Innovation Promotion Competencies of Indian Managers: An Empirical Study

Ravindra Jain & Pragya Sharma

This study revealed that innovation promotion competencies (IPCs) exist among Indian managers at high or moderate levels. High or moderate degree of positive correlation was found to exist among the various creative abilities (CAs), among the various innovation promotion competencies (IPCs), and also among the various CAs and IPCs. Creative abilities have positive impacts on the IPCs. Social and work environment factors in the organizations have also been found favourable to innovation promotion competencies. Social and work environment factors have positive impacts on the innovation promotion competencies in the organizations. The effectiveness of innovation adoption and diffusion is not only a function of "perceived innovation promotion competencies" but also of effective application of such competencies in practice.

Ravindra Jain is Professor in Business Management (Faculty of Management Studies), Vikram University, Ujjain (M.P.). Email : jainravindrak@rediffmail.com
Pragya Sharma is Assistant Professor in Business Management, Shri Vaishnav Institute of Management, Indore (M.P.).
Email : pragya.aditi@gmail.com

Introduction

The recent study Khandwalla and Mehta (2004) indicated that effective management of innovation is the greatest predictor of change in competitive corporate excellence. Managers, therefore, are expected to institutionalize and nurture the climate and culture for fostering innovation in organizations. And for promoting the innovation in organizations, they require enthusiasm, commitment and capability to such a level as to act as innovation champions. Innovation champions, in fact, help to legitimize the creative idea of an originator (ideator or inventor) and also serve as bridge between the unconventional ideator and traditional management (Jain 2010). Where the role of idea champion is formalized and resourced, innovations are most likely to occur (Daft 1986). Innovation promotion competencies are necessarily required to be possessed by the innovation champions. Innovation promotion competencies are those abilities / capabilities that enable innovation champions to transform new ideas / knowledge into new products, services,

schemes, systems, processes for the benefit of the organization as a whole as well as for the benefit of all or some of the stakeholders. Such competencies also enable managers to synthesize the abilities to run main-stream business successfully and capabilities to generate, adopt and implement new mechanisms for self-renewal within the organization and its new-stream. Social capital as well as human capital of the innovation champion enables him / her to gain success in the matter of promoting the intended innovations. Human capital of an innovation champion includes all aspects of the personality, experience and competencies. (Jenssen & Havens 2002). Social capital includes social networks, access to the cross section sources of relevant information and mutuality & reciprocity inheriting in one's social networks. The presentation in the present paper is confined to only human capital of managerial personnel of selected Indian organizations.

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Earlier Research

A large number of human capital factors are assumed to influence the innovation. Risk-taking propensity, self-confidence, spirit of go-ahead despite many obstacles, enthusiastic attitude towards new ideas (technology), abilities to inspire others, quality of encouraging others to put greater effort, capacity to access and stimulate others intellectually, having communication networks (Howell & Higgins 1990 a, 1990b), competence to gain binding support from others (Dean 1987), political cleverness (Beath 1991), diplomatic skills (Chakrabarty 1974), ability to articulate a catchy and fascinating vision (Jenssen & Jorgensen 2005), patience and aggressiveness (Beatty & Gordon 1991), having influence on the conduct and action of other actors in the organization (Holbeck 1990), having persuasion abilities even to convince sceptical people (Burgelman 1983), having understanding of the technical aspects of innovation (Chakraborty 1974), knowledge of the trade (Pearson 1988), a high ranking job (Holbek 1990), having greater force of power & status (Rothwell 1974), emotional appeal, communicative strength and other skills to inspire others (Beath 1991), and willingness to invest great amount of energy for innovation etc. are the important individual-specific human-capital resources of innovation champions as revealed in the earlier researches. Several earlier studies (Beath 1991, Dean 1987, Burgelman 1983, Kipnis et al. 1980) indicate that the innovation champions use a broad variety of influence tactics, however the personality characteristics of the particular champion determine his / her choice of influence strategy (Howell & Shea 2001), certain factors (e.g., availability of others' support for innovation) in the specific champion situation also affect the champion's influence tactics (Kipnis et al. 1980).

