Towards a moderated mediation model of innovative work behaviour enhancement

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Abstract
Purpose – The purpose of this paper is to investigate a moderated mediation model of innovative work behaviour enhancement. Perceived firm (organizational and market) performance was assumed to moderate the relationships between leader-member exchange (LMX) and organizational citizenship behaviour (OCB), on the one hand, and employability, on the other hand. In a previously validated human resources management (HRM) model, employability appeared to be a full mediator in the relationship between LMX and OCB, and innovative work behaviour, being the outcome measure.
Design/methodology/approach – Data were collected from a sample of 487 pairs of employees and their immediate supervisors working in 151 small and medium-sized enterprises (SMEs). Structural equation modeling (SEM) was used to confirm the factor structure of the baseline model variables, including LMX, OCB, employability, and innovative work behaviour. The moderating effect of firm performance was tested using multi-group SEM.
Findings – Results indicated that firm performance had a substantial influence on the baseline model’s relationships. More specifically, firm performance appeared to moderate partially a mediation model wherein LMX was assumed to be associated with innovative work behaviour, through employability, being the mediator. Moreover, firm performance also appeared to moderate conclusively a model with employability as a mediator in the relationship between OCB and innovative work behaviour.
Originality/value – To the best of our knowledge, this is the very first study that investigates a mediation model of innovative work behaviour enhancement moderated by firm performance. It appears that high- vs low-performance firms present very different organizational environments for an employee to work in. Obviously, these situational factors affect workers’ employability. This study adds particular knowledge to the scholarly literature in this field since not much is known about the science and practice of HRM within SMEs.
Keywords Employability, Small and medium-sized enterprises, Leader-member exchange, Innovative work behaviour, Organizational citizenship behaviour, Perceived firm (organizational and market) performance
Paper type Research paper

Introduction
Employability (or career potential) not only depends on individual factors, but on situational factors as well (Nauta et al., 2009). The nature of employees’ working environments, and, more specifically, firm performance, has a significant bearing on their attitudes and behaviour (Patterson et al., 2004; Schneider et al., 2003). Due to the
financial and ensuing economic crisis, a dichotomy has been created between so-called high- and low-performance (in comparison with the benchmark) firms, which could in turn have an impact on human resources management (HRM) practices within the organization (Archibugi and Filippetti, 2011b; Isaksen et al., 2001).

Kirkman et al. (1999) identified several important characteristics of high-performance firms, including employee involvement, participation, empowerment, and a sound learning environment. High-performance firms focus on employee development, providing them with opportunities to experiment with new ideas (Kirkman et al., 1999). Opportunities for self-development, both inside and outside of one's job, experimenting, and the absence of rules and regulations which might otherwise hinder one from trying out new things are important for employability enhancement (Nauta et al., 2009). If one feels that there is freedom to take initiative without any restrictions, such as formal rules of conduct, and if one receives initiative encouragement and support from supervisors, then employee innovation can be enhanced (Amabile and Gryskiewicz, 1989; Ekvall and Rhyhammar, 1999).

These so-called situational factors are often assumed to be organizational realities in high-performance firms when compared to low-performance firms. Since low-performance firms must first deal with the limited resources available for employee learning and experimentation with new ideas, and since these firms do not have much opportunity for supervisor involvement in employee development, they are inclined to focus on control systems (Gill and Murray, 2009).

In a previously validated HRM model, employability appeared to be a full mediator in a model comprising the relationship between leader-member exchange (LMX) and organizational citizenship behaviour (OCB), on the one hand, and innovative work behaviour, on the other hand (Stoffers and Van der Heijden, to be resubmitted). As a consequence of increased knowledge, skills, and expertise (George and Brief, 1992), the amount of innovative work behaviour from employees rises as well (Leonard and Sensiper, 1998; Youndt et al., 1996; Verworn and Hipp, 2009). That is to say, LMX and OCB enhance employee innovative work behaviour through employability (Stoffers and Van der Heijden, to be resubmitted).

