

Innovation Management: Types, Management Practices and Innovation Performance In Services Industry of Developing Economies

Tahir Masood Qureshi

Assistant Professor, Faculty of Management Sciences,
International Islamic University, Islamabad Pakistan
tahirmasood2002@hotmail.com, +92 345 5090550

Imran Dar

Faculty of Management Sciences,
International Islamic University, Islamabad Pakistan
&

Muhammad Amanullah Khan

Prof. and Dean Faculty of Management Sciences,
International Islamic University, Islamabad Pakistan

Abstract:

Innovation is reshaping the corporate culture of organizations in this present age of competency and service legacy. Innovation in services is getting recognition from the top executives due to its strategic importance and globalize competition, which has escalated the demand of better change and adoption of best practices through change in processes. This research is based on innovation management in service industry of Pakistan according to the prevailing corporate environment and strategies to sustain or have potential competitiveness to meet the standards of the ever changing market. Organizations are considering innovative ideas as their potential informational resource along with financial and non financial resources. Almost 80% of the IT sector and 60% of the banking sector has embedded the innovation concepts in their organizational hierarchy to get optimum utilization of resources and benefits through market and organizational performance. Innovation is the core competency factor for every market oriented approach.

Keywords:

Pakistan, innovation management, service industry, organizational performance, innovation types, Degree of innovativeness.

1. Introduction

The significance of the service sector is mounting in western economies. There has been a growth in the service sector input to the GNP of the developed world in the last decade. Economic activity has experienced the greatest heights of growth and development by the incorporation of innovation in service sector. A considerable part of the foreign investments is injected in the service sector in Pakistan due to its profitable market, secure future and vast opportunities of growth and development. This is the reason why the service sector of Pakistan is growing with a flashing pace when compared with the economies of the region. The economists are working to divert the basis of economy from agricultural to industrial and service oriented to be at par with the developed world. Innovations are important for sustainable growth of all economic sectors and specially service sector which has the most dynamic and challenging market

with less barriers and product service legacy. Organizations in the country are facing environmental, policy, structural, institutional and cultural weaknesses, which have constrained their ability to take full advantage of the rapidly advancing process of globalization and from innovation practices, but professionally and non professionally these practices are in action in organizations especially in the service sector, this research will be an attempt to explore the actual innovation types, the degree of innovative practices in different organizations and their contributions towards growth and development.

It is, therefore, envisioned to explore innovative practices and their contribution towards organizational performance. Although in most of the developing countries the main obstacle of organizational profitability is the lack of professional use of innovative practices in product service development but struggle is, however, going on to find out best ways to utilize them.

The main aim of this study is to examine the different types of innovation that are applicable in companies in the Pakistan services sector, the degree of innovativeness, the practices and barriers, associated to the pursuit of innovation and their relationship with company performance. Research study will include 35 service organizations for data/ information collection and analysis will be consisted on facts and figures provided by innovation managers, the views of employees will also be focalized.

2. Literature Review

2.1 Innovation types Radical, Incremental and Me-too innovation

The future of culture of innovation on corporate level is based on the provision of conducive environment (Robert M. Price, 2007), contribution of the individuals in the growth of innovative ideas and self development which gives birth to a set of innovations which are radical, incremental and learnt from the competitors through proper manner recognized in the corporate world. These set of innovations (ideas, methodologies) become the value of the organization by supporting the corporate strategy (W.David, Chin Huat Ong *et al.*, 2005). The source of pressure to innovate is the increase in complexity in the processes and global competition. Organizational excellence is born form the continuous improvement in processes, develop and maintain competitiveness in the ever changing environment (Pervaiz K. Ahmed, 1998). Innovations on the basis of science have contributed to the global society for the past centuries. Research on innovation has three aspects like experimental observation of innovation processes and systems, critical analyses of the innovation theory, decision making skills based on innovation. Innovation is in its developmental stage and new types and forms of innovation disciplines are emerging as research on innovation is contributing to the knowledge of theory and operational processes (Ruud Smits, 2002).

2.2 Degree of innovativeness

The clear evolution of the phases or aspects of innovation with respect to their impact on the organizational performance is crucial for effective and efficient benchmarking as it depicts the true picture of the indicators which

reveal about the degree of innovativeness and its impact on the performance of the organization. The effectiveness of the innovation is measured in terms of the responsive impact on the products and organizational processes which indicates the efficiency of innovation in the shape of organizational performance (G .Tor & L.Kathryn, 1994).

