Knowledge Sharing and Performance Appraisal of Employees: a Pilot Case Study

Review of Integrative Business & Economics Research

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ABSTRACT

Broad scope of knowledge management and its interdisciplinary nature spans traditional functions and professional boundaries. Knowledge sharing is process of exchanging and communicating knowledge and information between employees in an organization. It refers to transmitting knowledge from the place where it is stored to the situation where it is used and vice versa. Various factors can influence and contribute to the quality and form of the shared knowledge. Goal of this paper is to present findings on knowledge sharing and performance management and the impact of motivation on knowledge management. In the empirical part, a preliminary research on relationship between knowledge sharing, performance management of employees is presented. This relationship was observed in small IT and was tested using PLS– SEM techniques.
Keywords: Knowledge management, knowledge sharing, performance appraisal, IT

1. INTRODUCTION

Human resources are main and key aspects in every organization, service or production, representing total knowledge, talent, creative ability, aptitude and belief of an individual involved in the organization (Dhamija, 2012). Knowledge management (KM) and human resources (HR) are regarded as key levelers of competitive advantage in global, dynamic and complex business environment (Brewer & Brewer, 2010) through which company can enhance performance, innovation and practices (Wang & Wang, 2012). Knowledge, as the most important intellectual property and asset of the company (Collins, 2010), is conceptualized as codified information which enhances companies' value and achievement (Anand & Singh, 2011). The two concepts: people and knowledge, considering from the context of knowledge work, are inextricably joined (Oltra, 2005). The HR view in KM is increasingly gaining more attention in recent years (Brewer & Brewer, 2010). Various researchers have been interested in area of knowledge management and employees, combining it with perspectives of strategic, project management and information technology (Ahmed & Ahmad, 2012; Attafar, Soleimani, Shahnazari, & Shahin, 2012; Davenport & Völpel, 2001; Hussock, 2009; Ishak, Eze, & Ling, 2010; H. F. Lin, 2007; Oltra, 2005; Özbebek & Toplu, 2011; Theriou & Chatzoglou, 2008). Contribution of HRM to KM is at the high end of value chain as it is primarily used to create and sustain a culture that fosters innovation, creation, creativity and learning (Chivu & Popescu, 2008). Certain HRM practices are

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found to be effective in encouraging knowledge sharing behavior, e.g. staffing, training and development, performance appraisal and compensation (Cabrera & Cabrera, 2005). Not all HRM practices enhance knowledge management and wrong HRM practices can be harmful especially to knowledge sharing behavior (Currie & Kerrin, 2003). It is important to choose appropriate HRM practices which facilitate knowledge management.

Abundant literature that has investigates the relationship between HRM and organizational performance exist, but there is a shortage of findings on the relationship between HRM practices and knowledge sharing (KS) behavior, especially within small companies and in the context of Croatia. This paper, through an empirical pilot study, investigates association between HRM practices, with core focus on performance management and knowledge sharing behavior as perceived by employees in small IT Croatian companies. For data analysis the Partial least Square Structural Equation Modeling (PLS-SEM) is employed and for results reporting the SmartPLS software package is used. Remaining sections of this empirical paper are arranged in the following manner. First through a literature review of HRM practices, performance management and knowledge sharing are discussed. Afterwards the hypotheses of the research are presented and research methodology including information on the research instruments, data and analysis performed in this study. This is followed by a presentation of the results. Implications, limitation and recommendations for future research as well as the final conclusions are also provided at the end.

2. LITERATURE REVIEW

2.1 Knowledge Sharing

Knowledge management is defined as creating, acquiring, storing, sharing, transferring and utilizing both explicit and implicit forms of knowledge at individual, group, organizational and community level through harnessing of people, process and technology (Madhoushi, Sadati, Delavari, Mehdivand, & Hedayatifard, 2010) . Knowledge management from an operational perspective, is perceived as systematic process by which ‘organization identifies, creates and acquires, shares and leverages knowledge’ (Chivu and Popescu, 2008). Housel and Bell (2001) summarized four main goals of KM: (1) Gathering: bringing information and data into the system; (2) Organizing: associating items to subjects establishing context, making them easier to find; (3) Refining: adding value by discovering relationships, abstracting, synthesizing, and sharing; (4) Disseminating: getting knowledge to people who can use it.Term knowledge management does not imply only on a set of technologies or methodologies, but also practice and discipline that involves interaction of people, processes and technology. Knowledge management is not only a necessity, but also source of competitive advantage and thus an important strategic resource for business organizations.