In this contribution, we will focus on the influence of perceived firm (organizational and market) performance, being a potential moderator, on the previously established mediation model of innovative work behaviour enhancement (Stoffers and Van der Heijden, to be resubmitted), (see Figure 1). Given the lack of HRM research and practice in small and medium-sized enterprises (SMEs) (Huselid, 2003; Van der Heijden, 2011), data have been gathered within a considerable amount of SMEs.

In the next section, an overview of the theoretical literature on the concepts and relationships between the variables under study will be given, followed by the formulation of our hypotheses. After that, we will go into an explanation of the research methodology, followed by the outcomes of our preliminary analyses. To follow through, Structural Equation Modeling (SEM) was performed in order to confirm the factor structure of the baseline model variables, and to test our hypothesized moderated mediation model. Finally, we will discuss our findings, and we will explore some possible future research perspectives. In conclusion, we will render the practical implications of our study.

**Moderating effect of firm performance**

*Reciprocal relationships*

Yuchtman and Seashore (1967) conceptualized organizational performance in terms of the key internal and external factors upon which the organization depends for...
Figure 1.
A mediation model moderated by firm performance.
survival (see also Ford and Schellenberg, 1982). Schneider et al. (2003) argued that, in most empirical research, an implicit, causal relationship has been hypothesized from a broad spectrum of employee behaviour to organizational performance, without taking possible reciprocal effects of performance into account at the same time. As such, Schneider et al. (2003) argued that there is growing empirical evidence for alternative causal models, and they examined the relationship between financial and market firm performance and employee behaviour over time, suggesting reciprocal relationships. The scholars found that firm performance indeed has an influence on employee attitudes and behaviour. In a similar vein, March and Sutton (1997) suggested that alternative, causal relationships and models in organizational research “are sufficiently plausible to make simple causal models injudicious” (p. 700).

The influence of low- and high-performance firms as moderators in a mediation model of innovative work behaviour enhancement

The benefits of maintaining close relationships and high-quality exchanges between employee and supervisor (LMX) and individual development due to employees’ discretionary behaviour (OCB) have been shown to have an indirect effect on innovative work behaviour, through its positive effects on workers’ employability (Stoffers and Van der Heijden, to be resubmitted). As a result of LMX and OCB, improved knowledge, skills, and abilities (George and Brief, 1992) can be achieved, hence adding to employees’ career potential. Innovation initiatives tend to depend profoundly on employees’ knowledge and expertise (Ericsson, 1999; Youndt et al., 1996), therefore, a better understanding of ways to improve these is needed.

High- vs low-performance firms present very different environments for one to work in Mannion et al. (2005), and might comprise an interesting moderator influencing the effects of the distinguished situations factors (LMX and OCB) in the light of a further increase of employability and workers’ innovative work behaviour. High-performance firms have incorporated a number of human resource policies that are aimed at enhancing employee skills, knowledge, and flexibility (Kirkman et al., 1999). White (1994) emphasized the importance of the relationship between having employed competent/skilled employees, who focus on and succeed in satisfying customers, and improving work processes (e.g. innovation), herewith contributing to high-performance firms. In a similar vein, Gill and Murray (2009) suggested that continuous acquisitions and applications of employee knowledge, skills, and beliefs are essential aspects of high-performance firms. The levels at which employers challenge, motivate, and empower employees and value and reward their learning encourage employability (Estienne, 1997). To conclude, the previously mentioned enhancing situational factors represent the organizational realities of high-performance firms. Employees who perceive that a firm is doing better in comparison to its competitors, and who enjoy favourable prestige and status, identify more strongly with, and, as a result, demonstrate positive attitudes and behaviour towards the firm (Carmeli et al., 2007; Jacinto and Carvalho, 2009). Organizational status and prestige play a substantial role in shaping employee attitudes, behaviour (e.g. OCB), and actions, and they are often a reflection of achievements and performance (Carmeli, 2005; Carmeli et al., 2007; Dukerich et al., 2002; Dutton et al., 1994). Analogously, according to Litwin and Stringer (1968), perceptions of work environments evoke outcome expectancies, instrumentalities, and valuations.

