Unleashing Factors Enhancing Creativity In Indian Software Companies

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Abstract: Creativity is important to organization not only to become more responsive and efficient but also to develop competence and professionalism in the employees. It is the requirement in every corporate sector to realize the potential creativity of employees so that they will be more enthusiastic and devoted towards their work and organization. Among the corporate, IT companies are doing best and demand for creative employees who explore the future opportunities in the sector. So there is a great challenge for Human Resource Managers to promote Employee creativity which leads to Organization Innovation. Creativity is a basic parameter for fostering Innovation and impact the brand image and financial outcome of the organization. But do human resource management practices have impact on creativity of employees? If so, what are those factors which truly impact the creative dividend in Indian software companies?

This study based on the primary survey of employees in software companies to quantify which factors are more prominent to impact creativity in those companies. This study found that Employee Creative Behavior is the important determinants that have impact on creativity as well as the survey results also found that employees, who suggests new ways to achieve goals, eager to learn new things, implement ideas with adequate plans and schedules, comes up with creative solutions to problem and exhibit creativity when given opportunity, shows to be more creative and thus plays a crucial role in developing innovative product and processes to fruitfully utilize the creative dividend in the company.

Keywords : Creativity, HRM Practices, Creative Behavior, Organization creative climate.

I. INTRODUCTION

Creative capital is company's most important asset which could be converted into valuable products and services. Foundation of knowledge, mastering a way of thinking and learning a discipline provide a base for creativity. Creativity can be learned through exploring, experimenting, using imaginations, questioning, assumptions and synthesizing information.

Earlier research on corporate creativity suggests the measures to improve corporate creativity by diagnosing the design of organization and identify the gaps, making cross functional teams to handle these gaps. A comprehensive and simple understanding of the creativity framework, which depicts that creativity involves following three components – *Expertise*: It includes technical, intellectual and procedural knowledge. Howard Gardner provides in depth view of knowledge by classifying it into two types that may be required for creativity. On the one hand the technical expertise gains in depth experience and long term focus as a foundation of creativity. On the other hand personal skills and characteristics are required to

combine elements in new ways.[6] *Creative Thinking*: It provides the key aspects of creative thinking process by disagreeing others, new solution, integrate knowledge of segregated fields, equilibrium between efforts and incubation. It defines the approach of a person towards the problem, which mostly depends on personality and working style. Stenberg in "Handbook of Creativity" proposed relationship between creativity and intelligence in his article "Creativity & intelligence". Thus provides multiple theories of creative intelligence which are: Synthetic, Analytical and Practical theories. *Motivation*: Many theorists consider motivation as important aspect of creativity. Intrinsic motivation develops involvement and commitment towards the work.[1] Howard Gardner researched on the lives of successful personalities, mentions that intrinsic motivation deals with sacrificing personal self and devote, time, energy and efforts toward the desired work endlessly. It is key driver towards creative production through intrinsic interest and passion. This creates a "Positive Psychology" towards the complexities of creativity.[4]

II.   LITERATURE REVIEW

A major question in organization behavior is to determine the specific human resource management practices which support the theory development on creativity [4][5]. Most of the work on determining the relationship between Employee creativity and specific human resource management practices has focused on broad categories determining the role of leadership, training, work life balance on creativity of employees. There have been research studies participation[3]; feedback valence, task autonomy [12]; informational evaluation about work and creative work modelling; communication[2]; encouragement, autonomy, freedom, resource availability and reduction of workload pressures [4][6]; supportive supervision and assigning of complex jobs [16]; supporting, monitoring, recognizing, consulting, clarifying roles and objectives, and problem solving [4]; information sharing, Organization's support for new creative ideas, focusing on learning, interpersonal interaction and working in teams to develop human skills [10]; support for new ideas [2][16]; and interaction among the employees which get promoted within the teams [9].

Finally most researches on creativity had focused on individual characteristics and behavior rather than examining how the organization HRM practices have specific impact to accomplish creativity of employees in an organization.

In the wide area of creativity literature beside the role of personal and individual's characteristic, social and organizational factors also determine the strength of development of creativity in organization. The *"Componential Theory of creativity"* suggests "a comprehensive model of psychological and social components necessary for an individual to produce creative work" which shows four components that affect creativity.[6] These are "domain relevant skills, creativity relevant processes, social environment and task motivation". Organization can stimulate creativity by providing such environment which guides them besides engaging the employees in their work. In article *"Managing for creativity"* provide "three guiding principles for creativity : help employees to do their best work by keeping them intellectually engaged and by removing distractions, make managers responsible for sparking creativity and engaging customers as creative partners.[7]"

III.   RESEARCH METHODOLOGY

A. Objective

To find out the factors which are important predictors of employee creativity in Indian software companies

B. Method:

The ergonomics discipline could help organizations to use its human capital to be creative for product and process innovation. The main contribution of researcher is that it has empirically tested the effect of the Human resource management practices on two dimensions of Employee's creativity- Employee creative behaviour and organization creative climate. This research is descriptive in nature, based on primary and secondary data. To collect the primary data for research purpose, questionnaire was used as research instrument, related to Employee creativity considering: Employee Creative Behavior and organization Creative Climate. After finding the suitable companies in IT industry, a random sample size of 444 has been taken, assuming the population is very large in number.

