



# KNOWLEDGE SHARING AND INNOVATION PERFORMANCE AFFECTED BY HR GENERIC STRATEGIES: AN EMPIRICAL STUDY OF SMES IN CHINA AND PAKISTAN

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## ABSTRACT

*This study examines how Chinese and Pakistani SMEs use HR Generic Strategies specifically about the mediating role of affective management that influences "knowledge sharing" and "innovation performance". It specifically focuses how HR practices adds value to knowledge sharing and innovation by providing essential assurance and dedication to workers and induce them to be enthusiastic to share their knowledge and perform well in innovation. The finding suggests that Affective Commitment mediates high-commitment, knowledge-sharing behavior and Innovation performance in SMEs. This study has also explore the level to which employees are sharing knowledge within Organizations is positive and significant influence to the Organization's innovation performance.*

**Keywords:** Innovation, Knowledge Sharing, Knowledge Management, HR Strategies, Affective Commitment

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\* The material presented by the author does not necessarily portray the viewpoint of the editors and the management of the Institute of Business & Technology (IBT)

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## 1. INTRODUCTION

The insufficiency of relevant literature about the role of HRM in SMEs had made this a sought after area for researchers and academics. Many researchers have been conducted on large Organizations but SMEs are less explored. Henman et al (2000) stresses that the role of HRM in SMEs is an area rich in recommendation, however, deficient in **sound descriptive data** as well as in analytic and methodological research. The growing notion is that practice and science of HRM in SMEs is neither an agreed upon topic nor it is a flourishing one. Therefore, call for quality research, both descriptive and analytic in this area has been in demand which is likely to benefit both HRM as well as the small and medium enterprise management (Tansky and Heneman, 2003). Harney and Dundon (2006) rightly point out that the existing body of **HR theories and practices** are largely based on the research on large enterprises and only a small body of work represents small and medium enterprises making information about HR practices, application and strategies in SMEs.

### 1.1 Background of Study

There exist a number of issues and challenges in small and medium organizations that are essential to be addressed. This study, however, concentrates on the mediating role of affective management in fostering knowledge sharing and innovation performance. A comparative study of Chinese and Pakistani SMEs will be done to address the chosen area. The effective HR practices and strategies nourish knowledge management and enhance staff abilities to develop efficiency in small and medium size firms. Huselid (1995) suggests that employees usually attain necessary knowledge about Organization during orientation, induction and training stages. Based on a study in the service sector, Huselid (1995) examines the relationship between human resource practices, workers exit rate and organizational performance. The findings suggest a firm with good HR practices focuses on talented workers, employee participation in decision process, working in teams, higher financial incentives, job safety and high personnel performance standards. This study is just a representative of a voluminous research that has been dedicated to examine the influence of HR generic strategies on Organizational Performance. The SME sector in Pakistan and China has grown impressively in recent years. This is largely due to the fact that Pakistan is an emerging economy and its economical, cultural and social factors are more conducive for SMEs.

### 1.2 Problem Statement and Gap Identification

Edvardsson (2006) asserts that the small and medium enterprises of China and Pakistan are facing problems with regard to encouraging workers to share knowledge. It is highlighted that the Chinese and Pakistanis SMEs can't attain 'knowledge sharing' and 'innovation performance' without implementing effective human resources management practices which enhance employee commitment by mediating role of affective commitment (Edvardsson, 2006). There exists a body of research that examines knowledge management and innovation performance in the context of HR perspective

but in a rather limited context (see for example Einhorn, 2006; Oltra, 2005; Svetlik&Stavrou-Costea, 2007; Rohra, 2009; Cunningham, 2010 and Gine, 2011). There is particularly a gap in existing literature to provide cross-national evidences on influence of HR practices on knowledge sharing and performance innovation (Edvardsson, 2006). This study intends to shrink this gap and contributes to the exiting body of knowledge for researchers and practitioner by extending evidence from small and medium size enterprises from China and Pakistan.

### **1.3 Objectives of Research**

As stated above, the primary aim of this study is to examine the effects of HR generis strategies on knowledge sharing and performance innovation in China and Pakistan in SMEs specifically, it has the following key objectives:

§ To examine how knowledge management procedures and processes play integral part in formation of knowledge creation and improve innovation performance through essential commitment for personnel who are eager to share their knowledge;

§ To highlight how affective commitment promotes knowledge sharing and innovation performance;

§ To propose and empirically test a model on relationships between HRM practices, knowledge sharing, affective commitment and innovation performance;

§ To compare and contrast the findings of the above model between China and Pakistan SMEs samples.

### **1.4 Contribution of the Study**

The major contribution of this study is to propose and examine empirically a conceptual model to examine the influence of HRM generic strategies on knowledge sharing and innovation performance and furthermore, to examine the mediating role of affective commitment on innovation performance together with HR strategies in Small and medium enterprises in China and Pakistan. The author believes that this is the first kind of empirical study that will not just fill the gaps highlighted by Gine (2011), Cunningham (2010) and Rohra (2009) but will also be useful to HR managers to implement HR practices that will promote knowledge sharing culture through affective commitment and increase innovation performance of SMEs. This study will provide new era for researchers in the area of HRM practices influences role in knowledge sharing and innovation performance

## **2. LITERATURE REVIEW**

## **2.1 Theoretical Background**

It was elaborated that Small and Medium enterprises (SMEs), regardless of their limited production and comparatively high operational costs, were recognized to be momentous causes of employment progress and novelty (Gine; 2011). SMEs are effected by the social, political and economical factors of any country. It was further elaborated that the knowledge of what makes SME firms robust and competitive in any country is vested in the workers, who join, stay and leave; their role in Organization commitment (Gine; 2011).

## **2.2 SMEs Culture in China**

One of the representative studies in this regard is by Zhang (2003) who examines HR practices of 15 small and medium enterprises in Northern China. The study highlights key elements of success of Chinese SMEs. It was reported that Guanxi (social networking) with important stakeholder's success and innovation in HR systems are two prominent elements. The study deeply examined the HR practices of sample companies from various sectors and reported that the participation of national culture is profound for the stability in the study of human resource management in China. Further, it revealed that the Confucian philosophies are of greater importance for commerce, trade and economics in China. It was highlighted that the success of SMEs of China were based on the important teachings and principles of Confucian support esteem for work, discipline, frugality, shielding face, upkeep of harmony and prevention of conflict (Zhang, 2003).

## **2.3 Small and Medium Enterprises of Pakistan**

The Small and medium enterprises sector of Pakistan has experienced marvelous development in recent years. The sector has prospered Pakistan as a developing economy, however, the growth of SMEs has necessitated the need for having right personnel for the right job to curtail costs and increase productivity. In the heart SMEs there are the HR strategies which have to attract quality brains, retain them and add value innovation in the business. It is suggested that human resource management is a valuable source of competitive advantage in SMEs. However, SME sector of Pakistan faces a real challenge in this regard. The active role of HR management is only visible in large and successful Organizations which are either technology based or knowledge based (George and Zahra, 2001). To realization that how important the HR practices in Pakistan for SMEs is relatively a new and emerging area of knowledge based on the mediating role of Organization Commitment.; Although this area ignored in the past as far as research and knowledge development is concerned.

## **2.4 Variables of study**

There are four important variables of the model that this study develops and empirically examines. Those are 'Human Resource Generic Strategies', 'Knowledge Sharing', 'Affective Commitment' and 'Innovation Performance'. Their linkages with

each other are discussed below.

### **2.4.1 Human Resource Practices and Knowledge Sharing**

Oltra (2005) and Stavrou-Costea (2007) highlighted that researches over the last couple of decades have focused on the need to develop a strong link between Knowledge Management and Human Resource Practices. This was in response to growing demand to bridge the gap in existing theory and practice and to encourage researchers to research the impact of human resource practices on knowledge management and innovation performance. Hislop (2003) highlights that the achievement of any knowledge management and innovation intentions and initiatives necessitate that workers must be eager to share their knowledge, skills, capabilities and experiences with other co-workers in the Organization. This leads to development of first hypothesis of this study.