Low-performance firms, on the other hand, cannot overcome long-term success barriers. According to Gill and Murray (2009), limited resources for employee learning and new-idea experimentation, and a lack of supervisory involvement in employee
Barriers also include a need for supervisor control, and intentional and unintentional foci on regulations, performance evaluations, compensation, budgets, and expense monitoring (i.e. a focus on short-term performance only) (Gill and Murray, 2009). Organizational constraints associated with low-performance firms, such as a lack of tools, budgetary support, training, and time, correlate negatively with OCB because they motivate employees to focus more on in-role behaviour (Organ et al., 2006).

LMX researchers have consistently called for the examination of possible moderators, with regard to the LMX to performance relationships (e.g. Erdogan and Liden, 2002; Scandura, 1999). However, the majority of previous scholarly work has not taken the broader social context into account when studying LMX. Taking a contextual approach is essential as it most closely mirrors the theoretical foundations of LMX and provides the most accurate representation of how a relationship exits in firms (Mayer and Piccolo, 2006). In a similar vein, Uhl-Bien et al. (1997) and Dansereau et al. (1975) suggested that there are several situational moderators of LMX-outcome relationships and constraints, such as, for instance, available resources and time. More explicitly, limited resources are associated with low-performance firms, and ample resources are associated with high-performance firms.

Delaney and Huselid (1996) conceptualized perceptions of organizational performance, which included two variables: perceptions of firm performance relative to similar organizations; and perceptions of firm performance relative to product market competitors. Their measure is relative (i.e. benchmarked), and it has been derived from questions that ask supervisors to assess organizational performance in relation to the performance of industrial competitors. In the next section, we will formulate our hypotheses that follow from our theoretical overview.

Hypotheses
The dichotomy between high- and low-performance firms could have an impact on HRM practices within the organization. It is assumed that firm performance influence the strength of the relations in the mediation model, with LMX and OCB being predictors of innovative work behaviour, through employability, being the mediator.

Specifically, employability is assumed to mediate the relationship between LMX and innovative work behaviour, and this relationship is supposed to be stronger for employees who work in firms with a high perceived organizational performance (H1a), and with high perceived market performance (H1b). In a similar vein, employability is assumed to mediate the relationship between OCB and innovative work behaviour, and this relationship is supposed to be stronger for employees who work in firms with a high perceived organizational performance (H2a), and with high perceived market performance (H2b).

Methods
Participants and procedure
This study was carried out among pairs of employees and supervisors working in SMEs in the province of Limburg, in the south of the Netherlands. Using the European Union definition, SMEs are commercial organizations (firms) which employ fewer than 250 people. The validity of self-ratings is proven to be higher when employees are cognizant of the fact that their supervisors are also providing ratings (Mabe and West, 1982), thus resulting in a suppression of the leniency effect (Arnold and MacKenzie Daveys, 1992; Hoffman et al., 1991). The final sample consisted of 487 pairs of
The employees held numerous types of employment, at middle and higher occupational levels within 151 SMEs, allowing more opportunity for individual innovation (Scott and Bruce, 1994). Sampling criteria included the geographical representation of SMEs throughout Limburg, their various branches, and the willingness of the company to improve workers’ employability and their innovative work behaviour. The companies were approached through the researchers’ personal contacts that were established by means of support from the province of Limburg and The Employers Association for SMEs in Limburg (convenient sampling).

From the employees, 290 were men (59.5 per cent) and 197 were women (40.5 per cent). In addition, 255 of the employees were < 40 years old (52.4 per cent) and 232 were ≥ 40 years old (47.6 per cent). Their mean age was 38 years old (SD = 11.05), and their average organizational tenure was 7.43 years (SD = 5.51). In total, 81.9 per cent of the supervisors were men and 18.1 per cent were women. Their mean age was 43 years old (SD = 9.23).

For the purpose of respondent anonymity and in order to mitigate social desirability, two nominally identical (employee version and supervisor version) on-line questionnaires were developed and fully administered by an independent agency under the supervision of the researchers. All employees received an anonymous feedback report demonstrating their scores on the model variables, accompanied by interpretation guidelines and a clear outline of ways to bring about improvement in the light of future employability management.

