International Journal of Current Research in Life Sciences
Vol. 4, No. 08, pp. 349-355, August, 2015

www.ijcrls.com

Full Length Research Article

STRUCTURAL EQUATION MODELING FOR IDENTIFYING ANTECEDENTS IN STRATEGIC TALENT MANAGEMENT PRACTICES AND JOB DESIGN FOR INNOVATION IN INDIAN MANUFACTURING FIRMS

[1]Mr. Naresh Mehta, [2]Pestonjee, D.M. and [3,*]Dr. Khan, S.M.

[1]A Mechanical Engineer with a master's degree in HR and Finance, Fellow – AHRD Ahmedabad
[2]Indian Institute of Management, Ahmedabad, Chair Professor (GSPL), Pandit Deendayal Petroleum University,
[3]Psycho Technical Unit (RDSO), Operating Branch, Western Railway HQ., Churchgate, Mumbai – 400020

Accepted 23rd *July* 2015; *Published Online* 31st *August* 2015

ABSTRACT

In this article, a search for antecedents' latent variables of innovation from Strategic Talent Management Practices and Job Design for Indian Manufacturing industries was made. Structural Equation Modeling (SEM) was used to assess the fit of the model that identified Job Characteristics, Job Identity and Overall Job Design of employees as statistically significant antecedents of Innovation. Our models provided a good fit. Direct and Indirect effects of exogenous variables on endogenous variables estimated and resultant percent of variance accounted into Innovation reported. Limitation of the study, managerial implications and direction for future research discussed.

Key words: Manufacturing, Industries, Innovation, Job Design

INTRODUCTION

In the field of strategic human resource management (SHRM), researchers have examined the potential benefits of using high-performance work systems (HPWS) as a means to maximize firms' competitive advantage (Huselid 1995; Becker and Huselid 1998; Bae and Lawler 2000). One of the fundamental principles of strategic human resource management (HRM) research is that the impact of human resources (HR) practices on individual and organizations is best understood by examining the bundle, configuration, or system of HR practices in place.

Wright and McMahan (1992) noted that strategic HRM is primarily focused on "the pattern of planned HR deployments and activities" that are intended to help organizations to achieve their objectives. Delery (1998) noted, "The basic assumption is that the effectiveness of any practice depends on the other practices in place. If all of the practices fit into a coherent system, the effect of that system on performance should be greater than the sum of the individual effects from each practice alone." While researchers may agree that a systems perspective is more appropriate than a perspective that focuses on the role of individual HR practices in isolation, adopting a systems perspective introduces a host of issues and problems that remain to be addressed in the literature.

Corresponding author: Khan, S.M.,
Psycho Technical Unit (RDSO), Operating Branch, Western Railway HQ., Churchgate, Mumbai – 400020, India.

For instance, inconsistencies abound regarding what constitutes a system and multiple conceptualizations of HR systems proliferate the literature (e.g., high performance work systems (HPWS), human capital enhancing HR systems, commitment HR systems, high-involvement HR systems, etc.). A lack of consistency regarding these systems limits our ability to truly understand the form and function of these systems in organizations.

There has been growing interest in demonstrating High Performance Work System (HPWS), yet limited attention has been paid to study the impact of Top Management Commitment on HPWS and in turn impact of HPWS on innovation and Firm's Performance. Further, the literature is silent about the direct impact of Job/Work Design elements (Job rotation, job enrichment, job enlargement, autonomy and empowerment) on innovation.

Strategic Talent Management Practices

We define strategic talent management as activities and processes that involve the systematic identification of key positions which differentially contribute to the organization's sustainable competitive advantage, the development of a talent pool of high potential and high performing incumbents to fill these roles, and the development of a differentiated human resource architecture to facilitate filling these positions with competent incumbents and to ensure their continued commitment to the organization (Collings, 2009).

Job Design

Work arrangement or rearrangement aimed at reducing or overcoming job dissatisfaction and employee alienation arising from repetitive and mechanistic tasks. Through job design, organizations try to raise productivity levels by offering non-monetary rewards such as greater satisfaction from a sense of personal achievement in meeting the increased challenge and responsibility of one's work. Job enlargement, job enrichment, job rotation, and job simplification are the various techniques used in a job design exercise.

