

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)**ScienceDirect**

Procedia - Social and Behavioral Sciences 99 (2013) 784 – 793

**Procedia**  
Social and Behavioral Sciences9<sup>th</sup> International Strategic Management Conference

## The Impact of HRM Capabilities on Innovation Mediated by Knowledge Management Capability

Gönül Kaya Özbağ<sup>a</sup>, Murat Esen<sup>b</sup>, Dilek Esen<sup>c</sup> b\*<sup>a</sup> Kocaeli University, Kocaeli, 41500, Turkey<sup>b</sup> İzmir Katip Çelebi University, İzmir, 35620, Turkey<sup>c</sup> Dokuz Eylül University, İzmir, 35210, Turkey

### Abstract

Nowadays, managers recognize the value of knowledge as an intangible asset which stimulates innovation in organisations. However, few studies examine the role of human resource management in fostering knowledge capability which leads more innovation in enterprises. For this reason, this paper investigates the impacts of the policies and practices of human resource management in the relationship between knowledge management capability on innovation. The study is empirically based on the primary data collected from 122 medium and large sized organizations that are registered to Kocaeli Chamber of Industry, operating in Kocaeli, one of the most important industrial cities of Turkey. Data obtained from questionnaires will be analyzed through the SPSS statistical packet program and PLS-Graph. The Sobel test is used to measure the significance of mediation effect of knowledge management capability. The results indicate that Human Resource Management (HRM) Capabilities are positively related to Knowledge Management (KM) Capability which turn into innovation. Furthermore, HRM Capabilities have both direct and indirect effect mediated by KM Capabilities on Innovation.

*Keywords:* Innovation, knowledge management, human resource management

© 2013 The Authors. Published by Elsevier Ltd. Open access under [CC BY-NC-ND license](https://creativecommons.org/licenses/by-nc-nd/4.0/).

Selection and peer-review under responsibility of the International Strategic Management Conference.

### 1. Introduction

Many studies indicate that HRM practices can improve employees' motivation, commitment and thus organizational outcomes (Lado and Wilson, 1994; Iqbal et al, 2010; Lopez-Cabrales et al, 2009; Perdomo-Ortiz et al, Ishak et al, 2010). Moreover, it can facilitates the creation and integration of knowledge and improve rare characteristic's of enterprises (Huang, 2007; Pastor et al, 2010; Iqbal et al, 2010; Mukherjee et al, 2011; Swart and Kinnie 2011; Dörhöfer, 2012). Human resources of an enterprise cannot be easily imitated by competitors since the knowledge resides in employees is tacit, and cannot be codified ( Dierickx and Cool; 1989, Collis and Montgomery; 2008). For that reason, enterprises' success is muchly depends on their capability to affect employees' motivation and behaviour

\* Corresponding author. Tel. + 90-262-349-4351 fax. +90-262-349-3997

Email address: [muratesentr@gmail.com](mailto:muratesentr@gmail.com)

to improve knowledge sharing practices necessary for innovation. Relatedly, in this paper, we argue that HRM capability through knowledge management capability increases innovation in enterprises.

## 2. Literature Review And Hypotheses

### 2.1. Innovation and HRM capability

The business competitive environment is getting tougher by limited resources, local and global competition, fast and intensive technological change. Since innovation is so crucial in sustaining competitive advantage, managers and scholars have been very interested in understanding the innovation process in organizations (Maidque, 1980; Damanpour, 1989; Zirger and Maidique 1990; Dougherty and Hardy, 1996). Many studies and reviews suggest that innovation is complex and context sensitive. Understanding of innovative behaviour in organizations is still not so clear as the results of innovation research have been unconvincing and incompatible. It can be concluded from the literature that a deep understanding of innovation cannot reach an agreement without perception into the personal, organizational, technological, cultural and environmental contexts (Damanpour, 1989; Wolfe, 1994; Leifer et al., 2000). So, it seems that there is a need in the literature on measuring the innovation capabilities of enterprises since innovation by adding value to the company increases the chance of passing ahead of the competition.

