



3<sup>rd</sup> International Conference on Leadership, Technology and Innovation Management

## Examining Organizational Innovation and Knowledge Management Capacity

### The Central Role of Strategic Human Resources Practices (SHRPs)

Mine Afacan Fındıklı<sup>a</sup>, Ugur Yozgat<sup>b</sup>, Yasin Rofcanin<sup>c</sup>

<sup>a</sup>Istanbul Gelisim University, Istanbul, Turkey

<sup>b</sup>Marmara University, Istanbul, Turkey

<sup>c</sup>Bogazici University, Istanbul, Turkey

#### Abstract

This study was an effort to test the effects of strategic human resources practices over organizational innovation (exploration and exploitation) and knowledge management capacity of firms (knowledge sharing and knowledge application). Data were gathered across industries operating in Turkey (N = 109). Results from regression analyses emphasized that only certain practices in strategic human resources had predictive power of organizational innovation. Moreover, a similar pattern was observed between the strategic human resources practices and knowledge management capacity of firms. Overall, our findings spoke to the importance of compensation, training and performance appraisal systems as predictors of our dependent variables. Discussions, further suggestions and limitations are provided at the end.

*Keywords:* Exploration, exploitation, knowledge sharing, knowledge application, strategic human resources practices.

© 2015 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Peer-review under responsibility of Uluslararası Stratejik Yönetim ve Yöneticiler Derneği (usyyd) (International Strategic Management and Managers Association).

#### INTRODUCTION

Today's stiff, fierce and dynamic business settings necessitate companies to be innovation-driven (Benner and Tushman, 2003; Holmqvist, 2004; Katila and Ahuja, 2002). More specifically, companies have to engage in different types of innovation efforts in order to grow their competitive advantages and survive in long run (Gupta, Smith and Shalley, 2006). Since the seminal contribution of March (1991), exploration and exploitation types of innovations have gained substantial scholar attention in extant literature. Previous research (Adner and Kapoor, 2010; Mohrman, Cohen and Mohrman, 1995) revealed that organizational innovativeness (exploration and / or exploitation) was closely associated with firm performance (Gupta, Smith and Shalley., 2006), firm strategic goal setting (He and Wong, 2004), productivity (Mohrman, Cohen and Mohrman, 1995) and organizational culture (Ostroff, Kinicki and Tamkins, 2003). In addition to organizational level studies where exploration and / or exploitation were examined; recent studies have started emphasizing the team level and individual level innovativeness (e.g., exploration and exploitation: O'Reilly and Tushman, 2008). Despite the plethora of these studies, and myriad ways of measuring innovativeness, scholars have almost reached a consensus that being innovative is almost equal to desirable performance and productivity outcomes.

In this study, our central goals were two-folded. First, we aimed to establish the association between exploration and / or exploitation and strategic human resources practices at organizational level. We chose

\* Corresponding author. Tel. +90-212-507-9925 fax. +90-212-505-9332  
E-mail address: [uguryozgat@marmara.edu.tr](mailto:uguryozgat@marmara.edu.tr)

strategic human resources practices because it is an all-inclusive and exhaustive construct recently validated across industries (e.g., Chen and Huang, 2009). More importantly, this construct consists of training, staffing, performance appraisal, compensation and recruiting which emphasize the core elements related to competent talents of a company (Youndt et al., 1996; Collins and Clark, 2003). Guided with the resources based view of firms (Priem and Butler, 2001a; 2001b), we argue that the careful and effective implementation of these strategic

human resources practices will have predictive power organizational innovations. In line with this line of thinking, we also argue that the knowledge management capacity of firms contribute to organizational innovations in distinct and unique ways (Davenport and Prusak, 2000; Grant, 1996; Spender and Grant, 1996). Knowledge obtaining, knowledge sharing and knowledge implementation, which are the dimensions of this construct, emphasize the centrality of knowledge generation within firms and point out to the necessity of knowledge implementation (Chen and Huang, 2009). Accordingly, our second goal is to link the knowledge management capacity of firms with innovation outcomes (e.g., exploration and exploitation). To our knowledge, this study is among the first studies to investigate the effects of strategic human resources practices and knowledge management capacity of firms in the same framework, and with data drawn from an emerging country context.

We hope to make two key contributions to our audience and extant literature. Our first contribution relates to the context of our study. We collected our data across industries in Turkey and aftermath of financial crises. Given that most of the corporations cut their budgets for various types of innovations and that they implemented austerity measures for expansion in emerging context, findings of this study will emphasize unique and contextual implications for the sample context. Related to this contribution, we also hope to contribute to our knowledge in terms of replicating the recently validated constructs of strategic human resources practices and knowledge management capacity of firms. Moreover, by linking these two constructs to organizational innovations (e.g., exploration and exploitation), we also hope to strengthen the criterion validity of our contextualized and inclusive research frame.

The structure of the paper is as follows. First, we discuss the background for our literature study. Following this section, we frame our hypotheses. In methods, we discuss the procedure and report our findings from confirmatory factor and multiple regression analyses. In the discussion section, we emphasize our contextualized and idiosyncratic implications drawn from our dataset. As in all studies, we end our study with limitations with paths for further suggestions.

## **2. Literature Review**

### *2.1. Strategic Human Resources Practices (SHRPs)*

Since the main factor that will bring the organizations a competitive advantage is “human”, the idea that using the employees’ knowledge, skills and capabilities in an efficient and effective manner will significantly contribute to achievement of the strategic targets of the enterprises has introduced the strategic human resources approach. In this context, Strategic Human Resources Practices (SHRPs), by way of its applications, establishes connection between the business needs and organizational activity (Schuler and Jackson, 1987:2), unite and guide the employees in line with the business strategies (Snell, 2002:629), and provide the organizations with a competitive advantage (Schuler and MacMillan, 1984; Ulrich, 1991; Pfeffer, 1995; Wright et al., 2001). Therefore, it is stated that the Strategic Human Resources Practices (SHRPs) applications will provide the enterprise with a competitive advantage which cannot be imitated or substituted (Boxall, 1996:63). Thus, it can be ensured that the employees act in accordance with the company’s strategies and targets, that the expected behaviors are guaranteed by means of the planned trainings, that the employees are motivated become more participant by efficient practices.