Knowledge sharing has been identified as a major focus and research area of KM. It provides a link between the level of individual knowledge workers, where knowledge resides and level of organization, where knowledge attains its (economic, competitive) value (Hendriks, 1999). Process of sharing starts at individual level and expands to group and organizational level (H. F. Lin, 2007). Most authors agree that knowledge sharing depends on individual factors like experience, values, motivation and beliefs

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(Connelly & Kelloway, 2003; H. Lee & Choi, 2003; H. F. Lin, 2007). Many researchers have been examining effectiveness of knowledge sharing from different viewpoints focusing on the problem of transferring tacit and complex knowledge across organization parts, on the nature of informal relationships between two parties to transfer knowledge and on the problem of searching for knowledge (Ardichvili, Maurer, Li, Wentling, & Stuedemann, 2006; Brauner & Becker, 2006; Connelly & Kelloway, 2003; Fong, Ooi, Tan, Lee, & Chong, 2011; Goh & Hooper, 2009; Hoegl, Parboteeah, & Munson, 2003; Jalote, 2003; W.-L. Lee, Liu, & Wu, 2011; Martins & António, 2010; Moorthy & Polley, 2010). Effectively sharing knowledge increases the accumulation of organizational knowledge and develops the capability of its employees for better performance of their jobs (Jalote, 2003). Combining knowledge of different employees creates new opportunities and responds to challenges in innovative ways (Mathew, Kumar, & Perumal, 2011). In addition, C.-P. Lin, (2007) argues that the survival of company may be substantially undermined if employees are not willing to share knowledge, by which the ethic foundations can seriously be affected.

2.2 Performance Management

Human resources management includes decisions that affect the success of business, with aim of achieving long-term company strategy (Noe, Hollenbeck, Gerhart, & Wright, 2000, p. 4). This specific area of management has been explored throughout last few decades and various authors have defined range of classification and functions of HR management. Human resources practices and functions differ from industry to industry as well from size of the organization. Taking in consideration that there is no universal prescription for HRM policies and practices and everything lays on organization's context, culture and its business strategy, it is important for every company to find the "best fit". For purpose of this paper human resource functions are defined accordingly (Scarbrough, 2003): recruitment and selection, training and development, performance appraisal (management).

Performance management (PM) is continuous activity for evaluating employee work and is engaged for improving employee performance productivity and effectiveness (Chan, 2006). One goal of performance management is gaining information necessary for decision-making related to employee remuneration. Furthermore, tracking performance allows planning of career development which is in the interest of the company and individual employees (Bahtijarević-Šiber, 1999, pp. 507–509). Performance assessment results with three categories of workers' performance (Tuan, 2011). First, evaluation of employee's abilities and his/hers personal characteristics, then the behavior of employees and in the end specific job performance. This is necessary for accurate evaluation in order to develop a remuneration system based on the performance of employees. (Tuan, 2011). In assessment it is important to note that all employees do not have same ethical principles, temperament, abilities, skills and knowledge (Buntak, Drožđek, & Kovačić, 2013). Key activities in performance management are performance planning, coaching and review. Performance planning includes defining job responsibilities and performance expectations, as well as goals and objectives. Second is the performance coaching which occurs during the whole period and it involves monitoring, coaching and developing the employees. It's mostly based on feedback information. And third key activity is the performance review as the formal stage at the end of the review period. It is based on performance appraisal (Fitt 1992,

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from Chan, 2006). In her research on large companies in Croatia in 2001 Položki Vokić, (2004) concluded that performance appraisal in Croatian companies is below the level which is significant for contemporary business relationships. A half (51%) of large Croatian companies monitor job performance for 40.30% of total employees, while job performance is monitored for only 37% of managers. Another study conducted in 2005, also on large Croatian companies, shows that the percentage of companies conducting performance appraisal has increased to 71.87%. Percentage of employees who are monitored has increased from 40.30% from 2001, to 41.88% in 2005, which is unfortunately a small increase (Položki Vokić & Vidović, 2007). However, when this data is compare with data available for Europe, it can be noticed that Croatia is far behind Europe. About 70% of manager are involved in performance appraisal in EU companies and 70.5% professionals and administrative staff 65.4%, while the world's best organizations monitor work performance by as much as 87.07% of the workforce (Položki Vokić & Vidović, 2007).

