



Impact of Knowledge based HR Practices on Innovation with the Mediating Effect on Employee's Creativity

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Abstract

The purpose of this research is to concentrate on the mindful and orderly administrative activities for business with knowledge in firms (i.e. knowledge management (KM) practices), which aims at innovation performance improvements through proactive management of knowledge assets. The study examined the impact that the KM practices have on innovation performance. A study was conducted to obtain experiential evidence by using questionnaire. The data have been collected from 366 respondents from FMCGs within Lahore City. A structured questionnaire was framed containing 27 questions. This research is significant for practitioners, policy makers and from theoretical point of view. Quantitative data have been collected for research purpose. The results reveal that employee's creativity plays a positive role in innovation of an organization. Therefore, all hypotheses are acknowledged. The study clarifies

that the knowledge based HR practices have effect on innovation and it affects positively employee's creativity too.

Keyword: *knowledge management, innovation performance, employee's creativity, HR practices*

1. Introduction

The knowledge management perception has been urbanised as management task that aims to generate and distribute knowledge and information. Nowadays, knowledge management is a widely spread discussion, promoted by academicians, consultants and practitioners (Scarborough et al., 2005). The recent research has established that KM influences firm performance by providing organisations with a powerful structure to actualise their innovation techniques. Darroch and McNaughton (2003) have highlighted three principle exercises of knowledge management i.e. information obtaining, learning dispersal and responsiveness to learning. Knowledge management has been raised as determinant of development. The knowledge, learning and innovation are interrelated builds. As such, learning happens when information is utilised as a part of the association and at last this learning and creativity result in innovativeness and advancement (Yang et al., 2014).

Soliman and Spooner (2000) viewed that human resource practices are effective in assisting the acquisition, distribution and creation of new knowledge by the employees. The successful recruitment of employee's hiring those who are equipped with the required knowledge and expertise ought to fulfill the needs of knowledge creation and sharing. After being hired, training needs to be provided to the employees for their enhancement and development. Training the employee to be eager in developing and sharing of information is one of the vital functions of human resource department. Nowadays, the business environment has become more turbulent and more competitive; hence, creativity has become strategic asset for firm survival. Furthermore, this relationship has become an important issue for understanding how firms apply knowledge management capabilities to initiate, enhance and maintain supplier relationships, as well as enhance corporate performance.

Shalley et al., (2004) said that innovation is often defined as the implementation of ideas, whereas creativity is related to the production of ideas and that creativity is a necessary factor enabling innovation, also that there is a positive relation between creativity and organisational innovation. In this vein, creativity becomes the critical priority factor that firms have to enhance

as it helps them to respond to the rapidly changing environment and provides them with the stimulus for internal flexibility and revitalisation. Creativity is both a survival and competitive competency that can greatly increase the firms' performance. This is because creative employee's behavior can positively influence both the personal and the team creativity performance and finally the firm's innovative performance (Slatten and Mehmetoglu, 2011).

Roberts & Amit (2003) provided that innovation is a critical element for growth of economy. Innovation is the only way through which organisations can improve their performance especially in this unstable environment due to globalisation, technological changes, scarce resources and changing customers demand for better quality. With the emergence of intellectual capital and knowledge management as new disciplines, many authors and practitioners added these constructs as possible antecedents of the innovation. The innovation process heavily depends upon knowledge. Indeed, the power of knowledge lies in its subjectivity, underlying values and assumptions that underpin the learning process.

Nowadays, knowledge, innovation and creativity are widely recognised as the most crucial competitive factors that can substantially support and foster an enterprise's adaptation, survival and outstanding performance (Palacios and Garrigos, 2006). Actually, there is a reciprocal relation among these three concepts, as the capacity of an organisation to sustain its ability to generate ideas and innovation is predicated on its capacity to learn, expand its knowledge base, and its people sharing their knowledge (Teece, 2007). Thus, in dynamic markets whereby competition and risk intensifies and the product/service life cycles become shorter and shorter, the root to sustainable competitive advantage can only be found in continuous organisational learning, knowledge management (KM) and creativity (Sundbo, 2012).