Hypothesis 1: HR practices positively and significantly impact knowledge sharing in SMEs.

### **2.4.2 Human Resource Practices and Affective Commitment**

The Human Resource Management systems are based on commitment and cultivate participation and cooperation among workers which tend to increase the organizational profits and returns on human capital investments. The key challenge, however, is to find the key talent, nourish them retain them for a longer period of time. This initiates in SMEs with recruiting and hiring of enthusiastic and self-motivated employees. The organizations capitalize considerably to progress exceptional skills through wide-ranging new training programs. While discussing affective dimension that describes why workers excel in the organization is the loyalty, attachment and recognition with organization's goals, norms and values. Hanif and Shao (2011) conducted a research to investigate why top public and private sector organizations are unsuccessful in creating diverse workforce of impartial talent, behaviors, knowledge and experience. They revealed that the appropriate technique is to attract the quality and diverse workforce throughout the country can be achieved by multi-national companies (MNCs). Hanif and Shao (2013) conducted a study to highlight the role of talent management with HR generic strategies to retain talent, reduce employee turnover and to achieve perceived HR outcomes of a firm by implementing effectively and efficiently succession planning, employer branding, motivation and development policies. Meyer and Allen (1991, 1997) described that the commitment is the motive that drives workers to remain faithful to their organizations. The existing literature differentiates three different elements of attitude to remain loyal and committed to the organizations. These three factors constitute three kinds of commitment that becomes the basis of the tri-dimensional model: affective (wish), continuance (need) and normative (obligation) commitments. Subsequently, it was stated that commitment for long period in organizations always add value to company's welfare, skills improvement and solution of different issues, results in business and efficiency improvement (see for example, Wakebayashi and Chen; 2003). This provides the basis for second research hypothesis of this study.

Hypothesis 2: HR practices positively and significantly impact affective commitment.

### **2.4.3 Knowledge Sharing and Innovation**

Chinese SMEs frequently lack the resources needed to engage in lengthy and expensive knowledge exploration, which often involves an external search for new knowledge (Swan; 2007). Alternatively, they can improve their innovation deficiencies and attempt to catch up with developed nations by exploiting internal knowledge and rapidly responding to market changes, even though they are relatively latecomers in innovation activities (Li and Kozhikode, 2008). More specifically, knowledge may not be purely absorbed or used to generate an innovation routine independently and will only provide innovation benefits for a firm when it is appropriately utilized. Sungjoo et al (2010) studied innovation among SMEs and pointed out that family business SMEs are more successful compared to non-family SMEs. A notable exception is study by Zahra (2012), who explored the impact of family involvement on entrepreneurial activity via organizational learning. She found that it is vital for the development of innovation capability to involve other organizations in the process. The innovation capability measures the firm's ability to innovate. It is the ability to generate new knowledge. Such capability is seen as crucial to organizational performance because it allows organizations to continually create new sources of advantages and adapt to rapid changes in the market place and technology (Grant 1996). Referring to Nonaka and Takeuchi (1995), elaborated that formation of knowledge and innovation can be better described as a practice by which the knowledge kept by the employees is magnified, inflamed and co-opted as a culture and integral part of organizational knowledge. This leads to the development of third hypothesis of this study.

Hypothesis 3: Knowledge sharing positively and significantly impact innovation

### **2.4.4 Affective commitment, Knowledge Sharing and Innovation**

Hislop (2003) and VanDenHooff and De Ridder (2004) highlighted the significance of affective commitment in impacting knowledge sharing behavior. Meyer et al. (2002) concluded that affective commitment is positively influence on working environment behavior and removing the obstacles of confrontation to share knowledge. Lin (2007) conducted a study on the issue and commented that when workers of an organization accept a higher affective commitment, they are much passionate and loyal to share their knowledge and experience. Correspondingly, Jarvenpaa and Staples (2001) contended that a stronger level of commitment may aggravate thoughts and beliefs that the organization has more rights and access to the information and knowledge which help it to shape-up or develop. Further, Robertson and O'Malley-Hammersley (2000) empirically proved that the extreme consideration given to the SMEs has resulted in a disappointment to take into account the fundamental role played by employees and human resource management in the processes of knowledge sharing and innovation. Thompson and Heron (2005) suggested that the morale and motivation of employees to share their knowledge is compulsory to vary the method in which employee associations and relations are managed. They further elaborated that the traditional Human resource management practices are not completely suitable for approving the originality, formation and independence required for knowledge sharing and innovation. Yam et al. (2004)

examines the technological innovation capabilities of Chinese SMEs in Beijing and its impact on firms' competitive performance. It was proved from the results that innovation capability is positively related to firm performance. Panayides (2006) conducted an empirical study involving 251 Hong Kong firms and found that innovation always improves service quality of logistics and subsequently the firm performance. This leads us to development of fourth hypothesis of study.

Hypothesis 4: Affective commitment mediates the relationship between knowledge sharing and innovation.

#### **2.4.5 Affective Commitment is mediating variable**

Human resource management practices have strong impact to motivate and inspire some specific personnel behaviors, perceptions and attitudes. Ultimately, it results in a much improved efficiency, returns on investments and better overall performance of the firms (Hiltrop; 1996). There exists significant evidence suggesting that acceptance of high-commitment human resource management practices are linked with positive performance outcomes (Levering and Moskowitz 1993; Guthrie; 2001), and higher returns and financial improvements (Lawler et al. 1995; and Lawler 2000). MacDuffie (1995) elaborated that the interaction effect will be more noticeable and prove better results when Human resource practices are executed as a complete system compared to applying individual Human resource practices separately. Subsequently, it was stated that commitment for longtime period in organizations always adds value to in-company welfare, skills improvement, conflict resolution, and results in efficiency improvement (Wakebayashi and Chen; 2003). This leads to the development of our fifth and final hypothesis.

Hypothesis 5: Affective commitment mediates the relationship between HR and Innovation Performance.

### **2.5 Conceptual Model**

(See Figure-1 in index)

## **3. METHODS**

This part of the study discusses key methodological concepts and decisions undertaken by the researcher in order to effectively conduct the study. The following sections provide a succinct but highly relevant discussion in this regard.

### **3.1 Population**

Middle managers and supervisors of SME's are the major target population of this research paper. From China, the sample was taken from the Province Sichuan and three major cities Chengdu, Xindu&Mianyang were considered. From, Pakistan the focus was on province of Punjab with Multan, Lahore and Islamabad/Rawalpindi selected as target cities.

## 3.2 Research Instrument and Measures

After an extensive study and in depth review of literature, the researcher developed instrument for data collection. The research instrument has two important parts:

- The respondent's basic information and basic information about his/her small and medium organization.
- The second part of instrument is segregated into different parts. For example, the responses were recorded on a Likert scale of seven points such that 1 = "almost never" to 7 = "almost always" to gather inputs on key research variables.

The detail of key research dependent and independent variables is given below:

### 3.2.1 Human Resource Generic Strategies – HRGS - (Independent Variable)

The key independent variable is HRGS shows the extent to which employees are involved in HR practices of selected firms. This is measured across the range of HR activities which are scrutinized from intense literature review. The response is measured on a scale of 1 to 7 recording high involvement HR management practices to low involvement HR management practices.

### 3.2.2 Knowledge Sharing – KS - (Independent Variable)

This is the second important independent variable and it examines the extent to which the research and development workers of small and medium enterprises are willing to share knowledge with other workers. The instrument measures response on a scale of 1 – 7 focusing on high sharing to low sharing of knowledge among employees within SMEs.

### 3.2.3 Innovation Performance – IP / IN - (Dependent Variable)

This is the key dependent variable and measures the extent to which the two independent variables affect this variable to foster innovation performance in SMEs. The response is measured on the instrument on a scale from 1-7 focusing on high innovation performance to low innovation performance.

### 3.2.4 Organizational Affective Commitment – AC - (Mediating Variable)

This study examines affective commitment of employees within Chinese and Pakistan SMEs as a mediating variable between the dependent and independent variables. The response is measured on a scale of 1 to 7 focusing on high affective commitment to low affective commitment based on the assertion that:

- How supervisor and line managers perceive the reality?
- How their decisions are influenced by their perception?



