

# **Contribution of Human Resource Management Practices In Supply Chain Success in Small and Medium Enterprises**

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## **Abstract**

The purpose of this paper is to investigate the relationship between human resource management (HRM) practices and supply chain management (SCM) success in SME from the Pakistani industry context. A sample of 174 responses was collected through convenience sampling from manufacturing and service sectors of SME in Karachi. The method of confirmatory factor analysis and path analysis were employed to evaluate the fitness of the measurement model. The Path analysis method was applied to examine the theoretical framework. The results indicate that all HRM practices, showed a significant relationship with supply chain management, as perceived by the employees of the Pakistani SME manufacturing and service organizations. Since the study has contributed by giving valuable insights for enhancing the SCM success by implementing these HRM practices; therefore, companies should concentrate more on these four HRM practices and pay extra attention when managing their respective organization to give edge over competitors. Findings from this study would be beneficial for HRM managers in developing countries such as Pakistan, who plan to enhance supply chain management through the adoption of HRM practices.

**Keywords:** Human Resource Management, Supply Chain Management, SME, Path Analysis

## **1. Introduction**

The fields of Human resources (HR) and Supply Chain (SC) have always been treated as a separate discipline despite knowing the fact that they are “intimately linked” in almost all business environments (Barnes & Liao, 2012). Human resource is considered to be the backbone of every organization; similarly a significant role is being played by supply chain management to improve organizational performance. Therefore amalgamation of HR and SCM has resulted in the creation of value chain system of an organization.

In the era of global competition where business environment has become highly dynamic, organizations face higher risk and greater degree of uncertainty. These risks and uncertainties have badly affected organizational efficiency as they have decreased market share at national and international levels. In this “era of turbulence” organizations managed to survive by continuously developing, redesigning and altering their strategies. Hence, the scope of new business opportunities are the result of such changes in business environment which has introduced a new profession recently by the name of supply chain. This profession demands skillful and competent professionals with the aim to regulate global supply chain successfully (Cottrill, 2010; Ellinger, 2014). Therefore, organizations in such a dynamic and complex environment, compelled to manage and operate supply chain where markets are highly volatile (Kiesling & Harvey, 2005; Bhatnagar & Teo, 2009; Harvey et al., 2013). Thus the integration of supply chain management into the organization processes, was actually witnessed in the decade of 1990 and was considered as the strategic advantage for the firm around the world (Shub & Stonebraker, 2009). Similarly, it is widely acknowledged that human resource management function is a dominant organizational function, which has a significant positive impact on organizational functions and performance (Zheng, 2009). In general, HRM practices are used to manage people and improve organizational performance (Wright & McMahan, 1992). Subsequently another key dimensions of Human resource management is to conform that efficient professionals having right KSA (knowledge, skill and abilities) are inducted in the organization irrespective of any geographic location. (Roberts et al., 1998;

Richey et al., 2006; Schuler et al., 2011; Strack et al., 2008; Collings & Mellahi, 2009; Harvey et al., 2013 suggests that those organization who have global supply chain can have the edge of talented and competent employees. Therefore, the emergence of supply chain success is proactively contributed to other organizational functions in human resource management (Wellins & Rioux, 2000).Hence ,the hunt for talented professionals SCM has globally created the heighten threat for the organization regarding selecting , engaging, and progressing their human resources (Gibson & Cook, 2003; Knemeyer & Murphy, 2004; Keller & Ozment, 2009; Cottrill, 2010.)In order to achieve sustainable growth and strengthen the dynamic environment globally, SCM is considered as a top strategic priority for Human Resource Management. (Ellinger et al., 2005; Ketchen & Hult, 2007; Sweeney, 2013). Since human plays a dominant role in logistic process of supply chain therefore HRM has gain more consideration (Myers et al., 2004). Education of employees as well as their knowledge, skills, and abilities are very essential (Gammelgaard & Larson, 2001; Murphy & Poist, 2006; Wu et al., 2013). In SCM, supply chain performance can be improved by talented human resources who offers competitive advantage. (Barnes & Liao, 2012; Autry & Whipple, 2013; Thornton et al., 2013; Ellinger, 2014). Therefore, employees who are talented and have high potential should manage effectively to foster the firm's performance (Feisel et al., 2011; Schuler et al., 2011). Moreover Stank et al. (2011), who establish the foundation of The New Supply Chain Agenda by identifying right talent as one of the five pillar. It has been observed after detailed review of literature that, in the past few decades very few research has been conducted to study the relation between Human Resource Management (HRM) and Supply Chain Management (SCM). The supply chain functions better when competent people are managed well within and between organizations. This is very astonishing that despite knowing the fact that the success of supply chain management rests on the performance of the people in the supply chain, still they ignore to manage their supply chain. On the other hand, human resource practitioner does formulate many processes to improve the firm and employees performance but fails to implement.