Research will be significant for HR managers because the HR management's task is to assess and analyse training needs and provide evaluate training. The ultimate goal of these practices is to find and select the best-fitting employees, and to use appropriate remuneration, training, and evaluation mechanisms to retain and bring out the best in them. KM-focused HRM practices can increase innovation performance through four main mechanisms.

The previous studies related to the relationship between strategic knowledge management regarding corporate performance are insufficient and issues related to knowledge management and organisation financial performance have not been systematically investigated (Yang et al.,

2014). The previous researches were conducted on relationship of generic knowledge processes like knowledge acquisition, sharing, creation and protection or knowledge-based assets like human, structural, and relational capital on innovation performance (Lee et al., 2013). A small number of studies have been conducted to explore the effect of knowledge management human resource practices on firm's innovation performance. A few factors of knowledge management practices had been selected for research purpose to know about their relationship with innovation process (Jayakody, 2014). Many studies are conducted on knowledge management, innovation and creativity but only few of them explored the FMCG sector (Sigala and Chalkiti, 2012). Creativity is considered as the most important factor in the process of innovation which leads to profits for the firms. This gap is also astonishing because employees' creativity greatly depends on their ease of understanding and ease to use correct information at the accurate moment and situation. Many researchers highlighted in their studies that knowledge management activities have significant relationship with creativity generation process (Basadur, 2014; Amabile, 2010).

The concept of knowledge management human resource practices through collaborative innovation is most important. There are too many studies on knowledge management implementation to enhance successful innovation activities but this research covers the employees' creativity in administration arrangement and development (Vargo and Lusch, 2014). Creativity permits associations to learn, meet client requests and to enhance execution. Therefore, it is very important to conduct study on it (Prahalad & Ramaswamy, 2013). It is fundamental to cover the gap of getting current level knowledge for awareness of knowledge management human practices like knowledge based compensation, recruiting, performance appraisal in relation to cluster firms.

2. Literature Review

Wong (2005) said in his study that HRM practices play a significant role in knowledge management. Human resource management is usually defined as managing the employees of an organisation. Generally, HRM functions comprise recruiting, reimbursement, performance appraisal and guidance and growth. The ultimate purpose of these practices is to find out and select the best workers. Their suitable compensation, training and assessment mechanisms hold and bring out the best in them. This is the main purpose of HRM. If these practices are properly implemented and focused in any organisation, it can increase innovation performance through four most important mechanisms. Initially, while recruiting an employee, attention must be paid

to the candidates' knowledge, his abilities and social skills. By applying this knowledge incentive task, the firm can produce well-informed workforce that will perform knowledge-intensive responsibilities effectively and efficiently (Chen and Huang, 2009).

Foot and Hook (2008) mentioned in their study about knowledge based on human resource practices that for any task in the organisation, employees must have best expertise to perform it and their competences must match the right task. Subsequently, there is another HRM practice that significantly influences the firm's knowledge i.e. training and development. A firm that enthusiastically plans and arranges trainings for their employees keeps its knowledge base modernised and competitive. These trainings may include courses, seminars, and other. It is the basic responsibility of HR management to assess and evaluate training needs of employees and provide them the best training session accordingly (Senge, 1994).

Scarborough (2013) explained in his study that a regular review of employees' performance and career development session between higher authorities and employee is considered as performance appraisal. Usually, economic performance is considered as a tool to evaluate employees but a KM-based system also takes into consideration different knowledge activities like knowledge distribution, creation, and utilisation. If an organisation values its employees then it is likely that employees will add to knowledge activities of firm.

Pirola-Merlo and Mann (2004) explained that employee's creativity is an important area to pay attention while investigating the impact of personal factors (traits, cognitive style, inspiration) and organisational background factors like (organisational traditions, management style, organisational design, size, etc.). On the other hand, by adopting a group focus on measuring the performance, the creativity of an individual employee is not taken into consideration. It must be kept in mind while measuring the performance or creativity of a firm that each individual has its own importance and knowledge based skills. Also his abilities and compensation should not be omitted. This lapse is dangerous because it is apparent that creativity is not an entity's process, it is collective process because networks and communications can drastically control the materialisation of ideas (Hemphäländ Magnusson, 2012). Certainly, it is important to study the process of creativity generation. Instead of taking into the individual process, firms and researchers should focus on the factors that can influence the accessibility and knowledge of employees towards creative practices. Firms should focus on the factors that are helpful to

diverse knowledge i.e.they should focus on employees' social structure and their network bonding (Aubke, 2013).