It is possible to define the SHRM practices as a system which appeals, improves, motivates, and retains employees to guarantee the effective implementation and the survival of the organization and members thereof (Schuler and Jackson, 1987). In addition to this, it is proven that the human resources practices have a significant effect on the positive organizational results (Lado and Wilson, 1994; Barney et al., 200; Chang and Huang, 2005). Due to the increasing importance of the competitive advantage provided by the human resources practices to the organizations, it is seen that the studies explaining how the SHRM practices take shape in the organizations intensify in the perspective of “best practices” (Pfeffer, 1995; Huselid, 1995; Delaney and Huselid, 1996) and “best fit” (Delery/Doty, 1996; Delery, 1998; Wright and Snell, 1998). The studies deemed to have contingency and configuration approach are built on the concept of “fit”, and the argument suggesting that the human resources strategies must be consistent with the other aspects of the organization is taken as a basis.

Under the dynamic environmental conditions and market conditions with fierce competition, the organizations should correctly identify the expectations and needs of the environment and they should be innovative in value creating in order to ensure their profitability in the short term and successfully continue their existence in the long term. The companies having greater proactivity will achieve more success in responding to changing environments and in developing new skills to provide them with better performance (Montes et al., 2004). In the value creation process, the knowledge, expertise, and commitment of the employees are the key inputs on which the innovation initiatives tend to depend mainly (Youndt et al., 1996). In the light of this information, it can be said that the SHRM practices to be implemented are the key that will realize the targets and strategies determined by the organizations.

In the relevant literature, it is observed that five common SHRPs are defined, which are in compliance with the strategies regarding innovation. These include encompassing performance appraisal, career management, reward system, training, and recruitment (Ling Tan and Nasurdin, 2011). In another study, it is understood that five strategic SHRM practices are determined, which are, again, in compliance with the strategies regarding innovation (Yle and Huang, 2009). These include staffing, training, participation, performance appraisal, and compensation. It is seen that there are common aspects in both literatures. In this study, staffing, training, participation, performance appraisal, and compensation are taken into consideration as the aspects of the SHRM practices.

### *2.2. Exploration and Exploitation as Organizational Level Innovations*

Under the dynamic environmental conditions, the organizations should use their resources in an efficient manner in order to ensure profitability in the short term, and gain new skills, new market places and new customers in order to maintain success in the long term, and therefore, they should be innovative. In the relevant legislation, the organizations that can correctly balance the two aforementioned challenges are defined as “ambidextrous organizations” (Gibson and Birkinshaw, 2004: 375). It is stated that the ambidextrous organizations set their organizational structures and business strategies so as to reduce the internal tension and ensure coherence by simultaneously applying both exploitation and exploration (O’Reilly and Tushman, 2007:42; Andriopoulos and Lewis, 2009: 707).

It is suggested that the exploitation practices enable the organizations to better research their resources with a central structuring. Although such structuring supports the exploitation types of innovation (exploitation), it has been found that it restricts lateral communication between the departments, reduces the quality and quantity of the available information within the organization, and therefore, the skills and motivation of the employees become inadequate in generating the new and innovative ideas (Damanpour, 1991: 569). On the other hand, it is stated that lateral communication increases and exploratory researches are supported and it is promoted to obtain new information in the centrifugal structuring that applies exploratory innovation (Exploration) (Adler et al., 1999: 48). The organizations that simultaneously use the exploitation and exploration practices harmonize their structure as flexible and centrifugal to instantly respond to the changes in external environment and also as central and mechanical with determined rules and business processes to use the available resources in an effective and efficient way. (O’Reilly and Tushman; 2004: 80). In other words, it is suggested that focusing only on the exploitation will cause the organizational performance to increase for a while but also cause the organizations to lose their ability to respond to the changes; and focusing so much on the exploration will cause the organizations to repeat themselves within an everlasting cycle of researches despite the information-based renewal (Raisch and Birkinshaw, 2008: 377).

In respect of ensuring inter-compatibility between the structures and strategies of the organizations; it is made reference to the structural and contextual ambidexterity. It is stated that the defenders of structural ambidexterity aim at differentiation using the organizational structure and strategies in this direction, and for this purpose, focus on the exploration and exploitation tactics that will realize the innovation (Gupta et al., 2006: 695-696). It is stated that the defenders of contextual ambidexterity focus more on the behavioral and social aspects of this dual structure and aim at establishing a working environment in which the shared values and a cooperative ambient can be created by practices such as socialization, human resources, team building, etc. (Andriopoulos and Lewis, 2009: 696). However, it is seen that both mentalities choose to design their management processes by (jointly/and) instantly compensating this dual tension within the organization with the paradoxical thought rather than exchanging it (Lewis, 2000: 761-763).

### *2.3. Knowledge Management Capacity at Organizational Level*

Providing a sustainable competitive advantage, the knowledge is a vital organizational resource in a competitive and dynamic economy (e.g., Davenport and Prusak, 2000; Grant, 1996; Spender and Grant, 1996).