### **3.3 Pilot Study and Instrument Refinement**

To check the validity and relevance of the research instrument, a pilot study was conducted. The middle level and functional managers of sundry SME's were approached through emails and telephone calls in order to get the questionnaire fulfilled. A limited number of managers were privately approached for face to face meetings, whereas questionnaires were sent to others through emails. In total, 110 managers showed their willingness to take part in the pilot survey. Later on, however, a total of 95 questionnaires were received back. Out of those 95 questionnaires, 76 questionnaires were serviceable and were adopted to test accuracy and validity of research instrument.

#### **3.3.1 Confirmatory Factor Analysis**

In order to scrutinize the reliability and validity of the research instrument and its contents, the multidimensional analysis was conducted. The multidimensional analysis was applied with the help of Confirmatory factor analysis (CFA) individually to each question of the instrument. With the help of robustness of this model which has been developed to measure validity and reliability of instrument, a satisfactory fit was found and all variables were found correlated.

### **3.4 Main Study Measurement**

#### **3.4.1 Sampling Technique:**

The target population of this research work is middle level managers and supervisors of different departments of Small and Medium enterprises in three cities of Sichuan Province of China: Chengdu, Xindu, Mianyang; and middle managers and supervisors of Small and Medium enterprises in three cities of Punjab Province of Pakistan: Multan, Islamabad/Rawalpindi and Lahore. The primary data from Small and medium enterprises was collected simultaneously from both countries. The data was assembled from SMEs largely from fashion and interior decorations sectors.

#### **3.4.2 Sample Size and Data Collection**

For accumulation of data, the researcher distributed a research Instrument to obtain necessary information. Executives of Small and Medium enterprises were approached through telephonic calls, emails, and letters asking for their consent to participate in the survey. On getting the affirmative answers, five hundred pairs of questionnaires were sent to target SMEs in China and same number of pair of questionnaire was sent to target population of SMEs in Pakistan. A covering letter summarizing the research and its objective was attached with each pair of questionnaire. A necessary follow up procedure was put in place to ensure that the questionnaires have been successfully received. In China, Questionnaires were circulated in both English and Chinese languages to get the maximum response. Primary data is collected from SMEs in China and Pakistan through personal visit, emails, postal, personal contacts and

references. Stratified sampling technique was used. Two strata of Pakistan and Chinese SMEs were made. After creating sub-strata based on individual SMEs, random sampling was used to gather data from each sub-stratum.

### **3.4.3 Sample Statistics**

Two correspondence analyses were conducted according to responses gathered from small and medium enterprises of China and Pakistan samples respectively and later on a comparative study was conducted to analyze and compare results. Approximately a month after distribution of questionnaires, approximately 100 questionnaires from both countries were received. In a span of two months and one week, with a lot of intensive efforts of multiple follow-ups, almost 300/500 Questionnaires from Pakistan and 245/500 from China were received. The effort of various people to expedite the response is greatly acknowledged by the researcher. The retort rate was from Pakistan is 60 % and from China is 49 %, respectively. The overall response rate is 55% which symbolize its significance.

### **3.5 Instrument**

To collect the data from targeted population, an instrument was adopted on the grounds of assessment of the strong existing literature. A procedure of initially contacting the organizations, and later on distributing the questionnaire, and finally making more follow-ups was conceded out for the survey. Instrument in English Language is provided in Appendix I.

## **4 .RESULTS**

For descriptive statistics, Frequency Distribution, Standard Deviation and to check errors through Structural Equation Modeling (SEM), the researcher used AMOS ver. 17.0. Basically, the researcher used this software to check confirmatory factor analysis (CFA) and path analysis. In addition to AMOS software, Statistical Package for Social Sciences (SPSS) ver. 19.0 for data entry and data interpretation were used. Two parallel analyses were conducted according to responses gathered from small and medium enterprises of China and Pakistan respectively and later on a comparative study is undertaken to compare results.

### **4.2 Results and Data Analysis of Small and Medium Enterprises of China**

#### **4.2.1 Descriptive Analysis of SMEs of China:**

The data displayed in the table -1, depicts that how the employees and top executives of SMEs recognize HR generic strategies, affective commitment, sharing of knowledge and their impact on Innovation performance (See Table-1 in index).

The average means of HRGS and AC are 4.21 and 3.91 respectively. This shows that the respondents agree that there is a strong relation between these two variables. The mean of knowledge sharing KS is 3.41 it symbolizes the firms realization of knowledge sharing importance. The average mean of Innovation is 3.54 that represents that the firms need innovation and view that AC is very important to mediate towards IP.

#### **4.2.2 Correlation Analysis of Data of Chinese SMEs**

In Table-2, Correlation test was conducted to check the correlation between variables of study from the data collected from Chinese SMEs. The Correlation statistics analysis among two independents variables including HRGS and KS, a mediating variable AC and a dependent variable namely IN. The table of correlation displays that the HRGS value in correlation to HRGS is 1. The value of HRGS in correlation to AC is 0.678, in correlation to KS it is 0.334 and HRGS value in correlation to IN is 0.427. The value of AC in correlation to HRGS is 0.678; the value of AC in correlation to KS IS 0.606 and in correlation to IP is 0.532. The value of correlation of AC in correlation to AC is 1. Furthermore, if we see the values of KS in correlation to HRGS and AC, the value is 0.334 in correlation to HRGS, in correlation to KS, it is 1 and in correlation to AC the value of KS is 0.606. The value of IN/IP in correlation to HRGS, it is 0.427. The value of IN in correlation to AC is 0.532 and in correlation to KS, it is 0.493. The value of IN in correlation to IN is 1. The values of AC in correlation to HRGS is 0.678, in correlation to KS it is 0.606 and value of AC in correlation to IN is 0.532, in correlation with AC, it is 1. All values depict that there is strong significant positive relationship among the two invariable dependents HRGS & KS, the mediating variable AC and one dependent variable IP/IN (See Table-2 in appendix).

#### **4.2.3 Reliability of Data of Chinese SMEs**

Reliability was checked and Cronbach Alpha score was 0.776 for Chinese's SMEs data mentioned in Table -3 (See Table-3 in appendix).

There were four items checked on reliability scale. Those were HRGS, AC, KS and IP, it is mentioned in Table -4 (See Table-4 in appendix)

#### **4.2.4 Regression Analysis of Data of Chinese SMEs**

Table -5 displays the summary of results of regression among two Independent variables HRGS and KS, one mediating variable AC and a dependent named IP. In the table, it depicts the R value is 0.596. The R value square is 0.355; the adjusted value of R square is 0.352. Furthermore, the standard error value of estimate is 0.67910. All values are positive and significant and it depicts that

the summary of model is very significant consequently; it provides support that is logical to the model studied (See Table-5 in appendix).

#### 4.2.5 ANOVA Analysis of SMEs of China

Table-6 displays results of ANOVA (Analysis of Variance) of regression among the two independent variables including HRGS and KS, the variable of mediating AC and one variable dependent named as IP. On the other side the table of ANOVA depicts that in the regression results of ANOVA, the sum value of squares is 169.811, the degree of freedom value (df) 3. The mean square value is 56.604 and the value of F is 122.736 and the value of significance is .000. Consequently, the residual value the sum value of squares is 308.991, the degree of freedom value is 670 and the mean square value is 0.461. Here after, getting a total of sum of squares of regression and residual is 478.802 and total of degree of freedom values of regression and residual is 673. The positively and significance of all values depicts that the model of summary is also significant and it gives a logical support to study model (See Table-6 in appendix).

#### 4.2.6 Coefficients of Regression

Table -7 portrays that the coefficients of regression among the two independent variables HRGS & KS, one mediating variable AC and a variable that is dependent named as IP/IN. It is depicted by the table that constant point, the B value is 1.218. At constant, the standard error value is 0.134. In HRGS, the B value is 0.153, the standard error value is 0.035 and Beta value is 0.035. In AC, the B value is .248, the standard error value is 0.051 and Beta value is 0.305. In KS, the B value is 0.212, the standard error value is 0.27 and Beta value is 0.305. This table of coefficients contains all positive values. Hence, the positively and significance adds logic to our study model. It also shows that HRP and KS are invariable dependents (See Table-7 in appendix).