Metaxiotis et al.(2005) explained that knowledge-based organisationis widely used to foster creativity in organisation alternatively to the concept of organisational intelligence which was used to incorporate thinking and doing, formulation and implementation as well as learning and application. A Knowledge-based organisation possesses a special advantage that allows for movement of intelligence and knowledge creativity towards the enhancement working conditions. The impacts of knowledge creativity are linked to increase in multifactor of productivity that reflects increase in the overall efficiency of labor and capital.

Nair and Gopal (2010) explained the creativity as mental capability by which individuals working together and group of individuals can produce productive and useful ideas; therefore, it is significant for organisations' continued existence and competitiveness. Ultimate aim of creative activity is to resolve, clarify, offer better solutions and improve the organisation's ability. This kind of culture of creativity is built by providing amenities, incentives, favorable work environment, and headship to workers so that they could better use their skills. Good leadership is about creating new ideas and work in the way that it affects the ability to inspire followers. This compassion, consideration, and support of leaders can help to achieve the status quo which will help to defeat the fear of challenges in the organisation.

Unsworth (2003) explained that innovation is followed by creativity because it is a method of engaging in those behaviours which are designed to produce and execute new thoughts, processes, goods and services. Specifically, creativity begins with imaginative possibilities within the human mind. This is the point at which the theoretical arguments by Zhang and Bartol (2010) came into thought that how the empirical study by the psychological empowerment affects internal motivation. It also shows its relationship with staff creativity psychological self-sufficiency of the brain side out. The organisation's ability to look after creativity and innovation depends upon the organisational culture.

Hon (2012) said that innovation has a key part in the growth of a firm. To nurture creative environment, it is important to provide a learning environment. Researchers encouraged creativity and innovation in a firm and explored that innovativeness depends on the guideline of interior inspiration in staff conduct. A study depended on the friendliness business demonstrated

the deficient feeling of inventiveness and development sway on representative independence. Case of such variables includes incorporate engaging authority and work environment atmosphere. The individual clash, controlling or coercive administration style and outside guidelines were identified with negative self-inspiration, the empowering different components much more were unfavorable to imaginativeness and curiosity. Writing and studies directed on work environment imagination and innovation (Baas, De Dreu, & Nijstad, 2008).

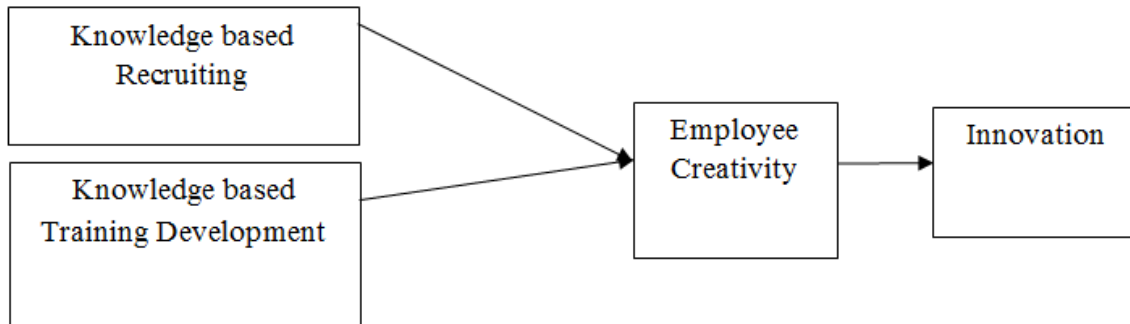
Nawaz and Danish (2011) said that individual creativity contains two parts i.e. creative ability and creative behaviour: Creativity that comes naturally is considered creative skill but ability level is different. Creative behaviour practice is to use one's creative skills and abilities. Leadership key closes the gap between the dynamic creativity and creative behaviours. Researcher's leadership behaviours practices explored a variety of styles which influence followers towards creative work. If you follow these leader behaviours that can produce a level of creative activity with increased solve organisational issues, it will enhance organisational performance, improve organisational effectiveness and employee satisfaction. On the other hand, if firms do not follow the appropriate leader behaviours that can reduce the body's ability to maximise its creative resources, it will weaken the creativity and performance. Unsuccessful organisations leaders encourage an environment that supports the generation and implementation of creativity and knowledge management practices for innovation. Creativity and innovation are depending on an individual's perception in the organisational climate.