A number of social capital factors such as 'structural holes'[1] in the person's network inside the organization (Krackhardt 1995), layers in ties among players of the social system[2] (Granovetter 1973), informal relations among people in organizations, warmth / emotional attachment in friendship relations, emotional ties with organizational members[3] (Krackhardt 1992), informal communication among organization's people (Beatty & Gordon 1991), nature of coalition of supporters inside and outside of the organization, social and structural barriers that prevent some innovation (Holbek 1990), availability and extent of superiors' support for bottlegging practices[4] (Meyerson 2001, Augsdorfer 1994) also influence the application of resource acquisition strategies by the innovation champion. Management support may stimulate positively champions' acquisition of necessary variety of resources and it is possible to reduce the necessity of using too much force and too many non-legitimate resource acquisition strategies. Besides the innovation championing with management support, 'innovative work to bear fruit' requires more freedom, more time, more flexibility, quicker decision making, and greater tolerance for risk, uncertainty for failure than what is adequate in day to day operations (Ekvall 1988, 1996).

Khandwalla's (1985) study of policy frameworks used by a sample of 75 companies yielded one that he labelled as 'pioneering-innovative.' The study indicates that on an average the group of companies using innovation promotion policy grows faster than the group of companies that were traditionally managed and also averaged better profitability. Khandwalla's (1995) study of ninety Indian corporates identified three top management styles, viz., the entrepreneurial style, the organic style, and the participative decision making style which had the largest number of significant correlations with organizational mechanisms for generating innovative ideas. The management styles with the largest number of significant correlations with organizational aids for implementing innovations and changes as well as for stabilizing the changes was the altruistic management style. Harvard Business School (2002) sought to find out what, some of today's most innovative leaders really do to inspire innovation in their organizations. Based on this study, some of the following measures may also be taken by Indian executives to inspire innovation in organizational settings: (i) Making it the norm; (ii) Putting aside ego; (iii) Mixing people up; (iv) Abandoning fear failure;

1. 'Structural holes' implies the innovation champion's relationship with two or more persons who are not connected to one-another provides to the champion a better chance of obtaining the necessary resources than he or she would have in other network positions.
2. 'Layers in ties' implies strong ties and weak ties (like layers in knots) among the people inside and outside an organization. Weak ties often form bridges among various parts of the social system whereas strong ties often provide redundant information.
3. 'Emotional ties' means long-lasting relationship with mutual trust & understanding, reciprocity and emotional attachment.
4. Bottlegging practices include decisions and actions even against the prevailing practices taken by the innovation champions without explicit approval from the competent formal authority.

(v) Hiring Outsiders; (vi) Abandoning the crowd; (vii) Fighting negativity (viii) Asking what if; (ix) Merging patience and passion (x) Experimenting like crazy (xi) Making it meaningful. Overall, for inspiring innovation, people should be allowed to experiment and take risks. Martins and Martins' study (2002) was conducted in a service – oriented organization that was going through a transformation and change process. The sample size was 286 (73.8 % males & 26.2% females). The results of the comparisons between the preliminary model and the model that evolved from the empirical study have indicated interesting similarities, differences and new perspectives. Strategy and behaviour that encourage innovation were identified as determinants in both the models. The factors called trust relationship, working environment, and management support and customer orientation on an operational level were found to have interesting shifts in emphasis in the new model. Khandwalla and Mehta's study (2004) based on 65 Indian companies indicated that change in effective management of innovations was a strong predictor of change in innovation success, which in turn, was the greatest predictor of change in competitive corporate excellence. Dwivedi's study (2005 a) to evaluate the developing, reinforcing and harnessing innovation sponsoring capability of managers revealed that innovation sponsoring capability mean score (75%) for executives was less than the norm (80%) for Indian innovative professionals. Dwivedi's (2005 b) evaluation of developing, harnessing, and reinforcing innovation sponsoring capability of managers belonging to one prospector and one reactor organization revealed that the seven components in the prospector organization exceeded the standard norms whereas six components of innovation sponsoring capability were found to be below the standard norms for innovative professionals of reactor organizations. Using structural equation modelling on a sample of 63 countries, Williams and Stephen (2010) proposed and tested a comprehensive explanation of how culture affects innovation and national prosperity and found support for their hypothesized relationship that ''economic creativity'' influences ''innovation implementation.'' Jain and Juneja (2010, 2011) conducted a study of role innovation attitude and behaviour of managerial personnel belonging to the selected public sector banking and insurance enterprises of India with a sample of 143 senior, middle and junior level managers and on a three point scale (0-2) of unfavourable, fairly favourable, and highly favourable. The overall role innovation attitude of the managerial personnel of selected enterprises has been found 'fairly favourable' by them and the role innovation behaviour has been found at moderate level. Role efficacy in the matter of 'creativity' has also been at moderate level. Role clarity, managers' need for achievement, facilitating work environment, organizational image, organization's bureaucratic system and managers' capability for resource utilization have been found as favourable / facilitating for role innovation as perceived by the managerial personnel of the study organizations.

