavily centralised to 2 = heavily decentralised; Miles & Snow, 1984), ‘organizational culture’ (1 = power-oriented, 2 = role-oriented, 3 = project-oriented, 4 = fulfilment-oriented; Trompenaars, 1993), ‘type of involvement of HRM department in developing business strategies’ (1 = from the outset, 2 = consultative, 3 = implementation; Brewster & Hegewisch, 1994), ‘translation of HRM strategy into clear set of work programmes and deadlines’ (0 = no, 1 = yes; Budhwar & Sparrow, 1997), ‘proactiveness of HRM in strategy making’ (0 = no, 1 = yes; Budhwar, 2000). These five organizational context items produced a Cronbach’s alpha of 0.53, a level that is rather low, due possibly to the fact that this larger composite construct was formed from indicators that should probably not be combined but should be kept separate.

Contingencies. Several contingencies may influence the adoption of business strategies, HRM policies and performance, such as ‘size’ (employment in logs), ‘age’ (in logs), ‘life cycle stage’ (introductory, growth, maturity, decline, turnaround), ‘union intensity’ (percent of employees in unions), ‘capital intensity’ (total assets by employment, in logs), ‘industry’ (0 = industries that their primary inputs for their production come mainly from the agricultural sector, and 1 = industries that their primary inputs for their production do not come from the agricultural sector). These six contingency items produced a Cronbach’s alpha of 0.64, a level that is rather low, due possibly to the fact that this larger composite construct was formed from indicators that should probably not be combined but should be kept separate.

Statistical Analysis

To test the raised research questions of the proposed framework, regression analysis may be used. Specifically, for testing whether business strategies moderate HRM policies, hierarchical regression models may be used (Youndt et al., 1996) and for testing whether HRM outcomes mediate HRM policies and business performance competing regression models may be used (Baron & Kenny, 1986). However, it is argued that the methodology of structural equation models or latent variable models (Hair, Anderson, Tatham, & Black, 1995) is much more powerful in investigating causal relationships.
between categorical variables (Bollen, 1989), and thus this methodology was used in this study.

**Results**

We tested the theoretical model presented in Figure 1 using structural equation modelling (SEM) via the statistical package LISREL (Linear Structural Relations) and the maximum likelihood estimation (MLE: see Jöreskog & Sörbom, 2004). We used MLE because tests of departure from normality, skewness and kurtosis for all variables used (except union intensity) were all within acceptable statistical limits. Furthermore, the sample size of 178 in this study is within the range of 100 to 200 for using MLE procedures (Hair et al., 1995). Moreover, the general rule for SEM is that the number of observations needed for each parameter estimated must be between 5 and 10 observations (Hair et al., 1995), a rule that is fulfilled in the present study. We assessed the overall model fit employing the chi-square test and the normed-chi-square test and examining the root mean squared error of approximation (RMSEA), the goodness of fit index (GFI), the normed fit index (NFI) and the comparative fit index (CFI). A non-significant chi-square 

\( p > 0.05 \) and a value of the normed-chi-square (i.e. value of chi-square / degrees of freedom) between 1 and 2 or 3 indicate that the proposed model is an adequate presentation of the entire set of relationships. The RMSEA considers the fit of the model to the population covariance / correlation matrix. A value of RMSEA less than 0.05 indicates a close fit and a value less than 0.08 represent a reasonable approximation. The CFI traces the relative improvement of the assessed model over a null where all observed variables are assumed to be uncorrelated. The CFI ranges from zero to 1.00, with values over 0.95 indicating a well-fitting model. The NFI and the GFI are also used for investigating the structure that best fits the empirical data. These indices should not go lower than 0.90, but in complex models, the lowest acceptable level for the NFI and GFI is 0.80.