Many researchers who are interested in the topic of innovation defined it generally in similar ways despite some minor differences. Gopalakrishnan and Damanpour defined innovation as programs, policies, systems, equipment, service, product, behavior or idea which is newly adapted to organization (Shanthi and Fariborz, 2000: 15). Innovation represents the development of an entirely new product, service category, or production system, where knowledge experience are limited (Damanpour, 1988; Wolfe, 1994; Christensen and Raynor, 2003). Wang, et al., expresses that innovation is conceptually a process that begins with a novel idea and concludes with market introduction” (2010, p. 767) In this study we use the term innovation broadly that includes the development of products, programs or services and also a process including different stages. In other words innovation can be understood a broad term which defines a firm’s ability to introduce new products or process (Lopez-Cabrales, Pérez-Luño and Cabrera, 2009; 486). Most of the researchers and practitioners consider innovation as a positive and productive change but on the other hand a difficult task to succeed since it involves people, process and technology.

It is a widely accepted idea that, if firms wish to increase their level of innovation they should recognise the value of their employees as generators of ideas. Resource Based View suggests that critical organizational competencies often are embedded in human resources, which includes individuals' non-codified body of expertise and skills accumulated through experience, and so are highly rare and difficult for competitors to imitate (Wei and Lou, 2005: 1902). Their uniqueness emerges from the difficulty in copying people’s knowledge, abilities, experience and behaviour completely. HRM practices, policies and systems can enhance creative and innovative behaviours of individuals by influencing individual’s behaviour and attitude (Pastor, Santana, and Sierra, 2010; Lopez-Cabrales, Pérez-Luño and Cabrera, 2009; Ishak, Eze and Ling; 2010). Therefore, managers must recognise the challenge of developing and implementing HRM practices that favour the process by creating the correct context for individuals to feel motivated and committed to learning, and articulating and sharing the knowledge that they have acquired with others, with the intention of applying it to the creation of new products and processes (Perez et al, 2010;1652)

One way of obtaining valuable and unique knowledge is through a system of HRM knowledge-based practices that enable the internal development of human resources with specific selection, training, development, appraisal, and compensation practices. The aim of selection is to attract the best people to the company in terms of their inherent potential. Informal contacts that favor socializing among the workforce are encouraged, and firm-specific training and career development are offered within the company. Individuals receive feedback concerning what they do and how performance can be improved, thus promoting autonomy. Incentives are also used as a form of reward. This model of HRM practices enables valuable and firm-specific knowledge to be generated by internal development and also helps firms to obtain the benefits of employees’ value-creating potential and firm-specific human capital (Lopez-Cabrales, Pérez-Luño and Cabrera, 2009; 488-489).

Moreover, Lado and Wilson claims that HR practices can foster and facilitate innovation through eliciting and reinforcing employee role behaviors, such as creativity and innovation, a long-term orientation, cooperation and trust, risk taking, and tolerance of conflict. Accordingly, a HR strategy would emphasize idiosyncratic and interdependent jobs, participative decision making and problem solving, group-based work assignments, individual performance appraisal, specific compensation, and broad career paths (Lado and Wilson, 1994: 717). Effective HRM should balance between organization systems which on the one hand are open and flexible enough to allow creativity to flourish, but on the other hand have enough formality and discipline that creativity produces tangible outcomes. Since it is argued that bureaucracy and formal communication inhibit spontaneity and freedom of expression necessary for innovative responses to rapid environmental change (Ishak, Eze and Ling, 2010; 11).

In summary, the technologies, the products and the services of an organization may be imitated, but the intellectual capital is hard to imitate, that is why human resources become unique and strategic (Duica et.al., 2010;119). RBV places more emphasis on the role of Human Resource managers in the selection, development, combination, and deployment of a firm's resources since competences implanted in the firm's unique and valuable workforce. Similarly, in Human Resource management capabilities scale we tried to measure the capabilities of managers in the selection, development, combination, and deployment of resources and capabilities.

*Hypothesis 1: A positive correlation exists between HRM capabilities and innovation.*

## 2.2. Innovation and Knowledge Management capabilities

Effective knowledge management involves the creation, capturing, sharing, implementing and exploitation of knowledge (Egbu, 2004; 315). It normally requires a proper combination of organizational, social, and managerial initiatives along with exploitation of appropriate technology. The idea of Knowledge Management is to congregate, classify, store, and spread all knowledge that is required to make the organization both grow and flourish (Mukherjee et al, 2011; 649). It is a useful instrument to create innovation by acquiring, creating, sharing, storing and applying knowledge which is the necessary ingredient for innovation works in organizations. We can summarize the reasons why KM increases innovation as; it enables the sharing and codification of tacit knowledge, helps in converting tacit knowledge to explicit knowledge, creates a culture promoting knowledge creation and sharing as well as collaboration (Mehrdad et al, 2010: 394).