In this regard, as the knowledge embedded in human capital ensures that the companies improve distinctive qualifications and get innovation opportunities, the view based on knowledge concerns knowledge as a valuable resource of the company (Grant, 1996; Spender, 1996) (Chen and Huang, 2009:114; Darroch and Naughton, 2002: 210). The knowledge management can be defined as the deployment of an extensive system that improves the growth of an organization's knowledge (Salisbury, 2003:129). According to another approach, the knowledge management is an integrated and systematic approach which contains databases, documents, policies and procedures including the current expertise and experience and which is related to determining, managing and sharing all information assets of the enterprise (Çakar and Yıldız, 2010:73). Moreover, the knowledge management can also be defined as the management functions that cover the formation of knowledge, the management of the flow of knowledge within the organization, and the effective and efficient use of knowledge for the long-term benefit of the organization (Darroch and McNaughton, 2002: 211). In general terms, the knowledge management efficiency can be considered as the efficiency of an organization for the management of the knowledge acquired, shared, and applied by its employees (Ling Tan and Nasurdin, 2011:157).

Based on the definitions, it can be said that the knowledge management represents a process. The knowledge management processes vary from study to study. For example, Davenport and Laurence (2000:46) defines it as knowledge generation, information coding, coordination and information transfer; and Malhotra (2003:68) as information awareness, determination of the purposes of knowledge, implementation, dissemination, improvement and storage. Bharadwaj and colleagues (2005) revealed that the knowledge management capacity of firms consists of obtaining, sharing, implementing and assessing processes. Gold and colleagues (2001) also address the knowledge management processes in four stages; namely, information collection, conversion of information into available information (information internalization), implementation (information sharing - information assessment), and information safe-keeping. It can be said that the aspects determined by the researchers refer the processes with respect to information acquisition, information sharing and implementing (Chen and Huang, 2009). In this study, the knowledge management capacity is examined within the framework of these three aspects.

It can be said that the information acquisition process is realized with two different points of view. The first one (1) is the acquirements from the knowledge management including exploitation through available knowledge. The critical information is taken by the firm from its surroundings including its clients, competitors, suppliers, and others who influence and are influenced by the performance of the company. The second one (2) is the acquirements from the knowledge management including the recycling of exploration by means of sharing and synthesis of the knowledge. The ideas and information that will modify what is done and how it is done are used by the firm (Allameh and Abbas, 2010: 90-92). The firms get the opportunity to recombine the current knowledge and generate new knowledge thanks to the knowledge acquisition from the external marketplace and the internal employees (Yli-Renko et al., 2001). The generation of collective information is intended by stimulating the knowledge of the employees within the course of the information sharing. When the knowledge sharing and exchange are desired, it is possible for the individuals to create collective learning and synergistic benefits from the processes of exchanging knowledge and resource (Nonaka and Konno, 1998). It is comprehended that the knowledge application is a focal element for the process of managing the knowledge. From the point of view based on knowledge, the value of individual and organizational knowledge depends mainly on its application due to the stickiness and tacit nature of the knowledge. The effective application of the knowledge allows the individuals to make fewer mistakes or improve their efficiency and reduce redundancy (Chen and Huang, 2009: 108)

### **3. Hypotheses Framing**

#### *3.1. Strategic Human Resource Practices and Organizational Innovations*

The relevant literature includes a limited number of studies that examine the relationship between the strategic human resources practices and ambidextrous organizations (i.e. Kang and Snell, 2009; Swart and Kinnie, 2010; Lackner et al., 2012). The relation between ambidexterity and SHRM practices is shown in a review of the ambidexterity literature (Lackner et al., 2012:7). Two alternative HR configurations which facilitate ambidextrous learning and which comply with the exploitation and exploration strategies of the ambidextrous organizations have been established by Kang and Snell (2009). While one HR configuration gathers job or development based on function, the other HR configuration gathers development based on skill. It is shown by the results of the research performed by Swart and Kinnie (2009) that the exploitative and explorative learning level is increased by the human resources practices and, by this means, the conformity with the ambidextrous organizations can be guaranteed. With the intention of standing for the specific contextual ambidextrous strategy, the SHRM practices give support to either exploratory or exploitative learning in

connection with diverse intellectual capital categories.

In their researches, Lackner and colleagues (2012) analyzed the necessity for the companies to configure and re-configure their SHRM systems for the purpose of achieving vertical conformity between SHRM system and corporate strategy. Their goal was to ensure and maintain ambidexterity as an organizational innovation to simultaneously perform exploration and exploitation. The findings of the research point out that the diverse ambidextrous strategies are contributed by the SHRM practices. The results of another study that is considered as relevant to the subject indicated that the organizational innovation is considerably and positively influenced by the SHRM practices (Ling tan and Nasurdin, 2011).

*H<sub>1</sub>: The strategic human resources practices (SHRPs) of organizations will be positively associated with the exploration and exploitation types of innovations.*

*3.2. Strategic Human Resource Practices and Knowledge Management Capacity*

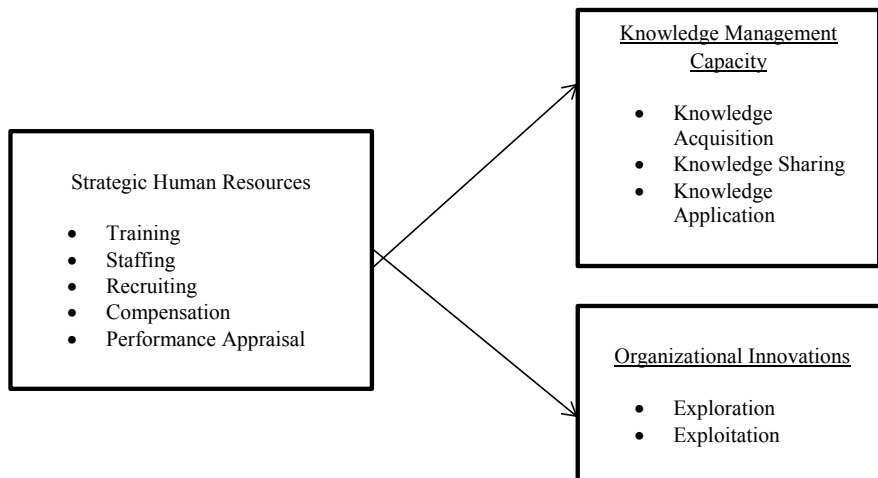
It is stated that the major changes within the organizations are mostly based on the improvement of the basic competencies of available human resources. It is also stated that the basic competencies and intellectual assets can only be improved with organizational culture and training. In this context, it is suggested that the strategies and practices of human resources should be planned so as to manage the knowledge and increase the basic competencies (Chourides at al., 2003:33). It was designated by Lackner et al. (2012:7) that the organizational learning processes are simplified and led by the SHRM practices within ambidextrous designs. Accordingly, either exploratory or exploitative learning is supported by the SHRM practices with respect to different intellectual capital categories with the aim of supporting the ambidextrous strategy. A significant positive impact of the SHRM practices on organizational innovation was revealed by the research findings obtained by Ling tan and Nasurdin (2011: 155). Furthermore, there is a mediation effect arising from the effectiveness of the knowledge management on the relationship between SHRM practices and organizational innovation.

