Factors affecting individual innovation: an examination of personality Trait (in Indian perspective)

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ABSTRACT
This exploratory study aims to identify those internal and external organizational characteristics that significantly affect individual innovation in an organization. The sample was drawn from a NRV industries manufacturing consumer Self adhesives tapes, Brown tape, cello tape & Corrugated boxes etc. products in Dehradun. A total sample of 100 was obtained, which is made up of 20 top-level employees, 20 middle level employees and 60 operational level employees. Results from the study showed that individual innovation does not significantly differ across the three levels of employees. Five internal characteristics were hypothesized to affect the innovation propensity of individuals: (1) communication structure, (2) knowledge structure, (3) individual interaction, (4) integration, (5) leadership.

Only knowledge structure was found to be significantly related to individual innovation. The external organizational characteristic, which is represented by environmental dynamism in this study, is also found not to have any significant relationship with individual innovation.

I. INTRODUCTION
In the dynamic environments with rapid globalization and advances in technology, “creativity” and “innovation” plays important role of in long-term survival and development of organizations. They have been seen as key goal for many organizations and have potentially powerful Influence on organizational performance, so they provokes Continuing interest among researchers and practitioners. Recently, The range of studies into innovation Has continued to advance in the world scope, in response to the increasing demand of the knowledge Work and the more emphasis placed upon employee creativity and teamwork innovation.

Moving into the new millennium, with rapid changes in the global technological industry, an organization’s competitiveness and ultimate survival depends on its ability to develop and bring out new and innovative products and services. Previous studies on innovation tend to support the view that technological innovation in manufacturing companies is one of the main engines for industrial competitiveness and national development. However, little empirical research has been done on employees’ perception with regard to the impact of organizational factors on individual innovation. We conducted this exploratory study with three objectives in mind. This study firstly aims to identify possible differences in innovation activities among individual employees from different hierarchical levels. Existing literature has put forward views that differences in individual innovation exist among the various levels. The second objective is to identify organizational (or internal) factors that are important to an individual’s contribution towards innovation. Current research offer limited empirical evidence on innovation from the perspective of an individual employee. Successful innovation activities in an organization require employee participation at all levels. This study seeks to extend the Understanding of employee innovativeness throughout the organization. Thirdly, the study investigates the influence of external forces on employees’ innovation.
II. THEORETICAL DEVELOPMENTS AND HYPOTHESES

(a) Individual innovation at different levels of the organization

The term “individual differences” could be used most generally to be suggestive of any dissimilarities across people, including differences in perceptions and behaviors however, for the purpose of this study, consistent with practice in the information systems research literature individual differences refers to user factor that include traits such as personality and demographic variables, as well as situational variables that account for differences attributable to circumstances, such as experiences and training. Personality is a collection of emotional, thought and behavioral patterns that are unique to each person and relatively stable over time. How and why people differ from each other is a question that has been asked for centuries with various answers, hypotheses and theories.

Employees in an organization can be categorised into three broad categories, which are the top (or strategic) Management level, the middle (or administrative) management level and the lower (or operational) management level. As organizational characteristics influence an individual’s innovativeness, any organization that aims to be successful should involve every individual in the organization’s innovation process and get them involved in different but interdependent ways. Each level of the hierarchy is deemed to be involved in different ways in an organization’s innovative activities. Top managers who are involved in making strategic decisions, are linked intimately with the external environment, and usually take a higher degree of responsibility for innovation activities in their organizations. This will mean that innovation by top management affects the organization directly and are usually driven by demands outside the organization. The importance of the middle level managers is seen as the centre point of the organization’s overall innovation process. However, middle managers may perceive their innovative activities as originating from others at the top or lower levels. This may in some ways inhibit middle managers to realise their full innovative potential. In this case, employees in the middle management level are more involved with the coordination of innovative ideas within the organization among employees from different levels. Lower (or operational) level individuals play an important role in the generation and implementation of innovation in an organization. Kanter (1983) highlighted the need to empower individuals at this level to innovate. This effort can be neutralised as individuals at this level tend to see themselves as implementers rather than initiators of innovation, which are derived from the higher organizational level and see little need and opportunities for them to play an active role in contributing to the organization’s innovation activities. The operational level individuals are less innovative because innovation is viewed as a threat to the security of their jobs. Also, since these individuals are sealed away from the more disordered organizational and external environments faced by individuals at higher levels of the organization there is less urgency for them to improvise and make changes. Therefore, innovation derived from the employees at this level may be limited to on-the-job innovative ideas and may come not from their own initiatives, but through the various innovation programmes put forth by the upper management. As such, there could be possible differences in individual innovation among the various organizational level and thus leads to the following hypothesis:

**H1a:** Innovation suggestions vary according to employees at the three organizational levels.

**H1b:** Implemented innovation suggestions vary according to employees at the three organizational levels.

(b) Internal characteristics and individual innovation

**Communication structure and individual innovation**

With an efficient communication structure in place, different departments in an organization will be better able to seek out, collect and disseminate information. This in turn increases the chance to identify innovation opportunities through interaction within the organization. A Well-developed internal communication infrastructure facilitates the dispersion of ideas and allows contribution by individuals, increasing the number of ideas generated and improving the visibility of new ideas. A well-integrated communication structure, which allows for close interpersonal
connectedness, is positively related to innovation rate. As such, we propose the following hypothesis:

**H2:** A well-developed communication structure is positively related to individual innovation within the organization.

### III. KNOWLEDGE STRUCTURE AND INDIVIDUAL INNOVATION

An organization’s built-in knowledge bank served by a well-developed information infrastructure is a useful channel for harnessing innovative ideas from its employees. Studies have been done on how organizations can absorb knowledge from their internal and external environments as well as from their experience in bringing about innovation and change. It was found, three repositories of organizational knowledge have been identified: (1) the individuals, (2) files maintained by the organization and (3) features found within the organization, e.g. new products and services. After identifying the sources, a structure needs to be put in place to harness them. Propose a knowledge system that illustrates how an effective organizational information infrastructure should function. It should be able to (1) capture information from several sources, (2) constantly maintain the visibility of the various ideas generated,(3) rediscover new uses for old ideas, no matter how simple they are and (4) create prototypes for testing concepts that show promise. Hence,

**H3:** A well-developed knowledge structure is positively related to individual innovation within the organization

### Integration and individual innovation

We differentiate integration from interaction by noting that the former is a precedent of interaction. It is necessary to integrate the various individuals and work groups who are skilled in their own areas into the organization so as to achieve innovation. Also the study on product introductions discovered that the failure rate was higher in organizations that did not have an integrated collaborative structure. By integrating individuals as well as the individual functional units they belong to into the overall organization, employees will be better able to identify innovative seeds that are consistent with the needs of the organization. This at the same time will allow them to take into consideration the limits of the organization when generating ideas and formulating implementation. Thus, we propose that

**H5:** Effective integration within an organization is positively related to individual innovation.

### IV. LEADERSHIP AND INDIVIDUAL INNOVATION

Top managers, when drawing up an organization’s strategy, should encourage employee input into strategy formulation to present a more complete view on the organization’s future directions. They must be committed to draw out the innovation ability of every single employee throughout the organization, which is the main goal of a good leader. By incorporating innovation as part of the organization’s vision or mission, this should serve as a motivational tool to individuals. Though it was found that the use of positive vision results in successful research and development (R&D). Thus,

**H6:** Strong leadership is positively related to individual innovation.
V. RESEARCH METHODOLOGY

Research Design: - Once the research problem is formulated unambiguously and plan of the research is clearly specified, the next problem is to build up a research design to streamline the research it determines “what” and “how” the researcher hopes to find the best solution to the problem. The research design is basically a working plan from beginning to the end of a research study, involving collection, measurement and analysis of data. The basic research design differ according to *objective *characteristics*method

Research Sample size: - The number of sampling units enumerated in a sample survey is called the size of sample, usually denoted by small letter ‘n’. Its maximum value is the size of the population (N) if n=N, there is no sampling and we have 100% enumeration or complete enumeration or census. The larger the sample size, there is more likelihood of the sample giving proper representation to the population. In this study the sample size is equal to 100. All respondent are from different part of organization and they belong from different level of the organization

VI. ANALYSIS

The sample consist of 50 % men and 50% women with the largest portion (40%) falling between the age of 30 to 45 years and (40%) between 25 to 30 year and (20%) between 20 to 25 year. The following table summarizes the result of the five internal hypothesized to affect the innovation personality of individuals.