The impact of knowledge management capability on organizational competitive advantage is the resource –based view of the firm which links the competitive advantages of organizations with resources and capabilities that are firm-specific, and difficult to imitate or substitute. Knowledge is the most important resource, and heterogeneous knowledge bases across firms are the main determinants of performance differences (Juntarung and Ussahawanitchakit, 2008; 71). A knowledge management capability has three facets: (1) knowledge development, (2) knowledge dissemination, and (3) knowledge application. A knowledge management capability is tacit, complex, and firm-specific. In addition, it enables firms with market intelligence that can be used to maintain and build broad customer relationships (Arnet and Badrinarayanan, 2005: 330). Many researches indicate that knowledge management can increase customer information and therefore successful innovation (Dewar and Detton, 1986, Cohen and Levinthal, 1990, Dosi v.d., 2005, Basadur and Gelade, 2006, Nonako and et.al, 2000).

Basadur and Gelade investigate the role of knowledge in innovation process. Their proposed process consists of four stages; 1)the proactive acquisition and generation of new information, and the sensing of trends, opportunities and problems, 2)the conceptualization of new challenges and ideas, 3)the development and optimization of new solutions, 4)the implementation of the new solutions (Basadur and Gelade, 2006: 50). So,it can be concluded from the literature that knowledge management scales are usually consist of the sub-headings such as the collection of information, dissemination, sharing and implementation. For that reason our knowledge management scale consists of questions related to these sub-headings. The next section includes knowledge management capability as a mediator affecting the relationship between HRM capability and innovation.

*Hypothesis 2: A positive correlation exists between KM capabilities and innovation.*

### 2.3. *Innovation,, Knowledge Management and HRM*

Based on the resource-based view (RBV), authors such as Wernerfelt (1984) and Barney(1991) proposed that the crucial research question concerns what kinds of corporate resources lead to sustainable competitive advantages. Following these arguments, the types of employee knowledge, skills, and abilities have been considered critical resources for the improvement of existing products and services or for the generation of new ones (innovations). In addition, it is argued that there must be coherence between an organization's HRM practices and the strategies which increases organizations learning capability, a key to innovation. Investigating the relationships among HRM capabilities and knowledge enhances innovation could extend the RBV, HRM, and innovation literature. (Lopez-Cabrales, Pérez-Luño and Cabrera, 2009;485-486).

Knowledge and human capital are two concepts that have received a great deal of attention from scholars of all disciplines in explaining the positive outcomes of organisational achievement like innovation. Human capital is defined as the pool of employee talent, skills and abilities that brings economic value to organisations. Knowledge is defined as an individual's experience and understanding that can be communicated and shared (Jalal, et al, 2011, 1). Therefore, it has been suggested that knowledge resides within individual employees (tacit knowledge) plays a vital role in facilitating the growth of knowledge to increase its value. It is the human capital that needs to be captured through knowledge sharing and employed in creating new knowledge through collaborative activities. Knowledge sharing is an activity or behaviour involving the transfer and dissemination of knowledge from one person to another that is regarded as an important process (Iqbal et al, 2010; Jalal et al; 2011). Appropriate HRM practices can be an important medium that translate knowledge sharing capability into successful outcomes.

It appears that innovation and HRM capability both have strong links with knowledge and learning thus HRM practitioners' have critical roles in promoting individual, group, and organizational learning (Gibb and Waight, 2005; 272). It is concluded by many researchers that HRM practices through knowledge management capability increases organization's learning which is significant for innovation and thus sustainable competitive advantage especially in today's knowledge intensive industries (Iqbal et al, 2010; Lopez-Cabrales et al, 2009; Perdomo-Ortiz et al, Ishak et al, 2010). Building on this, Nonaka (1995) pointed out that successful companies are those that consistently create new knowledge, disseminate it widely throughout the firm and quickly embody it in new technologies and products. It therefore becomes important to show which HRM practices are contributing to the knowledge sharing improvements that leads to innovation.

HRM issues, such as recruitment and selection, education and development, performance management, pay and reward, as well as the creation of a learning culture are vital for managing knowledge within firm (Edvardsson, 2003; 1). However, the knowledge management facilitator's position cannot be easily slotted into traditional HRM functions, such as training and development or compensation. The knowledge management, facilitator role is much broader and requires original integration across traditional HRM activities. It involves both rethinking old ways of managing the workplace as well as using innovative approaches outside the box of traditional (Mukherjee et al, 2011;650) where individual employees can work more creative and innovative to achieve better results.