Each latent variable model is accompanied with a path diagram indicating all the causal relationships between the variables involved. The path diagram for the estimated HRM-performance linkage model proposed in Figure 1 is presented in Figure 2. In this figure, the boxes represent exogenous or endogenous observed variables and the circles represent the related latent variables. The light arrows indicate the observed variables that constitute the related latent variable and the bold arrows indicate the structural relationships between the corresponding variables. The figures that are assigned to each arrow show the estimated standardised coefficients. The statistics presented in Figure 2 suggest that our estimated model possesses a satisfactory degree of fit with the data (\( p \) of Chi-Square = 0.15, Normed Chi-Square = 1.06, RMSEA = 0.018, NFI = 0.92, CFI = 0.99, GFI = 0.82).
Turning now to the SEM specific results, the significant arrows between the various variables of the model suggest the following relationships:

- With respect to contingencies, it is seen that life cycle stage, union intensity, age, capital intensity, size and industry have direct links to organizational performance (Huselid, 1995).
- Considering the organizational performance variables, management style, organizational culture, HRM involvement in developing business strategies, translation of HRM strategy into clear set of work programmes and deadlines, and proactiveness of HRM in strategy making have direct links with business strategies and HRM outcomes.
- However, business strategies are followed by HRM policies in determining HRM outcome that consequently determines organizational performance. This result supports the contingency principle (Delery & Doty, 1996), advocating that HRM policies are determined by business strategies, and the mediation principle (Doty & Delery, 1997; Fey et al., 2000), arguing that HRM output mediates HRM policies and organizational performance.
- Although we used eight items in describing business strategies, only the items of cost reduction and customer service gave significant results in determining the business strategy latent variable.
- With respect to the 18 HRM policy items used to describe the HRM policies latent variable, 13 items produced significant results. Specifically, recruitment and selection for resourcing, careers for development, incentives for employee rewards and communication, health and safety, participation, and involvement for employee relations presented the highest standardised coefficients.
- With respect to the eight HRM output items used to describe the HRM output latent variable, seven items produced significant results. Specifically, cooperation with management, cooperation with employees and competence for skills, motivation, commitment and satisfaction for attitudes, and presence for behaviour presented the highest standardised coefficients.
- All six organizational performance items (effectiveness, efficiency, development, satisfaction, innovation, quality) that describe organizational performance produced significant results.

Summarising the above, the path estimates displayed in Figure 2 indicate some divergence from the corresponding paths indicated in the proposed model in Figure 1. Specifically, Table 1 presents all testing results with respect to the hypotheses developed in Figure 1.
Figure 2
The Estimated Model using LISREL

Chi-Square = 733.59  df = 695  p-value = 0.15049  Normed Chi-Square = 1.00  RMSEA = 0.018  NFI = 0.92  CFI = 0.99  GFI = 0.82
+ p < 0.10,  * p < 0.05,  ** p < 0.01  *** p < 0.001
Table 1  
Results of Hypothesis Testing

<table>
<thead>
<tr>
<th>Path</th>
<th>Hypothesis</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational context → Business strategies</td>
<td>H1-1</td>
<td>Support</td>
</tr>
<tr>
<td>Organizational context → Organizational performance</td>
<td>H1-2</td>
<td>Reject</td>
</tr>
<tr>
<td>Organizational context → HRM output</td>
<td>H1-3</td>
<td>Support</td>
</tr>
<tr>
<td>Organizational context → HRM policies</td>
<td>H1-4</td>
<td>Reject</td>
</tr>
<tr>
<td>Contingencies → Business strategies</td>
<td>H2-1</td>
<td>Reject</td>
</tr>
<tr>
<td>Contingencies → Organizational performance</td>
<td>H2-2</td>
<td>Support</td>
</tr>
<tr>
<td>Contingencies → HRM output</td>
<td>H2-3</td>
<td>Reject</td>
</tr>
<tr>
<td>Contingencies → HRM policies</td>
<td>H2-4</td>
<td>Reject</td>
</tr>
<tr>
<td>Business strategies → Organizational performance</td>
<td>H3-1</td>
<td>Reject</td>
</tr>
<tr>
<td>Business strategies → HRM output</td>
<td>H3-2</td>
<td>Reject</td>
</tr>
<tr>
<td>Business strategies → HRM policies</td>
<td>H3-3</td>
<td>Support</td>
</tr>
<tr>
<td>HRM policies → Organizational performance</td>
<td>H4-1</td>
<td>Reject</td>
</tr>
<tr>
<td>HRM policies → HRM output</td>
<td>H4-2</td>
<td>Support</td>
</tr>
<tr>
<td>HRM output → Organizational performance</td>
<td>H5</td>
<td>Support</td>
</tr>
</tbody>
</table>

Discussion

The contribution of this study is two-fold. First, although previous studies on the HRM-performance linkage perspective are based on regression-like analyses, the present study used structural equation modelling. Second, the proposed and tested conceptual HRM-performance linkage framework put some light into the ‘black box’ mediating HRM policies and organizational performance, by considering new organizational context variables.