Table-8, where HRGS is constant, displays the summary of results of regression. In the table, it depicts the R value is 0.427. The R value square is 0.183 the adjusted value of R square is 0.181. Furthermore, the standard error value of estimate 0.76315. All values are positive and significant and it depicts that the summary of model is very significant consequently; it provides support that is logical to the model studied (See Table-8 in appendix).

Variables HRGS and one dependent variable IP/IN. On the other side the table of ANOVA depicts that in the regression results of ANOVA, the sum value

of squares is 87.429, the degree of freedom value (df) 1. The mean square value is 87.429 and the value of F is 150.118 and the value of significance is 0.000. Consequently, the residual value the sum value of squares is 391.373, the degree of freedom value is 672 and the mean square value is 0.582. Hereafter, getting a total of sum of squares of regression and residual is 478.802 and total of degree of freedom values of regression and residual is 673. The positively and significance of all values depicts that the model of summary is also significant and it gives a logical support to study model (See Table-9 in appendix).

#### **4.2.7 Model Fitness of Chinese SMEs Model**

All the values shown in the Figure 2 and later on all results from SEM Model test CMIN, Baseline Comparisons, FMIN, regression, variance depicts authorization and confirmation the fitness of the model. The obtained values are given above with estimates are presented for the comparison. The fitness of the model is obvious from the obtained values of all absolute fit measures (See Figure-2 in appendix)

### **4.3 Data Analysis of SMEs of Pakistan**

#### **4.3.1 Descriptive Statistics**

The Table-10 shows the descriptive statistics of the sample of SMEs of Pakistan. It displays the statistics of the collected data. It shows the standard deviation and Mean values of all variables and its relativeness. The data displayed in the table, depicts that how the employees and top executives of SMEs recognize HR generic strategies, affective commitment, sharing of knowledge and their impact on Innovation performance (See Table-10 in appendix).

The average means of HRGS and AC are 4.27 and 3.91 respectively. This shows that the respondents agree that there is a strong relation between these two variables. The mean of knowledge sharing KS is 3.50, symbolizes the firms realization of knowledge sharing importance. The average mean of Innovation is 3.55 that represents that the firms need innovation and view that AC is very important to mediate towards IP. Frequencies of gender results obtained from data of small and medium enterprises of Pakistan are expressed in Table -11 (See Table-11 in appendix).

Frequencies of organizations results obtained from data of small and medium enterprises of Pakistan are expressed in Table -12.

### 4.3.2 Correlation Analysis

According to table-13, Correlation test was conducted to check the correlation between variables of study from the data collected from Pakistani SMEs. The Correlation statistics analysis tests the relationship between the two independent variables including HRGS & KS, mediating variable AC and dependent variable IN. The Table of Correlation displays that the value of HRGS with correlation to HRGS is 1. The value of AC in correlation to HRGS is 0.681, the correlation of AC in correlation to KS is 0.520 and in correlation to IN it is 0.436.

The value of IN/IP in correlation is 1. All values depict that there is strong significant positive correlation among two independent variables HRGS and KS, the variable of mediating AC and one variable dependent IN. The value of AC in correlation to AC is 1. Furthermore, if we see the values of KS in correlation to HRGS are 0.249 and with respect to AC, the value is 0.520 in correlation to AC, KS value in correlation to KS, it is 1. The value of IN in correlation to HRP, it is 0.331. The value of IN in correlation to AC is 0.436 and in correlation to KS, it is 0.479.

### 4.3.3 Reliability

Reliability was checked and Cronbach Alpha score was 0.744 (Table-14) for SMEs data collection from Pakistan. There were four items checked on reliability scale which are in the model.

### 4.3.4 Regression

Table-15 displays the summary of results of regression among independent variables HRGS and KS, mediating variable AC and the dependent variable IP. In the table, it depicts the R value is 0.331. The R value square is 0.110, the adjusted value of R square is 0.109. Furthermore, the standard error value of estimate 0.74236. All values are positive and significant and it depicts that the summary of model is very significant consequently it provides support that is logical to the model studied.

### 4.3.5 ANOVA Results of Data of SMEs of Pakistan

Table-16 displays results of ANOVA (Analysis of Variance) of regression among Independents variables HRGS and KS, mediating variable AC and dependent variable IP. On the other side the table of ANOVA depicts that in the regression results of ANOVA, the sum value of squares is 46.842, the degree of freedom value (df) 3. The mean square value is 46.842 and the value of F is 84.997 and the value of significance is .000. Consequently, the residual value the sum value of squares is 379.708, the degree of freedom value is 689 and the mean square value is 0.551. Hereafter, getting a total of sum of squares of regression and residual is 426.549 and total of degree of freedom values of

regression and residual is 690. The positively and significance of all values depicts that the model of summary is also significant and it gives a logical support to study model.

#### **4.3.6 Coefficients of Regression of Data of SMEs of Pakistan**

Table-17 portrays that the coefficients of regression between independent variable HRGS and dependent variable IP. It is depicted by the table that constant point, the B value is 2.478. At constant, the standard error value is 0.120. In HRP, the B value is 0.252, the standard error value is 0.027 and Beta value is 0.0331. This table of coefficients contains all positive values. Hence, the positively and significance adds logic to our study model. It also shows that HRP is invariably dependents (See Table-17 in appendix).

Table-18 displays the summary of results of regression between mediating variable AC and dependent variable named IP. In the table, it depicts the R value is 0.436. The R value square is 0.190, the adjusted value of R square is 0.189. Furthermore, the standard error value is estimates at 0.70824. All values are positive and significant and it depicts that the summary of model is very significant and consequently it provides support to the model studied (See Table-18 in appendix).

#### **4.3.7 Model Fitness of SMEs of Pakistan**

The Figure 3 displays the fitness measurements of model. All the values shown in the Figure 3 and later on all result from SEM Model test CMIN, Baseline Comparisons, FMIN, regression, variance depicts authorization and confirmation the fitness of the model. The obtained values are given above with estimates are presented for the comparison. The fitness of the model is obvious from the obtained values of all absolute fit measures (See figure-3 in appendix).

## **6. CONCLUSIONS, LIMITATIONS & FUTURE RECOMMENDATIONS**

### **6.1 Conclusions**

This study makes significant contribution to the existing body of literature and provides new insights in management sciences in general and to managers at different levels in particular. It provides finding which can be useful for managers for developing new performance and motivation strategies in SMEs of developing countries. It particularly provides a theoretical framework for connection between knowledge sharing and innovation performance in SMEs with mediating role of affective commitment. On empirical side, this study fills the gap in existing literature by investigating the relationship among high-commitment HR management, knowledge sharing and innovation performance.

It has also been tested and concluded that the affective commitment mediates high-commitment HR management, knowledge sharing behavior and innovation performance in SMEs. It is also observed that the extent to which employees are willing to share knowledge within the organization is positively related to affective commitment and innovation performance. To the best of researcher knowledge, these relations are never been combined and tested empirically into a single incorporated framework. The perception underlying the framework of this study is to examine the connection between HR generic strategies, knowledge sharing, affective commitment and that how they impact on innovation performance within organizations. It is concluded that the positive HR generic strategies such as team formation, development of group work, social gathering to share experience, application of remuneration and reward system based on team work, motivating employees to share and transmit knowledge can lead to affective commitment. This is something not examined and proven directly in earlier studies. It is, therefore, suggested on the basis of findings that organizational affective commitment sets the tone and direction of relationship and affiliate the organization for achieving their goals and objectives under the shed of HR management. It is also concluded that through effective execution of highly involved human resource practices, the line managers become able to motivate their employees and accelerate the research and development of sharing information, knowledge and expertise. This, however, is only possible if managers are capable to establish certain practices and develop an environment for stability, safety, networking, empathy and sound relationship with personnel based on affective commitment. This kind of organizational commitment establishes the basic structure of relational atmosphere which always grown, flourished and motivated in the organization.