Morover, trust, between employees, helps for an effective knowledge transfer. But people are not always volunteer to share the knowledge since the increasing importance of employees tacit knowledge in an organization can lead to knowledge power (Iqbal et al, 2010; 576). Therefore, beyond having capable, motivated employees, organizations can create and leverage knowledge by nurturing social relationships in which employees trust one another and more willing to share knowledge and ideas. Thus, when firms create open, collaborative, and trusting culture employees get the necessary knowledge in an easy and unproblematic way (Huang, 2007; Pastor et al, 2010; Iqbal et al, 2010; Swart and Kinnie 2011; Dörhöfer, 2012).

Accordingly, Pastor and et al, consider that HRM can influence employees' abilities, motivation and opportunity to share, maintain and create knowledge by respectively: (1) impacting staff qualifications by means of training processes and development opportunities;(2) inducing employees' motivation with proper rewards and performance appraisal; and (3) fostering relationships that are based on trusting and collaborative behaviours (2010; 2456).

In summary, Managing HR to achieve better knowledge capabilities means retaining personnel, building their knowledge and expertise into organizational routines, and establishing mechanisms for the distribution of benefits arising from the utilization of that knowledge. The development of a new HRM function where human experience is critical, and knowledge can be generated, shared and leveraged in the learning processes of lived experiences (Pastor et al, 2010; 2456) is critical for innovation. These new HRM roles are those devised for human capital, knowledge facilitator, relationship builder, and rapid deployment professional. (Mukherjee et al, 2011;651)

*Hypothesis 3: KM capabilities mediates the relationship between HRM capabilities and innovation*

### **3. Methodology**

#### *3.1. Research Goal*

In this survey we aim to identify the mediating effect of Knowledge Management Capabilities on the relationship between HRM Capabilities and Innovation. To test the propositions, a field survey using questionnaires was conducted.

#### *3.2. Sample and Data Collection*

The study is empirically based on the primary data collected from 122 medium and large sized organizations that are registered in Kocaeli Chamber of Industry, operating in Kocaeli, one of the most important industrial cities in Turkey. Participation was optional for all respondents. Data was collected according to the preferences of managers; face to face interactions or electronic mail. Data obtained from questionnaires will be analyzed through the SPSS statistical packet program and PLS-Graph.

A majority of the respondents (85,4%) were male. As to the educational qualification, 70,3% had obtained a university degree, and (8,9%) held a postgraduate degree. 54,7% of the participants were aged between (31 – 45) years and the majority of the participants (59,4%) with job experience between (1– 5) years .

#### *3.3. Measures*

All items were measured on a five point Likert-type scale where (1) Strongly Disagree (2) Disagree (3) Neither Disagree nor Agree (Indecisive) (4) Agree (5) Strongly Agree. Three sections of the questionnaire are important for the present study; HRM Capabilities, KM Capabilities and Innovation. There are 28 questions in HRM Capabilities and KM Capabilities. HRM Capabilities scale questions are developed from the studies of Han, Chao and Wright (2006) and KM Capabilities scale questions are developed from the studies of Chen and Huang (2009). Finally there are ten questions in innovation scale which are developed from the studies of Prajogo ve Ahmed (2006), Alegre ve Chiva (2007), Hansen and Birkinshaw (2007).

#### *3.4. Data Analysis And Results*

The statistical analysis method used for this study was partial least squares (PLS). The reason for using this technique is that PLS method can operate under limited number of observations and more discrete or continuous variables. Therefore PLS method is an appropriate method for analysing operational applications. PLS is also a latent variable modeling technique that incorporates multiple dependent constructs and explicitly recognizes measurement error (Karimi, 2009). Also PLS is far less restrictive in its distributional assumption and PLS applies to situations where knowledge about the distribution of the latent variables is limited and requires the estimates to be more closely tied to the data compared to covariance structure analysis (Fornell and Cha, 1994).

Following the proposal of Straub (1989), we re-examined the survey instrument in terms of reliability and construct validity although the scale questions were developed from items successfully used in previous surveys. First of all, the original survey which consists of 28 questions was analyzed by PLS-Graph program and 4 item is found below the suggested loading value 0.70 and communal value .50 (Fornell and Larcker), as suggested in literature these “below threshold” items are deleted (Hair, Tatham, Anderson and Black, 1998). Examination of the remaining items revealed

that they adequately represent the underlying construct attesting to the content validity of the instrument. Table 1. indicates reliability scores of remained items.