In a nut shell , we can say that both HRM and SCM does have bright future and promising potential , perspectives on managing employees in supply chain if shown the right track. In order to develop valuable inter-firm relationships, HRM practices can be used to encourage supply chain partner which will ultimately result in new competitive advantage.

Human resource practices and supply chain management are the strategies that have been recently adopted in Pakistan's SME sector (Khan, 2011). These practices already existed in SME but in a very informal and casual manner under one roof, there is a need to restore these practices under separate department in order to improve organizational performance. SME expanded their market share during the last decade by focusing on competitive advantages in the booming economy of the country .Number of initiatives had taken by the Government of Pakistan in this period for supporting SME growth, for example, SMEDA, Agriculture Support Fund, Business Support Fund, SME Bank and Competitive Support Fund. The State Bank directed private banks for soft collateral policies for microfinance grants. Harvey et al., 2013 suggests that those organization who have global supply chain can have the edge of talented and competent employees .Hence , the emergence of supply chain success is proactively contributed to other organizational functions in human resource management (Wellins & Rioux, 2000).Hence ,the hunt for talented professionals SCM has globally created the heighten threat for the organization regarding selecting , engaging, and progressing their human resources (Gibson & Cook, 2003; Knemeyer & Murphy, 2004; Keller & Ozment, 2009; Cottrill, 2010.)In order to achieve sustainable growth and strengthen the dynamic environment globally, SCM is considered as a top strategic priority for Human Resource Management. (Ellinger et al., 2005; Ketchen & Hult, 2007; Sweeney, 2013). Though there exist no concept considering the role of HRM functions in SCM (McAfee et al., 2002; Carter & Ellram, 2003; Schoenherr, 2009; Kern et al., 2011).Therefore we can say that HRM/SCM is an under developed area and this gap should be filled.

Following the problem statement, the research objectives are as under:

1. To assess the impact of selection on supply chain management success.
  2. To analyze the impact of Training on supply chain management success.
  3. To evaluate the impact of compensation on supply chain management success.
  4. To assess the impact of evaluation on supply chain management success.
5. To analyze whether all the four HRM practices have a significant impact on supply chain management success.

## **2 Theoretical Background and Hypotheses**

### **2.1 Review of Related Literature**

There is a wide debate on the integration of HR/SCM that supply chain management is a discipline that is human-centric which accentuates the significance of HRM strategically (e.g. Harvey & Richey, 2001; Myers et al., 2004; Cottrill, 2010; Sweeney, 2013). Our findings are also in line with this evidence that indicate increasing significance of HRM in SCM that leads to selecting highly competent and educated employees (e.g. Mangan & Christopher, 2005; Richey et al., 2006; Harvey et al., 2013; Ellinger, 2014). Thus, by illustrating the five research streams of Human resource management and supply chain management below, we analyze our findings, followed by a critical discussion.

#### **HRM Research Streams in SCM Literature**

To study the impact of HRM practices on SCM we have found four key HRM dimensions that impact SCM.

##### **2.1.1 Selection**

Selection is the first human resource activities that involves planning, job design, job analysis and recruitment, and selection. The talented SCM employees have growing global demand. Highly skilled professionals are increasingly been enticed and recruited by the firms (Cappelli, 2008). For an employee selection criteria KSA (Knowledge, skill and abilities) are the attributes that are considered to be the indicator of superior job performance (Myers et al. 2004).

In order to upgrade selection accuracy and lessen the time exposure .Richey et al. (2006) developed a tool. This tool helps selecting the best, talented and competent candidates for organization, since managers are the ones who are market based asset that provide link in global supply chains. Gibson and Cook (2003) identified that selecting competent SCM professionals positively influence firm performance .It is also very essential for the firm to understand employees needs when fostering effective recruiting practices.

Gibson and Cook (2001) in a study identified that an increase in recruiting approaches such as increase in internship programs, via media advertising results better than management search approach as this will help in getting a wider pool of talented candidates more quickly.

**Hypothesis 1a: Selection has a significant impact on supply chain management success**

##### **2.1.2 Training and Development**

Training is associated with human resource activities that involve training of employees, organizational development and career development. Superior job performance can be obtained by providing training programs to the employees that determines the aptitude and upgrade them with suitable training that would expand their potential for certain position. Training initiative in support of supply chains results in organization commitment. (Gunasekaran et al, 1994; Lepak & Snell, 1999; Swailes, 2004; Hunter et al., 1996; Lam, 2002). To support a commitment-focused relationship environment development of differentiated production skills and less formal types of training were identified for extensive training. (Lepak & Snell 1999). McAfee et al. (2002) viewed HRD as an essential ingredient for best-practice firms. Moreover Khan, N. R. (2013) in his study also demonstrated employee training and compensation to be the most significant value that contributes in the success of SCM .For global managers SCM training and development programs along with effective profile development skills has been considered as the key factor for professional development.( Harvey et al. 2013). However, the objective of developing SCM professionals' competencies are still not achieved since the latest training and development programs have failed to align with them (Ellinger, 2014). However, companies that emphasizes on developing their human resources by training and retraining their employees are considered to be effective in SCM practices (Gowen & Tallon, 2003).