Analytically, starting with the latent variable of ‘business strategies’ (cost reduction, customer service), path coefficients reveal that it is positively influenced by the ‘organizational context’ variable. This means that the more heavily decentralised the management style, the more fulfilment-oriented (i.e. emphasis on expertise and orientation toward the person) organizational culture is, the more active the involvement of the HRM department is in developing business strategies is, the more the HRM strategy is translated into clear set of work programmes and deadlines is, and the more proactive of HRM in strategy making is, the more positive is the influence of organizational context variables on the development of business strategies. However, we must note here, that although we used 8 items constituting the three types of Porter’s (1985) business strategies of cost (cost reduction), quality (customer service, distribution channels, quality enhancement, brand image), and innovation (innovation, improvement of existing products, wide range of products), only the variables of cost reduction and customer service fit into the model. This is may be due to the fact that Greek manufacturing firms put more emphasis on cost reduction and customer service than on quality or innovation (World Economic Forum, 1998).

Although path coefficients reveal that the latent variable of HRM outcomes (cooperation with management, cooperation with employees, competence, motivation, commitment, satisfaction, presence) is indirectly influenced by the organizational context variable, through business strategies and HRM policies, it has been found that it is directly, moderately and positively influenced by the organizational context variable. This result seems to be very important because it reveals that the internal environment of the organisation influences the skills, attitudes and behaviour of the
employees, which in turn affect organizational performance (Murphy & Southey, 2003). We must note here that, to our surprise employee retention did not fit into the model, contrary to the findings of Boselie et al. (2001); Fey et al. (2000); and Guthrie et al. (2004), who advocate that it affects organizational performance.

The latent variable of HRM policies, that is constituted by resourcing (recruitment, selection), development (individual and team training and development, careers, performance appraisal), rewards (job evaluation, compensation, promotion arrangements, incentive schemes), and relations (employee participation, employee involvement, communications, health and safety), path coefficients reveal that it is heavily and positively influenced by the business strategies variable. This result indicating that business strategies are followed by HRM policies in determining business performance supports the contingency perspective, arguing that an organisation’s set of HRM policies and practices will be effective if it is consistent with other organizational strategies. The variables of separation, flexible work arrangements, monitoring training and development, work design, and benefits did not fit into the model. Although Becker and Gerhart (1996) have identified only three HRM policies that influence organizational performance to be common among various empirical studies, we decided to include in this study as many HRM policies as possible, considering that the proposed research model is tested for the first time in the Greek context using structural equation modelling.

In terms of mediation we found that the latent variable of HRM outcomes mediates the relationship between HRM policies and organizational performance. The results show that HRM outcome strongly and positively affects organizational performance. Furthermore, it is seen that employee skills (cooperation between management and employees, cooperation among employees, competence), attitudes (motivation, commitment, satisfaction) and behaviour (presence) positively affect organizational performance. This finding demonstrates that the relationships between HRM policies and organizational performance may be mediated by HRM outcomes, such as employee skills, attitudes and behaviour. This finding coincides with Doty and Delery (1997) and Park et al. (2003) who argued that HRM policies influence organizational performance by creating a workforce that is skilled and has the right attitudes and behaviour. It also partially supports Guest (2001) for satisfaction and commitment, Boselie et al. (2001) for satisfaction and motivation, and Paul and Anantharaman (2003) for competence and commitment, arguing that these HRM outcomes affect organizational performance. Furthermore, we found that the standardised coefficient of HRM policies on HRM outcomes is equal to 0.90 and the standardised coefficient of HRM output on organizational performance is equal to 1.01. This result contradicts with Dyer and Reeves (1995, p. 661) and Guest (1997, p. 269) who “expect the impact of HRM to become progressively weaker as other factors intervene”.