Given the relationship of each SHRM practices with the knowledge management, many studies showed the role of the training-based view in the achievement of the Knowledge Management objectives (e.g. Nonaka and Takeuchi, 1995; Hall, 2001; Davenport and Völpe, 2001; Jelenic 2011). The unique knowledge of the employees frequently causes positive evaluations from the human resource systems (such as performance appraisal, staffing, etc.) (Wang and Noe, 2010; Chen and Huang, 2009). Khaksar and colleagues (2011) also underpinned that the achievement of the knowledge management and organizational performance goals is effectively contributed by the training of the human resource.

There are two primary strategic SHR practices, namely performance appraisals and compensation, that allow the companies to improve their employees' behaviors and enable them to adhere to the organizational objectives (Collins and Clark, 2003; Argote et al., 2003; Uriarte, 2008). Should the compensation systems reward the contribution to acquisition and exchange of knowledge, the individuals might strain for an effect on the knowledge management activities much more (Scarbrough, 2003; Collins and Clark, 2003; Von Krogh, 1998). In the light of this information, the strategic HR practices are expected to have a positive effect on the knowledge management capability.

*H<sub>2</sub>: The strategic human resources practices (SHRPs) of organizations will be positively associated with the knowledge management capacity of companies.*

Our proposed research model is suggested in below Figure 1.



## 4. Methodology

### 4.1. Procedure

This survey was administered to a wide range of companies operating in Turkey. Industries represented include various sectors like ready-wear, food, pharmacy; heating and cooling. Our primary goal was to include a wide range of industries to be representative of an overall economic outlook. This perspective is especially significant in an emerging economy context where sectors follow huge growth trends. We communicated with our contact people from the targeted companies and briefed them about the content of the study. After receiving their approvals, we sent our translated surveys to those contact people for pre-approval of purchasing managers to participate in the study.

Our constructs are collective in terms of functions and outcomes; therefore we followed the recommendation of Morgeson and Hofmann's (1999: 253) in operationalizing them. In their study, Morgeson and Hofmann (1999) argue that overall constructs represent the overall organizational functions, strategies or processes which are embedded in a set of individual level knowledge, skills, and abilities. For this reason, we collected our survey responses from individuals working across companies. Some modifications were made to existing scales to ensure that they were salient in the context of this investigation. With the suggestions of Yin (2003), we carried out back-to-back translation. Original scales were borrowed from existing literature and they were back-to-back translated to match the Turkish context. Our survey included items measuring training, compensation, performance appraisal, staffing, and participation as strategic human resources practices; knowledge acquisition and knowledge sharing as knowledge management capacity; exploration and exploitation as constructs measuring organizational innovation.

### 4.2. Measures

All questions were anchored on a 5 point Likert-scale (1 stands for strongly disagree and 5 stands for strongly agree). Questions measuring different constructs were mixed in order to reduce the possible method bias impact (Podsakoff et al., 2003).

#### *Strategic Human Resources Practices*

Drawing on the previous research (e.g., Youndt et al., 1996; Collins and Clark, 2003; MacDuffie, 1995; Tannenbaum and Dupree-Bruno, 1994), we utilized the items developed by Chen and Huang (2009). We measured training, staffing, participation, performance appraisal and compensation to represent the overall strategic human resources practices. Example statement for training was "Availability of formal training activities" (Cronbach Alpha: .96). For compensation, the example phrase was "existence of incentive pay" (Cronbach Alpha: .78). Having "developmental focus" for performance appraisals (Cronbach Alpha: .73), "selectivity in hiring" for staffing (Cronbach Alpha: .90) and "employees were allowed to make decisions" for participation (Cronbach Alpha: .71) were the phrases for the rest of the dimensions measuring strategic human resources practices. The overall Cronbach Alpha value for the scale was .93.

#### *Knowledge Management Capacity*

The knowledge management capacity construct consists of items that measure the extent of the knowledge management capacity of the company. Previous research (Lin and Lee, 2005; Gold et al., 2001; Chen and Huang, 2009) underpinned that knowledge management capacity of firms are measured via knowledge sharing, knowledge acquisition and knowledge application. Knowledge acquisition was measured with phrases such as "Knowledge was obtained from customers" (Cronbach Alpha: .72). An example statement for knowledge application was "Effectively managing knowledge into practical use" (Cronbach Alpha: .75). The overall Cronbach Alpha value for the knowledge management capacity construct was .81.

#### *Exploration and Exploitation*

To measure exploration and exploitation types of innovations of organizations, we used the scale developed by He and Wong (2004). The construct is composed of eight statements. For exploration, an example phrase was "we introduce new products or services" (Cronbach Alpha: .89). Example statement for exploitation was "We improve the quality of our existing products or services" (Cronbach Alpha: .88).