Table 1. Descriptive Statistics and Empirical Results of Measurement Model

Const. & Variables		Loading	Communal	T-Statistics	
KM Capabilities	1	0.72	0.52	15.73	Composite Reliability= 0.901 AVE= 0.603
	2	0.73	0.54	16.80	
	3	0.78	0.61	15.25	
	4	0.85	0.72	33.20	
	5	0.80	0.65	23.59	
	6	0.76	0.58	16.90	
HRM Capabilities	1	0.76	0.58	23.49	Composite Reliability =,963 AVE= 0,746
	2	0.88	0.77	39.82	
	3	0.91	0.82	54.53	
	4	0.90	0.81	47.51	
	5	0.79	0.63	19.58	
	6	0.90	0.81	63.93	
	7	0.86	0.74	39.29	
	8	0.86	0.75	32.90	
	9	0.87	0.76	43.18	
Innovation	1	0.73	0.53	13.84	Composite Reliability= 0,929 AVE= 0,594
	2	0.82	0.67	33.10	
	3	0.82	0.67	33.17	
	4	0.75	0.56	15.75	
	5	0.78	0.61	19.90	
	6	0.75	0.57	17.47	
	7	0.77	0.59	18.14	
	8	0.75	0.56	23.31	
	9	0.73	0.53	15.57	

As seen in Table 1 item reliability scores of scales is higher than the accepted 0.70 level and communalities is higher than the accepted 0.50 level (Fornell and Cha, 1994). The results show composite reliability (CR) exceeding 0.8 as recommended by Nunnally (1978). AVE which can also be considered as a measure of reliability exceeds 0.5 as recommended by Fornell & Larcker. Together CR and AVE attest to the reliability of the survey instrument. Composite Reliability and AVE values of scales are higher than the expected values.

According to the correlation results seen in Table 2, there is a positive significant result between HRM capabilities and innovation (0.687) and also between KM capabilities and innovation (0.806). Moreover, there is a positive significant result between latent variables; HRM capabilities and KM capabilities (0.703).

Table 2. Correlations between latent variables

	1	2	3
1) HRM Capabilities	1		
2) Knowledge Management Capabilities	0.703	1	
3) Innovation	0.687	0.806	1



### 3.5. Model Testing Results

In this survey we aim to identify the mediating effect of Knowledge Management Capabilities on the relationship between HRM Capabilities and Innovation.

For mediation effect the following conditions should be provided (Baron and Kenny, 1986):

First, a direct link should be set up between the independent and dependent variable to ensure that there is a relationship to be mediated. Second, a direct relationship should be set up between the independent and mediator variable. Third, the mediator should be revealed to be related to the dependent variable. Last, the relationship between the independent and dependent variables would significantly reduce when the mediator is added.

The Sobel test has been a traditional method for testing the significance of mediation effects (Preacher and Hayes, 2004). The reason for using Sobel test in this study is that it is the most widely employed. The significance is measured by the following formula (Baron and Kenny, 1986):

$$z\text{-value} = a*b/\text{SQRT}(b^2*sa^2 + a^2*sb^2)$$

This formula requires the unstandardized regression coefficient (a) and the standard error (sa) of the relationship between the independent variable a, and the unstandardized regression coefficient (b) and standard error (sb) of the path from the mediator to the dependent variable.

The steps and results of Sobel test, the values of indirect effect and total effect were given below.

- (1) a direct path from HRM Capabilities to Innovation;
- (2) a direct path from HRM Capabilities to KM Capabilities;
- (3) a direct path from KM Capabilities to Innovation; and
- (4) a direct path from HRM Capabilities to Innovation, and an indirect path from HRM Capabilities to KM Capabilities then from KM Capabilities to Innovation.