The supervisors completed a questionnaire which consisted of amended items phrased to assess their corresponding subordinates. To avoid invalid data from being collected due to training, or perhaps the fatigue of overburdened supervisors, and to protect data independence, one supervisor filled out ratings for a maximum of three employees (see also Van der Heijden, 2000), striving for an adequate distribution of respondents across departments and educational levels. To prevent common-method bias, it is important to obtain data from different sets of respondents (Doty and Glick, 1998; Podsakoff et al., 2003; Podsakoff and Organ, 1986; Spector, 1987). Data on employability and LMX were obtained from the employees themselves, and data on OCB, innovative work behaviour and perceived firm (organizational and market) performance were obtained from their immediate supervisors.

**Measures**

Employability was assessed with Van der Heijde and Van der Heijden’s (2006) employability (or career potential) instrument, which was proven to have sound psychometric qualities (see also Van der Heijden et al., 2009, 2005; Van der Heijden and Bakker, 2011). The five dimensions included: occupational expertise (15 items), anticipation and optimization (eight items), personal flexibility (eight items), corporate sense (seven items), and balance (nine items). Sample items for the self-ratings’ version of the measure were: I consider myself competent to indicate when my knowledge is insufficient to perform a task or solve a problem; I approach the development of my weaknesses in a systematic manner; I adapt to developments within my organization; I share my experience and knowledge with others; and I achieve a balance in alternating between reaching my own career goals and supporting my colleagues. All 47 items comprising the five dimensions were scored using a six-point Likert scale with response formats ranging from, for instance, “not at all” to “to a considerable degree”, and “never” to “very often”, depending on the item’s wording.
LMX was measured using Graen et al. (1982) seven-item version LMX instrument. Meta-analytical empirical research has shown that the LMX 7 provides the soundest psychometric properties, and the highest correlations with outcomes, compared to all other available instruments (Gerstner and Day, 1997). Usually, LMX is included as a dyadic construct in empirical work; however, for the purpose of this study, we only incorporated LMX in terms how the employees perceived the supervisor-subordinate relationship. Six items assessed leader-member relationships concerning three dimensions: trust (two items); respect (two items); obligation (two items); and one global item which addressed relationship quality. Sample items were: How well does your supervisor recognize your potential?; How well does your supervisor understand your job problems and needs?; I have enough confidence in my leader that I would defend and justify his/her decision if he/she were not present to do so; and How would you characterize your working relationship with your leader? Participants scored all seven items on a five-point Likert scale ranging from 1 (not at all) to 5 (extremely).

OCB was assessed using Podsakoff et al. (1990) 24 item OCB questionnaire comprising five dimensions: altruism (five items); conscientiousness (five items); sportsmanship (five items); courtesy (five items); and civic virtue (four items). Supervisors were asked to indicate the OCB of their subordinates. Example items included: this worker helps others who have been absent; this worker is one of my most conscientious employees; this worker consumes a lot of time complaining about trivial matters; this worker tries to avoid creating problems for co-workers; and this worker attends meetings that are not mandatory, but are considered important. Participants rated all of these 24 items on a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Innovative work behaviour was measured using the nine-item scale developed by Janssen (2000, 2001). Three items comprised the dimensions of: idea generation, three to idea promotion, and three items dealt with idea realization. Supervisors were asked to indicate the innovative work behaviour of their subordinates. Some examples of scale items are: this worker generates original solutions for problems; this worker acquires approval for innovative ideas; and this worker transforms innovative ideas into useful applications. All nine items were scored using a seven-point Likert scale with a response format ranging from “never” to “always”.

To measure perceived firm performance, we used 11 items from previously scholarly work by Delaney and Huselid (1996) that encompasses two performance measures: organizational performance; and market performance. The first measure, organizational performance, consists of seven items assessing respondents’ perceptions of their firm’s performance during the past three years as compared to that of similar organizations. One example is as follows: how would you compare the organization’s performance over the past three years to that of other organizations that do the same kind of work, e.g. the quality of products, services, or programmes? The second measure, i.e., market performance, consists of four items concerning respondents’ perceptions of their firm’s performance during the past three years relative to product market competitors. One example is as follows: compared to other organizations that do the same kind of work, how would you compare your organization’s performance during the past three years in terms of growth in sales? The respondents were asked to assess their organization’s performance in relation to its key competitors on a Likert scale, (ranging from 1 = much worse than the competitors, to 4 = much better than the competitors).
The measures for LMX and the perceived firm (organizational and market) performance used in this study were originally constructed in English. The translation-back translation methodology has been used to establish conformity of meaning and to heighten linguistic qualities (Hambleton, 1994). For the measures of OCB, employability and innovative work behaviour, previously validated Dutch scales have been used (see respectively De Clercq et al., 2008; Janssen, 2001; Van der Heijde and Van der Heijden, 2006).