**Hypothesis 2a: Training has a significant impact on supply chain management success.**

### **2.1.3 Compensation**

Compensation is one of the human resource activities that include base wage, perks and incentive system, along with benefits which is transaction-based or relationship-based strategies. For example at Cisco Systems, employees on an exceptional performance may earn on-the-spot \$2,000 bonus (Levering & Moskowitz, 2000).

Gibson and Cook (2003) considers this HR dimension as one of the major challenges in the hiring process. For earning the compensation the researcher points out workload as gap. The increasing demand of supply chain managers has created future shortage of SCM talent that has subsequently raised their compensation level. Gibson and Cook (2001) advocated salary differentials to qualified and talented applicants and entry level compensation as benchmarking. A good salary package should be highlighted to students as there is scarcity of experts in the SCM profession at the same time conveying the educator probability of long hours and high workload .(Goffnett et al. 2012). It has been forecasted in China that there will be substantial rise in compensation level, where qualified SCM professionals will generally stay in their job for only a year, reason behind this fact is, these professionals will be enchanted by headhunters offering them handsome salaries (Shi & Handfield 2012).

**Hypothesis 3a: Compensation has a significant impact on supply chain management success.**

### **2.1.4 Evaluation**

Evaluation generally involves human resource functions that include different evaluation designs and different evaluation periodicities. Continuous feedback is appropriate for a relationship-based environment whereas quantitative approach i.e. structured, periodic feedback is appropriate for a transactional environment (Lepak & Snell 1999). McAfee et al. (2002) in his study suggested, greater supply chain integration and performance can be achieved if individualized, less-formal, qualitative, and more continuous mentoring like evaluation methods are done.

**Hypothesis 4a: Evaluation has a significant impact on supply chain management success.**

## **2.2 Supply Chain Management**

Human interaction has emerged SCM as a strategic organizational process (Sweeney, 2013). SCM can have competitive edge if leading-edge practices is adequately executed, such as competitive benchmarking, customer satisfaction evaluation, continuous improvement teams and supplier partnerships and evaluation. (Dow et al., 1999; Evans & Lindsay, 2002; Hadfield & Nichols, 1999). Many corporations, such as Toyota and Honda because of it world class SCM practices have competitive edge over others (Bensaou, 1999; Vonderembse & Tracey, 1999). It is the HR factor that can nurture and enhance the success of SCM practices that has been limited by organizational implementation barrier. (Bubshait & Farooq, 1999; Dooley & Fryxell, 1999; Dow et al., 1999; Wilkinson et al., 1993). If a firm wants to ensure their SCM success they need to commit themselves in nurturing human capital .Most of the firms they just concentrate on investing in infrastructure and technology but they need to focus and contribute equally in investing on human capital and operate the SC. An adequate Human resource system should be the ultimate goal in implementing SC and improved operational performance for customer satisfaction. (Ou et al. 2010). By improving supply chain performance, talented human resources get competitive advantage (Barnes & Liao, 2012; Autry & Whipple, 2013; Thornton et al., 2013; Ellinger, 2014).

**Hypothesis 5a: All four HRM practices have a significant impact on supply chain management success**

## **2.3 Concepts Related to Supply Chain Success and Human Resource Management in SME Sector**

In the context of SME, very few studies have been available which reported the relationship between human resource management practices and supply chain management success. Human resource practices and needs in large and small organizations tend to be stratified by their business characteristics. (Deshpande & Golhar, 1994). Small organizations are time and cost-conscious and in order to achieve maximum performance outcomes they prefer to choose more or less HR practices that would help them work efficiently and effectively .(Kerr & McDougall, 1999; King et al., 2001; McCann et al., 2001; Dickson et al., 2006).

### **2.3.1 A Pakistani Perspective**

SME sector of Pakistan is very different from globalized SME world .To generate foreign exchange, SMEs contribute in export that boosts the national economy. Even in worst economic conditions from the period between 1990s and 2006, the total export of SME, China stood at the top with 60% share, followed by Taiwan (56%), Thailand (46%), India (40%), and Pakistan (25%). SME's performance in Pakistan is commendable and better than Malaysia and Indonesia and it has great potentials to increase its share in the total (Tambunan, 2010). .SMEs are considered as one of the leading employment generation sector in Pakistan. It plays pivotal role and have potential for further growth. (Khan, 2011).