Strategic direction is crucial to gain optimum benefits from innovation as it makes innovation the part of the organizational strategy. The degree to which this strategic vitality is recognized by the organizations can be judged by the quantum of responsibilities given to significant amount of staff in relation to their human resource and the verticals where that staff is placed in the organizational hierarchy (C. Angela, E. John, *et al.*, 2001).

This is the age of information technology, companies are changing rapidly and market competitiveness forces them to develop synergic relation between quality and productivity (Michael A. Allocca & Eric H. Kessler, 2006).

2.3 Innovation management practices

The survey of large firms has proved that there are different requirements for managing radical and incremental innovations. Profitable radical innovations are more dominant in small medium enterprises as compared to large firms. Incremental innovations, involving improvements to processes, products and services in response to customer needs are focused (Oke A., Burke G. *et al.*, 2007).

The greatest level of growth and vitality over the past decade in the economic activity is experienced in the service industry due to innovation in services.

Academic interests in the innovation management sector are growing due to the growth of service sector by the introduction of innovative services and processes.

The life cycle of innovation is to be taken into account through applying a whole set of techniques to have the risk analyses of the changes in cost, value, product and processes at organizational level (Frederic Tomala & Olivier Senechal, 2004).

Studies on innovations in the service sector, however, have received little Research is gaining recognition about relationships between innovation types, the degree of innovativeness, innovation performance and innovation management practices.

Innovation performance is based on radical product innovation and radical service innovation. Incremental innovations for products and for services are informally related to innovation performance. Formal practices are implemented in the development of radical innovations by studying the prevailing relationship between product and service innovativeness and innovation management practices in the organizations. The management systems for innovation processes are developed by analyzing the organization of innovation activities and management policies (Tuominen M., *et al.*, 1999). Incremental innovations are to be recognized formally in the strategies and define formal practices for implementing these types of innovations. Service innovations are more visible in transport and retail sectors (Oke A., 2007).

Ineffective deployment processes are the major hindrance in the way of innovation management and utilization of its benefits in the shape of innovation legacy through proper safeguarding of

corporate strategies by patents and recognition plus support from the top management to make innovation as the part of the corporate culture (Oke Adegoke, 2004).

2.4 Innovation performance Organizational performance & Market performance

Innovation is the source of potential competitiveness which safeguards service legacy and is utilized as a tool to go beyond the strength of the competitors. Innovative personals are considered assets of the company and competitive advantage of the organization is based on the idea generation and knowledge management of the organizations in collaboration with the professionals responsible for innovations. The nucleus of competencies of the modern business world is innovation management because companies surpass one another on the basis of degree of innovativeness in their processes, technology use and customer satisfaction mechanisms (Y. Carol *et al.*, 2007).

The performance of innovations depend on long term and development –focused planning which has strategic and visionary value in the organization and the products and services created through innovative processes. The vision and goals of innovation must be communicated affectedly throughout the organization.

Interdepartmental communication is vital to accelerate innovations and innovative processes. The focus of managers is to be shifted from traditional approaches to innovation and knowledge management .It could be done by attracting, retaining and motivating the innovative personal. The management

practices are to be aligned with corporate objectives regarding innovations.

Innovation has pivotal role in gaining competitiveness for the organizations through unmatched link with the economic activities which reflect the financial as well as non financial performance of the organization (D. Keith Denton, 1999).

Innovation is the center of the organizational strategy. Innovation is the key to potential growth which build competitiveness. It needs supportive environment, risk taking behavior, merging into bigger units and allowing change in the current processes and organizational hierarchy (Bolko von Oetinger, 2004).

The perceived organizational and market performance is assessed in the market place where innovative marketing techniques are applied to convert good ideas and products into sales and revenue. Innovations are inevitable for maintaining sustainable growth and market competitiveness due to increasing dynamism in customer demands and technological development in the global economy. Innovation management systems are applied to effectively promote innovative processes and prove their efficiency by getting maximum benefits out of them through restructuring of policies and communication channels. Innovation is closely linked with firm performance because it adds value to the processes and products. The innovative activities are measured on the basis of their value and degree of direct affect on the organizational performance. Innovation is considered as the process of commercializing and extracting value from ideas and converting them in to benefits in the real market. The companies today compete on the basis of

new and improved added value products and services, processes and business methods.