4.3. Results

Descriptive Findings

We present the descriptive findings in Table 1. Overall, the mean responses of participants regarding all research constructs ranged between 3.09 (for compensation) and 3.72 (for training). Correlation patterns across measures of constructs differed in terms of strength and significance. Most correlation values were mediocre. The direction and statistical strength in correlation patterns were as expected and in line with previous research. The highest degree of correlation was observed between exploration and exploitation (r = .85\*\*). The lowest degree of correlation pattern was observed between exploration and training given to employees (r = .25\*).

Table 1. Means, Standard Deviations and Correlations among the Variables

	Means	S.D.	1	2	3	4	5	6	7	8	9
Training	3.72	0.99	(.96)								
Compensation	3.09	1.02	.74**	(.78)							
Performance Appraisal	3.62	0.89	.44**	.53**	(.73)						
Staffing	3.44	0.91	.66**	.71**	.74**	(.91)					
Participation	3.62	0.89	.44**	.54**	.55**	.74**	(.71)				
Knowledge Acquisition	3.51	0.81	.37**	.53**	.70**	.59**	.71***	(.72)			
Knowledge Application	3.55	0.65	.25*	.49**	.58**	.53**	.57**	.71***	(.75)		
Exploration	3.43	0.94	.25**	.50**	.27**	.32**	.27**	.47**	.71***	(.89)	
Exploitation	3.15	0.85	.27**	.57**	.38**	.42**	.38**	.53**	.69**	.85***	(.90)

Note. Diagonal values represent the Cronbach Alpha values.

Note. N= 106

\* p<.05, \*\* p<.01, \*\*\* p<.001

Before hypotheses testing, we examined our data for common method variance problems. As suggested by Podsakoff and colleagues (2003), we tried to collect data based on the experience of respondents and company data. We implemented Harmon-One-Factor test to all study constructs (Podsakoff and Organ, 1986) to examine the existence and explanation structure of constructs. Our results showed that items loaded in their respective constructs in line with the literature. Overall, findings showed that most covariance explained was 24.12 by one factor. Therefore, despite its presence, common method bias problem was not a significant problem that distorted the explanatory power of relations among our constructs (Fornell & Larcker, 1981).

Measurement of the Model with Exploratory Factor Analyses

We conducted a Principal Components Factor Analysis with Varimax rotation to reveal the factorial structure of our constructs. Measure of sampling adequacy (.88), Barlett’s Test of Sphericity ( $\chi^2=3750$  significant at  $p < .000$ ) provided evidence to continue with the exploratory factor analyses. Our findings also emphasized that the communality values of all measures were above .50 which indicates that measures fit well with the other measures in the relevant construct (Nunnally and Bernstein, 1994). All the measures in our model loaded in their respective and pre-determined constructs and the overall variance explained with the rotated factors is 81%. Cronbach’s Alpha values for all the multi-item constructs were also found to be above 0.70 (Nunnally and Bernstein, 1994). We present the results of our fit indices in Table 2.

Measurement of the Model with Confirmatory Factor Analyses

We conducted a confirmatory factor analysis using maximum likelihood estimation procedure in M-Plus. We measured for training, staffing, performance appraisal, compensation, and participation for strategic human resources practices; knowledge acquisition, knowledge sharing and knowledge application for knowledge capacity management and exploration and exploitation for organizational innovation. The items belonging to different constructs were restricted to load on their priori extracted factors. In terms of fit indices, we utilized SRMR (standardized root mean square residual value) (Hu and Bentler, 1995; 1999) which needs to be smaller

than .06; RMSEA (root mean square error of approximation) that should also be as small as possible; TLI (Tucker Lewis index) and CPI (Comparative fit index) that deserve to be as high as possible. We also used  $\chi^2/df$  as a mean of comparison and it should be below 2, 3 or 5. Our fit indices were above the cut-off values and therefore, we proceeded on with the hypotheses testing of our proposed model.

Table 2. Fit Indices of the Present Model

Evaluation Parameters	$\chi^2$	<i>d.f.</i>	P Value	$\chi^2/df$	RMSEA	90 % of RMSEA	SRMR	CFI	TLI	AIC	Adjusted BIC
Recommended Values	Lower	Higher	Non-significant	<3	<.06	90% CI	<.06	>.95	>.95	Smaller	Smaller
Values	1125.52	252	0.00	3	0.00	[.09-.17]	0.16	0.71	0.78	10252	10525

Note. *N*= 109. RMSEA = Root Mean Square of Estimation. SRMR = Standardized Root Mean Square Residual. CPI = Comparative Fit Index. TLI = Tucker Lewis Index. AIC = Akaike’s Information Criterion. BIC = Bayesian Information Criterion.  $\chi^2$  significant at \* *p*<.05, \*\* *p*<.01, \*\*\* *p*<.001.

*Hypotheses Testing*

To test our hypotheses, we conducted Multiple Regression Analyses. Our first hypothesis aimed to reveal the association between human resources practices and organizational level innovation types measured as exploration and exploitation. In terms of exploitation type of organizational level innovation, our findings revealed that only compensation ( $\beta = .10^{***}$  with *p*<.001) and training ( $\beta = .11^{**}$  with *p*<.005) were found to be associated. The overall explanatory power of the model was 36% (*R*<sup>2</sup>). In terms of exploration, only compensation was found to be statistically significant ( $\beta = .49$ , \*\*\* with *p*<.000). The overall explanatory power of the model was 23% (*R*<sup>2</sup>). Therefore, our first hypothesis was partially accepted.