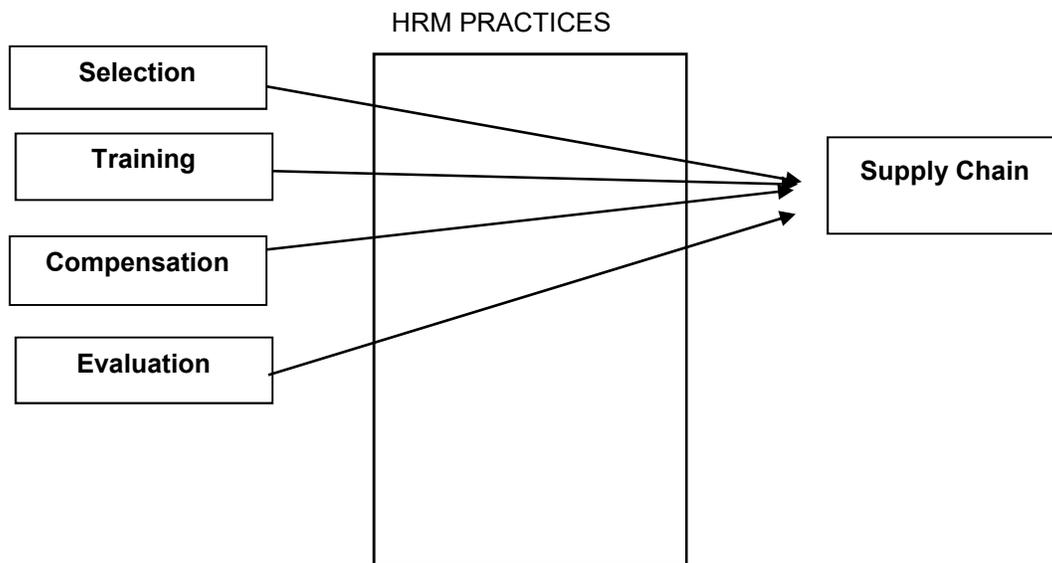
In SME sector of Pakistan Human resource practices and supply chain management strategies have recently been adopted strategies. These practices already existed in SME but in a very informal and casual manner under one roof, there is a need to restore these practices under separate department in order to improve organizational performance. SME expanded their market share during the last decade by focusing on competitive advantages in the booming economy of the country .Number of initiatives had taken by the Government of Pakistan in this period for supporting SME growth, for example, Small and

Medium Sized Enterprises Development Authority (SMEDA), SME Bank, Agriculture Support Fund, Business Support Fund, and Competitive Support Fund. The State Bank directed private banks for soft collateral policies for microfinance grants. Human resource practices and supply chain management are the strategies that have been recently adopted in Pakistan's SME sector. (Khan, 2011).

In order to identify the employment potential, researcher draws his intentions on this sector as the major concern of research. A profound shift have been observed in Pakistan (Bhutta et al., 2007), in which SMEDA was established in October, 1998 under SMEDA ordinance promulgated by the President of Pakistan on August 12, 2002 with the aim to develop Small & Medium Enterprises (SME) in Pakistan (SMEDA, 2010). Furthermore, in 1990s Pakistani government established an SME bank to provide financial assistance. Similarly, many Pakistani commercial banks had set up their SME departments to cater for the SME sector (Bhutta et al., 2007).

Following is our final Research framework with the below mentioned hypothesis of our study to be tested:

**Figure 1**  
**Research Model**



### 3 Research Framework

#### 3.1 Sample and Data Collection

Managers of different SMEs of Karachi area is considered to be the target population of this research. A sample of 174 responses was collected through convenience sampling from manufacturing and service sectors of SME in Pakistan, using a structured questionnaire. The data was collected from close-ended questionnaire, based on five-point Likert scales to produce statistics. In order to get fixed responses from the respondents the close ended questions are highly planned Neuman (2007). The primary data was collected from the managers of SMEs to analyze the impact of independent variables on the dependent variable.

#### 3.2 Instrument

For this study, survey questionnaire was used as a research instrument for collecting primary data. All the items (questions) of the survey questionnaire are adapted from two different research papers

and then it has been evaluated on the Likert scale. This scale has been developed by Rensis Likert. However, in this instrument there are 26 items out of which 4 items belong to selection ,6 ,6 ,5,5 items belong to training ,compensation evaluation and supply chain respectively .

### **Human Resource Management Practices**

The measurements used for HRM practices were based on the four dimensions of HRM developed by Chew (2003).These four dimensions are: selection, training, compensation and evaluation, altogether consist of 26 items. Each of items were rated on five-point Likert scale from 1 –Strongly disagree, 2- Disagree, 3- Neither disagree nor agree, 4 Agree and 5- Strongly agree.

#### **Selection**

To measure selection, the study used four items. These items are “Only the best people are hired to work in this organization”, “The values and beliefs of this organization are discussed in Interviews with potential employees”, “When new employees are hired, they must go through an extensive hiring process in which they are interviewed a number of times “and “Employees of this organization are involved in the hiring of their peers”.