**SEM**

To test the research model presented in Figure 1, SEM analyses (Bollen, 1989) were carried out by using the AMOS software package (Arbuckle, 2006; Byrne, 2010). Maximum likelihood estimation of covariance matrices was used in all SEM analyses, and model fit was assessed using three indices: $\chi^2$ (Jöreskog, 1969); root mean square error of approximation (RMSEA); and the goodness of fit index (GFI). Subscale scores for the different dimensions of each construct were used as estimates of the latent constructs instead of raw scores for all constituting items (Coffman and MacCallum, 2005).

Before testing the structural relationships among the model variables, it was necessary to establish that the latent variables represented distinct constructs. LMX and employability were self-measures captured from employees, while the perceptions of OCB and innovative work behaviour were captured from their immediate supervisors. To test both convergent and discriminant validity, a confirmatory factor analysis (CFA) using SEM was conducted. Again, scale scores were used as estimates of latent construct indicators in lieu of raw scores.

**Hypotheses’ testing**

In order to test the assumed moderating effects of firm performance, we conducted multi-group SEM. Our full sample ($n = 487$) was divided (median-split) into two sub-samples: high organizational performance ($n = 283$) and low organizational performance ($n = 204$). Furthermore, the full sample ($n = 487$) was divided (median-split) into two sub-samples: high market performance ($n = 210$) and low market performance ($n = 277$). In general, a criticism of this method has been that dichotomizing leads to less powerful and less accurate statistical tests (e.g. Cohen, 1983; Maxwell and Delaney, 1993). However, the criticism has not stopped researchers from dichotomizing their continuous variables prior to analysis (MacCallum et al., 2002). Results from DeCoster et al. (2009) indicated that a naturally categorical variable is a valid justification for dichotomization. In this study, we have tested a mediation model distinguishing between high- vs low-performance firms. High- vs low-performance firms present very different organizational environments for an employee to work in Mannion et al. (2005).

We used the Aroian Test of mediation admission (Aroian, 1947) to assess both the significance and strength of the mediating relationships among, first, LMX, employability, and innovative work behaviour ($H1a$ and $H1b$), and, second, OCB, employability, and innovative work behaviour ($H2a$ and $H2b$) across two measures of firm performance: perceived organizational performance (high vs low) and perceived market performance (high vs low). The Aroian Test produces a $z$-value and associated $p$-value based on the formula shown as follows:

$$z-value = \frac{a \times b}{\sqrt{b^2 \times S_a^2 + a^2 \times S_b^2 + S_a^2 \times S_b^2}}$$
where $a$ is the unstandardized beta between the independent variable and the mediator when only those two variables are included in the regression model, and where $b$ is the unstandardized beta between the mediator and the dependent variable when both the independent variable and the mediator are regressed on the dependent variable, and $S_a$ and $S_b$ are the standard errors associated with $a$ and $b$, respectively. Among a number of mediation admission tests (Goodman, 1960; Sorbel, 1982), the Aroian method was chosen for two reasons. First, unlike similar methods, the formula used to calculate the $z$-value includes a product term for $S_a^2$ and $S_b^2$, thereby not making the assumption of vanishing error as assumed in the more prevalent Sorbel test (Baron and Kenny, 1986; Sorbel, 1982). Second, the Goodman test (Goodman, 1960) subtracts – rather than adds – the product from the denominator, making the assumption that the error term is not a confounding factor in a test of mediation. Consequently, the Aroian test is both more conservative and robust when it comes to assessing mediation admission.