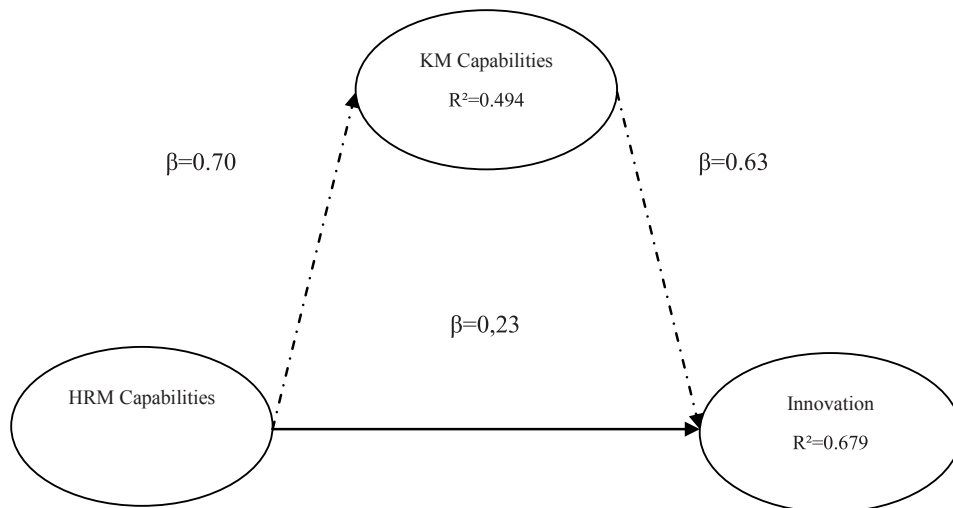


Fig.1 Betas for the paths and R<sup>2</sup> for the variables

Table 3. Mediation Effect KM Capabilities

Steps	Paths	Beta	Std Error	t
1	HRM Capabilities-Innovation	0.688	0.04	16.29
2	HRM Capabilities- KM Capabilities	0.707	0.03	17.95
3	KM Capabilities-Innovation	0.809	0.02	31.24
4	HRM Capabilities-Innovation	0.238	0.06	3.83
	HRM Capabilities- KM Capabilities	0.703	0.03	19.02
	KM Capabilities-Innovation	0.639	0.05	10.73
Sobel Test		z	P	
HRM Capabilities KM Capabilities Innovation		11,08	0,00	
Indirect Effect= 0,703*0,638			0.449	
Total Effect = direct effect + indirect effect			0.688	

#### 4. Conclusion

The study empirically supports for the mediating effect of KM Capabilities on the relationship between HRM Capabilities and Innovation. Table 3 demonstrates the analyze results which is achieved by applying the method suggested by Baron and Kenny. Accordingly, the whole premise of mediation analysis requirements has been provided. When the beta values are examined carefully, it is apparent that in the first step the standardized beta for the path which shows the direct effect of HRM Capabilities on Innovation decreases from  $\beta=0,688$  to  $\beta=0,238$  when KM Capabilities included in the model as a mediator. Correspondingly, approximately 0.45, a strong indirect effect was observed. The decreasing but still significant effect of HRM Capabilities on Innovation when KM Capabilities included in the model as a mediator proves that KM Capabilities is a partial mediator variable in this model. In other words, HRM Capabilities have both direct and indirect effect mediated by KM Capabilities on Innovation. Sobel test is applied for the significance of the effect of intermediaries and the mediation effect is found significant. According to the results of this study, one can conclude that an improvement in HRM Capabilities leads to Innovation and also HRM practices through knowledge management capability increase organization's learning which is significant for innovation.

Although innovation has attracted considerable attention in the literature, only a few studies have analyzed the mediating roles of KM Capabilities in the relationships between HRM Capabilities and Innovation. Therefore, the empirical findings of this study fill the gap in the literature. The results prove that the capability of HRM in selection, training, development, appraisal, and compensation practices positively affects the firm's innovation capability. Furthermore, knowledge management capability acts as a mediator in innovation process by facilitating knowledge development, knowledge dissemination, and knowledge application. Especially, collaborative HRM practices based on knowledge create an environment and a culture that encourages knowledge generation and sharing behaviour that elicit and reinforce better innovative results.

RBV suggests that critical organizational competencies often are embedded in human resources, which includes individuals' non-codified body of expertise and skills accumulated through experience, and so are highly rare and difficult for competitors to imitate (Wei and Lou, 2005: 1902). Their uniqueness emerges from the difficulty in copying people's knowledge, abilities, experience and behaviour. Besides, knowledge that resides in individuals is the key ingredient in innovation process. Proper organisational support in terms of relevant HR practices will reduce the barriers to individual employees' knowledge creating and sharing capacity both at the individual and organisational levels. In conclusion, in terms of innovation, HRM play an integrative role by facilitating knowledge management



through appropriate communication, recognition and reward, and also by developing organizational processes that motivate knowledge acquisition and transfer.