This study is a comparative study of two different countries: China, a fast developing country and Pakistan, an under-developing country. It has been proved after comparing the results from the target population of SMEs of both countries that there exists a significant and positive relation among all variables. It is also highlighted that results from Chinese sample exhibits more convincing evidences suggesting a more powerful association among the variables as compared to the similar results from Pakistani sample. It is suggested that the differential findings are due to more awareness, better innovative culture and more trained and educated human resources in SMEs in China. It is found that Innovation, Research & Development departments are very mature in SMEs of China and that they have largely assumed the role of knowledge sharing, talent management, affective commitment and need and scope of innovation in development of SMEs. It is also observed that a strong need has now been felt in Pakistani SMEs to take serious measures in developing their HR practices to support knowledge sharing and innovation performance in order to achieve long-term goals of organizations. This study supports and confirms the existing notion that the achievement of a business depends on the quality of its workers and that how efficiently they are managed and developed. The effective



performance assessment and measurement strategies allow firms align compensation with performance. The modern SMEs managers must understand the importance of implications of these findings as well others in this area of HR management.

### **6.3 Managerial Implications**

The findings of this study have serious implications for the human resource managers and practitioners of small & medium enterprises of China and Pakistan. The same goes, to some extent, for large multinationals working in the two countries, however, it primarily relates to SMEs. The research helps small and medium organizations to identify the reasons and solutions of sharing of knowledge among employees in order to improve performance and innovation in companies. By effective application of highly involved human resource practices, formation of knowledge sharing process and environment and establishing platform of formation of affective commitment, the managers of small and medium organizations can assure successful HR practices and efforts to ensure improve organizational performance of innovation and gain competitive advantage over other companies.

### **6.4 Limitations of Study**

It is pertinent to discuss few important limitation encountered during the course of this study. Language was the most important barrier while collecting data in China. Researcher must have some basic know how of the local language in order to facilitate the primary data collection. It is again very much appreciated the role of my friends, class-mates, my supervisor and teachers who really facilitated me and guided me in all possible means for collection of data and in helping and supporting me to access to the small and medium organizations and in interpreting the results, translation of my questionnaire and many other important aspects of this research. There were also few problems in data collection in Pakistan; because the questionnaire was designed in English language and in many SMEs of Pakistan the employees are not well educated and well versed in English. The sample selection and getting access to the target SMEs was also a major hindrance, however, that was handled due to the right supervision and guidance from research mentor. Getting access to the management of Chinese sample was of particular challenge.

### **6.5 Future Research**

The future studies in this area can look into other aspects of commitment and employee behavior, for instance trust. A study focusing on these variables across developing and develop countries would also be an area of interest for future researchers. The independent variable HRGS would be replaced by another management tool for future research to explore and measure the efficiency

and effectiveness of the Organization. This study examines the issue of affective commitment in SMEs and future studies can examine the same phenomenon in large multi national companies. Also, in this study the role of affective commitment was tested empirically as mediating factor, it is recommended to examine the role of affective commitment as a dependent variable.

## REFERENCES

- Adler PS, Kwon SW. Social capital: prospects for a new concept. *The Academy of Management Review* 2002; 17:27-1.
- Agarwala, T. (2003), 'Innovative Human Resource Practices and Organizational Commitment: An Empirical Investigation,' *International Journal of Human Resource Management*, 14, 175–197.
- Andrawina L, Govindaraju R, Samadhi TA, Sudirman I. Absorptive capacity moderates the relationship between knowledge sharing capability and innovation capability. In the Proceedings of the 2008 IEEE International Conference On Industrial Engineering And Engineering Management; 2008, p. 944-948.
- Appelbaum, S., Bartolomucci, N., Beaumier, E. Boulanger, J., Corrigan, R., Doré, I., Girard, C., & Serroni, C. (2004). Organizational citizenship behavior: a study of culture, leadership and trust. *Management Decision*, 13-40.
- Aselage, J., & Eisenberger, R. (2003). Perceived organizational support and psychological contracts: A theoretical integration. *Journal of Organizational Behavior*, 24(5), 491.
- Ashton, C., & Morton, L. (2005). Managing talent for competitive advantage: Taking a systemic approach to talent management. *Strategic HR Review*, 4(5), 28-31.
- Barlett, C. A., & Ghoshal, S. (2002). Building competitive advantage through people. *MIT Sloan Management Review*, 34-41.

- Barney, J.B. (1986). Organizational culture: can it be a source of sustained competitive advantage? *Academy of Management Review*, 11 (3), 656-665 .
- Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York: Free Press. Bass, B. M. (1990b). *Stogdill's handbook of leadership: A survey of theory and research*. New York: Free Press.
- Bass, B. M., Avolio, B., & Goodheim, L. (1987). Biography and the assessment of transformational leadership at the world-class level. *Journal of Management*, 13 (1), 7-19.
- Berger, L. A. & Berger, D. R. (2004). *The talent management handbook: creating organizational excellence by identifying, developing, and promoting your best people*. New York, NY: McGraw-Hill.
- Bhal, K. T. (2006). LMX-citizenship behavior relationship: Justice as a mediator. *Leadership & Organization Development Journal*, 27(2), 106-117.
- Blau, P. (1964). *Exchange and power in social life*. New York, NY: Wiley. Block, L. (2003). The leadership-culture connection: an exploratory investigation. *Leadership & Organization Development Journal*, 24(6), 318-334.
- Boal, K. B., & Hooijberg, R. (2001). Strategic leadership research: Moving on. *Leadership Quarterly*, 11(4). 515-549.
- Boardman, A. E., & Vining, A. R. (1989). Ownership and performance in competitive environments: A comparison of the performance of private, mixed, and state-owned enterprises. *Journal of Law and Economics*, 32(1), 1-33.
- Buble, M., & Pavic, I. (2007). Interdependence between organizational culture and leadership styles: The Croatian case. *The Business Review*, 7(1), 143-150.
- Cabrera, A., Collins, W.C., and Salgado, J.F. (2006), 'Determinants of Individual

Engagement in Knowledge Sharing,' *International Journal of Human Resource Management*, 17, 245–264.

Camelo-Ordaz, C., Pe´rez-Lun˜o, A., and Sousa-Ginel, E. (2009), 'The Impact of Market and Entrepreneurial Orientation on Innovativeness: An Empirical Assessment,' *International Journal of Entrepreneurship and Innovation Management*, 10, 243–265.

Chandan L Rohra, (2009), "Comparative Analysis of SMEs Policies of Asian Countries with Reference to Pakistan" *Interdisciplinary Journal Of Contemporary Research In Business*, VOL 1, NO 1.

Cunningham, X.L. (2008), 'A Review of HRM Research in Small and Medium Sized Enterprises in China with Comments,' in Conference proceedings, 10th West Lake International Conference *Journal of International Business Studies*, 40, 6, 1005–1021.

Cappelli, P. (2008a). *Promises and challenges of the talent on demand model: Creating a new paradigm*. Boston, Massachusetts: Harvard Business Press.

Cascio, W. F. (2003). *Managing human resources: Productivity, quality of work life, profits* (6th ed.). New York, NY: McGrawHill/Irwin.

Chen, A. (1998). Inertia in reforming china's state-owned enterprises: The case of chongqing. *World Development*, 26(3), 479-495.

Colan, L. J. (2009). *Engaging the hearts and minds of all your employees*. USA: McGraw-Hill.

Cole, M. S., Schaninger Jr., W. S., & Harris, S. G. (2002). The workplace social exchange network: A multilevel, conceptual examination. *Group & Organization Management*, 27(1), 142-167.

Collings, D. G., & Mellahi, K. (2009). *Strategic talent management: A review and*

research agenda. *Human Resource Management Review*, 19, 304-313.

Cook, S. (2008). *The essential guide to employee engagement: better business performance through staff satisfaction*. London, UK: Kogan Page Limited. Corace.