Results from the Aroian tests were used in two ways. First, two separate analyses were conducted for both high and low organizational performance perceivers, and for both high and low market performance perceivers. Using $p$-values associated with the Aroian $z$-values, the outcomes of the analyses suggested whether mediation was admissible for both, either, or neither of the high versus low perceivers. Second, the $z$-values for both high and low-performance perceivers were compared in order to suggest whether mediation was more admissible for high-performance perceivers. A grouping of consistently higher $z$-values for high perceivers of both types of performance suggested the veracity of our hypotheses, and hence whether and which firm performance perceptions moderated the relationships implied by the model (see Figure 1).

**Results**

*Test of the mediation model moderated by perceived firm performance*

Results of the CFA suggested both convergent and discriminant validity (see specific results in Table I), hence the authors assumed that construct validity had been established.

$H_1a$, $H_1b$, $H_2a$, and $H_2b$ posited the moderating effects of firm performance within a model wherein employability was hypothesized to be a mediator between LMX and OCB, on the one hand, and innovative work behaviour, on the other hand. In order to test moderation effects, our sample was split into two sub-samples (see the methodology section for more precise information in this regard).

The outcomes of the Aroian Test of mediation admission suggested that mediation is warranted in the relationship found among LMX and innovative work behaviour, through employability, for high organizational performance perceivers ($z$-value = 2.328; $p < 0.05$), but not for low perceivers ($z$-value = 0.782; $p = 0.434$). For market performance perceivers, neither the high ($z$-value = 1.858; $p = 0.063$) nor low-performance perceivers’ ($z$-value = 1.42; $p = 0.157$) group justified a conclusion of mediation.

**Table I.**

<table>
<thead>
<tr>
<th></th>
<th>$n$</th>
<th>$\chi^2$</th>
<th>df</th>
<th>GFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confirmatory factor analysis</td>
<td>487</td>
<td>727.873</td>
<td>160</td>
<td>0.867</td>
<td>0.085</td>
</tr>
</tbody>
</table>

*Note:* All $\chi^2$ significant at $p < 0.001$.
higher $z$-values for high organizational (2.328 vs 0.782) and high (1.858 vs 1.416) market performance perceivers suggested that both types of high performance moderate the mediation effect between LMX and innovative work behaviour, through employability. However, the non-significant mediation for three of the four Aroian tests suggested that mediation is weak at best. Therefore, $H1a$ and $H1b$ were only partially supported.

The Aroian Test of mediation admission indicated that mediation is warranted for the relationship among OCB and innovative work behaviour, through employability, for both high ($z$-value $= 3.404; p < 0.001$) and low ($z$-value $= 2.850; p < 0.01$) organizational performance perceivers. The same is true for high ($z$-value $= 3.155; p < 0.01$) and low ($z$-value $= 3.056; p < 0.05$) market performance perceivers. The higher $z$-values for high organizational (3.404 versus 2.850) and high market (3.155 vs 3.056) performance perceivers imply that both types of high performance moderate our hypothesized mediation model. Therefore, $H2a$ and $H2b$ were supported. These results are summarized in Tables II and III.

**Discussion**

Firm performance appeared to moderate partially a mediation model wherein LMX was assumed to be associated with innovative work behaviour, through employability, being the mediator. Moreover, firm performance also appeared to moderate conclusively a model with employability as a mediator in the relationship between OCB and innovative work behaviour. It was found that the supervisors’ perceptions of (high or low) organizational performance influenced leadership style and HRM (i.e. opportunities and possibilities for employees to develop and to learn the value of work-related activities), resulting in certain patterns of behaviour within the organization. The benefits of maintaining close relationships and high-quality exchanges between an employee and his or her supervisor (LMX), and individual development due to employees’ discretionary, voluntary behaviour (OCB) appeared to have an indirect effect on innovative work

### Table II.

Results of the multi-group SEM: fit indices of the mediation model moderated by perceived firm performance