For inspiring innovation, people should be allowed to experiment and take risks.

The review of earlier research indicates that existing literature on innovation covered a wide variety of issues, however, the theme – 'innovation promotion capabilities' received quite insufficient attention of the researchers. Such an observation sparked the interest of the authors of this paper to take up the topic for their research.

The Study

The objectives of the present study are: (i) To make an assessment of the 'Innovation Promotion Competencies' of Indian managers with reference to selected service provider and manufacturing organizations; (ii) To make a comparison among various strata of the study subjects pertaining to 'Innovation Promotion Competencies'; (iii) To determine interrelationship between various Innovation Promotion Competencies; (iv) To understand interrelationship between (a) various Creative Abilities, and (b) various Innovation Promotion Competencies; (v) To evaluate the impact of (a) Social Environment, and (b) Work Environment on Innovation Promotion Competencies of the managerial personnel.

Sampling Design

Both primary and secondary data from a cross section have been collected for the study. Primary data have been collected through the survey of 270 managerial personnel of selected service and manufacturing organizations. Out of 270 respondent managers included in the sample survey, 58% belonged to service provider organizations, and 42% to manufacturing organizations. 20% senior managers, 68% middle level managers, and 12% junior managers constituted the sample for the study.

Data Collection & Analysis

The questionnaires developed by Khandwalla (1988), administered to 270 managers, include (i) Innovation Sponsoring Capability (a Likert type 4- point scale); (ii) Creative Personality Assessment (a Likert type 4- point scale) ; (iii) Creative Environment Scale: Part A: Social Environment sub- scale (a Likert type 5-point scale) ; (iv) Part B: Work Environment sub-scale (a Likert type 5-point scale. The reliability of the above mentioned questionnaires / scales has been tested and Cronbach Alpha (á) scores for such questionnaires / scales were obtained as 0.91, 0.86, 0.61, and 0.73 respectively which indicate the overall reliability of such questionnaires / scales. Mean, standard deviation, t-test, Karl Pearson's coefficient of correlation, regression analysis, and ANOVA have been used for the purpose of data analysis. The data analysis was done with the help of 'SPSS' software.

Key Variables

I. Innovation Promotion Competencies: There is a range of skills needed to be a successful agent of innovation: (i)

Proclivity for Social and Organizational Innovation; (ii) Sensitivity about System and Structure; (iii) Problem Solving Skills; (iv) Task Accomplishment Drive; (v) Win Drive; (vi) Interpersonal Sensitivity and Skill. (i) *Proclivity for Social and Organizational Innovation* requires keeping in touch with new developments in their fields and fresh opportunities for innovation in work setting. It necessitates a preference for novel and creative as compared to stock responses and an ability to come up with creative solutions. It also requires having a vision of a more desirable state of affairs which then breeds discontent with the status quo which in turn fuels a desire to search for innovative opinions. It also demands the ability to rope in people for collective action on one's innovative ideas. Proclivity to innovate in organizational settings is strengthened by keeping in touch with developments and opportunities, wanting and being able to come up with fresh ideas and being able to mobilize support for these ideas. (ii) *Sensitivity about Systems and Structure* necessitates sensitivity among executives about systems and structures. Knowing or finding out who matters in the system; whether something is going wrong before symptoms are visible, awareness of the unspoken but strongly held norms of the system and what would be the right, acceptable moves in the system; knowledge of who has what resources, expertise and power; and the cultivation of potentially valuable people. (iii) *Problem Solving Skills* demand ability to analyze a complex situation (problem structuring ability), brainstorming ability, appropriate assessment of alternatives in depth, solution planning, follow-up and execution ability; (iv) *Task Accomplishment Drive* relates to achievement motivation; the desire to get jobs done, to set oneself demanding goals, to seek personal responsibility and accountability for jobs, to get new project going quickly without the lethargy. Without this drive, it is not possible to accomplish innovative goals. (v) *Win Drive* covers the desire to be toper through performance. (vi) *Interpersonal Sensitivity and Skills* involves the capacity to respond to others sensitively and deal with others appropriately. To accomplish it, there is need for empathy, ability to listen sympathetically, ability to convey accurately what they are feeling and thinking, and ability to make others feel that their ideas are valued.