3. Research Methodology:

3.1 Purpose of the Research Study:

The objective of this paper is to analyze the impact of innovation on the service industry in Pakistan. The main findings of this research comprises of the relationship between innovation types, innovation management and their impact on organizational performance.

3.2 Research Design:

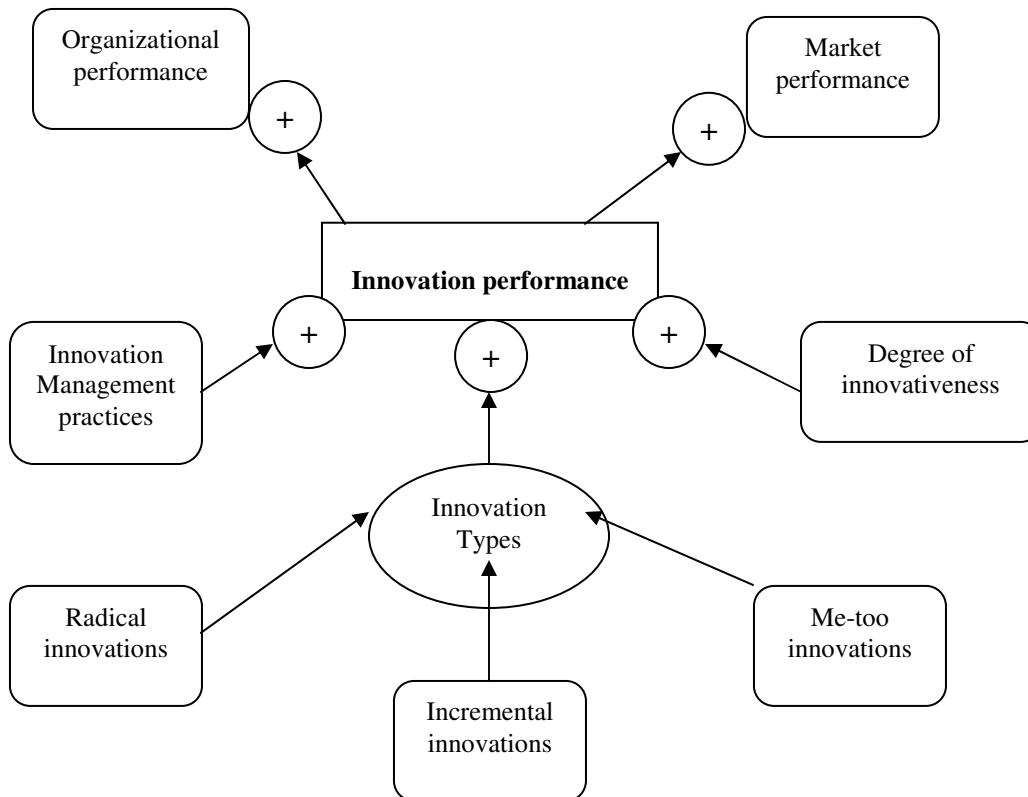
The research design was finalized on the basis of the interviews taken form executives of IT and Banking sector. Mail survey was adopted due shortage of time and resources. We received positive response from the targeted

individuals. Most of the people related to academic professions and individuals having executive level were aware of the concept. The questions were designed in the simplest and common words were used instead of technical terms.

3.3 Response Rate:

Information was collected from the individuals who were responsible for innovative actives in the firm to have rock hard authenticity. The individuals were instructed to fill the questionnaire according to the prevailing conditions. Out of 250 questionnaires we got back only 145. Overall response rate was 58%. Statistual tools as regression, correlation and mean were applied to have meaningful data.

3.4 TMQ- Innovation Performance Research Model



Equation tested is following:

$$\text{Equation2: } y = \alpha + \beta_1 (x_1) + \beta_2 (x_2) + \beta_3 (x_3) + \epsilon$$

$$\text{OP} = \alpha + \beta_1 (\text{IT}) + \beta_2(\text{DOI}) + \beta_3(\text{IMP}) + \epsilon$$

Where as :

$X_1 = \text{IT} = \text{Innovation types}$

$X_2 = \text{DOI} = \text{Degree of innovativeness}$

$X_3 = \text{IMP} = \text{Innovation management practices}$

$$\text{Equation2: } y = \alpha + \beta_1 (x_1) + \beta_2 (x_2) + \beta_3 (x_3) + \epsilon$$

$$\text{MP} = \alpha + \beta_1 (\text{IT}) + \beta_2(\text{DOI}) + \beta_3(\text{IMP}) + \epsilon$$

Where as :

$X_1 = \text{IT} = \text{Innovation types}$

$X_2 = \text{DOI} = \text{Degree of innovativeness}$

$X_3 = \text{IMP} = \text{Innovation management practices}$

3.6 Hypothesis

H1: There is a positive relationship between radical innovations and organizational performance.