Work is an effort directed toward producing or accomplishing results. Job is a grouping of tasks, duties, and responsibilities that constitutes the total work assignment for an employee. In other sense job/work design is a grouping of tasks, duties, and responsibilities that constitutes the total work assignment for an employee and person-job fit is matching characteristics of people with characteristics of jobs. The process of job design has been defined as, "...specification of the contents, methods, and relationships of jobs in order to satisfy technological and organizational requirements as well as the social and personal requirements of the job holder." (Buchanan, 1979)

Table 1. Company's Name and Number of Participants selected

S.No.	Company	Numbers of Participants
1	A	33
2	B	225
3	C	13
4	D	34
5	E	10
6	F	80
7	G	30
8	H	57
9	I	28
10	J	56
11	K	51
12	L	50
13	M	27
14	N	31
Total		725

Innovation

The contingency perspective on HRM is also known as "best fit" approach and proposes that the extent (or even the direction) of the effect of HRM on firm performance will depend on a firm's context or environmental conditions (Burns, and Stalker, 1994). To be called an innovation, an idea must be replicable at an economical cost and must satisfy a specific need. Innovation involves deliberate application of information, imagination and initiative in deriving greater or different values from resources, and includes all processes by which new ideas are generated and converted into useful products. In business, innovation often results when ideas are applied by the company in order to further satisfy the needs and expectations of the customers. In a social context, innovation helps create new methods for alliance creation, joint venturing, flexible work hours, and creation of buyers' purchasing power. Innovations are divided into two broad categories:

- Evolutionary innovations (continuous or dynamic evolutionary innovation) that are brought about by many incremental advances in technology or processes and (2) revolutionary innovations (also called discontinuous innovations) which are often disruptive and new.

Applying innovation is the application of practical tools and techniques that make changes, large and small, to products, processes, and services those results in the introduction of something new for the organization that adds value to customers and contributes to the knowledge store of the organization. Technology innovation is the development through which improved technologies are expanded and brought into extensive application. Generally, innovation is not a linear procedure; there are several interconnections and feedback loops in between the development stages. Innovation is the process of making changes, large and small, radical and incremental, to products, processes, and services those results in the introduction of something new for the organization that adds value to customers and contributes to the knowledge store of the organization.

Firm's financial performance is the measure of its financial performance in terms of revenue growth (sales), EBITDA (profit), number of new product launch and revenue from new products. While literature exists regarding impact of Innovation on firm's performance, very little is known about synergistic and net end impact/effect of Top Management Commitment, Strategic Talent Management Practices, Job/Work Design, and Innovation on Firm' Financial Performance. Therefore, what remains to be answered is; how significant is the direct/indirect relationships of strategic talent management practices and job design on innovation?

The companies were classified into *High Top Management Commitment* and *Low Top Management Commitment* on the basis of their total score out of 50. The companies which scored less than and equal to 35 fall under the category of *Low Top Management Commitment* companies and rest of the companies fall under *High Top Management Commitment* companies. Out of fourteen companies three companies were identified as *Low* and eleven as *High Top Management Committed* companies.

Instructions

The participants were told to feel free and be honest while replying and that this information shall be used for research work only. It may help in having a thought-provoking look at various human resource development programmes in Industries. Responses shall be kept fully confidential and identity will not be disclosed at any stage. They were asked not to mention any identification mark (name/signature) on the answer sheet thereby ensuring anonymity.

Brief Description of Companies

- Company – A. The company is engaged in manufacturing solar water heater systems and solar photvoltic power plants with employee strength of 120 and annual turnover of Rs. 17Cr.
- Company – B. The company is engaged in manufacturing induction furnaces and auxiliary equipments with employee strength of 800 and annual turnover of Rs. 415 Cr.