3. LINKING KNOWLEDGE SHARING AND PERFORMANCE APPRAISAL

Evaluating the performance of work may also contribute to the sharing of knowledge (North, 2008, pp. 149–150). Pervious research has shown that motivated employees are willing to share when they think that knowledge sharing will be worth the effort (H. F. Lin, 2007). Results of Lam & Lambermont-Ford (2010) research showed that external motivational factors help knowledge sharing in organizations. Some of the previous studies have proven that PM is linked to knowledge management and knowledge sharing (Nien-Chi Liu & Min-Shi Liu, 2011). Currie and Kerrin (2003) analyzed performance management systems and stated that the performance management system inhibits knowledge sharing, as much of the conflict between different functions was due to the divergent objectives set out for employees in the performance agreements. Paying attention to needs of employees, giving feedback to them and performance appraisal based on accurate standards is effective on facilitation of knowledge management process (Attafar et al., 2012). Better performance appraisal system can help employees obtain information about the requirements of knowledge sharing (Nien-Chi Liu & Min-Shi Liu, 2011). Authors Jaw and Liu (2003) stated that it is important for companies to publish the results of the PM to the employees and through that enforce remedial actions for the underperforming employees. Knowledge sharing can help incentive systems which are measures aimed to increase employee motivation. Some of the incentives can be: increase salary, bonuses, trips, feedback (evaluation) about the performance of work, independence, promotion, etc (North, 2008, pp. 149–150). Thus, a PM system may serve as a positive pressure in directing employees to develop for better performance, through greater knowledge sharing among other employees (Fong et al., 2011). Therefore, it is important to study effect of performance management and knowledge sharing behavior in companies. Accordingly following hypothesis is proposed: *H1: Performance appraisal of employees in IT companies has a significant association with knowledge sharing.*

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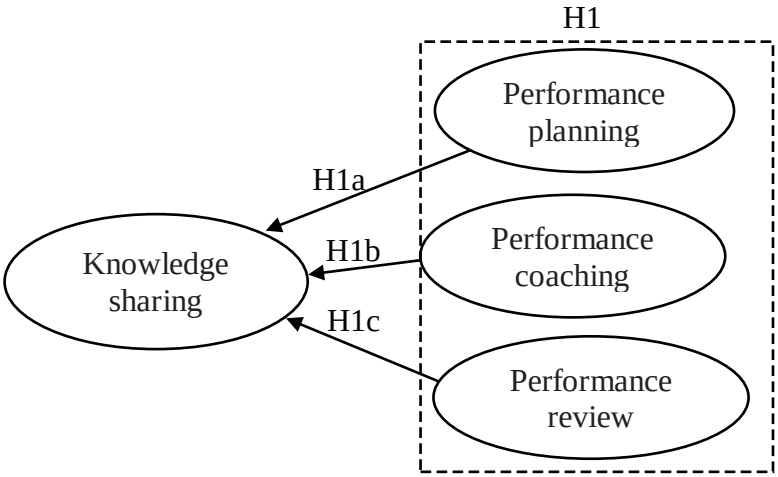
Figure 1: Conceptual framework



As stated above, the performance management consist out of three main segments: performance planning, performance coaching and performance review (see Chan, 2006). For the purpose of this research the relationship between these three elements and knowledge sharing is observed. The above stated hypothesis is now dividend in three:

H1a: *Performance planning of employees in IT companies has a significant association with knowledge sharing.*

H1b: *Performance coaching of employees in IT companies has a significant association with knowledge sharing.*

H1c: *Performance review of employees in IT companies has a significant association with knowledge sharing.*

Below methodology of data collection and analysis and research results of the pilot study in Croatia IT companies are presented.