With respect to the latent variable of organizational performance it is seen that all the variables (effectiveness, efficiency, development, satisfaction, innovation, quality) used to constitute this construct fit properly into the model. However, path coefficients reveal that organizational performance is moderately and positively influenced by the other contingencies variable, supporting thus the argument of Harel and Tzafrir (1999) that organisations do not operate in a vacuum. Specifically, with the introduction of the ‘life cycle stage’ variable we tried to capture maturity effects of the organisation, or to assess the stage of organizational development. It is argued that HRM policies change over time depending on whether the organisation is in a stage of formation, growth, maturity, or decline (Budhwar & Sparrow, 1997). There is
much evidence that unions affect a firm’s performance (Freeman & Medoff, 1984). In our study we found that union intensity is positively related to organizational performance, supporting thus similar findings of Arthur (1994) and Huselid (1995). Superior performance becomes crucial in firms that make large investment in plant, equipment and other assets. In our research we found that capital intensity is positively related to organizational performance (Hayes, Wheelwright & Clark, 1988). We also found that the variable of size is positively related to organizational performance. Such results are expected as it is now known that large firms tend to have established HRM systems that facilitate in improving performance of the organisation (Brewster et al., 1996). Furthermore, we found that the variable of age, used to capture any founding values of the organisation (Delaney & Huselid, 1996), positively influences organizational performance. Finally, we found that organizational performance depends on the industry specific effects (Shih et al., 2006).

Summarizing, we may say that although past research has demonstrated that there exists a relationship between HRM policies and organizational performance, it has neglected to investigate the mediating mechanisms, usually called the “black box”, through which HRM policies are hypothesised to affect organizational performance (Park et al., 2003). The results of this study support that HRM policies positively affect organizational performance of Greek manufacturing companies. Specifically, the relationship between HRM policies and organizational performance is mediated through the HRM outcomes of skills, attitudes and behaviour, and is moderated by business strategies, organizational context and other contingencies, giving support to the contingency perspective of the HRM-performance linkage. Thus, this paper not only supports that HRM policies have a positive impact on organizational performance, also explains the mechanisms through which HRM policies improve organizational performance and that too in a non US/UK context where most of research related to field has been conducted.

The conclusions above, nonetheless, should be treated with caution. This is mainly because a single respondent from each organisation provided information on HRM policies and practices, HRM outcomes and perceived measures of organizational performance, respondent bias may have set in the form of upward or downward reporting of the measures (Paul & Anatharaman, 2003). Furthermore, the use of global composite constructs from conceptually distinct items may have reduced the validity of inferences about specific contextual variables. In spite of such limitations, the study makes some important contributions. It tests theoretical assumptions in smaller firms and in a non-USA/UK context. It provides support to the mediation and contingency perspective. The study supports for the use of HRM outcomes (skills, attitudes, behaviours) as mediating variables between HRM policies and business performance. Thus, the research suggests that models depicting direct relationships between HRM policies and business performance may be too simplistic and does not show the causalities involved. This meets the advice of Becker and Gerhart (1996) and Fey et al. (2000) to test models with mediating variables such as HRM outcomes, using the methodology of structural equation modelling, and thus, contributing to this academic area of research.

The argument that HRM makes an impact on the bottom line may not be in dispute. However, what is of interest is in knowing how this impact has taken place. Thus, a managerial implication of this study is not only the demonstration that HRM policies are positively related to organizational performance in the Greek context, but also that employee skills, attitudes, and behaviours are three major components of the
“black-box” that generate organizational competitiveness from HRM policies. Managers should recognise that changes in employee skills, attitudes, and behaviours that are caused by HRM policies precede changes in organizational performance (Katou & Budhwar, 2006).

Considering the limitations of the study we may propose paths for future research. Specifically, in this study we tried to explore the question of causality using cross-section data. However, causality can only really be tested with data collected at different points in time. Thus, the field would greatly benefit from some time-series studies in the future. Further, considering the pace of globalisation, there is a strong need for such investigations in emerging markets, through the inclusion of organizational context variables (Katou & Budhwar, 2006). However, future research should treat contextual and other contingency variables either separately or in related groups, allowing thus the development of safe inferences concerning their impact on organizational performance.

References


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