Johnson et al., (2006) explained that knowledge is a building block for creativity. It is an important way to achieve the exchange of information among team members and knowledge creation. There is a concept related to the exchange of information which means that the leadership is a learning behaviour. It is explained as "an ongoing process of reflection and action, asking questions, feedback on experiences in the search results, and mistakes or actions the expected results, characterised by making discussion".

Caves (2000) explained that creative industries are characterised by their excellence and satisfaction, difficulties in explaining service regulations for working, worker productivity actions as well as the users can choose a variety of products unpredictability. Creative industries are in the form of complex projects, firm's complementary inputs, resources or to rely on a combination of different specialisations. Therefore, service is struggling to raise and boost their inner competence. On the other hand, such firms collectively or individually create new

knowledge based and creativity based processes to enhance their innovation activity (Belussi, 2011). On the basis of above literature following model has been devised.

Research Model



On the basis of above mentioned model following hypothesis are stated.

- H1: There is relationship between knowledge based recruiting and innovation process.
- H2: There is relationship between knowledge based training and development and innovation process.
- H3: There is relationship between knowledge based recruiting and employee creativity.
- H4: There is relationship between knowledge based training and development and employee creativity.
- H5: There is relationship between employee creativity and innovation.
- H6: There is a mediating relationship of employee creativity between knowledge based recruitment and innovation process
- H7: There is a mediating relationship of employee creativity between knowledge based T& D and Innovation process

3. Methodology

This research used quantitative research method under positivism paradigm to test the effect of independent variables on dependent. Data collection is an important aspect of any type of research study. Data are collected through questionnaire. SPSS software is used for analysing the data. Questionnaire was made with 5 points liker scale ranging from “Strongly Agree” to

“Strongly Disagree” for analysis. Questions are adapted from "Knowledge management practices and innovation performance in Finland" (2015) by Henri TapioInkinen, AinoKianto and Mika Vanhala and from “Leadership, Creative problem solving capacity and creative performance. The importance of knowledge is shared by Abraham Carmeli (2013), Roy Gelbard and Roni Peiter Palmon. Reliability Test, PCA (principle Component Analysis) and regression and mediation analysis are used. Sample Size is 366 and population is fast moving consumer goods (FMCG) manufacturing concerns.

3.1 Frequency Distribution

Table 1. Age of Respondent

Age	Frequency	Percent
20-30	312	86.7
30-40	28	7.8
40-50	18	5.0
50-60	2	0.6

Above given table shows frequency distribution of age of respondents. Frequency distribution table is always drawn on categorical variables to check the frequency, percent, and valid percent). Total 360 respondents had given the response that is 100%. The frequency of 20-30 years is 312 with the percentage of 86.7%. 30-40 years age respondents are 28 in frequency and the percentage is 7.8%.40-50 years respondents are 18 and percentage is 0.5%. And 50-60 respondents are 2 in frequency with the percentage of 0.6%.

Table 2. Gender of Respondents

Gender	Frequency	Percent
Female	129	35.8
Male	231	64.2

The above given table is frequency distribution table of gender wise respondents. Frequency distribution table is always drawn on nominal variables to check the frequency, percent, and

valid percent. Total 360 respondents had given the response that is 100%. The frequency of “male” is only 231 with the percentage of 64.2%. Female gender respondents are 129 in frequency and the percentage is 35.8%.

Table 3. Monthly Income of Respondents

Income	Frequency	Percent
15000-25000	142	39.4
25000-35000	213	59.2
35000-45000	2	0.6
45000 and above	3	0.8

The above given table is frequency distribution table of income of respondents. Frequency distribution table is always drawn on categorical variable to check the frequency, percent, and valid percent. Total 360 respondents had given the response that is 100%. The frequency of 15000-25000 is only 142 with the percentage of 39.4%. 25000-35000 years age respondents are 312 in frequency and the percentage is 59.2%. 35000-45000 respondents are 2 and percentage is 0.6%. And 45000 and above respondents are 3 in frequency with the percentage of 0.8%.

