Measure of Successful Innovation Management from Employees’ Viewpoint: Concerning Employees Working in the IT Sector of Bengaluru City, Karnataka

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Abstract
The process of innovation management in the Indian Information Technology sector has resulted in the creation of an efficient and competitive system. Innovation management has offered a variety of services to the customer. During the past few years, innovation management has shown better growth in the IT sector. Many companies are now making strategies for the implementation of the innovation management system and measuring its impact by using different measures of innovation management. Various measures of successful innovation management are identified through literature review. The present paper primarily aims to find out the most relevant measures of successful innovation management from employees’ viewpoint hence samples were collected from 450 respondents. The study is based on primary as well as secondary data. Multiple response analysis is used to find out the most relevant basis of successful innovation management.

Keyword: Innovation, Employees, Measures

Introduction
The information technology sector is considered the backbone of the Indian economy’s service sector. The introductions of innovation management, related strategies, and techniques used for its implementation have strengthened the position of IT companies. The proper implementation of innovation management techniques and strategies in the IT sector has shown better growth and helped companies to gain a competitive advantage in the market. However, various measures are used to measure the impact of innovation management. Indeed, not all the positive impact on the company’s overall performance is the result of innovation management. It is, therefore, vital to identify the most relevant measure basis of successful innovation management. To further the research in this field, it is crucial to understand the critical factors, according to employees, that determine the success of innovation management.
Therefore, this research paper tries to fill this research gap and evaluate the most relevant basis of successful innovation management in IT companies.

**Literature Review**

Research literature in the late 1980s has discussed services innovation (Droege, Hildbrand, and Forcada, 2009). Yet, when juxtaposed with product innovation, the research around services innovation remains a relatively unexplored territory. There have been studies around new product development (Page & Schirr, 2008), financial services, transportation services (Vence & Trigo, 2009). Studies have also found that innovation management is a determining factor in helping emerging economies rank higher when it comes to factors such as global market expansion (Sundbo, J., 1997, Fleury & Fleury, 2003; Llor, 2007) and market need associated competency development (Drejer, 2000; Drejer & Riis, 1999; Hagan, 1996; Mansfield, 2004; Schuler & Jackson, 2005; Schroeder et al., 2002).

**Research Objectives**

Identify the most relevant measures of successful innovation management with respect to an employee viewpoint.

**Data Collection and Analysis**

The study is based on primary as well as secondary data. Secondary data is mainly used to list various measures of successful innovation management. Primary data is collected through a structured questionnaire distributed to 450 employees of IT companies. Out of this a sample of 400 respondents was chosen using a simple random sampling method (Table1). The data collected through the structured questionnaire was analyzed using multiple response analysis. The software package SPSS 21 is used to analyze data and present the result.

Following measures of successful innovation management are listed from secondary data
- Improved Productivity
- Reduced cost
- Increased Competitiveness
- Improved brand recognition
- Improved value proposition
- New partners and relationships
- Increased turnover
- Improved market share
- Economic value addition of staff
- Increased number of new ideas by employees
- Improved quality of ideas
- More efficient implementation of new ideas by employees
- Improved resultant success by the implementation of new ideas
- Increased annual Research and Development budget as a percentage of the sale
- Increased number of patents filled in the past few years
- Total research and development headcount
- Improved customer satisfaction
- Increased process efficiency

**Findings and Conclusion**

Out of the total 400 responses analyzed as indicated in Table 1, 91.8% concurred with improved productivity being a relevant basis to measure success of innovation management. 74.8% responses
believe improved value proposition is a measure of success. Further, 61.5% of the respondents view implementation of new ideas as a measure to assess success of innovation management program. The frequency Table2 of the multiple response set shows, when measured out of 100% of responses, that improved productivity (23.1%), improved value proposition (18.8%), Improved resultant success by the implementation of new ideas (15.5%), and increased process efficiency (14.4%) are the most relevant measures of successful innovation management from employees’ viewpoint. Only 1.5% of the employees see increase in R&D budget to be a determining factor for success of a company, thereby laying emphasis implementation aspect of R&D & new ideas. The responses also indicate the preference and inclination of employees towards incremental innovation, the outcome of which is visible in a relatively short period of time. Further, from employee viewpoint, coming up with newer ideas is not sufficient in itself, it’s the successful implementation that yields increased productivity, better processes and newer value propositions that determine the success of innovation management.