Like all studies, this study has some limitations. First of all, HRM capability is a very large and comprehensive issue that concerns the whole of the organization and for that reason it can not be investigated in one research with its every dimensions. The study focuses some specific practices of HRM capability and some additional practices like empowerment, job design, participation in decision making process, may be investigated by the researchers who are interested in this subject. Secondly, the situation becomes more complicated when the subject is innovation since it is not a homogeneous process. For instance, it would be beneficial for a future study to investigate the impact of HRM capability on innovation mediated by KM capability taking the character of the innovation (radical or incremental, product or process, administrative or technical) into account.

## References

- Alegria Joaquin, Chivab Ricardo (2008). Assessing the impact of organizational learning capability on product innovation performance: An empirical test, *Technovation*, 28.
- Arnet Dennis B., Badrinarayanan Vishag (2005). Enhancing Customer-Needs-Driven CRM Strategies: Core Selling Teams, Knowledge Management Competence and Relationship Marketing Competence, *Journal of Personal Selling & Sales Management*, 25(4).
- Basadur Min, Gelade A.Garry (2006). The Role of Knowledge Management in The Innovation Process, *Journal Compilation*, 15-1.
- Christensen Clayton M., Raynor Michael E., Anthony Scott D. (2003). Six Keys to Creating New Growth Business, *Harvard Management Update*, Vol. 8 Issue 1.
- Chen Chung-Jen, Huang Jing-Wen (2009). Strategic Human Resource Practices And Innovation Performance: The Mediating Role Of Knowledge Management Capacity, *Journal Of Business Research*, Vol.62, No:1.
- Damanpour Fariborz et al (1989). The Relationship Between Types of Innovation and Organizational Performance, *Journal of Management Studies*, 26/6.
- Dewar R., Dutton, J. (1986). The Adoption Of Radical and Incremental Innovations: An Empirical Analysis, *Management Science*, 12.
- Cohen M.Wesley, Levinthal A. Daniel (1990). Absorptive Capacity: A New Perspective on Learning and Innovation, *Administrative Science Quarterly*, Vol.35, No:1.
- Dosi G., Arcangeli F., Moggi, M. (1991). Patterns Of Diffusion of Electronics Technologies: An International Comparison With Special Reference To The Italian Case, *Research Policy*, 6.
- Dougherty Deborah, Hardy Cynthia (1996). Sustained Product Innovation In Large, Mature Organizations: Overcoming Innovation-to-Organization Problems, *The Academy of Management Journal*, 39/5.
- De Saá-Pérez Petra, Díaz-Díaz Nieves Lidia (2010). Human resource management and innovation in the Canary Islands: an ultra-peripheral region of the European Union, *International Journal of Human Resource Management*, Vol. 21 Issue 10.
- Duică Mircea Constantin, Florea Nicoleta Valentina, Duică Anisoara and Cucui Andra (2012). Human Resources Management and Knowledge Management: The key for Competitive Advantage, *European Journal of Social Sciences*, Vol.28 No.4.
- Han Jian, Chou Paul, Chao Minston, Wright Patrick M. (2006). The HR Competencies, HR Effectiveness Link: A Study In Taiwanese High Tech Companies, *Human Resource Management*, 45(3), Fall.
- Hansen T. Morten, Birkinshaw Julian (2007). The Innovation Value Chain, *Harvard Business Review*.
- Gibb Stephen, Waight Consuelo L. (2005). Connecting HRD and Creativity: From Fragmentary Insights to Strategic Significance, *Advances in Developing Human Resources* Vol. 7, No. 2.
- Gopalakrishnan Shanthi, Damanpour Fariborz (2000). The Impact Of Organizational Context On Innovation Adoption in Commercial Banks, *IEEE Transactions on Engineering Management*, 47(1).
- Edvardsson Ingi Runar (2003). Knowledge Management and Creative HRM, Occasional Paper 14.
- Egbu, Charles O. (2004). Managing Knowledge And Intellectual Capital For Improved Organizational Innovations In The Construction Industry: An Examination Of Critical Success Factors, Engineering, *Construction and Architectural Management*, 11(5).
- Huang Keke (2007). Human Resource Management & Knowledge-Based Management: A study of HR practices in performance related knowledge management, A Dissertation presented in part consideration for the degree of "MA in Management".
- Ishak Norhaiza Binti, C. Eze Uchenna and Ling Lew Sook (2010). Integrating Knowledge Management and Human Resource Management for Sustainable Performance, *Journal of Organizational Knowledge Management*, Vol. 2010.
- Juntarung Napaporn (2008). Ussahawanitchakit Phapruke, Knowledge Management Capability, Market Intelligence, And Performance: An Empirical Investigation Of Electronic Businesses In Thailand, *International Journal Of Business Research*, Volume 8, Number 3.
- Jalal Hayati Abdul, Toulson Paul and Tweed David (2011). Exploring Employee Perceptions of the Relationships Among Knowledge Sharing Capability, Organisational Culture and Knowledge Sharing Success: Their Implications for HRM Practice, Proceedings of the International Conference on Intellectual Capital, Knowledge Management & Organizational Learning.
- Lopez-Cabrales Alvaro, Pérez-Luño Ana, Valle Cabrera Ramón (2009). Knowledge As A Mediator Between HRM Practices And Innovative Activity, *Human Resource Management*, July–August, Vol. 48(4).
- Maidique M.A. (1980). Entrepreneurs, Champions & Technological Innovation, *Sloan Management Review*, 2(59).
- Mukherjee Aroop, R. Ganesan, Syed Muhammad Hasan Hashmi (2011). Knowledge Management for Expansion of Human Resource Management Systems, International Conference on Technology and Business Management, March 28-30.