<table>
<thead>
<tr>
<th>n</th>
<th>$\chi^2$</th>
<th>df</th>
<th>GFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full sample</td>
<td>487</td>
<td>949.466</td>
<td>163</td>
<td>0.842</td>
</tr>
<tr>
<td>Sub sample high organizational performance</td>
<td>283</td>
<td>661.758</td>
<td>163</td>
<td>0.818</td>
</tr>
<tr>
<td>Sub sample low organizational performance</td>
<td>204</td>
<td>531.472</td>
<td>163</td>
<td>0.801</td>
</tr>
<tr>
<td>Sub sample high market performance</td>
<td>210</td>
<td>487.340</td>
<td>163</td>
<td>0.816</td>
</tr>
<tr>
<td>Sub sample low market performance</td>
<td>277</td>
<td>653.130</td>
<td>163</td>
<td>0.818</td>
</tr>
</tbody>
</table>

**Note:** All $\chi^2$ significant at $p < 0.001$

### Table III.

Results of Aroian tests of mediation admission

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Variables</th>
<th>Measure of performance</th>
<th>$z$-value</th>
<th>$p$-value</th>
<th>Supported?</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H1a$</td>
<td>LMX→employability→IWB</td>
<td>Organizational HIGH</td>
<td>2.328</td>
<td>&lt;0.05</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>LMX→employability→IWB</td>
<td>Organizational LOW</td>
<td>0.782</td>
<td>0.434</td>
<td>Yes</td>
</tr>
<tr>
<td>$H1b$</td>
<td>LMX→employability→IWB</td>
<td>Market HIGH</td>
<td>1.858</td>
<td>0.063</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>LMX→employability→IWB</td>
<td>Market LOW</td>
<td>1.416</td>
<td>0.157</td>
<td>Yes</td>
</tr>
<tr>
<td>$H2a$</td>
<td>OCB→employability→IWB</td>
<td>Organizational HIGH</td>
<td>3.404</td>
<td>&lt;0.001</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>OCB→employability→IWB</td>
<td>Organizational LOW</td>
<td>2.850</td>
<td>&lt;0.01</td>
<td>Yes</td>
</tr>
<tr>
<td>$H2b$</td>
<td>OCB→employability→IWB</td>
<td>Market HIGH</td>
<td>3.155</td>
<td>&lt;0.01</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>OCB→employability→IWB</td>
<td>Market LOW</td>
<td>3.056</td>
<td>&lt;0.05</td>
<td>Yes</td>
</tr>
</tbody>
</table>
behaviour, through the positive effects on workers’ employability (career potential). Since LMX and OCB appeared to improve workers’ knowledge, skills, and abilities, representing their employability, their innovative work behaviour improves subsequently as well (see also Stoffers and Van der Heijden, to be resubmitted).

Employees are attracted to successful organizations, and they are likely to remain with such organizations, as there is growing evidence regarding reciprocal relationships between organizational performance and employee attitudes (Heskett et al., 1997; Schneider et al., 1998). This might explain why high organizational performance moderates the mediation model examined in this paper. HRM strategies of high-performance firms include enhancing employee skills, knowledge, and flexibility (Kirkman et al., 1999).

Estienne (1997) already argued that supervisors influence employability by challenging, motivating, and empowering employees (i.e. a focus on learning), which include characteristics that are in accordance with the essentials of SMEs (i.e. less bureaucracy, small hierarchical distance between supervisors and employees, owner expertise, and closeness between owners and customers). Previous research suggested that these essentials encourage innovation (Madrid-Guijarro et al., 2009). Indeed, SMEs focusing on innovation as a core business strategy enlarge productivity, growth potential, and the likelihood of survival (Cefis and Marsili, 2006).

Gill and Murray (2009) reasoned that low-performance firms possess characteristics, such as limited resources and commitment for employee learning and new-idea experimentation, a non-learning culture focusing on supervisor control and regulation. These characteristics are associated with poor innovative SMEs (Mohen and Roller, 2005). The recent financial crisis, and the economic crisis that soon followed, rigorously reduced the short-term willingness of companies to invest in innovation (Archibugi and Filippetti, 2011a; OECD, 2009a; Paunov, 2012). The most important obstacles concerning innovation are associated with resources and expenses, which appear to have a larger impact on small firms (Madrid-Guijarro et al., 2009). SMEs have the advantages of flexibility and adaptability, but they also have the disadvantage of resource limitation when attempting to become more innovative (Freel, 2000).