IV.   ANALYSIS

In this study employee creativity has been determined on two parameters: Employee Creative Behavior and organization creative climate.

Table 1: Average Score of Determinants of Employee Creativity

Determinant	Average Score
Employee Creative Behavior	3.982
Organization Creative Climate	3.852

From average score table, High average score of Employee Creative Behavior (3.982) determines that creative behavior of employees play a crucial role to determine creativity. (Table 1)

In order to examine the significance of overall average scores on Employee Creative Behavior and Organization Creative climate, the researcher adopted one sample sign test. It is a non parametric test, based on direction of positive and negative signs of observation. It is used to test whether two groups are equally sized or not. The one sample sign test as follows:

One Sample sign test (Employee Creative Behaviour):
Null Hypothesis H0 : AS = 3.982, Alternate Hypothesis Ha : AS ≠ 3.982
Total number of signs (n) = 13; 9 plus sign and 4 minus sign,
Number of less frequent sign (s) = 4
Critical value of two tailed test at 5% level of significance (k)
k = (n-1)/2 – 0.98√n = 2.472
Since s(4) > k(2.472), (Comparing the value of less frequent sign s with critical valve k)
Null hypothesis is accepted.
As per the test null hypothesis is accepted, hence average scores of factors of Employee Creative Behavior is not significantly different.

One Sample sign test (Organization Creative Climate):
Null Hypothesis H0 : AS = 3.852, Alternate Hypothesis Ha : AS ≠ 3.852
Total number of signs (n) = 10; 6 plus sign and 4 minus sign,
Number of less frequent sign (s) = 4
Critical value of two tailed test at 5% level of significance (k)

k = (n-1)/2 – 0.98√n = 1.40

Since s(4) > k(1.40), (Comparing the value of less frequent sign s with critical valve k)

Null hypothesis is accepted.

As per the test null hypothesis is accepted, hence average scores of factors of Organization Creative Climate is not significantly different.

To determine the factor items from Employee Creative Behavior, which are important predictors of creative behavior of employees. (Table 2)

Table 2:Percentage of Respondents predicting Creative behavior of employees.

Employee Creative Behavior	% of Agree and Highly Agree Respondents
Suggest new ways to achieve goals (ECB 18)	76.35
learning new things (ECB 24)	76.13
Develop adequate plans (ECB 23)	75.68
creative solutions to problems (ECB 20)	74.55
explore opportunities for creativity (ECB 22)	74.55

Determine the factor items from Organization Creative Climate which are important predictors of Creative environment in Organization.

Table3: Percentage of Respondents predicting Organization Creative Climate.

Organization Creative Climate	% of Agree and Highly Agree Respondents
Value innovation at all levels (OCC 38)	72.3
Intellectually challenging task (OCC 39)	71.62
Sense of togetherness (OCC 33)	71.17
Attentive in receiving ideas (OCC 37)	70.27
Alternative solutions (OCC 40)	70.05

V. CONCLUSION

Creativity is an intangible characteristic, needed by each and every organization. To be successful a company must foster innovation and bring talented individuals of higher degree of creative ideas for existing and new problems. IT can support innovative services in different sectors and directions in engineering, education, medicine, agriculture, transportation, communication, gaming, virtual reality and a lot more. Difficult to count and quantify the creative potential and capabilities of individual and companies but the tangible output comes up in the form of innovation.

- Creativity includes internal (stored knowledge) as well as external factors (communication and collaboration) to see different problems and their solutions.

- There are a lot of factors in companies which enhances creativity, but it is not a play of either or, it is about prioritizing such practices which fascinate and develop curiosity among individuals.

Employees, who suggests new ways to achieve goals, eager to learn new things, implement ideas with adequate plans and schedules, comes up with creative solutions to problem and exhibit creativity when given opportunity, shows to be more creative and thus plays a crucial role in developing innovative product and processes.

When organization supports innovation at all levels of management, motivation towards high intellectual task, togetherness and cohesion among the employees, organization receives ideas in attentive way and adopts different approach towards problem with finding out alternative creative solutions. These practices support creativity in software companies and provide platform to develop innovative products and processes which finally enhance organization's performance. The results showed that the heterogeneous group produced greater number of ideas as compared to homogeneous group. It also reports that among the several factors that can driven creativity for engineers, qualitative evaluation and assessment of creativity at different phases of research and development projects.

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