4. METHODOLOGY

Survey method was used for data collection. Target sample were employees in small IT companies in Croatia. Online questionnaire formed in GoogleDocs was sent per e-mail with appropriate cover letter. Authors received 77 answers. Main focus was on performance management which was measured on three levels: performance planning, performance coaching and performance review. For performance planning six items were used and for performance coaching three and performance review was measured through five items. Responses were measured on a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Knowledge sharing behavior was measured using ten items. For example, 'This company has processes for distributing knowledge throughout the whole company' and 'Employees in this company share knowledge through formal channels (projects reports and other)'. Response option to each item again ranged from 1 = strongly disagree to 5 = strongly agree. Form the above mentioned items, several had to be dropped in order to ensure reliability and validity of the model. The PLS-SEM technique was employed to analyze the research model constructed in Figure 1.

Structural equation modeling (SEM) techniques are considered to be a major component of applied multivariate statistical analyses and are used by biologists, economists,

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educational researchers, marketing researchers, medical researchers and a variety of other scientists (Pugesek, Tomer, & Eye, 2003). One reason for the enhanced attention is the availability of specialized SEM programs (e.g., AMOS, EQS, LISREL, Mplus, Mx, RAMONA, SEPATH, SmartPls) (Pugesek et al., 2003).

SEM models represent translations of a series of hypothesized cause–effect relationships between variables into a composite hypothesis concerning patterns of statistical dependencies (Pugesek et al., 2003). The relationships are described by parameters that indicate the magnitude of the effect (direct or indirect) that independent variables have on dependent variables. SEM is a combination of factor analysis and multiple regression (Pugesek et al., 2003). It is used to determine how sets of variables define constructs (i.e. measurement model) and how these constructs are related to each other (i.e. structural model) (Bollen & Long, 1993). It includes a large set of powerful statistical indices for testing measurement and structural models. Its goal is to determine to which extent the model fits the sample data. With SEM, the relationship between measured variables and the relationship between unmeasured, hypothetical constructs can be modeled. Two main goals in SEM are (Suhr, 2006):
1) To understand the patterns of correlation/covariance among a set of variables
2) To explain as much of their variance as possible with the model specified.
Structural equation models comprise two components, a measurement model and a structural model. Model is statistical statement about the relations among variables. The measurement model relates observed responses or 'indicators' to latent variables and sometimes to observed covariates. The structural model then specifies relations among latent variables and regressions of latent variables on observed variables (Skrondal & Rabe-Hesketh, 2005). Path analysis tests models and relationships among measured variables. Two different techniques for structural equation modelling can be applied (Afthanorhan, 2013): covariance-based technique (CB-SEM) and partial least square (PLS-SM). CB-SEM is a covariance-based technique and attempts to minimize the difference between the sample covariance and that predicted by the theoretical model (Pugesek et al., 2003). PLS-SEM increases the explained variance of the endogenous latent constructs (dependent variables) and minimizes the unexplained variance (Afthanorhan, 2013). PLS does not assume the normality of data distribution, and therefore is more suitable for smaller samples. The analysis can also be conducted with several (fewer than three) indicators (items), whereas the CB-SEM assumes that there are more than three indicators (Afthanorhan, 2013).

For purpose of this research the partial least square structural equation modeling is employee and as for the software the SmartPLS 2.0 (Ringle, Wende, & Will, 2005) is used. SmartPLS is one of the main applications for Partial Least Square Structural Equation modeling (PLS-SEM). This software, developed by Ringle, Wende and Will (2005) has a friendly user interface and advanced reporting features and is freely available to academics and researchers.

5. RESULTS

The proposed structural model reflecting the research hypothesis H1 (H1a, H1b, H1c) is depicted in Figure 1. After the data was collected and adjusted the path model was formed and tested (see Figure 2).