- Madhoushi Mehrdad, Sadati Abdolrahim, Delavari Hamidreza, Mehdivand Mohsen and Mihandost Ramin (2011). Entrepreneurial Orientation and Innovation Performance: The Mediating Role of Knowledge Management, *Asian Journal of Business Management* 3(4): 310-316.
- Nonaka Ikujiro, Toyama Ryoko, Konno Noboru (2000). SECI, Ba and Leadership: A Unified Model of Dynamic Knowledge Creation, *Long Range Planning*, 5–34.
- Nonaka Ikujiro, Toyama Ryoko (2005). The theory of the knowledge-creating firm: subjectivity, objectivity and synthesis, *Industrial & Corporate Change*, Vol. 14 Issue 3.
- Pastor Isabel Ma Prieto, Ma Pilar Pe´rez Santana and Celia Martı´n Sierra (2010). Managing Knowledge Through Human Resource Practices: Empirical Examination On The Spanish Automotive Industry, *The International Journal of Human Resource Management*, Vol. 21, No. 13.
- Perdomo-Ortiz Jesu´s, Gonza´lez-Benito Javier and Galende Jesu´s (2009). An analysis of the relationship between total quality management based human resource management practices and innovation, *The International Journal of Human Resource Management*, Vol. 20, No. 5.
- Pastor Isabel Ma Prieto, Santana Ma Pilar Pe´rez and Sierra Celia Martı´n (2010). Managing knowledge through human resource practices: empirical examination on the Spanish automotive industry, *The International Journal of Human Resource Management*, Volume 21, Issue 13.
- Prajogo Daniel and Ahmed Pervaiz K. (2006). Relationships Between Innovation Stimulus, Innovation Capacity, And Innovation Performance, *R&D Management* Vol.36, No.5.
- Swart Juani, Kinnie Nicholas (2003). Sharing knowledge in knowledge-intensive firms, *Human Resource Management Journal*, 13(2).
- Döhrhöfer Steffen (2012). Knowledge-Based HRM: An Integrative Approach, *European Journal of Social Sciences*, Vol.28 No.4.
- Wang S., Guidice R., Tansky J. and Wang, Z. (2010). When R&D spending is not enough: The critical role of culture when you really want to innovate, *Human Resource Management*, 49(4).
- Wernerfelt Birger (1984). A Resource Based View of The Firm, *Strategic Management Journal*, 5(2).
- Wei Li- Qun and Lou Chung-Ming (2005). Market Orientation HRM Importance and Competency; Determinants of Strategic HRM in Chinese Firms, *International Journal of Human Resource Management*, 16.
- Barney Jay (1991). Firm Resources and Sustained Competitive Advantage, *Journal Of Management*, 1.
- Wolfe R. (1994). Innovation Review, Critique and Suggested Research Directions, *Journal of Management Studies*, 3(3).
- Leifer R., McDermott C., O’Connor G., Peters L., Rice M., & Veryzer R. (2000). *Radical Innovation: How Mature Companies Can Outsmart Upstarts*, Boston: Harvard Press.
- Zirger B. J., Maidique M. A. (1990). A Model of New Product Development: An Empirical Test, *Management Science*, V:36, No.7.