References
1. Dave, Rishi (1997) “Patterns of Success in the Indian Software Industry”, Senior Honors Thesis, Stanford University.
2. Drejer, A, (2000). Organizational learning and competence development. The Learning Organization, 7(4), 206 – 220. http://dx.doi.org/10.1108/09696470010342306
3. Drejer, A., & Riis, J. O. (1999). Competence development and technology: how learning and technology can be meaningfully integrated. Technovation, 19(10), 631-644. http://dx.doi.org/10.1016/S0166-4972(99)00064-4.
4. Droege, h, d Hildebrand and MAH Forcada (2009). Innovation in services: present findings, and future pathways. Journal of Service Management,20(2), 131-55.
5. Fluery, A., & Fluery, M.T.L.(2001). Construindo o conceito de competencia. Revista de Administracao Contemporanea, 5, 183-196. http://dx.doi.org/10.1590/S1415-65552001000500010.
6. Hagan, C.M.(1996). The core competence organization: implications for human resource practices. Human Resource Management Review, 6(2), 147-164. http://dx.doi.org/10.1016/S1053-4822(96)90017-0.
7. Llor, A. (2007). Delay from patent filing to technology transfer: a statistical study at a major public research organization. Technovation, 27(8), 446-460. http://dx.doi.org/10.1016/j.technovation.2006.10.002.
8. Mansfield, B. (2004). Competence in transition. Journal of European Industrial Training, 28(2-4), 296-309. http://dx.doi.org/10.1108/03090590410527672.
9. Page, A.L., & Schirr, G.R. (2008). Growth and development of a body of knowledge: 16 years of new product development research, 1989–2004. Journal of Product Innovation Management, 25(3), 233–248.
10. Rubalcaba, L., Gago, D., & Gallego, J. (2010a). On the differences between goods and services innovation. Journal of Innovation Economics, 5(1), 17–40.
11. Schroeder, R. G., Bates, K. A., & Junntila, M.A.(2002). A Resource-based view of manufacturing strategy and the relationship to manufacturing performance. Strategic Management Journal, 23(2), 105-117. http://dx.doi.org/10.1002/smj.213.
12. Sundbo, J. (1997). Management of innovation in services. Service Industries Journal, 17(3), 432–455.
13. Schuler, R.S., & Jackson, S.E.(2005). A Quarter-century review of human resource management in the U.S.:the growth in importance of the international perspective. Management Review, 16(1), 11-35.
14. Vence, X., & Trigo, A. (2009). Diversity of innovation patterns in services. Service Industries Journal, 29(12), 1635–1657.

### Table 1: Case Summary

| Cases          | Valid | Missing | Total  |
|----------------|-------|---------|--------|
| N             | Percent | N | Percent | N     | Percent |
| $Basis^a$     | 400 | 100.0% | 0 | 0.0% | 400 | 100.0% |

^a. Group

### Table 2: Response Frequency

| $Basis$ Frequencies | Responses | Percent of Cases |
|---------------------|-----------|------------------|
|                     | N | Percent |
| Improved Productivity | 367 | 23.1% | 91.8% |
| Reduced cost         | 42 | 2.6%  | 10.5% |
| Increased Competitiveness | 86 | 5.4%  | 21.5% |
| Improved brand recognition | 35 | 2.2%  | 8.8%  |
| Improved value proposition | 299 | 18.8% | 74.8% |
| New partners and relationships | 37 | 2.3%  | 9.3%  |
| Increased turnover   | 28 | 1.8%  | 7.0%  |
| Improved market share| 22 | 1.4%  | 5.5%  |
| Economic value addition of staff | 38 | 2.4%  | 9.5%  |
| Increased number of new ideas by employees | 15 | 0.9%  | 3.8%  |
| Improved quality of ideas | 28 | 1.8%  | 7.0%  |
| More efficient implementation of new ideas by employees | 28 | 1.8%  | 7.0%  |
| Improved resultant success by the implementation of new ideas | 246 | 15.5% | 61.5% |
| Increased annual Research and Development budget as a percentage of the sale | 24 | 1.5%  | 6.0%  |
| Increased number of patents filled in the past few years. | 21 | 1.3%  | 5.3%  |
| Total research and development headcount | 20 | 1.3%  | 5.0%  |
| Improved customer satisfaction | 15 | 0.9%  | 3.8%  |
| Increased Sale        | 8  | 0.5%  | 2.0%  |
| Increased process efficiency | 228 | 14.4% | 57.0% |
| Total                | 1587 | 100.0% | 396.8% |

^a. Group
### Appendix

**Questionnaire**

Select the most Relevant basis of the Measure of Successful Innovation Management

|   |                                                                                           |
|---|-------------------------------------------------------------------------------------------|
| 1. | Improved Productivity                                                                     |
| 2. | Reduced cost                                                                              |
| 3. | Increased Competitiveness                                                                 |
| 4. | Improved brand recognition                                                                 |
| 5. | Improved value                                                                            |
| 6. | New partners and relationships                                                             |
| 7. | Increased turnover                                                                        |
| 8. | Improved market share                                                                     |
| 9. | Economic value addition of staff                                                           |
| 10. | Increased number of new ideas by employees                                                |
| 11. | Improved quality of ideas                                                                  |
| 12. | More efficient implementation of new ideas by employees                                    |
| 13. | Improved resultant success by the implementation of new ideas                             |
| 14. | Increased annual Research and Development budget as a percentage of the sale              |
| 15. | Increased number of patents filled in the past few years                                   |
| 16. | Total research and development headcount                                                   |
| 17. | Improved customer satisfaction                                                             |
| 18. | Increased process efficiency                                                               |