#### **Training**

The sample questionnaire items include “ People are properly oriented and trained upon joining this Organization”, “The company provides enough training for the employees to learn new ways to do their job”, “This organization does provide regular opportunities for personal and career development”, “Training provided by the firm often consists of both classrooms teachings and On-Job-Training (OJT)”, “This organization subsidizes, assists or reimburses employees for training they get outside the organization”, “Employees in this organization receive additional compensation”.

#### **Compensation**

The compensation was measured on the basis of six items, “Employees are given positive recognition when they produce high quality work”, “This organization pays well, this organization offers good opportunities for promotion”, “The way in which employees in this organization are compensated”, “This organization values individual excellence over teamwork”, “This organization offers a good benefits package compared to other Organizations”.

#### **Evaluation**

Evaluation was measured using six items, “SMEs are highly intended to let its employees know”, “how they are performing”, “The measurement of an employee's performance on the job is a priority in this organization”, “Turnover and absenteeism is a priority in this Organization”, “When evaluating the employees for promotion”, “seniority is one of the criteria taken into account”, “This organization makes a point of keeping track of factors that it considers critical for success”.

#### **Supply Chain Management**

However SCM items were measured by five-point Likert scale adapted from the study of Khan (2013). The questionnaire items are “Our organization is involving in establishing continuous improvement teams”, “Our organization is creating substantial customer satisfaction evaluation”, “Our organization is creating substantial supplier quality evaluation”, “Our organization is involving in substantial competitive benchmarking advantage”, “Our organization is establishing substantial supplier partnerships”. These items were rated on five-point Likert scale from 1 –Strongly disagree, 2- Disagree, 3- Neither disagree nor agree, 4 Agree and 5- Strongly agree.

### 3.3 Ethical Considerations

The respondent had been assured of the confidentiality of their name, addresses and contact numbers. Interference with a respondent’s private life was kept to a minimum. Moreover there was no physical or mental harm for the participant of this research. The respondent also had the right to give suggestions and make related modification, suitable for the research.

## 4. Data Analysis and Results

The software used for the analysis of the data and finding of result were SPSS 21 and AMOS 21. The sample collected were 174 out of which 5 cases were found to have multivariate outliers which were removed using Mahalanobis Technique.

### 4.1.1 Descriptive Profile of the Data

**Table 4.1 Composition of the Data (N=169)**

| Variable              | Category  | Frequency | Percentage |
|-----------------------|-----------|-----------|------------|
| <b>Age</b>            |           |           |            |
|                       | 20-25     | 17        | 10.1       |
|                       | 26-30     | 20        | 11.8       |
|                       | 31-35     | 38        | 22.5       |
|                       | 36-40     | 30        | 17.8       |
|                       | 41-45     | 30        | 17.8       |
|                       | 46-50     | 22        | 13.0       |
|                       | Over50    | 12        | 7.1        |
|                       | Total     | 169       | 100        |
| <b>Education</b>      |           |           |            |
|                       | Bachelors | 63        | 37.3       |
|                       | Masters   | 81        | 47.9       |
|                       | M Phil    | 8         | 4.7        |
|                       | PhD       | 1         | .6         |
|                       | Others    | 16        | 9.5        |
|                       | Total     | 169       | 100        |
| <b>Marital Status</b> |           |           |            |
|                       | Married   | 136       | 80.5       |
|                       | Unmarried | 133       | 19.5       |
|                       | Total     | 169       | 100        |

|                         |               |     |       |
|-------------------------|---------------|-----|-------|
| <b>Gender</b>           |               |     |       |
|                         | Male          | 161 | 95.3  |
|                         | Female        | 8   | 4.7   |
|                         | Total         | 169 | 100   |
| <b>Management Level</b> |               |     |       |
|                         | Junior        | 3   | 1.8   |
|                         | Middle        | 81  | 47.9  |
|                         | Top           | 85  | 50.3  |
|                         | Total         | 169 | 100   |
| <b>Work Experience</b>  |               |     |       |
|                         | Less than 1   | 5   | 3     |
|                         | 1-3 years     | 28  | 16.6  |
|                         | 4-6 years     | 34  | 20.1  |
|                         | 7-9 years     | 28  | 16.6  |
|                         | 10-12 years   | 20  | 11.8  |
|                         | 13-15 years   | 16  | 9.5   |
|                         | Over15 years  | 38  | 22.5  |
|                         | Total         | 169 | 100   |
| <b>No of Employees</b>  |               |     |       |
|                         | 10-50         | 67  | 39.6  |
|                         | 51-100        | 24  | 14.2  |
|                         | 101-150       | 22  | 13.0  |
|                         | 151-200       | 29  | 17.2  |
|                         | 201-250       | 27  | 16.0  |
|                         | Total         | 169 | 100.0 |
| <b>Type of Business</b> |               |     |       |
|                         | Manufacturing | 62  | 36.7  |
|                         | Services      | 107 | 63.3  |
|                         | Total         | 169 | 100   |