3.2 Descriptive Statistics

In descriptive statistics, mean and standard deviation of dependent, independent and mediating variable was obtained to know about the responses of slope. The findings of the analysis are given below:

Table 4. Descriptive Statistics

Variable	Mean	standard deviation
Knowledge based Recruitment	4.2370	.65353
Knowledge based Training and Development	4.2215	.61043
Innovation	4.0806	.65705

Employee Creativity	4.1142	.58513
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The above table shows the mean and standard deviation of independent, mediator and dependent variables. The descriptive analysis shows that about independent variables like knowledge based recruitment knowledge based knowledge based training and development items. Mostly people are agreed and strongly agreed. In the same way, the mean of employee creativity is mediator and the results show that mostly people agree and strongly agree because its mean value is 4 or close to 5. The mean value of innovation is 4.0806 that shows individual response against innovation varies between 4 and 5

3.3 Reliability

Table 5. Reliability Analysis

Variables	Chronbach Alpha
Knowledge based Recruitment	0.775
Knowledge based Training and Development	0.793
Innovation	0.846
Employee Creativity	0.807

In this analysis, independent, mediator and dependent variables outcomes occur which is proven through the value of Cronbach's Alpha. It proves the reliability of data. Cronbach Alpha value should be greater than 0.7. Value of Cronbach's Alpha is above in all independent, mediator and dependent by compute variable. Eleven items used for compute variable (0.7) shows the positivity in results and it is above then (0.7).

3.4 Regression Analysis

Table 6. Knowledge based recruitment and Innovation

Model	R	Adj. R Square	B	P	F
1	.568	.320	.571	.000	170.318

In above table, value of R is .568 and R square is .320 which demonstrates change in independent variable (knowledge based recruitment).It will bring 32% change in dependent variable (innovation). B , value of Beta shows a positive slope whereas value of P is .000 that is less than 0.05. It shows that model is good fit and there exists a significant relationship between knowledge based recruitment and innovation.

Table 7. Knowledge based training and development and Innovation

Model	R	Adj. R Square	B	P	F
1	.778	.604	.837	.000	547.833

In above table, value of R is .778 and R square is .604 which demonstrates that change in independent variable (knowledge based training and development) will bring 60% change in dependent variable (innovation). The value of Beta shows a positive slope whereas value of P is .000 that is less than 0.05. It shows that model is good fit and there exists a significant relationship between knowledge based training, development and innovation.

Table 8. Employee Creativity and Innovation

Model	R	Adj. R Square	B	P	F
1	.498	.246	.559	.000	118.197

In the above table, value of R is .498 and R square is .246 which demonstrates that change in independent variable (employee creativity) will bring 24% change in dependent variable (innovation). B value of Beta shows a positive slope, whereas value of P is .000 that is less than 0.05. It shows that model is good fit and there exists a significant relationship between employee creativity and innovation.

Table 9. Knowledge based Recruitment and employee creativity

Model	R	Adj. R Square	B	P	F
1	.521	.269	.466	.000	133.060

In the above table, value of R is .521 and R square is .269. This demonstrates that change in independent variable (knowledge based recruitment) will bring almost 30% change in dependent variable (employee creativity).

B value of Beta shows a positive slope whereas value of P is .000 that is less than 0.05. It shows that model is good fit and there exists a significant relationship between knowledge based recruitment and employee creativity.

Table 10. Knowledge Base T&D and Employee Creativity

Model	R	Adj. R Square	B	P	F
1	.386	.147	.370	.000	62.830

In the above table, value of R is .386 and R square is .147 which demonstrates that change in independent variable (knowledge based training and development) will bring 15% change in dependent variable (employee creativity). B value of Beta shows a positive slope whereas value of P is .000 that is less than 0.05. It shows that model is good fit and there exists a significant relationship between knowledge based training, development and employee creativity.