C. J. (2007). Engagement-enrolling the quiet majority. *Organizational Development Journal*, 25(2), 171-175. Croston, D. (2008). *Employee engagement: the people's approach to building a business*. Sydney, NSW: Moonstone Media.

Delaney, J.T., and Huselid, M.A. (1996), 'The Impact of Human Resource Management Practices on Perceptions of Organizational Performance,' *Academy of Management Journal*, 39, 949–969.

Denison, D. R. (1990). *Corporate culture and organizational effectiveness*. USA: John Wiley & Sons.

Denison, D. R. Haaland, S., & Goelzer, P. (2003). Corporate culture and organizational effectiveness: Is there a similar pattern around the world? *Advances in Global Leadership*, 3, 205-227.

Dienesch, R. & Liden, R. (1986). Leader-member exchange model of leadership: A critique and further development. *Academy of Management Review*, 11, 618-634.

Eisenberger, R., Fasolo, P., & Davis-LaMastro, V. (1990). Perceived organizational support and employee diligence, commitment, and innovation. *Journal of Applied Psychology*, 75, 51-59.

Eisenberger, R., Huntington, R., Hutchinson, S., & Sowa, D. (1986). Perceived organizational support. *Journal Applied Technology*, 71(3), 500-507.

Edvardsson, I.R. (2006), "HR and Knowledge management" *Employee Relations* Vol. 30 No. 5, 2008 pp. 553-561.

- Einhorn, B. (2006), 'A Dragon in R&D,' *Business Week*, 6, 4008, 44. Farrell, D., and Grant, A.J. (2005), 'China's Looming Talent Shortage,' *McKinsey Quarterly*, 4, 70–79.
- Fey, C. F., & Denison, D. R. (2003). Organizational culture and effectiveness: Can American theory be applied in Russia? *Organization Science*, 14(6), 686-706.
- Fleming, J.H., & Asplund, J. (2007). *Human sigma: managing the employee-customer encounter*. New York, NY: Gallup Press.
- George, G, Zahra, S.A., Wheatley, K.K., and Khan, R. (2001), 'The Effects of Alliance Portfolio Characteristics and Absorptive Capacity on Performance: A Study of Biotechnology Firms,' *Journal of High Technology Management Research*, 12, 205–226.
- Guthrie, J. (2001), 'High Involvement Work Practices, Turnover, and Productivity: Evidence from New Zealand,' *Academy of Management Journal*, 44, 180–192.
- Gouldner, A.W. (1960b). The norm of reciprocity. *American Sociological Review*, 25, 165-167.
- Grant, R. M. (1999). Transforming uncertainty into success: The strategic leadership forum 1999. *Strategy & Leadership*, 27(4/5), 31-36.
- Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis. *Journal of applied Psychology*, 87(2), 268-279.
- Hay Group. Employee engagement: Highly engaged workers create better financial performance. Retrieved August 19, 2009 from ?
- Hanif and Shao (2011), Talent Hunt of Diverse Workforce can be achieved: By

- Educating and Implementing Similar and Equitable Education Practices in a Culture, *Journal of Education and Practice*, Vol. 2, No 1, 2011 .
- Hanif and Shao (2013), The role of talent management and HR generic strategies for talent retention, *African Journal of Business Management*, Vol. 7(29), pp. 2827-2835, 2013.
- Harney, B., and Dundon, T. (2006), 'Capturing Complexity: Developing an Integrated Approach to Analyzing HRM in SMEs,' *Human Resource Management Journal*, 16, 1, 48–73.
- Heiman, BA and JA Nickerson (2004). Empirical evidence regarding the tension between knowledge sharing and knowledge expropriation in collaborations. *Managerial and Decision Economics*, 25(6–7), 401–420.
- Heneman, R.L., Tansky, J.W., and Camp, S.M. (2000), 'Human Resource Management Practices in Small and Medium-sized Enterprises: Unanswered Questions and Future Research Perspectives,' *Entrepreneurship: Theory & Practice*, 25, 1, 11–26.
- Hiltrop, J.M. (1996), 'The Impact of HRM on Organizational Performance: Theory and Research,' *European Management Journal*, 14, 6, 628–637.
- Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33(4), 629-724.
- Kaplan, R. S. & Norton, D. P. (1996). *The balanced scorecard: translating strategy into action*. Boston, MA: Harvard Business School Press.
- Keesing, R. M. (1974). Theories of Culture. *Annual Review of Anthropology*, 3, 73-97. (doi: 10.1146/annurev.an.03.100174.000445) .
- Kiggundu, M. N. (1994). Managing research institutions in developing countries: Test of a model. *Public Administration Development*, 14(2), 201-222.
- Konrad, A. M. (2006). Engaging employees through high involvement work practices. *Ivey Business Journal*, April-March, 1-6.
- Kuhnert, K. W., & Lewis, P. (1987). Transactional and transformational leadership: a constructive/developmental analysis. *The Academy of Management Review*, 12(4), 648-657.
- Lacy, P., Arnott, J., & Lowitt, E. (2009). The challenge of integrating sustainability into talent and organization strategies: investing in the knowledge, skills and attitudes to achieve high performance. *Corporate Governance*, 9(4), 484-494.
- Lawler III, E. E. (2008). *Talent: making people your competitive advantage*. San

- Francisco, CA: Jossey-Bass. Levinson, H. (1965). The relationship between man and organization. *Administrative Science Quarterly*, 9(4), 370 – 390.
- Lewis, R. E., & Heckman, R. J. (2006). Talent management: A critical review. *Human Resource Management Review*, 16, 139154
- Lawler, E.E., Mohrman, S.A., and Ledford Jr., G.E. (1995), *Creating High Performance Organizations: Practices and Results of Employee Involvement and Total Quality Management in Fortune 1000 Companies*, San Francisco, CA: Jossey-Bass.
- Levering, R., and Moskowitz, M. (1993), *The 100 Best Companies to Work for in America*, New York: Doubleday.
- Li, Y., Liu, Y., Duan, Y. and Li, M.F. (2008) Entrepreneurial orientation, strategic flexibilities and indigenous firm innovation in transitional China. *International Journal of Technology Management*, 41, 223–246.
- McDermott, R.; O’Dell, C. (2000): Overcoming the ‘Cultural Barriers’ to Sharing Knowledge, American Productivity and Quality Centre.
- Meyer, J., and Allen, N. (1991), ‘A Three-Component Conceptualization of Organizational Commitment,’ *Human Resource Management Review*, 1, 61–89.
- Meyer, J., and Allen, N. (1997), *Commitment in the Workplace: Theory Research and Application*, London: Sage.
- Nonaka, I. (1994), ‘A Dynamic Theory of Organizational Knowledge Management,’ *Organization Science*, 5, 14–37.
- Oltra, V. (2005), ‘Knowledge Management Effectiveness Factors: The Role of HRM,’ *Journal of Knowledge Management*, 9, 70–86.
- Obloj, K., & Thomas, H. (1996). Breaking away from the past: Strategies of successful polish firm. *European Management Journal*, 14(5), 467-476.
- Ormanidhi, A., & Stringa, O. (2008). Porter’s model of generic competitive strategies: An insightful and convenient approach to firms’ analysis. *Business Economics*, 55-64.
- Peteraf, M. A., & Barney, J. B. (2003). Unraveling the resource-based tangled. *Managerial and Decision Economics*, 24(4), 309-323.
- Pfeffer, J. (1995). Producing sustainable competitive advantage through the effective management of people. (1994). *Academy of Management Executive*, 9(1), 55-71.
- Pfeffer, J. (2001). Fighting the war for talent is hazardous to your organization’s health. *Organizational Dynamics*, 29(4), 248259.