Table 1 gives the descriptive profile of the data .Out of 169 respondents, 10.1% of the respondents fall in the age group of 20-25. Whereas respondents in the age group of 26-30 were 11.8%,31-35 were22.5%, ,36-40 were 17.8%,41-45 were 17.8%,46-50 were 13% and those respondents who were Over 50 were 7%. There academic information reveals that 37.3% gained the degree of bachelor whereas 85.2% had done Masters .The analysis of the data further reveals that 80.5% of the respondents were married however 19.5% were unmarried .995.3% of the respondents were male whereas 4.7% were females.1.8% of the respondents belong to junior level management whereas 47.9%, 50.3% belong to middle and top level management. Employees having less than 1 year experience were 3%. Employees whose experience fall in the category of 1-3 were 16.6%, 4-6 were 20.1%,7-9 were 16.6% 10-12 were 11.8%,13-15 were 9.5% ,over 15 were 22.5%.The analysis illustrates that 36.7% of the business were from manufacturing industry whereas 63.3% belong to servicing industry.

#### 4.1.2 Descriptive Statistics

**Table 2 Means, Standard Deviations, Skewness, Kurtosis and Pearson Correlations**

|                     | Mean  | SD    | Skewness | Kurtosis | 1       | 2       | 3       | 4       |
|---------------------|-------|-------|----------|----------|---------|---------|---------|---------|
| <b>Selection</b>    | 3.575 | 0.694 | -0.451   | -0.063   |         |         |         |         |
| <b>Training</b>     | 3.404 | 0.738 | -0.24    | -0.125   | 0.64 ** |         |         |         |
| <b>Compensation</b> | 3.752 | 0.586 | -0.242   | 0.113    | 0.579** | 0.943** |         |         |
| <b>Evaluation</b>   | 3.866 | 0.708 | -0.965   | 1.968    | 0.277** | 0.599** | 0.613** |         |
| <b>Supply Chain</b> | 3.925 | 0.52  | -0.367   | 0.194    | 0.473** | 0.647** | 0.771** | 0.679** |

Overall reliability of 16 loaded items is 0.772. Correlation is significant at the 0.01 level (2-tailed). If the Pearson r value is below threshold point i.e. 0.9 then the issue of multicollinearity does not exist (Hair et al. 2010). Therefore we can say that other than compensation, all the variables does not have multi collinearity issue. It is considered ,if the value of Skewness and Kurtosis lies between  $\pm 1$  then the data is considered to be normal (Fotopulos & Psomas 2009). As all the value lies between the acceptable ranges, therefore it is safe to conclude that the data is normal.

#### 4.1.3 Confirmatory Factor Analysis (Measurement Model)

**Table 3 Measures of Model Fit (CFA)**

| Goodness-of-fit Measures | CMIN/DF | GFI           | AGFI          | NNFI         | CFI           | RMSEA (PCLOSE)        |
|--------------------------|---------|---------------|---------------|--------------|---------------|-----------------------|
| <b>Recommended Value</b> | <3.00 a | $\geq 0.80$ a | $\geq 0.80$ b | Close to 1 c | $\geq 0.90$ a | $\leq 0.05$ d (>0.05) |
| <b>CFA Model</b>         | 1.45    | 0.912         | 0.872         | 0.88         | 0.907         | 0.052(0.409)          |

a Byrne (2010), b Bagozzi and Yi (1988), c Bentler and Bonnet (1980), d Browne and Cu deck (1993)

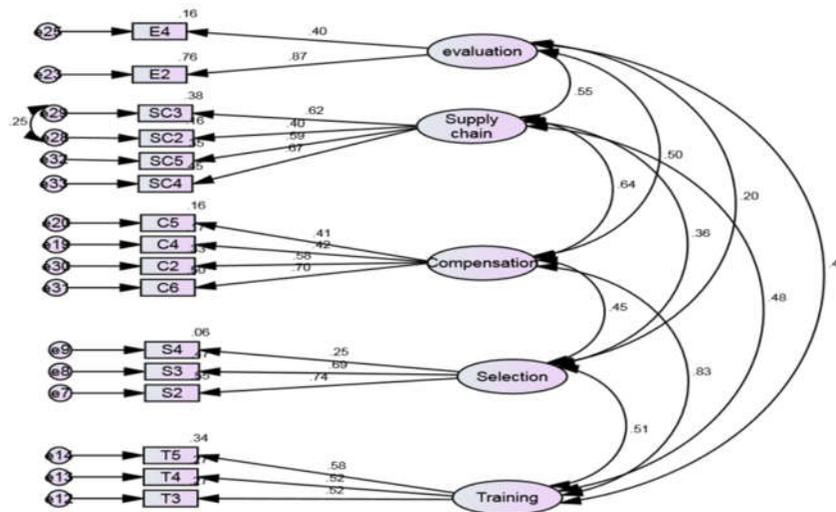
Confirmatory factor analysis was carried for the evaluation of construct validity. The statistical tool package AMOS was used for analysis purpose. CFA consisted of 16 items that were used to measure five latent variables that includes Selection, Training, Compensation, Evaluation and Supply chain.