3.5 Mediation Analysis

Table 11. Innovation is Dependent Variable

Models	R	Adj. R Square	B	P
Employee creativity	0.615	0.375	0.312	0.000
Knowledge based recruitment	0.615	0.375	0.425	0.000

In the above table, a combined regression is run on knowledge based recruitment, employee creativity, innovation and result shows that value of independent variable (knowledge based recruitment) is equal to (mediator) employee creativity. Both variables have same values 0.375; it means that there is partial mediation. Partial mediation shows that both employee creativity and knowledge based recruitment are equally affecting the dependent variable (innovation).

Table 12. Innovation is Dependent Variable

Models	R	Adj. R Square	B	P
Employee creativity	0.807	0.649	0.261	0.000
Knowledgebase T&D	0.807	0.649	0.740	0.000

In the above table, a combined regression is run on knowledge based T&D, employee creativity and innovation and result shows that value of independent variable (knowledge based T&D) is equal to (mediator) employee creativity. Both variables have same values 0.649 and it means that there is partial mediation. Partial mediation shows that both employee creativity, knowledge based training and development are equally affecting the dependent variable (innovation).

4. Discussion and Conclusion

Estimated value of R (0.568) demonstrates that there is a moderate relationship between knowledge based recruitment and innovation. It demonstrated that 32.0% change in innovation was because of knowledge based recruitment and remaining because of different components. Value of P is 0.000 i.e it is less than 0.005 which implies that we will acknowledge hypothesis and there exists noteworthy relationship between knowledge based recruitment and innovation so H1 is acknowledged.

Estimated value of R (0.778) demonstrates that there is a strong relationship between training and development and innovation. It demonstrated that 60.4% change in innovation was because of training and development and remaining because of different components. Value of P is 0.000 and it is less than 0.005 which implies that we will acknowledge hypothesis. There exists noteworthy relationship T&D Practices and innovation so H1 is acknowledged.

KM practice that is likely to be an influential contributor for firm's innovation performance is knowledge-based compensation. This HRM practice encourages employees to engage in knowledge-intensive activities through rewarding and promotion systems that recognise involvement in knowledge processes such as knowledge sharing, knowledge creation, and knowledge utilisation. The finding reaffirms the prevailing understanding of how HRM practices could positively influence the firm's innovation performance by increasing the knowledge processes (Chen and Huang, 2009) by adding to the employees' affective commitment (Camelo-

Ordaz et al., 2011) increasing knowledge sharing (Soto-Acosta et al., 2014) and by supporting impersonal trust (Vanhala and Ritala, forthcoming).

Estimated value of R (0.498) demonstrates that there is a moderate relationship between employee creativity and innovation. It demonstrated that 24.6% change in innovation took place because of employee creativity and remaining because of different components. Value of P is 0.000 and it is less than 0.005 which implies that we will acknowledge hypothesis and there exists noteworthy relationship between employee creativity and innovation so H1 is acknowledged.

McEwen (2011) creative workers results not only produce high efficiency but also serve as assistance to produce high benefit, innovativeness, development and high consumer loyalty. Aside from execution, change as noted by Whittington and Galpin (2010) explained workers' creativity likewise results to additional part practices among staff and this accelerates inventiveness and advancement at the work place.

5. Conclusion

Overall, this study adds to a better consideration of how knowledge should be managed for organisational benefit. It adds more to the knowledge based view of a company by means of utilizing experiential data with a huge sample size in order to reveal the most efficient management mechanisms for increasing innovation. Furthermore, the division of KM practices to four types and the provision of the validated measurement scales add to the general consideration of KM as a field of hypothesis and put it into practice. It offers avenues for further research with the same instruments. The research also adds to innovation management writing by representing the collision of KM as a decision-making tool for advancing innovation. The results of this study increases understanding of the potentially most effective KM practices which are expected to advance a firm's innovation performance serving as a guideline for the managers.

5.1 Future Research Directions

In future studies, this phenomenon should also be examined in other contexts. Secondly, single respondents were used to assess all the variables examined in the study. Further studies could improve this limitation by utilising more objective measures of innovation performance. Furthermore, studies should involve different respondents with different organisational roles as multiple variables to improve methodological firmness. On the third level, knowledge-intensity and innovation management vary greatly between industries. Thus, a comparative study about

KM practices and innovation performance between different industries could be interesting to carry out.

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