- Company – C. The company is engaged in manufacturing TMT bars and ductile iron pipes with employee strength of 2000 and annual turnover of Rs. 1800 Cr.
- Company – D. The company is engaged in manufacturing electric two wheelers with employee strength of 120 and annual turnover of Rs. 25Cr.
- Company – E. The company is engaged in manufacturing transmission line towers with employee strength of 90 and annual turnover of Rs. 40Cr.
- Company – F. The company is engaged in manufacturing ball bearing cages with employee strength of 400 and with annual turnover of Rs. 286Cr.
- Company – G. The company is engaged in manufacturing of textile machineries and pumps with employee strength of 400 with annual turnover of Rs. 110Cr.
- Company – H. The company is engaged in manufacturing hydraulic equipments with employee strength of 800 and annual turnover of Rs. 568Cr.
- Company – I. The company is engaged in manufacturing of gearboxes and material handling equipments with employee strength of 1500 with annual turnover of Rs. 1527Cr.
- Company – J. The company is engaged in manufacturing of textile mill machinery parts and equipments with employee strength of 500 and with annual turnover of Rs. 63Cr.
- Company – K. The company is engaged in manufacturing of plastics extrusion and injection moulding machines with employee strength of 800 with annual turnover of Rs.216Cr.
- Company – L. The company is engaged in manufacturing plastics injection and blow moulding machines with employee strength of 1200 and with annual turnover of Rs. 446Cr.
- Company – M. The company is engaged in manufacturing pumps with employee strength of 600 and with annual turnover of Rs. 210Cr.
- Company – N. The company is engaged in manufacturing of electric transformers with employee strength of 80 and with annual turnover of Rs. 46Cr.

Data Collection

The respondents were contacted at their workplace and purpose of the study was discussed with them. After receiving their consent for participation in the study they were given appointments at the individual level for filling the questionnaires. The respondents were asked not to leave any item unchecked and assured for confidentiality of information which will only be used for research.

Measures

Two survey questionnaires; one for Top management and second for Firm's Financial Performance was used in this study. Financial statements of last three years were obtained in requisite format for determining the financial performance of companies. The observation method was also used to study various HR systems and processes practiced in companies. In addition to these one more scale was developed to measure STMP, Job/Work design and Innovation and its psychometric properties verified on the target population. The details of the scale along with psychometric properties are as follows:

Strategic Talent Management Practices (STMP) Scale

This instrument comprises 24 items measuring six dimensions of STMP. The dimensions were Talent Acquisition, Performance Management, Compensation, Training & Development, Strategic Benefits and Skill Variety. It was 5-point Likert scale with anchors labeled (5= Strongly agree and 1= Strongly disagree). There was no negatively worded item. The responses of the identified items were added to generate respective dimension's score and all 24 items were added to generate overall STMP score. Thus, the possible score for STMP scale varies from 24 to 120. High score indicates high STMP and low score indicates low STMP. There are different ways to measure reliability (Lord & Novick, 1968; Nunnally, 1978). The Cronbach's Alpha for this scale was 0.89. The reliability of the scale is significant at 0.001 level of significance. The construct/factorial validity of the scale was determined using the Exploratory Factor Analysis (EFA) with Principal Component Analysis Extraction Method and Varimax Rotation. Six factors emerged (the criterion with initial Eigen values greater than 1) with rotation sum of squared loadings varying from 12.30 to 6.37% variance and cumulative 58.44%. It can be inferred that, the factorial validity of the scale is very high.

Job/Work design Scale

This instrument comprises 26 items measuring and six dimensions were job characteristics, task identity, autonomy, job empowerment, job enlargement and skill multiplicity. It was 5-point Likert scale with anchors labelled (5= Strongly agree and 1= Strongly disagree). There was no negatively worded item. The responses of the identified items were added to generate respective dimension's score and all 26 items were added to generate overall Job/Work design score. Thus, the possible score for Job/Work design scale varies from 26 to 130. High score indicates high Job/Work design and low score indicates low Job/Work design. The Cronbach's Alpha for this scale was 0.86. The reliability of the scale is significant at 0.001 level of significance. The construct/factorial validity of the scale was determined using the Exploratory Factor Analysis (EFA) with Principal Component Analysis Extraction Method and Varimax Rotation. Six factors emerged (the criterion with initial Eigen values greater than 1) with rotation sum of squared loadings varying from 11.65 to 5.87% variance and cumulative 52.95%. It can be inferred that, the factorial validity of the scale is very.