- Rahab ;Sulistiyandari and Sudjono , 2011. “the development of innovation capability of small medium enterprises through knowledge sharing process: an empirical study of indonesian creative industry”, *International Journal of Business and Social Science*.
- Schumpeter, J.A. (1980): *Kapitalismus, Sozialismus und Demokratie* (6. ed.). Tübingen: Francke (Orig 1942).
- Shua, A. (2004). Knowledge management system architecture – a bridge between KM consultants and technologists. *International journal of information management* (In press – uncorrected version).
- Smith, H.; McKeen, J. (2002): *Installing a knowledge-sharing culture*, Queens University School of Business, Kingston, 2002.
- Svetlik, I., and Stavrou-Costea, E. (2007), ‘Connecting Human Resources Management and Knowledge Management,’ *International Journal of Manpower*, 28, 197–206.
- Swan, J., Bresnen, M., Newell, S., and Maxine, R. (2007), ‘The Object of Knowledge: The Role of Objects in Biomedical Innovation,’ *Human Relations*, 60, 1809–1837.
- Takeuchi, N., Wakebayashi, M., and Chen, Z. (2003), ‘The Strategic HRM Configuration for Competitive Advantage: Evidence from Japanese Firms in China and Taiwan,’ *Asia Pacific Journal of Management*, 20, 447–480.
- Tansky, J.W., and Heneman, R.L. (2003), ‘Guest Editor’s Note: Introduction to the Special Issue on Human Resource Management in SMEs: A Call for More Research,’ *Human Resource Management*, 42, 4, 299–302.
- Thompson, M., and Heron, M. (2006), ‘Relational Quality and Innovative Performance in R&D Based Science and Technology Firms,’ *Human Resource Management Journal*, 16, 28–47.
- Van den Hooff, B., and Ridder, J.A. (2004), ‘Knowledge Sharing in Context: The Influence of Organizational Commitment, Communication Climate and CMC Use on Knowledge Sharing,’ *Journal of Knowledge Management*, 8, 117–130.
- Viverita & Ariff, M. (2008). On productivity performance gains of Indonesian firms. *Managerial Finance*, 34(9), 644-659.
- Wang, X. (2008). Analyzing work attitudes of chinese employees: A comparison between state-owned and privately-owned enterprises in china. *Chinese Management Studies*, 2(3), 215-228.
- Wat, D., & Shaffer, M. A. (2005). Equity and relationship quality influences on organizational citizenship behaviors: The mediating role of the trust in the supervisor and empowerment. *Personnel Review*, 34(4), 406.

- Watson Wyatt. (2007, November 20). Watson Wyatt reveals research finding connection between employee engagement and business success.
- Watson Wyatt World Wide. 20 November 2007. Retrieved August 19, 2009 from <http://www.watsonwyatt.com/asia-pasific/news/press.asp> .
- Wayne, S. J., Shore, L. M., & Liden, R. C. (1997). Perceived organizational support and leader-member exchange: a social exchange perspective. *The Academy of Management Journal*, 40(1), 82-111.
- Wayne, S. J., Shore, L. M., Bommer, W. H., & Tetrick, L. E. (2002). The role of fair treatment and reward in perceptions of organizational support and leader-member exchange. *Journal of Applied Psychology*, 87(3), 590-598.
- Wielmaker, M., & Flint, D. (2005). Why does HRM need to be strategic? A consideration of attempts to link human resources & strategy. *The Business Review, Cambridge*, 3(2), 259-264.
- Wildermuth, C. M. S., & Pauken, P. D. (2008a). A perfect match: decoding employee engagement – Part I: Engaging cultures and leaders. *Industrial and Commercial Training*, 40(3), 122-128.
- Yang, B., and Zhang, D. (2003), ‘A Theoretical Comparison of US and Chinese Culture and Implications for Human Resource Theory and Practice,’ *International Journal of Human Resource*.
- Yukl, G. (2002). *Leadership in organizations* (5th ed). New Jersey: Prentice Hall.
- Yukl, G. (2006). *Leadership in organization* (6th ed.). New Jersey: Prentice Hall.
- Yukl, G. (2008). How leaders influence organizational effectiveness. *The Leadership Quarterly*, 19, 708-722.
- Zahra, S. A. (2012). “Organizational Learning and Entrepreneurship in Family Firms: Exploring the Moderating Effect of Ownership and Cohesion,” *Small Business Economics* 38(1), 51–65.
- Zheng, C. (1999), ‘The Relationship between HRM and Chinese SME Performance,’ *International Journal of Organizational Behaviour*, 4, 4, 125–137.
- Zheng, C., Morrison, M., and O’Neill, G. (2006), ‘An Empirical Study of High Performance HRM Practices in Chinese SMEs,’ *The International Journal of Human Resource Management*, 17, 10, 1772–1803.

## Annex I Instrument

Note: Please rank 1 to 7 according to guideline given in each part.  
HRM Practices/HRGS

Guideline: Likert scale of 7 points (1 = almost never, and 7 = almost always).

1. On average, how often are the following practices applied to the management of R&D employees?
2. Firm emphasizes promotion from within
3. Performance appraisals include developmental feedback
4. Selection process assesses the ability to collaborate and work in a team
5. Training activities focus on team building and interpersonal relations
6. Appraisals are based on team performance
7. Appraisals focus on employees' ability to work with others

Knowledge Sharing

Guideline: Likert scale of 7 points (1 = almost never, 7 = almost always)

1. On average, how often do R&D members share each type of knowledge with members of other areas?
2. General overview (e.g., goals, milestones estimates or responsibilities)
3. Specific requirements (e.g., numerical projections, market forecast or order request)
4. Analytical techniques (e.g., statistical tools, detailed methods or testing procedures)
5. Progress report (e.g., status updates, resources problems or personnel evaluations)

Innovation

Guideline: Likert scale of 7 points (1 = less than competitors; 7 = more than competitors).

1. Please rate the situation of your company compared with competitors regarding the following issues.
2. Introduction to the market of technologically new products developed by the company (totally or partially)
3. Development of new products line/range
4. Frequency of renewal of old products by others with significant changes
5. Product innovation performed by the company

Affective Commitment

Guideline: Likert scale of 7 points (1 = almost never, and 7 = almost always).

1. I really feel as if the organization's problems are my own.
2. The organization has a great deal of personal meaning for me.
3. Employees of my organizations are more likely to share my values and beliefs than other
4. Organizations.
5. I enjoy discussing my organization with people outside it.
6. I do not feel "emotionally attached" to my organization.
7. One of the things I value most about my organization is the sense of community or camaraderie I feel.
8. I do not feel a strong sense of belonging in my office.
9. I am quite proud to tell people I am in my organization.

**APPENDIX**

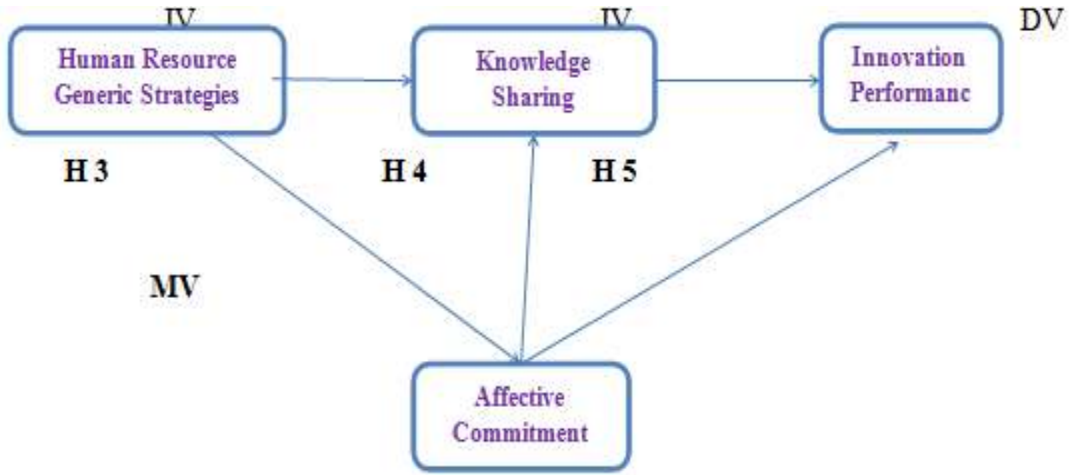


Figure.1: Conceptual Model

Table.1: Descriptive Analysis of SMEs of China

Variables	Mean	Std. Deviation	N
HRGS	4.2147	1.01543	696
AC	3.9171	.84546	696
KS	3.4155	1.24237	696
IN/IP	3.5472	.84347	674