In our second hypothesis, we predicted that strategic human resources practices would predict the knowledge management capacity of companies. Results emphasized that performance appraisal ( $\beta = .54^{***}$  with *p*<.000) and compensation ( $\beta = .16^{**}$  with *p*<.005) were only related to knowledge acquisition. The two constructs namely performance appraisal and compensation explained for 52% (*R*<sup>2</sup>) of the variance in knowledge sharing. In terms of the effects of strategic human resources practices over knowledge application, our findings revealed that only performance appraisal ( $\beta = .33^{***}$  with *p*<.000), compensation ( $\beta = .29^{***}$  with *p*<.000) and training ( $\beta = -.19^{**}$  with *p*<.05) were statistically significant in explaining the knowledge application. Overall, our measures explained 39% (*R*<sup>2</sup>) of the variance in knowledge application. Therefore, our second hypothesis was partially accepted.

**5. Discussion and Conclusions**

In this study, our over-reaching goal was to investigate the key effects of strategic human resources practices over organizational innovations (exploration and exploitation) and over knowledge management capacity of firms. To realize our objectives, we collected data across industries in Turkey. Our findings revealed that some of the strategic human resources practices were associated with organizational innovation and knowledge management capacity. More specifically, compensation and training were found to be significant predictors of organizational innovation. As for the knowledge management capacity of companies, performance appraisal and compensation had significant explanatory power.

Our results clearly differentiated between the effects of various strategic human resources practices over organizational innovation and knowledge management capacity. Training and compensation were associated with exploration and exploitation at organizational level. Drawing from March’s (1991) seminal contribution on organizational innovation, He and Wong (2004) emphasized that undertaking exploration and exploitation are associated with organizational resources. Similarly, O’Reilly and Tushman, (2008) also showed that intangible resources and social capital are drivers for successful organizational innovations. This line of thinking coincides with the resource based view of organizations (Priem & Butler, 2001a; 2001b) where resources that are valuable, intangible, non-imitable and non-transferable are treated as sources of competitive advantages. Building on this insight, we showed that compensation and training are key determinants for successful organizational innovations.

In same vein of thinking, our findings revealed that performance appraisal and compensation policies of companies were predictors of the knowledge management capacity. The central implications behind these findings emphasize that knowledge sharing and knowledge application prevail under the context of performance appraisal provision and the compensation benefits to employees (Gold et al., 2001; Chen and Huang, 2009).



In our study, we faced certain limitations and they should be noted. The first limitation we confronted was related with the sampling context. Reaching participants across industries rendered the implications of this study quite limited and context-specific. This limitation was amplified with the limited number of customers we reached. Second limitation worth noting is about the study constructs. All the three constructs that composed the research model of this study were perception based and included the subjective reflections of the participants. Examination of the same research model with innovation outputs would be an exciting avenue to further investigate. Despite these challenges, we tried to conceptualize and investigate an all-inclusive model regarding strategic human resources practices, organizational innovation and knowledge management capacity of firms. We hope that insights from this study benefit the audience and add to our understanding of organizations in general.

## References

- Adner, R. and Kapoor, R. (2010), "Value creation in innovation ecosystems: How the structure of technological interdependence affects firm performance in new technology generations", *Strategic Management Journal*, 31: 306-333.
- Allameh, S.M.; Abbas, S.K. (2010), "The Relationship between Knowledge Management Practices and Innovation Level In Organizations: Case Study Of Sub- Companies Of Selected Corporations in the City of Esfahan", *Journal of Business Case Studies – January/February*, 6(1), pp. 89-98.
- Argote L.; McEvily B.; Reagans R. (2003), "Managing knowledge in organizations: an integrative framework and review of emerging themes". *Management Science*, 49(4), pp. 571–82.
- Barney, J.; Wrijht, M.; Ketchen, JR. D.J. (2001), "The resource-based view of the firm: Ten years after 1991", *Journal of Management*, 21, pp. 625-641.
- Benner, M. J. and Tushman, M. L. (2002), "Process management and technological innovation: A longitudinal study of the photography and paint industries", *Administrative Science Quarterly* 47: 676–706.
- Bharadwaj, S.; Bhushan S.; Saxena, C. (2005), "Knowledge Management in Global Software Teams", *Vikalpa*, 30(4), pp. 65-75.
- Boxall, P. (1992), "Strategic Human Resource Management and the Performance of Western Firms in China", *International Journal Of Human Resource Management*, South- Eastern College Publishing, Cincinnati, pp. 40-50.
- Chang, W.A.; Huang, T.C. (2005), "Relationship between Strategic Human Resource Management and Firm Performance", *International Journal of Manpower*, XXXVI (5), pp. 434-449.
- 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*, 62, pp. 104–114.
- Cohen, W. M.; Levinthal D. A., (1990), "Absorptive Capacity: A New Perspective On Learning And Innovation", *Administrative Science Quarterly*, 35, pp.128–153.
- Collins C.J. ; Clark K.D. , (2003), "Strategic Human Resource Practices, Top Management Team Social Networks, And Firm Performance: The Role Of Human Resource In Creating Organizational Competitive Advantage", *Academy of Management Journal*, 46(6), pp. 740–51.
- Çakar, N., (2010), "Bilgi Yönetimi ve Örgütsel Etkinlik ilişkisi: Örgüt Kültürü ve Örgüt Yapısının Temel Etkileri", *Ege Akademik Bakış*, 10(1), ss. 71-93.
- Darroch, J.; McNaughton, R., (2002), "Examining the link between knowledge management practice and types of innovation", *Journal of Intellectual Capital*, Vol.3, No.3, pp. 210-222.
- Davenport, T.; Laurence, P. , (2000), *Working Knowledge*. Boston: Harvard Business School Press.
- Davenport, T.H.; Völpel, S.V., (2001), "The Rise of Knowledge Towards Attention Management", *Journal of Knowledge Management*, 5, pp. 212-221
- Delaney, J. T.; Huselid, M. A., (1996), "The Impact of Human Resource Management Practices on Perceptions of Organizational Performance," *Academy of Management Journal*, 39(4), pp. 949-969.
- Delery, J. E., (1998), "Issues of Fit in Strategic Human Resource Management: Implications for Research," *Journal of Management*, 8(3), pp. 289-309.
- Delery, J. E.; Doty, D. H., (1996), "Modes of theorizing in strategic human resource management: Tests of universalistic, contingency, and configurational performance predictions", *Academy of Management Journal*, 39(4), pp. 802-835.
- Dyer, J.H., (1997), "Effective Interfirm Collaboration: How Firms Minimize Transaction Costs and Maximize Transaction Value", *Strategic Management Journal*, 18, pp. 535-556.
- Dur, S.; Yıldız, S.; Demircan, N. Ç., (2010), "Bilgi Yönetimi ve Örgütsel Etkinlik İlişkisi: Örgüt Kültürü ve Örgüt yapısının Temel Etkileri", *Ege Akademik Bakış*, 10(1) , ss. 71-93.
- Filippini, R.; Güttel, W.H.; Nosella, A., (2012), "Ambidexterity and the evolution of knowledge management initiatives", *Journal Of Business Research*, 65(3), pp. 317-324.

