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The Role of Human Resource Practices on Profits Generated by the Innovations: The Role of Top Management Support and Regularity of Employees Meetings

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Abstract

Previous scholars argue that human resource practices advance valuable knowledge what could be reflected positively on innovations. Accordingly, we empirically investigate whether human resource related practices such as top management support and regularity of employees meetings are related to profit generated by the innovation activities. Using survey data of Montenegrin firms, we find that firms in which top management supports employees' idea and have regular employees meetings related to innovation activities are likely to report higher profit generated by innovations. Therefore, our results underline the crucial role of human resource practices in the process of innovation that generates profitability for firms.

Keywords: innovation, profit, human resource practices, top management support, meetings.

JEL classification: O30, O15

Introduction

Innovation is recognized as key to economic progress because it drives to improved productivity and competitive gains (Pekovic and Galia, 2009). Similarly, scholars also argue that firms engage in innovation are motivated by number of reasons such as products, markets, efficiency, quality or the ability to learn and to implement changes. OECD (2005) defines innovation as the introduction of new products and/or services, a new marketing plan, a new process, or a new organisational method for business practice relating to internal or external relations of business (OECD, 2005).

Due its importance for economic growth, the literature examines and distinguishes three dimensions enhancing innovation, such as: factor conditions (human resources, basic research infrastructure, information infrastructure and the supply of capital risk), supporting environment (competition, innovation incentives, presence of clusters, and local suppliers) and demand conditions (sophisticated customers, anticipated needs) (e.g. Pekovic and Galia, 2009). What more, Youndt et al. (1996) acknowledge particular importance to employees for innovation activities development. Actually, it is considered that human capital is more likely to produce a competitive advantage because they are difficult to imitate. Consequently, it is important to identify the human resources factors that lead firms to generate more value from their innovations. As argued by Cheng and Huang (2009) human resource (HR) practices are the most important tool by which firms can shape the skills, attitudes and behaviour of employees to do their work what would be reflected on improved organizational outcomes. Similarly, Youndt et al. (1996) note

that HR activities play a central role in linking employee capabilities with the firms' performance. Therefore, employees working under HR practices represent a source of competitive advantages. These practices encompass various job characteristics including job rotation, learning across tasks, teamwork, decentralization of responsibility, top managers support, worker participation in decision making, etc. Previous scholars confirm the positive relationship between HR practices and firm performance (e.g. Youndt et al. 1996; Huselid et al., 1997; Ichniowski et al., 1997). However, less is known concerning HR practices and innovation performance (Laursen and Foss, 2003; Cheng and Huang, 2009). The rationale for positive relation between HR practices and innovation could be based on the fact that HR practices through the capacity in knowledge acquisition, sharing, and application generate positive effects on innovation performance (Cheng and Huang, 2009). Employing sample of 146 firms, Cheng and Huang (2009) support the positive relationship between HR practices and innovation. The authors suggest that managers need to actively enhance human capital through variety of HR practices. Similarly, estimating an empirical model of innovation performance, using data from a Danish survey of 1,900 business firms, Laursen and Foss (2003) identify two HRM systems which are conducive to innovation. Moreover, Beugelsdijk (2008) worked on a sample of 988 Dutch firms and found that task autonomy, training and performance-based pay are important for generating incremental innovations. Regarding radical innovations, the author's results underline the importance of task autonomy and flexible working hours.

Our focus in this research is on the innovation effects of HR practices. In particular, this paper will examine the impact of two HR practices namely top management support and employee's meeting regularity on profit generated by innovation on the sample of Montenegrin firms. Our contribution is to add to the emerging theoretical and empirical research on innovation management as well as on human resource management. Moreover, understanding what HR practices drives innovation performance in Montenegro is crucial since it could help firms to achieve better employment of innovation capabilities what would result in higher levels of productivity and at the same time economic growth.

The outline of this paper is as follows: data and empirical methodology description to investigate the relationships between HR practices and innovation is provided in Section 2, followed by results and discussion in Section 3. Section 4 concludes the paper.

Methodology

Data

The data is extracted from a Montenegrin survey which is created by the Centre for Quality in Montenegro. The main objective of the survey is to obtain information concerning firms' behaviour regarding innovation activities in Montenegro. The questionnaire contains 31 questions. The survey was conducted in different geographical areas of Montenegro (north, centre and south), from September to the end of December 2011. The time allocated for employees to complete the questionnaire was not limited but it took approximately 5 days. The number of firms that have answered the questionnaire is 120.

Dependent and Independent Variables

Profit generated by the Innovations. In order to assess innovation, it is important to make the distinction between output of innovation activity and the input into

innovation activity (Rogers, 1998). Generally, the key output of innovation activity is the firm's success which may be defined as profits, market share, productivity, etc. Therefore, in this paper the dependent variable presents output of innovation activity. More precisely, the dependent variable denoted Profit generated by the Innovations presents dummy variable which equals 1 if the firm has generated profit from innovation activities more or equals to the mean of the sample used (mean= 2.184874).