<table>
<thead>
<tr>
<th>Type of sample</th>
<th>Persons with Communication structure</th>
<th>first Knowledge structure</th>
<th>preference Individual interaction</th>
<th>integration</th>
<th>Leaderships</th>
<th>Percentage of person from complete enumeration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top level employee</td>
<td>5</td>
<td>30</td>
<td>20</td>
<td>10</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Middle level</td>
<td>10</td>
<td>60</td>
<td>20</td>
<td>15</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>Operation Level</td>
<td>20</td>
<td>40</td>
<td>30</td>
<td>20</td>
<td>35</td>
<td>50</td>
</tr>
<tr>
<td>TOTAL</td>
<td>35</td>
<td>130</td>
<td>70</td>
<td>45</td>
<td>65</td>
<td>100</td>
</tr>
</tbody>
</table>

It means our calculated value is more then the table value therefore the null hypothesis that we consider, the innovation personality of individuals, communication structure, knowledge structure, individual interaction, integration, leadership are Rejected.

VII. CONCLUSIONS & IMPLICATIONS

Individual innovation at different levels of the organization

It is found that individual innovation displays no significant difference across the hierarchy of the organization. Such a situation would be extremely Favourable if all the employees throughout the organization are actively involved in making innovation suggestions and having them implemented. This is not the case here, as there appears to be a low level of innovation suggestion and implementation throughout the whole organization hierarchy even though innovation based suggestion programmes are already in place in the company. Such a situation may affect the long-term competitiveness and even survivability of the organization. In this situation, the management should urgently re-look into existing efforts that aim to encourage innovation within the organization.

VIII. INTERNAL CHARACTERISTICS AND INDIVIDUAL INNOVATION
The internal factor that is found to be positively related to individual innovation (suggestion and Implementation) is knowledge structure. The remaining four characteristics identified in this study are not found to be good predictors of individual innovation. Such a finding may indicate that there is no foolproof set of innovative characteristics an organization can adopt. Each individual organization must identify which Characteristic is applicable to the nature of the company and focus on improving those characteristics which Influence the organization’s and employees’ innovativeness, from this study, a company with a well established knowledge structure is shown to have a significant and positive relationship to individual innovation. Employees can readily refer to it for ideas and solutions and also use it to exchange creative ideas among colleagues. For the other aspect of individual innovation, innovation implementation, knowledge structure was again found to be significant. This is not surprising, as implementation requires knowledge to proceed with the how-to aspects of an innovative idea. Hence, managers of organizations should note the importance of a well-established knowledge structure in their organization and make an effort to improve if not create an effective knowledge structure access.

IX. EXTERNAL CHARACTERISTICS AND INDIVIDUAL INNOVATION

In this limited study, the external environment characteristics did not show any significant relationship with individual innovation. This means that environmental dynamism within a subsidiary context tend to exhibit little effect on the individual innovation of employees. Managers however are still advised to continuously monitor and respond to the external environment changes if it wants to survive or prosper. In sum, the key contribution of this study is that it examines the innovation concept from the perspective of different employee groups. Past research on innovation at the individual level tends to focus mainly on top-level managers. It is crucial to ascertain whether individual innovation activities decrease (or otherwise) down the hierarchical structure. Our findings reveal that individual innovation in this Indian subsidiary do not differ across the three employee groups. Whilst the organisational levels studied here provide a broader insight into determinants of individual innovativeness, the findings are not conclusive. That is, the sample was collected from a single company and further limited by the segmentation of the overall sample into three groups

REFERENCES