Innovation Scale

This instrument comprises 32 items measuring and six dimensions were thinking space, innovation entrepreneurship, idea management, innovation culture, innovation technology and inbuilt innovation. It was 5-point Likert scale with anchors labeled (5= Strongly agree and 1= Strongly disagree). There was no negatively worded item. The responses of the identified items were added to generate respective dimension's score and all 32 items were added to generate overall Innovation score. Thus, the possible score for Innovation scale varies from 32 to 160. High score indicates high Innovation and low score indicates low Innovation practices. The Cronbach's Alpha for this scale was 0.86.

The reliability of the scale is very high and significant at 0.001 level of significance. The construct/factorial validity of the scale was determined using the Exploratory Factor Analysis (EFA) with Principal Component Analysis Extraction Method and Varimax Rotation. Six factors emerged (the criterion with initial Eigen values greater than 1) with rotation sum of squared loadings varying from 15.93 to 4.79% variance and cumulative 52.00%. It can be inferred that, the factorial validity of the scale is very satisfactory.

RESULTS AND DISCUSSION

A researcher commonly wishes to discover the relationship of predictor variables to a criterion variable. Simple and multiple correlations are utilized and often yield important relationships, yet they never demonstrate causality. Structural equation modelling (SEM) technique allows us to state a theory in the form of a linear causal model. The most important variables on the basis of (Multiple Regression Analysis) are sought, and all others are regarded as 'residual'. This process assumed to be on the basis upon the results of past research and current theory.

Model specification

When SEM is used as a confirmatory technique, the model must be specified correctly based on the type of analysis that the researcher is attempting to confirm. When building the correct model, the researcher uses two different kinds of variables, namely exogenous and endogenous variables. The distinction between these two types of variables is whether the variable regresses on another variable or not. As in regression, the dependent variable (DV) regresses on the independent variable (IV), meaning that the DV is being predicted by the IV. In SEM terminology, other variables regress on exogenous variables, but exogenous variables never regress on other variables. In a directed graph of the model, an exogenous variable is recognizable as any variable from which arrows only emanate, where the emanating arrows denote which variables that exogenous variable predicts. Any variable that regresses on another variable is defined to be an endogenous variable, even if other variables regress on it. In a directed graph, an endogenous variable is recognizable as any variable receiving an arrow.

Overall STMP (X7) and Skill Variety (X6) characteristics of STMP through Job Design (X14) are important predictors of Innovation and to other sub-model Overall Job Design (X14), Job Characteristics (X8) and Task Identity (X9) are all important predictor variables and will help in determining the subsequent Innovation (X21) of industries in their settings. This is the linear statement or temporal order of the variables and may be written as shown in Figure 1.

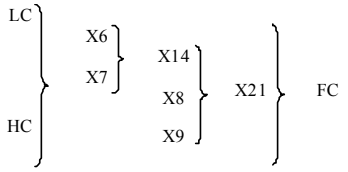


Figure 1. SEM Basic Model for the Causal Scheme

This basic SEM model in the research needs to be confirmed over the subsequent paragarphs.

The conceptual framework now to be translated into quantitative estimates on the basis of pattern of association of the variables in the sequence. This will help to measure the gross magnitude of the effect of an antecedent variable upon the consequent variable. The correlation coefficients for all variables are significant at $p<0.05$. SAS (Statistical Analysis Software 9.2) was used to calculate Fit indices and other coefficients for SEM. Fit indices determine the goodness-of-fit of sample size to perform SEM and is shown in Table 2.

Table 2. Covariance Structure Analysis: Maximum Likelihood Estimation

Fit Function	1.5707
Goodness of Fit Index (GFI)	0.7498
GFI Adjusted for Degrees of Freedom (AGFI)	-0.3134
Root Mean Square Residual (RMR)	0.2054
Parsimonious GFI (Mulaik, 1989)	0.2000
Chi-Square	1137.1738
Chi-Square DF	4
Pr > Chi-Square	<.0001

The p value for Chi-square is below 0.05 which indicates good fit. Manifest variable equation with standardized estimates is given below. The manifest (observed) variable equations with standaridized estimates developed and is shown below:

Manifest Variable Equations with Standardized Estimates

$$X14 = 0.0749 \times X6 + 0.4820 \times X7 + 0.8512\ E2$$

$$X21 = 0.6697 \times X14 + 0.1421 \times X8 + -0.2581 \times X9 + 0.6761\ E1$$

Where, (X6= Skill Variety X7=STMP, X8= Job Characteristics, X9= Task Identity, X14=Job Design, X21=Innovation) and E1 & E2 are the residual terms for the endogenous variables.

t values should be large enough in order to understand the significance of manifest variables estimates. The p value at the level of 0.05 is 1.96 and all the t-values in our case are larger than the critical values. Path coefficients reflect the amount of direct contribution of a given variable on another when effects of other related variables are taken into account. Path coefficients are identical to partial regression coefficients (betas) when the variables are measured in standard form. SEM parameters viz. path coefficients for direct/indirect & total effects were estimated and are given in Table 3.

Parameter estimation is done by comparing the actual covariance matrices representing the relationships between variables and the estimated covariance matrices of the best fitting model. Now enter the path coefficients on the path diagram with effect of antecedent variables. The final path diagram along with quantitative estimates is depicted in Figure 2 and awaits evaluation.

Interpretation

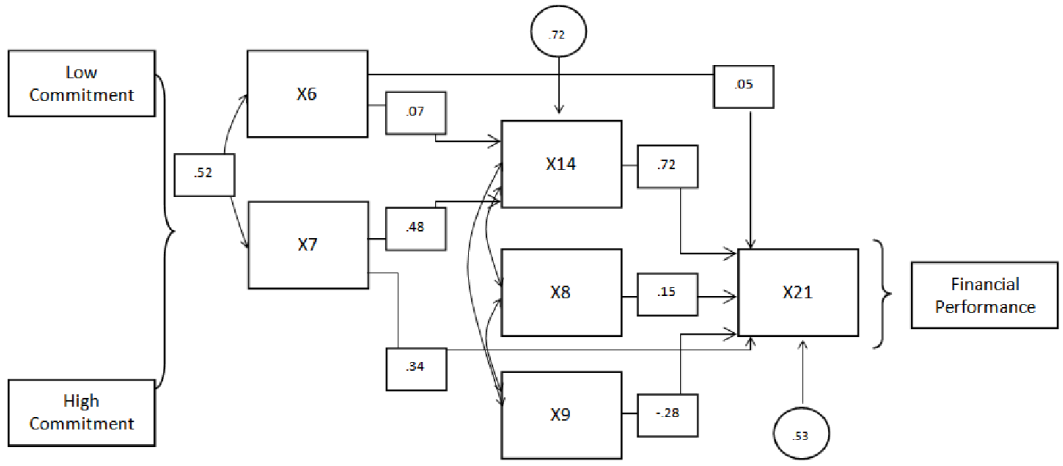
The variables in the causal scheme may be studied directly for their direct and indirect effects.

Table 3. Direct, Indirect and Total Effects of STMP and Job Design on Innovation

Vabs	X6			X7			X8			X9			X14		
	Dir	Indir	Tot	Dir	Indir	Tot	Dir	Indir	Tot	Dir	Indir	Tot	Dir	Indir	Tot
X14	.07	.00	.07	.48	.00	.48	.00	.00	.00	.00	.00	.00	.00	.00	.00
X21	.00	.05	.05	.00	.34	.34	.15	.00	.15	-.28	.00	-.28	.72	.00	.72

Dir: Direct; Indir: Indirect; Tot: Total
X6= Skill Variety X7=STMP, X8= Job Characteristics, X9= Task Identity, X14=Job Design, 21=Innovation

Management Commitment STMP Job Design Innovation



X6= Skill Variety X7=STMP, X8= Job Characteristics, X9= Task Identity, X14=Job Design, X21=Innovation

Figure 2. SEM Final Model for the Causal Scheme

Table 4. Squared Multiple Correlations

	Variable	Error Var	Total Var	R-Square
1	Job Design (X14)	0.72447	1.00000	0.2755
2	Innovation (X21)	0.52964	1.15868	0.5429