Table.2: Correlation Analysis of Data of Chinese SMEs

Variables and Tests		HRP	AC	KS	IN
S	Pearson Correlation	1	.678**	.334**	.427**
	Sig. (2-tailed)		.000	.000	.000
	N	696	696	696	674
AC	Pearson Correlation	.678**	1	.606**	.532**
	Sig. (2-tailed)	.000		.000	.000
	N	696	696	696	674
KS	Pearson Correlation	.334**	.606**	1	.493**
	Sig. (2-tailed)	.000	.000		.000
	N	696	696	696	674
IN/IP	Pearson Correlation	.427**	.532**	.493**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	674	674	674	674

Table .3: Reliability Statistics of Data of Chinese SMEs

Cronbach's Alpha	N of Items
.776	4

Table .4 :Item Total Statistics of Data of Chinese SMEs

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
S HRG	10.8324	5.682	.523	.752
AC	11.1366	5.620	.760	.650
KS	11.6372	4.885	.527	.773
P IN/I	11.4823	6.015	.594	.720

Table .5: Summary of Model of Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.596 <sup>a</sup>	.355	.352	.67910

a. Predictors: (Constant), KS, HRP, AC

Table .6: ANOVA Results of SMEs Data of China

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	169.811	3	56.604	122.736	.000 <sup>a</sup>
Residual	308.991	670	.461		
Total	478.802	673			

a. Predictors: (Constant), KS, HRGS, AC b. Variable dependent: IN

Table .7: Coefficients of Regression

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.218	.134		9.114	.000
	HRGS	.153	.035	.181	4.338	.000
	AC	.248	.051	.238	4.885	.000
	KS	.212	.027	.305	8.012	.000

a. Variable dependent: IN)

Table.8:Summary of Model of Regression of HRP

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.427 <sup>a</sup>	.183	.181	.76315

- a. Predictors: (Constant), HRGS
- b. Table-9 displays results of ANOVA (Analysis of Variance) of regression between independents

Table.9:ANOVA Results of SMEs of China

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	87.429	1	87.429	150.118	.000 <sup>a</sup>
	Residual	391.373	67	.582		
	Total	478.802	67			

- a. Predictors: (Constant), HRGS
- b. Variable dependent: IN/IP

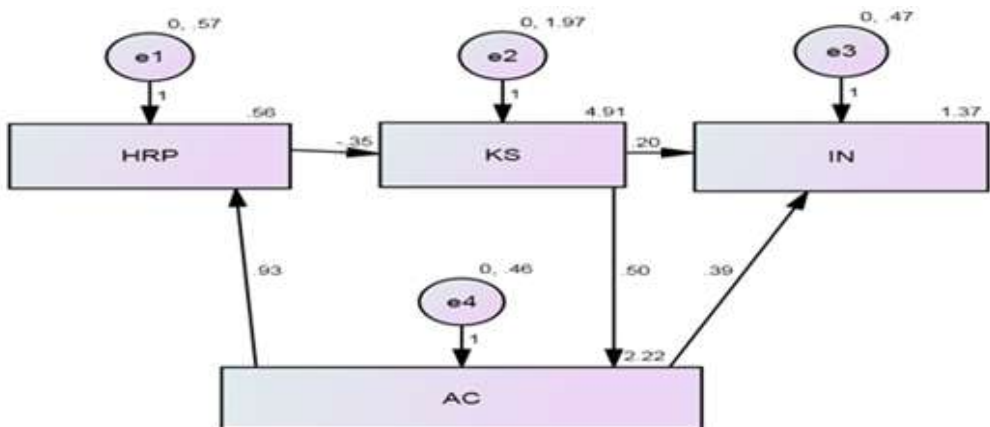


Figure .2: SEM Model of SMEs of China

Table.10: Descriptive Statistics of data of SMEs of Pakistan

	Mean	Std. Deviation	N
HRG	4.2736	1.03360	696
AC	3.9195	.83962	696
KS	3.5020	1.18343	696
IN/IP	3.5557	.78625	691

Table.11: Frequencies of Gender results of Data from SMEs of Pakistan

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	515	63.8	74.0	74.0
	Female	181	22.4	26.0	100.0
	Total	696	86.2	100.0	
Missing	System	111	13.8		
Total		807	100.0		

Table.12: Frequencies of Organizations results of Data from SMEs of Pakistan

Organization			
		Frequency	Percent
Missing	System	807	100.0



Table.13: Correlation Analysis of data of SMEs of Pakistan

		HRP	AC	KS	IN	
S	HRG	Pearson Correlation	1	.681**	.249**	.331**
		Sig. (2-tailed)		.000	.000	.000
		N	696	696	696	691
AC		Pearson Correlation	.681**	1	.520**	.436**
		Sig. (2-tailed)	.000		.000	.000
		N	696	696	696	691
KS		Pearson Correlation	.249**	.520**	1	.479**
		Sig. (2-tailed)	.000	.000		.000
		N	696	696	696	691
IN/IP		Pearson Correlation	.331**	.436**	.479**	1
		Sig. (2-tailed)	.000	.000	.000	
		N	691	691	691	691

Correlation is significant at the 0.01 level (2-tailed).

Table.14: Reliability Statistics of SMEs data of Pakistan

Cronbach's Alpha	N of Items
.744	4

Table.15: Summary of Model of SMEs data of Pakistan

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.331 <sup>a</sup>	.110	.109	.74236

Table .16: ANOVA results of SMEs data of Pakistan

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46.842	1	46.842	84.997	.000 <sup>a</sup>
	Residual	379.708	68	.551		
	Total	426.549	69			

Table.17: Coefficients of Regression of data of SMEs of Pakistan

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.478	.120		20.593	.000
	HRGS	.252	.027	.331	9.219	.000

a. Variable dependent: IN

Table.18: Summary of Model of data of SMEs of Pakistan

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.436 <sup>a</sup>	.190	.189	.70824

a. Predictors: (Constant), AC

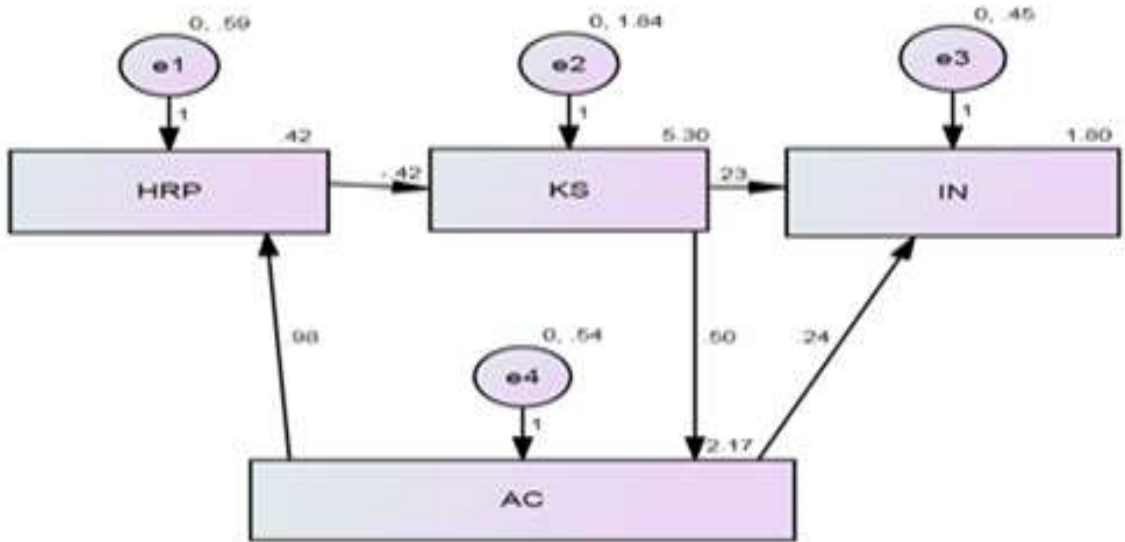


Figure 3: SEM Model of SMEs of Pakistan