H2: There is a positive relationship between radical innovations and market performance of the organization.

H3: There is a positive relationship between incremental innovations and organizational performance.

H4: There is a positive relationship between incremental innovations and market performance.

H5: There is a positive relationship between me-too innovations and organizational performance.

H6: There is a positive relationship between me-too innovations and market performance.

H7: There is a positive relationship between Innovation management practices and organizational performance.

H8: There is a positive relationship between Innovation management practices and market performance.

H9: There is a positive relationship between Degree of innovativeness and organizational performance

H10: There is a positive relationship between Degree of innovativeness and market performance.

4. Research Findings

The correlation of all the variables are shown in the **Table.1** and correlations are recorded in **Table.2** which describes that the highest value of correlation between

Independent and dependent variables is between innovation management and market performance (**0.82**) and also between innovation management and organizational performance (**0.86**). Innovation, management has mean (**3.67**) and standard deviation (**0.74**).

Table 1. Correlation of Variables

	<i>OP</i>	<i>MP</i>	<i>RI</i>	<i>II</i>	<i>MT</i>	<i>IM</i>	<i>DOI</i>
<i>OP</i>	1.00						
<i>MP</i>	0.89	1.00					
<i>RI</i>	0.77	0.74	1.00				
<i>II</i>	0.70	0.60	0.68	1.00			
<i>MT</i>	0.68	0.61	0.58	0.81	1.00		
<i>IM</i>	0.86	0.82	0.79	0.67	0.67	1.00	
<i>DOI</i>	0.81	0.75	0.76	0.75	0.76	0.87	1.00

Radical innovation has the highest correlation in innovation types with organizational performance (**0.77**) and market performance (**0.74**). Mean of radical innovation is (**3.66**) and standard deviation (**0.57**). The least affective is Mee-too innovation in innovation management having correlation (**0.68**) with organizational performance having mean (**3.18**) and standard deviation (**0.60**). It means that radical innovation in innovation types

significantly increases the rate of organizational performance and market performance. Incremental innovation has correlation (**0.60**) with market performance having the lowest level of correlation. After innovation management, degree of innovation has the second influential affect on organizational performance and market performance having correlation (**0.81**) and (**0.75**) with mean (**3.55**) and standard deviation (**0.70**).

Table 2. Mean and Standard Deviation

	Mean	Median	Standard Deviation
<i>OP</i>	3.69	3.80	0.66
<i>MP</i>	3.63	3.75	0.65
<i>RI</i>	3.66	3.80	0.57
<i>II</i>	3.39	3.40	0.63
<i>MT</i>	3.18	3.20	0.60
<i>IM</i>	3.67	3.83	0.74
<i>DOI</i>	3.55	3.50	0.70

According to **Table.2**, The variable having the highest mean (**3.67**) is innovation management practices (**IM**) which proves that it is having the most powerful impact. Mee-Too innovation

(**MT**) has mean (**3.18**) which depicts it to be the least affecting variable having minute contribution in organizational performance.

Table 3. Regression

Regression Statistics		
Adjusted R Square	Coefficients	P-value
0.77		
Intercept(OP)	0.30	0.09
RI	0.23	0.01
II	0.10	0.22
MT	0.10	0.23
IM	0.46	0.00
DOI	0.06	0.52

Table 4. Regression

Regression Statistics		
Adjusted R Square	Coefficients	P-value
0.69		
Intercept(MP)	0.48	0.02
RI	0.29	0.00
II	-0.07	0.48
MT	0.13	0.19
IM	0.50	0.00
DOI	0.02	0.84

The tables show the regression, p-values and coefficients of the variables. **Table3**. shows the relationship between organizational performance and other variables and **Table 4** indicates the relationship between market performance and other dependent variables. **Table 3**. explains that **1** unit increases (**0.46**) units of innovation management and there is **0%** significance. Innovation management increases the highest no units and also has the highest level of significance. Incremental innovation and Mee-too innovation increases (**0.10**) units of organizational performance with significance **22%** and **23%** with increase of **1** unit. This figure states that incremental

innovation and Me-too innovation has the least positive affect on organizational performance. **Table4**. shows that **1** unit increase in innovation management increases (**0.50**) units with significance of **0%.1** unit increase in **DOI** increases (**0.02**) units with significance of **84%** which reflects that it the least affecting variable with respect to market performance. **1** unit increase in **RI** and **MT** increases (**0.29**) and (**0.13**) units with the significance of about **0%** and **19%**.