The direct effect of Skill variety and STMP overall on Job Design were shown by path and coefficients are 0.07 and 0.48 respectively. The direct effect of Skill variety on Job design is not large, but direct effect of STMP overall on Job Design is quite large and is signficant at the probability ($p \leq 0.05$). Direct effect of Job design, Job Characteristics and Task Identity on Innovation shown by path and path coefficients are as 0.72, 0.15 and -0.28 respectively and signficant at the probability ($p \leq 0.05$). The indirect effect of skill variety and STMP overall on Innovation shown by path and path coefficients are as 0.05 and 0.34 respectively. The indirect of effect of STMP overall on Innovation is quite large and signficant at the probability ($p \leq 0.05$), this needs to be interpreted in real perspective. At the same time, many other factors/variables of even greater influence are clearly operating to determine the organizational commitment and are beyond the scope of the study.

Assessment of model and model fit

It is important to examine the "fit" of an estimated model to determine how well it models the data. This is a basic task in SEM modeling: forming the basis for accepting or rejecting models and, more usually, accepting one competing model over another. Assessment of fit essentially calculates how similar the predicted data are to matrices containing the relationships in the actual data. The Chi-Square value for goodness-of-fit is sufficiently large and the p value for Chi-square is below 0.05 indicates good fit.

Table 4 displays standardized path coefficients and squared multiple correlations for endogenous variables (often considered the dependent variables in such a model). The 'Squared Multiple Correlations' R-square column gives us an idea of how well our model fits because; these values are interpreted as the percentage of variance in our endogenous variables accounted for by their respective exogenous variables.

From the above table, we could interpret X21 (Innovation) as having 54.29% of its variance accounted for by the combination of Job Design (X14), Job Characteristics (X8) and Task Identity (X9). While interpreting the SEM model, it should be taken into consideration that Structural Equation Model (SEM) is not a method of discovering causal laws but a procedure for giving a quantitative interpretation of an assumed causal system as it operates within a given population.

The set of models are then interpreted carefully so that claims about the constructs can be made, based on the best fitting model. Caution should always be exercised when making claims of causality even when experimentation or time-ordered studies have been done. The term *causal model* must be understood to mean: "a model that conveys causal assumptions," not necessarily a model that produces validated causal conclusions. As in any science, subsequent replication and perhaps modification will proceed from the initial finding.

Conclusion

Job Design Overall, Job Characteristics and Task Identity explained 54.29% in Innovation. The model left unexplained ($1-R^2 = 0.4571$) or 45.71% of the variance. If proper practices in industreis are adopted to describe the Job Characteristics and Task Identity and Overall Job design of employees, the industries expected to be innovative in large extent. This is a satisfactory model as might be hoped in social sciences research. The 'unexplained' variation is due to the variables or measurement error not included in the model. As 'residual' path is not very large, it must not be assumed that the size of the coefficient is necessarily a measure of success in explaining the phenomenon under study. "The relevant question about the residual is not really its size at all, but whether the unobvserved variables it stands for are properly represented as being uncorrelated with the measures of antecedent variables".

Limitations of Study:

- This research was carried out in manufacturing sector only. Thus generalization of results across various sectors is difficult. The number of companies in which research was carried out was limited to fourteen where certain HR practices like HPWS might not have been implemented effectively, although results are very encouraging. Therefore, there is need to carry out the research in large scale companies where in the HR systems like HPWS are more effectively implemented and matured.
- Also, it is a bit difficult to measure the top management commitment and establish accurate relationship with HPWS, Innovation and firm's financial performance as lots of other variables like company strategy, external environment, market condition, company's culture, value systems, operational strategy etc. influence the correlation amongst various variables.
- Moreover, this research was carried out in Indian context and not global context. Therefore, it creates further opportunities to carry out the research on global scale. The numbers of useful respondents who fall into manufacturing industry sector are too small and uneven, and it is therefore difficult to get a further general conclusion for each sector if we control for industry type. A further cross sectional study should make efforts to improve the response rate.
- Further, limitation of this research is also a suggestion for further research, as innovation is multidimensional and influenced by both internal and external factors. Some of the large innovative projects will achieve payoffs a long time after investment. This study defined innovation by the proportion of total sales coming from products or services introduced within the previous three years. It is not long enough for a firm to evaluate the effects of HR systems on innovation.
- Longitudinal studies for innovation should be introduced in future research.
- Moreover, many companies do not have account tracking system to exactly capture the revenue from new products introduced in the market.