To measure the goodness of fit of the measurement model, we have used seven goodness-of-fit (GoF) measures namely , ratio of  $\chi^2$  statistics to the degree of freedom (CMIN/DF), goodness-of fit index (GFI), adjusted goodness-of-fit index (AGFI), normed fit index (NFI), Tucker-Lewis Index (TLI) also called non-normed fit index (NNFI), comparative fit index (CFI) and root mean square error of approximation (RMSEA) with PCLOSE (Bagozzi & Yi, 1988; Bentler, 1990; Byrne, 2013; Segars & Grover, 1998; Joreskog & Sorbom, 1992; Kline, 2011; Loehlin, 2004; Marcoulides & Schumacker, 2001).

As indicated in Table 3, The combination of the results illustrated below suggests that the CFA appears to show a very good fit model between the observed and unobserved variables where (CMIN/DF) value is 1.457 which is smaller than 3 ( $p < 0.05$ ) as recommended by Byrne (2010) . Other model fit indices include GFI =0.912; AGFI =0.872; NNFI (also called TLI) = 0.880; CFI =0.907; and RMSEA =0.052 (PCLOSE =0.409). Therefore we can say that , all of the GOF measures have satisfied

the suggested cut-of level described by different authors (shown in the Table 3).Hence the suggested model is a good fit model.

**Figure 2. Confirmatory Factor Analysis**



#### 4.2 Path Analysis and Hypotheses Testing

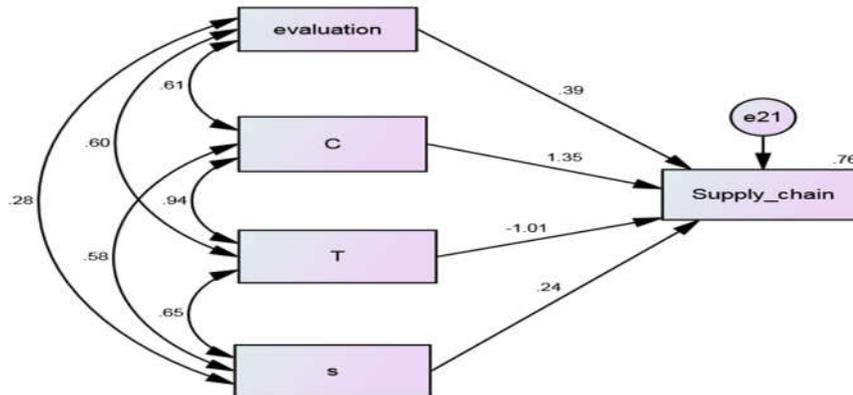
To determine the validity of the hypothesized paths, path analysis was performed to examine the statistical significance of all the structural parameter values.

The model shows that our first hypothesis is accepted since it shows a significant impact of Selection on Supply chain ( $\beta = 0.241$ ,  $p < 0.05$ ), hence accepting H1. When selection is increased by one standardized unit, supply chain also increases by 0.24 standardized units. Our second hypothesis is also accepted since Training significantly impacts supply chain ( $\beta = -1.015$ ,  $p < 0.05$ ) which means that one standardized unit increase in training effects supply chain to decrease by 1.015 standardized units.

Similarly our third hypothesis is also accepted as both shows significant impact of compensation on supply chain ( $\beta = 1.348$ ,  $p < 0.05$ ) i.e. one standardized unit increase in compensation will increase supply chain by 1.348 standardized units. Our fourth hypothesis is also accepted which shows significant impact of evaluation on supply chain ( $\beta = 0.393$ ,  $p < 0.05$ ) i.e. one standardized unit increase in evaluation will increase supply chain by 0.393 standardized units.

Moreover, the above findings of the study further reveals that 76.3% percent of the variance in SCM success has been significantly explained by the four factors of HR practices. Thus accepting our 5<sup>th</sup> Hypothesis which is all four HRM practices have a significant impact on supply chain management success.