5. Conclusion:

It has been concluded from the research that the most influential impact on organizational performance and market

performance is made by the variables named as innovation management practices and radical innovation in innovation types having the highest values in tables of mean, coefficients and regression. The **Adjusted R Square** reveals that **0.77** and **0.69** percent of the variables are explained by **Table3**. and **Table4**. which show the regression statistics of **MP** and **OP**. Radical innovation has the greatest level of recognition among the individuals and executives who are aware of the prevailing concept and operational forms and level of intensity of innovation in the local market. Banking and IT sector are chosen for sampling are the most highly innovative and potential competitiveness driven sectors of the local economy. The relationship between innovation types, degree of innovativeness and innovation management practices reveals that radical innovation and innovation management practices have a major role in the changes in organizational as well as market performance. The interviews taken from the executives revealed that much has to be done in Pakistan. Almost **80%** of IT related companies and **60%** of the banks are having some forms of innovation which are usually not named as innovation but those processes come under the definition of innovation due to their nature of effects on the corporate culture and organizational processes which is reflected in various performance reports of the company. The positive impacts of innovation are proved through survey and extensive literature review. Innovation management and degree of innovativeness also have an influential impact as they characterize the intensity, direction, Risk-management and

strategic as well as market value of the ideas and change in processes.

Further Research:

In future further research could be an organized and meticulous approach towards establishing a framework which depicts the relationship between innovation management systems and competency legacy of service oriented companies.

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A SURVEY ON

Innovation management: Types, management practices and innovation performance in services industry of Pakistan

Dear Respondent!

I am research associate at International Islamic University Islamabad, conducting a research on “Innovation management: Types, management practices and innovation performance in services industry of Pakistan” and have designed this questionnaire to collect data from professionals working in the vicinity of service Industry. The data collected will be used and reported in aggregate form; no individual responses will be referred or quoted. The information you furnish will be treated as confidential.

The objective of this research survey is to identify and explain the growing performance of organizations due to innovative practices. The results of this study will facilitate the service industry to address the fact that causes service organizations growth and will help to design effective strategies to for future goals achievement.

You are requested to take 10 minutes out of your busy schedule to fill this questionnaire that comprises two parts. Please fill both parts completely. Your cooperation is highly appreciated. If you need findings of this research please send a request to TQ@tahirmasood.com

Part A

Please tick the appropriate checkbox below.

Life of organization in years: <input type="checkbox"/> < 10 <input type="checkbox"/> 10-20 <input type="checkbox"/> 20-30 <input type="checkbox"/> 30+	No. of employee in organization: <input type="checkbox"/> -----	Highest Level of Education of employees: <input type="checkbox"/> Bachelors <input type="checkbox"/> MS/M.Phil <input type="checkbox"/> Masters <input type="checkbox"/> PhD
Avg. income level of employees: <input type="checkbox"/> 20,000-30,000 <input type="checkbox"/> 31,000-40,000 <input type="checkbox"/> 41,000-50,000 <input type="checkbox"/> 5s1,000+	Manager’s experience in this organization: <input type="checkbox"/> Less than year <input type="checkbox"/> 6-10 yrs. <input type="checkbox"/> 1-5 yrs. <input type="checkbox"/> 10 or above	Years in this industry: <input type="checkbox"/> Less than year <input type="checkbox"/> 6-10 yrs. <input type="checkbox"/> 1-5 yrs. <input type="checkbox"/> 10 or above

Part B

Please encircle the appropriate number against each statement, according to the scale given below.