Limitations and recommendations for further research

Several limitations and opportunities for additional research were identified. A convenient sampling strategy was used in this study, so the participants did not necessarily fully represent populations of SMEs or employees. Although a multi-source approach has been used, which allowed for greater insight into the effects of raters, it is preferable in future studies to combine both subjective and objective measures. Another limitation is that all data was collected at one point in time, that is, was cross-sectional. A longitudinal design would provide stronger evidence and enable testing of both the causal and reciprocal effects necessary to examine the role of time in the development of the model variables. Moreover, future research building on in-depth, qualitative methods should extend and deepen the findings, including the process of collecting information on HRM practices perceived by top managers, supervisors, and subordinates. Moreover, all data were collected using questionnaires, which might have resulted in response set consistency.

We have used perceived firm performance as a moderating variable in our mediation model. According to Delaney and Huselid (1996), perceptual data introduces limitations through increased measurement error and the potential for mono-method bias, but most scholars have set a precedent by using such measures. Next to subjective ones, future research should use objective measures for firm performance,
such as turnover, profit, productivity, or a number of patents. Previous empirical research suggests that measures of perceived organizational performance correlate positively, from moderately to strongly, with objective measures of firm performance (Dollinger and Golden, 1992; Powell, 1992), yet provide additional insights. In addition, the use of perceptual measures permits analyses and comparisons of SMEs among various industries to be made, whereas financial measures are too disparate among branches.

Scholarly work could also focus more closely on the influences of SME's organizational characteristics. A cross-validation of branches (i.e. labour and product/service markets) and (national) cultures is encouraged to justify using the proposed model.

**Practical implications**

In knowledge-based economies such as the Netherlands, where SMEs make up more than 99 per cent of all enterprises, 68 per cent of employment, and 62 per cent of value added (European Commission, 2011; Roth, 2011), highly skilled employees are essential in order to meet all labour market requirements (Dundon and Wilkinson, 2009; Stoffers and Van der Heijden, 2009). Hornsby and Kuratko (2003), Huselid (2003), and Van der Heijden (2011) argued that there is a considerable lack of empirical research regarding HRM practices in SMEs. The recent financial and economic crises have influenced SMEs particularly (Dallago and Guglielmetti, 2012), resulting in a severe decline in the availability of credit and tightening of credit terms, and a rigorous reduction in the demand for goods and services coupled with increased payment delays on receivables (OECD, 2009b). SMEs also enjoy fewer possibilities, in comparison to large firms or multinationals, to downsize and diversify economic activities (Dallago and Guglielmetti, 2012). Consequently, a dichotomy exists between high- and low-performance (in comparison with benchmarks) firms, which appears to influence HRM practices (see the outcomes of our moderated mediation model) within SMEs.

Estienne (1997) reasoned that although employees themselves are primarily responsible for keeping abreast of the latest competences needed in a particular occupation, management in working organizations is also responsible for work-related development. Therefore, a continuous dialogue between employees and supervisors about self-development, resulting in challenging work assignments with various learning opportunities, is needed (Nauta et al., 2009). After all, a supervisor’s perception of an organization’s performance (high or low) influences leadership style and, consequently, HRM practices. Therefore, it is particularly essential in case of low organizational performance that supervisors stimulate and facilitate employees carefully with regard to their occupational development throughout their entire career. Supervisors are in a position to shape a climate of knowledge and skill development (Cooke and Meyer, 2007), particularly in the case of daily practices of supervisors such as attraction, retention, relations, etc. From a strategic HRM perspective, contributions from employees to innovation, over time, are a positive outcome of their employability and the opportunities and possibilities that are available to them to utilize the knowledge and skills they have (recently) built up. Investing in employees' career potential might be a critical success factor and a turning point for achieving SME innovation in a knowledge-based economy. In this time of economic crisis, strong national systems of innovation and government policies encourage innovation among SMEs and enhance national economies to remain competitive in a global market (Filippetti and Archibugi, 2011). This has an uninterrupted effect on employment and facilitates those supervisors who attempt to encourage innovation (Madrid-Guijarro et al., 2009).
References


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Further reading


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