**Figure 3. Path Analysis**



### 4.3 Hypotheses Assessment Summary

**Table 4. Hypothesis Summary**

|              |      |              | Unstandardized | Standardized | SE    | CR     | P   | Remarks   |
|--------------|------|--------------|----------------|--------------|-------|--------|-----|-----------|
| Supply Chain | <--- | Selection    | 0.114          | 0.241        | 0.024 | 4.787  | *** | supported |
| Supply Chain | <--- | Training     | -0.558         | -1.015       | 0.068 | -8.257 | *** | supported |
| Supply Chain | <--- | Compensation | 1.01           | 1.348        | 0.087 | 11.67  | *** | supported |
| Supply Chain | <--- | Evaluation   | 0.143          | 0.393        | 0.018 | 8.142  | *** | supported |

\*\*\*p<001

### 5. Conclusion

The objective of this study is to explore the relationship between HRM practices and Supply chain management (SCM) success in SME from the Pakistani industry context. The empirical findings have shown that all HRM practices have significant impact on supply chain .Moreover, the findings of the study reveals that 76% percent of the variance in SCM success has been significantly explained by the four factors of HR practices. Thus the results in this study support the hypothesis that SME's HR practices have significant bearing on SCM success.

### 6. Discussion

This paper has contributed greatly to comprehend HRM and SCM issues and its emerging need in the globally competitive markets .After reviewing the literature intensively we have analyzed that over the last two decades HRM issues in SCM research have developed radically. Such increasing dynamic business environment has created different demand for supply chain profession. (Murphy & Poist, 2006; 2007; Richey et al., 2006; Cottrill, 2010; Harvey et al., 2013; Sweeney, 2013; Ellinger, 2014).Since supply chains has evolved for the reason of adopting more integrated processes which resulted in greater performance efficiencies, similarly the supporting human resource and organizational processes must also evolve. Organizations and industries that will adopt these strategies will lead these developments

while others will lag. In order to comprehend the concept of selection and recruitment issues different methods and techniques with the objective of finding best practices are encouraged.

Due to scarcity of HR professionals, it has become crucial for Pakistani SMEs to train and develop low level staff. Kerr and McDougall, (1999); Hill and Stewart, (2000) emphasized that, it is a very critical issue for small organization to have few resources available for employee training and development. Few companies who send their employees for training them also send their employees to in-country institutes and the top managers probably the owners, abroad for technical and high-level managerial training. Secondly, compensation has also become very debatable issue since no monetary incentives are given to blue-collar workers only wages and salary are set for white-collar staff (Zheng, 2009). In developing countries there is a serious concern on the salary of talented supply chain professionals that should be investigated.

Besides this, the result of training on supply chain does have significant impact but has shown inverse relationship, this is because though these organizations are giving training to their employees but they forget that such training programs are applicable in developed countries where they have proper resources to implement which definitely result in increase in supply chain management. Since training given to the employees do increase their knowledge but those organizations where employees due to lack of resources and failure of implementation, they get demotivated and supply chain instead of increasing starts to decrease because employees after getting such training feel upgraded and when they fail to implement due to lack of resources they switch to some other organization due to which the company had to suffer and ultimately their supply chain decreases.

## **7. Theoretical Implications**

The creation of a theoretically based model is one of the major contributions of this paper which integrates two major discipline i.e. HRM and SCM. Moreover, this model can be applied to both service as well as manufacturing industry .By performing a new technique called confirmatory factor analysis (by using Amos software) which gives information about multiple fit indices and to asserts whether the model is fit. Hence, the model of the study reveals a good fit to the data and has identified the relationships between HRM practices and supply chain.

### **7.1 Managerial Implications**

This research has determined the significance of HRM practices related to supply chain which include selection, training, compensation and evaluation .Therefore, companies should concentrate more on these four HRM practices and pay extra attention when managing their respective organization. Furthermore, this study has also contributed by giving valuable insights for enhancing the SCM success by implementing sophisticated HRM practices that will ultimately give edge over competitors.

Another valuable finding from our study is that compensation has shown positive significance on supply chain. This positive impact of compensation is important as it provides long-term infrastructural benefits. In addition to this, it also assist top managers to be consistent with the training needs and review compensation programs. Therefore, it is very important for the employees to perform better, for the purpose of achieve high commitment level that would lead towards goals of an organization.

Today, many developing countries are adopting HRM practices to compete nationally as well as internationally. Therefore appropriate approaches should be considered at national level to boost the

national economy through SME sector. Hence it is suggested to the managers and the owners of the SME to implement HRM and SCM functions in order to enhance organizational performance.

## 7.2 Research Limitations and Future Research

The research design of this study is cross-sectional that hinders the causation evidence between HRM practices and supply chain.

Secondly, the study is limited to the organization and the respondents had to directly respond to the questions related to HRM practices and Supply chain that focused on the few dimensions of HRM practices. Thirdly, the study was limited to one city only focusing few areas due to law and order situation and time constraint. Another limitation is the use of self-reported data.

Finally, the current study has collected empirical data from Pakistan an Eastern culture setting; the cultural characteristics of the sample limit the generalizability of research findings. Future research may investigate the theory in Western cultural context to test the generalizability of the findings of this study.

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