- Fornell, C.; Larcker, D.F., (1981), "Evaluating Structural Equations Models With Unobservable Variables And Measurement Error", *The Journal of Marketing Research*, 18, pp. 39-50.
- Grant R. M., (1996), "Toward A Knowledge-Based Theory Of The Firm", *Strategic Management Journal*, 17, pp. 109–22.
- Gold, H.A.; Malhotra, A.; Segars, A.H., (2001), "Knowledge Management: An Organizational Capabilities Perspective", *Journal of Management Information Systems*, 18, pp.185-214.
- Gupta, A., Smith, K. and Shalley, C. (2006), "The Interplay between exploration and exploitation", *Academy of Management Journal* 49(4): 693-706.
- Hall, B., (2001), "Learning management and knowledge management: Is the holy grail of integration close at hand?", Brandon-Hall Publication.
- He, Z.-L.; Wong, P.-K., (2004), "Exploration vs. exploitation: An empirical test of the ambidexterity hypothesis", *Organization Science*, 15: pp. 481–494.
- Holmqvist, M. (2004), "Experiential Learning Processes of Exploitation and Exploration. An Empirical Study of Product Development", *Organization Science* 15(1): 70-81.
- Hu, L.; Bentler, P. M. (1995), *Evaluation model fit.*, In R. H. Hoyle (Eds), *Structural equation modeling: Concepts, issues, and applications* (pp. 76–99). Thousand Oaks, CA: Sage.
- Hu, L.-T.; Bentler, P. M. (1999), "Cutoff criteria for fit indices in covariance structure analysis: Conventional criteria versus new alternatives", *Structural Equation Modeling*, 6(1), pp. 1–55.
- Huselid, M. A., (1995), "The Impact of Human Resource Management Practices on Turnover Productivity and Corporate Financial Performance," *Academy of Management Journal*, 38(3), pp. 635-672.
- Jelenic, D., (2011), "The Importance Of Knowledge Management In Organizations – With Emphasis On The Balanced Scorecard Learning And Growth Perspective", *Management Knowledge And Learning International Conference.*, www.issbs.si/press/ISBN/....
- Kane, B.; Ian P., (1995), "Strategic HRM or Managing the employment relationship?", *International Journal of Manpower*, 16(5/6), pp. 6-21.
- Kang, S. C.; Snell, S. A., (2009), "Intellectual Capital Architectures and Ambidextrous Learning: A Framework for Human Resource Management", *Journal of Management Studies*, 46(1), pp. 65-92.
- Katila, R. and G. Ahuja (2002), "Something old, something new: a longitudinal study of search behavior and new product introduction", *Academy of Management Journal* 45: 1183–1194.
- Kivijarvi, H., (2004), "Knowledge Conversion in Organizational Context: A Framework and Experiments", *Proceedings of the 37th Hawaii International Conference on System Sciences*, 1-10, [http://Csd12.Computer.org/comp/proceedings/hicss/2004/2056/08/2056\\_80\\_242a.pdf](http://Csd12.Computer.org/comp/proceedings/hicss/2004/2056/08/2056_80_242a.pdf).
- Lado, A.A.; Wilson, M., (1994), "Human Resource systems and sustained competitive advantage: a competence based perspective", *Academy of Management Review*, 19, pp. 699-727.
- Ling T. C.; Aizzat M. N., (2011), "Human Resource Management Practices and Organizational Innovation: Assessing the Mediating Role of Knowledge Management Effectiveness", *Electronic Journal of Knowledge Management*, 9(2), pp. 155-167.
- Lin H. F.; Lee G. G., (2005), "Impact of organizational learning and knowledge management factors on e-business adoption", *Management Decision*, 43(2), pp. 171–88.
- MacDuffie J.P., (1995), "Human resource bundles and manufacturing performance: Organizational logic and flexible production systems in the world auto industry", *Industry Labor Relation Review*, 48(2), pp. 197–221.
- Malhotra, Y. (2003). Is Knowledge the Ultimate Competitive Advantage? *Business Management Asia*. September, Q 3/4, pp. 66-69.
- March, J. G. (1991), "Exploration and exploitation in organizational learning", *Organization Science* 2: 71–87.
- Miller, R.E. ve C.C. Snow (1994), " Designing strategic human resource systemes, organizational dynamics, 13(1), 36-52.
- Mohrman, S.A., Cohen, S.G. and Mohrman, A.M., Jr., (1995), *Designing Team-Based Organizations*. San Francisco: Jossey-Bass.
- Montes, F.J.L; Moreno A.R.; Fernandez, L.M.M., (2004), "Assessing the organizational climate and contractual relationship for perceptions of support for innovation", *International Journal of Manpower*, 25(2), pp. 167–80.
- Morgeson, F. P.; Hofmann, D. A. (1999), "The structure and function of collective constructs: Implications for multilevel research and theory development", *Academy of Management Review*, 24, pp. 249–265.
- Nonaka I; Konno, N., (1998), "The concept of 'Ba': building a foundation for knowledge creation", *California Management Review*, 40(3), pp. 40–54.
- Nunnally, J.C.; Bernstein, I.H. (1994). *Psychometric theory* (3<sup>rd</sup> ed.). New York: McGraw Hill.
- O'Reilly, C. A., III, and Tushman, M. L. (2008), "Ambidexterity as a dynamic capability: Resolving the innovator's dilemma", *Research in Organizational Behavior* 28: 185-206.