Scale	Strongly Disagree 1	Disagree 2	Indifferent/Neutral 3	Agree 4	Strongly Agree 5
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FEED BACK FORM

Organization Name: _____

Total Employees: _____

Org. Life in years: _____

Rating Criteria

1	2	3	4	5
Strongly agree	Agree	Neutral	Disagree	Strongly disagree

INNOVATION TYPES

Radical

Compared to other organizations that do the same kind of work, how would you compare your organization's performance over the last three years in terms of:

- | | | | | | |
|---|---|---|---|---|---|
| 1. Changes are made to the product services at the grass root level. | 1 | 2 | 3 | 4 | 5 |
| 2. Formal strategies are formed for the implementation. | 1 | 2 | 3 | 4 | 5 |
| 3. Educating and training personnel for this innovation | 1 | 2 | 3 | 4 | 5 |
| 4. Manuals and documents accurately explain the implementation and operation of the innovation | 1 | 2 | 3 | 4 | 5 |
| 5. Innovations made during the last three years were perceived to be new to the industry in which the company operates. | 1 | 2 | 3 | 4 | 5 |

Incremental

Compared to other organizations that do the same kind of work, how would you compare your organization's performance over the last three years in terms of:

- | | | | | | |
|---|---|---|---|---|---|
| 1. Manuals and documents accurately explain the implementation and Operation. | 1 | 2 | 3 | 4 | 5 |
| 2. New products are made by modifying the existing products. | 1 | 2 | 3 | 4 | 5 |
| 3. Educating and training of workforce. | 1 | 2 | 3 | 4 | 5 |
| 4. Enhancement in the existing capabilities is done by restructuring of the processes or part of them | 1 | 2 | 3 | 4 | 5 |
| 5. There are formal training programs for skill development. | 1 | 2 | 3 | 4 | 5 |

Me-too

Compared to other organizations that do the same kind of work, how would you compare your organization's performance over the last three years in terms of

- | | | | | | |
|---|---|---|---|---|---|
| 1. New products are made by modifying the product services of the competitors. | 1 | 2 | 3 | 4 | 5 |
| 2. The product services and work processes are directly affected by the strategies of competitors. | 1 | 2 | 3 | 4 | 5 |
| 3. Educating and training personnel. | 1 | 2 | 3 | 4 | 5 |
| 4. Informal management practices are associated with the pursuit of me-too innovations. | 1 | 2 | 3 | 4 | 5 |
| 5. Employee and customer responses are valued in restructuring and adopting the innovations of the competitors. | 1 | 2 | 3 | 4 | 5 |

INNOVATION PERFORMANCE

PERCEIVED ORGANIZATIONAL PERFORMANCE

Compared to other organizations that do the same kind of work, how would you compare your organization's performance over the last three years in terms of:

- | | | | | | |
|--|---|---|---|---|---|
| 1. Increase in new products and product services. | 1 | 2 | 3 | 4 | 5 |
| 2. Strengthening of new processes of production and delivery. | 1 | 2 | 3 | 4 | 5 |
| 3. Exploring of new markets. | 1 | 2 | 3 | 4 | 5 |
| 4. Increase in new sources of supply. | 1 | 2 | 3 | 4 | 5 |
| 5. Achievements regarding Market competitiveness and sustainable growth. | 1 | 2 | 3 | 4 | 5 |

PERCEIVED MARKET PERFORMANCE

Compared to other organizations that do the same kind of work, how would you compare your organization's performance over the last three years in terms of:

- | | | | | | |
|--|---|---|---|---|---|
| 1. Productive marketing of products or services. | 1 | 2 | 3 | 4 | 5 |
| 2. Increase in growth in sales. | 1 | 2 | 3 | 4 | 5 |
| 3. Increase in Profitability. | 1 | 2 | 3 | 4 | 5 |
| 4. Increase in Market Share. | 1 | 2 | 3 | 4 | 5 |

INNOVATION MANAGEMENT

Compared to other organizations that do the same kind of work, how would you compare your organization's performance over the last three years in terms of:

1. Our organizational vision ,strategies and values about innovation are clear to the employees.	1	2	3	4	5
2. Senior management accountable for new product results.	1	2	3	4	5
3. Monitoring, Ensuring effectiveness and efficiency of innovative activities .	1	2	3	4	5
4. Top management is fully committed to support innovation activities and strategies.	1	2	3	4	5
5. New initiatives are aligned with the overall business strategy.	1	2	3	4	5
6. Goals for innovation are communicated effectively throughout the company..	1	2	3	4	5

DEGREE OF INNOVATIVENESS

Compared to other organizations that do the same kind of work, how would you compare your organization's performance over the last three years in terms of:

1. Encouraging innovative employees by reward method.	1	2	3	4	5
2. Ability to attract, retain and motivate innovative employees has increased.	1	2	3	4	5
3. Employees and customer responses are valued in the development of product and product service innovations.	1	2	3	4	5
4. Modifications are done in existing products/services and line extension to meet customer demands and serving new markets.	1	2	3	4	5

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