Top Management Support. To test our main hypothesis of the paper, namely that HR practices are positively associated with innovation performance, we use variable named Top Management Support coded 1 if respond completely agree or agree that top managers consider and accept suggestions and ideas from employees.

Regularity of Employees Meeting. The second variable that represents HR practices is Regularity of Employees Meetings which is count variable going from (1) employee has never meetings to (5) employee has weekly meeting relating innovation.

In order to control for firm-level heterogeneity, our analysis includes variables representing firm characteristics such as size and sector of activity (e.g. Pekovic and Galia, 2009). No problem of multi-collinearity was detected among variables.

Estimation Strategy

We use a linear model for underlying HR variables driving innovation:

$$Y_i^* = \alpha + \sum_{i=1}^{10} \beta_i X_i + \mu_i, \quad i = 1, 2, \dots, N. \quad (1)$$

where X_i represents the vector of variables for innovation (*Top Management Support*, *Regularity of Employees Meeting*, *Size and Sector of Activity*); $\beta_1 - \beta_4$ are slope coefficients to be estimated and α and μ are the intercept and the disturbance term, respectively. The interpretation of the latent variable in this kind of model is typically that of an overall net gain (or profit) originating from HR practices.

The model of firms' choice to invest in HR practices is stated as a discrete-choice model, with the dummy variables indicating innovation as the dependent variable Y_i :

$$\begin{aligned} Y_i &= 1 \quad \text{if} \quad Y_i^* > 0, \\ Y_i &= 0 \quad \text{otherwise.} \end{aligned} \quad (2)$$

We specified logistic distributions for μ and maximized the log-likelihood of the logit model (Greene, 2003) to estimate model's parameters up to a positive constant.

Results

Logit estimation results are presented in Table 1. The fit is reasonable with an adjusted pseudo-R-squared of 14% ($p < 0.001$).

Table 1

The estimated results concerning the relationship between HR practices and Profit generated by the Innovations

Variables	Profit generated by the Innovations	
	Estimate	z-value
Intercept	-3.31 ***	-4.28
Top Management Support	0.92*	1.87
Regularity of Employees Meeting	0.37***	2.37
Size	0.00	-1.06
Manufacturing	1.16*	1.84
Construction	1.29	1.58
Trade	1.79***	2.71
R2	0.14	
LR chi2(6)	19.64	
Prob > chi2	0.00	
Log likelihood	-58.738021	
Number of observations	120	

Note: (*), (**), (***) indicate parameter significance at the 10, 5 and 1 per cent level, respectively.

Sector reference: Service sector

Source: Authors

The results show that our hypothesized positive relationship between Top Management Support and Profit generated by the Innovation was supported ($\beta = 0.92$; $p < 0.10$). Furthermore, we proposed a positive relationship between Regularity of Employees Meeting and innovation what was also supported ($\beta = 0.37$; $p < 0.05$).

In sum, the empirical results revealed consistent evidence regarding the relationship between two HR practices and innovation performance. The findings are going in the same direction as those from Laursen and Foss (2003), Beugelsdijk (2008) and Cheng and Huang (2009) who found the positive link between HR practices and innovation.

However, we may notice that significance level is higher when looking the relationship between Regularity of Employees Meeting and innovation then between Top Management Support and innovation performance. Consequently, we may argue that Regularity of Employees Meeting is more important for generating profit from innovation in Montenegrin firms. A potential explanation for this is that regular meetings may further improve employee's knowledge and process related to information sharing.

Turning to control variables we may notice that size and being in construction sector do not influence innovation while being in manufacturing and trade sector increases firm's probability to generate profit from innovation activities.

Conclusion

The purpose of this study is to examine direct approach to HR practices and innovation performance in Montenegrin firms. More precisely, we use two measures for HR practices: Top Management Support and Regularity of Employees Meetings. The obtained findings confirm the notion that HR practices lead to higher profit

generated by the innovation activities. Accordingly, this study enriches our understanding of how Montenegrin firms could motivate their employees in order to improve their innovation activities. Notwithstanding, comparing the significance level, our results reveal that Regularity of Employees Meetings are more important for innovation than Top Management Support what we explained by the fact that having regular meetings broader range of knowledge and information therefore improve innovation performance.

The obtained findings provide insights that are relevant to managers in Montenegrin firms. Managers should be aware that HR practices are valuable assets that could help firm to improve its innovation performance what could result in improved sustainable competitive advantages. Therefore, managers should invest more energy to create working environment that enhance HR practices.

The limitations of this study point to several issues for future research avenues. First, we use cross-section data; therefore future research should use panel data in order to confirm the obtained results over time. Second, although this study proposes two measures of HR practices, it could be that other important variables remained un-measured such as teamwork, decision-making, pay incentives, etc. Third, our paper is based on a sample of Montenegrin firms what limits possibility of providing general conclusion. Due, future research should use multiple countries data in order to overcome this limitation. Finally, future studies should identify relational pathway (mediating factors) through which HR practices contribute to innovation performance.

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