Ostroff, C., Kinicki, A. J. and Tamkins, M. M. (2003) Organizational culture and climate. In W. C. Borman, D. R. Ilgen, & R. J. Klimoski (Eds.), *Handbook of psychology. Industrial and organizational psychology* (565–593). Hoboken: Wiley.

Priem, R. L. and Butler, J. E. (2001a), “Is the resource-based “view” a useful perspective for strategic management research?” *Academy of Management Review*, 26(1): 22–40.

Priem, R. L. and Butler, J. E. (2001b), “Tautology in the resource-based view and the implications of externally determined resource value: Further comments”, *Academy of Management Review*, 26(1): 57–66.

Podsakoff, P. M.; Organ, D. W. (1986), “Self-reports in organizational research: Problems and prospects”, *Journal of Management*, 12(4), pp. 531–544.

Podsakoff, P. M.; MacKenzie, S. B.; Lee, J.-Y.; Podsakoff, N. P. (2003), “Common method biases in behavioral research: A critical review of the literature and recommended remedies”, *Journal of Applied Psychology*, 88, pp. 879-903.

Salisbury, M. W. (2003), “Putting theory into practice to build knowledge management systems”, *Journal of Knowledge Management*, 7(2), pp. 128-141.

Schuler, R.S.; Macmillan, I.C. (1984), “Gaining competitive advantage through human management practices”, *Human Resource Management*, 23(3), pp. 241-256.

Schuler R.S.; Jackson, S.E. (1987), “Linking competitive strategies with human resource management practices”, *Academy Of Management*, 18(3), pp. 11-35.

Schuler, R.S. (1992), “ Strategic human resource management: Linking the people with the strategic needs of the business”, *Organizational Dynamics*, 2(1), pp. 18-33.

Schuler, R. S.; Jackson, S. E., (1987), “Linking competitive strategies with human resource management practices”, *Academy of Management Executive*, 1(3), pp. 207-219.

Snell, S. A. (1992), “Control Theory in Strategic Human Resource Management: The Mediating Effect of Administrative Information”, *Academy of Management Journal*, 35, pp. 292-327.

Soliman, F.; Spooner, K. (2000), “Strategies for Implementing Knowledge Management: Role of Human Resource Management”, *Journal of Knowledge Management*, 4(4), pp. 337-345.

Ulrich, D. (1991), “Employee and customer attachment: synergies for competitive advantage”, *Human Resource Planning*, 14(2), pp. 89-103.

Pfeffer, J. (1995), *Rekabette Üstünlüğün Sırrı: İnsan*, çev: Sinem Gül, 2. Baskı, Sabah Yayınları, İstanbul.

Rosen, R. H., (1998), *İnsan Yönetimi*, çev: Gündüz Bulut, Mess Yayınları, İstanbul.

Spender J.C., (1996), “Making knowledge the basis of a dynamic theory of the firm”, *Strategic Management Journal*, 17(10), pp. 45–62.

Spender, J. C.; Grant, R. M. (1996), “Knowledge and the firm: Overview”, *Strategic Management Journal*, 17, pp. 5–9.

Swart, J.; Nicholas, K. (2009), “Organisational learning, knowledge assets and HR practices in professional service firms”, *Human Resources Research Management Journal*, 20(1), pp. 64-79.

Tannenbaum S.I.; Dupree-Bruno L.M., (1994), “ The relationships between organizational and environmental factors and the use of innovative human resource practices”, *Group Organization Management*, 19(2), pp. 171–202.

Uhlener, L.; Stel, V.A.; Meijaard, J.; Folkeringa, M., (2007) , “The relationship between knowledge management, innovation and firm performance: evidence from Dutch SMEs”, <http://www.ondernemerschap.nl/pdf-ez/h200704.pdf>

Uriarte, Filemon, A., (2008), *Introduction to knowledge Management*, ASEAN Foundation, Jakarta, Indonesia., [http://www.aseanfoundation.org/documents/knowledge\\_management\\_book.pdf](http://www.aseanfoundation.org/documents/knowledge_management_book.pdf)

Wang, S.; Raymond A. N., (2010), “Knowledge sharing: A review and directions for future research”, *Human Resource Management Review*, 20 , pp. 115–131.

Wright, M. P.; Benjamin B. D.; Scott A. S. (2001), “Human resources and the resource based view of the firm”, *Journal Of Management*, 27, pp. 701-721.

Wright, P. M.; Snell, S. A., (1998), “Toward A Unifying Framework for Exploring fit and Flexibility in Strategic Human Resource Management,” *Academy of Management Review*, 23(4), pp. 756-772.

Yli-Renko H; Autio E; Sapienza H.J., (2001), “Social capital, knowledge acquisition, and knowledge exploitation in young technology-based firms”, *Strategic Management Journal*, 22(6/7), pp. 587–613.

Youndt, M.A.; Snell S.A.; Dean J.W.; Lepak D.P., (1996), “Human resource management, manufacturing strategy, and firm performance”, *Academy of Management Journal*, 39(4), pp. 836–66.