Managerial Implications

The research results leads to following suggestions for HR and Line Managers;

- Although, the moderating effect of various dimensions (Job Characteristics, Task Identity, Autonomy, Job Empowerment, Job Empowerment, Job Enlargement, Skill Multiplicity) of variable Job Design is less significant and do not moderate while interacting with other variables Strategic Talent Management Practices (STMP) and Innovation as apparently it looks like that Job Design should moderate the relationship with STMP and Innovation. Therefore, the HR and Line Managers have to focus more on practical aspects of their implementation effectively in day-to-day operations. This will improve effective implementation of HPWS and ground level Innovations especially in low top management committed companies.
- Various dimensions of Strategic Management Practices (Talent Acquition, Performance Management, Compensation, Training and Development, Strategic Benefits, and skill variety) have positive and high correlationship with Innovation and its all the dimensions (Thinking Space, Innovation Entrapreunaership, Idea Management, Innovation culture, Innovation Technology, and Inbuilt Innovation), the HR and Line Managers have to focus more on their effective implementation in reality to enhance the effect of these dimensions on Innovation and Firm's financial performance.
- Various dimensions of Strategic Management Practices (Talent Acquition, Performance Management, Compensation, Training and Development, Strategic Benefits, and skill variety) have positive and high correlationship with Job Design and its all the dimensions (Job Characteristics, Task Identity, Autonomy, Job empowerment, Job Enlargement, Skill Multiplicity), the HR and Line Managers have to focus more on their effective implementation in reality to enhance the effect of these dimensions on Innovation and Firm's financial performance.
- The magnitude of relationship of Strategic Talent Management Practices (STMP) was studied with Job Design and Innovation with reference to High and Low committed Top Management. It was observed that, the magnitude was smaller on Autonomy, Job enlargement, Skill multiplicity, and overall Job Design for Low Committed Top Management in comparisons to High Committed Top Management. The magnitude of relationship of Strategic Talent Management Practices (STMP) with Innovation, the magnitude of relationship was smaller on Idea Management, Innovation Culture, Innovation Technology, and overall Innovation for Low Committed Top Management in comparisons to High Committed Top Management. Therefore, in case of low top management committed companies, the HR and Line managers have to focus more on effective implementation of these dimensions.
- In case of low top management committed companies, the HR and Line Managers have to put more efforts to get commitment from Top Management.

Direction for Future Research:

This research is carried out in manufacturing sector that too in small and medium scale industries in fourteen companies. This opens the scope of further research covering large scale industries and other sectors like Banking, Insurance and Finance, Oil, Gas and Energy sector, Steel and Mining Sector, Pharmaceutical sector etc. with larger sample size. This will enable generalization of findings. The research has established strong and positive relationship of HPWS and Job Design in predicting Innovation in case of both high top management committed and low top management committed companies. However, it is found that, there is no moderating effect of Job Design with STMP and Innovation. There is need to further investigate the relationship and moderating effect of other variables like business strategy, firm's internal and external environment, market conditions, operational strategy, organization culture, industry and organizational characteristics.

REFERENCES

Bae, J. and Lawler, J. 2000. Organizational Performance and HRM strategies in Korea: Impact of firm performance in an emerging economy. *Academy of a Management Journal*, 43(3), 502-517.

Buchanan, D. 1979. The development of Job Design and Technique.

Burns, T. and Stalker, M.G. 1994. The management of innovation. USA: Oxford University Press.

Collings, D.G. and Mellahi, K. 2009. Strategic Talent management:A review of research agenda. Human Resource Management Review, 19:4, 304-313.

Delery, J.E. 1998. Issues of fit in strategic human resource management:Implications for research. Human Resource Management Review, 8, 289-310.

Huselid, Brian, E. and Mark. 1998. High Performance Work Systems and Firm performance: A synthesis of research and management implication. *Research in Personal and Human Resource Management*, 16, 53-101.

Huselid, M.A. 1995. The impact of Human Resource Management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal*, 38(3), 635-672.

Wright, P. and McMahan, G. C. 1992. Theoritical perspective for strategic human resource management. Journal of Management, 18, 295-320.

****