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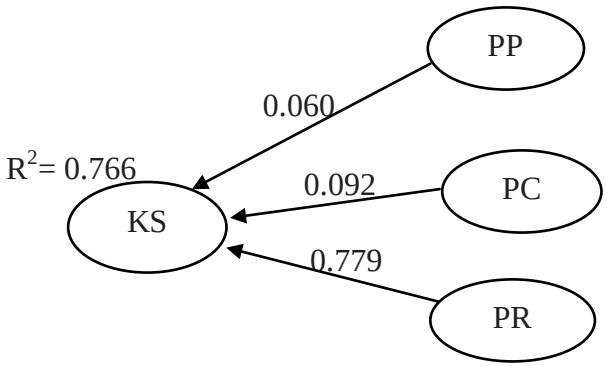
Figure 2: The structural model with path coefficients



*Note: (**KS:** Knowledge Sharing, **PC**: Performance coaching; **PP**: Performance Planning; **PR**: Performance Review)*

The PLS path modelling estimation for knowledge sharing and performance management is shown in figure 2. The beta values of path coefficient indicate direct influences of predictor upon the predicted latent constructs. The coefficient of determination is 0.766 for the KS endogenous latent variable. The inner model suggest that performance review has the strongest effect on knowledge sharing (0.779), followed by performance coaching (0.092) and performance planning (0.062). The hypothesized relationship between performance review and knowledge sharing is statistically significant. However the hypothesized path relationship between planning, coaching and knowledge sharing is not statistically significate, due to the low standardized path coefficients (accordingly 0.062 and 0.092) which need to be higher than 0.1 (Wong, 2013). The dimensions of knowledge sharing showed good validity and reliability and thus reflect the overall sharing of knowledge in companies. Three latent variables (planning, coaching and review) substantially explain 76% of variance of knowledge sharing. Thus, it can be concluded that performance review is a substantial predictors of knowledge sharing, but performance planning and coaching do not predict knowledge sharing in companies directly. Through that, the hypothesis has been partially confirmed (H1c): *Performance review of employees in IT companies has a significant association with knowledge sharing.*

Table 1. Reliability assessment of the measurement model

Items	AVE	Composite Reliability	R Square	KS	PC	PP	PR
KS	0,5001	0,8187	0,7659	**0,7071**			
PC	1,0000	1,0000	0,0000	0,5554	**Single item construct**		
PP	0,5845	0,9072	0,0000	0,6411	0,6498	**0,7645**	
PR	0,5194	0,7565	0,0000	0,8689	0,5456	0,6702	**0,7206**

Smart PLS simultaneously assesses the psychometric properties of the measurement model and estimates the parameters of the structural model (Yeşil, Koska, & Büyükbeşe, 2013) result of the reliability testing measurement model are presented in

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the table 1. As shown below the composite reliabilities of measure in the model range from (0.756) which exceeds the recommended threshold values of 0.70 (Yeşil et al., 2013). The average variance extracted (AVE) has a threshold of 0.5, which is acceptable for this model. The square root of AVE can be used to establish the discriminate validity of the model (Fornell & Larcker, 1981). These results are presented in table 1 as bolded elements in the matrix diagonal, representing the square roots of AVEs. They are greater, in all cases, than the off-diagonal elements in their corresponding row and column. These results support the discriminate and convergent validity of the model.

6. CONCLUSION

Individuals, human potentials are in the center of knowledge management, so knowledge management is individuals' management and individuals' management is knowledge management (Davenport & Völpel, 2001). If human resources, employees and their effective managing is essential for company and if people's most more valuable resource is knowledge, than HRM and KM are closely interrelated (Svetlik & Stavrou-Costea, 2007). Importance of knowledge management lies in the fact that it could result in empowerment of individuals and organization itself to accomplish activities effectively through organizing of knowledge (Jantz, 2001).

Current pilot study was conducted to reveal the impact of performance management on knowledge sharing in companies in Croatia. Insight in the possible implications of performance management on knowledge sharing can result with understanding how to improve the performance management systems, encourage knowledge sharing culture and all with effect of improving employee's ability and results. The results show that performance review (a part of performance management) has a positive effect on knowledge sharing. Although it is expected that performance management (planning, coaching and review together) have a positive influence on KS this was partially supported in the study due to maybe low level of sample size.

Main limitations of this research is the small sample size and companies are form just one country which limits' the generalizability of the findings. Therefore, authors recommend that further research is conducted on companies in other countries and with increased sample size. Future studies can also include other variables that may affect performance management and knowledge management in general.

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