II. Creative Abilities: These include Hunger for Knowing, Sensitivity, Entrepreneurship, Independence & Courage, Reality Contact, and Self- sufficiency. (i) *Hunger for Knowing:* A person, who is involved in constant questioning; having strong interest in stimulating ideas, theories, and philosophies, always wanting to know the 'how' and 'why' of things. (ii) *Sensitivity* is related to the ability to spot the uncommon, to be sensitive to feelings, interest in meeting interesting and sensitive persons; empathy for the suffering of others etc. (iii) *Entrepreneurship* combines various inputs in an innovative manner to generate value to the customer. (iv) A person is *Independent and Courageous* when he questions the status quo or established order; sticking to core convictions and clear in viewpoints; (v) *Reality Contact* relates to taking initiative in finding out

operating constraints; manage crisis with confidence; (vi) *Self-sufficiency* is the ability to absorb in challenging tasks; confidently operating in alien situations, persistence in getting ventures accomplished.

III. Social Environment: It includes Absence of Premature Negative Feedback for Creative Ideas (Relaxation), Availability of Encouraging Communication from Intimate People for Creative Efforts (Constructive Feedback), Favourableness of Social Circumstances for Creative Learning (Learning Opportunities), Availability of Diverse Viewpoints of the Intimate People (Diversity of Viewpoints), Availability of Autonomy for Pursuing Creative Acts (Freedom with Accountability for Excellence).

IV. Work Environment: It includes Degree of Stimulation (Stimulation), Encouragement and Reward to Creativity (Nurturance), Absence of Premature Criticism of Creative Ideas (Relaxation), Availability of Detailed Constructive Feedback on Creative Efforts (Constructive Feedback), Availability of Physical and Financial Facilities to Pursue Interest and Hobbies (Facilities for Experimentation).

Survey Results

Innovation Promotion Competencies (except Proclivity for Social or Organizational Innovation) have been found at high level among all the managerial personnel of selected service provider and manufacturing organizations. Innovation Promotion Competencies in terms of Proclivity for Social or Organizational Innovation have been found at moderate level among all the managerial personnel of selected service provider and manufacturing organizations (Table 1).

Table 1: 'Innovation Promotion Competencies' of Managerial Personnel in the Selected Service Provider & Manufacturing Orga.nizations

Innovation Promotion Competencies	Mean Value (N=270)	SD	Level of Innovation Promotion Competencies
Proclivity for Social or Organizational Innovation	17.90	2.29	High
Sensitivity about System and Structure	19.85	2.34	High
Problem Solving Skills	19.45	2.36	High
Task Accomplishment Drive	19.44	2.07	High
Win Drive	19.39	1.89	High
Interpersonal Sensitivity and Skills	18.17	2.03	High

Note: Standards for Analysis: If mean value of the specific 'Innovation Promotion Competencies' is above 18 it has been considered as 'high level; if the mean value is between 12 and 18 it has been considered as 'moderate level'; and, if the mean value is less than 12 it has been considered as 'low level'.

Innovation Promotion Competencies of managerial personnel vary significantly (at 0.05 level of significance) between the two sets of organizations (Table 2).

Table 2: 'Innovation Promotion Competencies' of Managers in the Selected Service Provider & Manufacturing Organizations (t-test results)

Innovation Promotion Competencies	Service Provider Organizations (N=157)		Mfg. Organizations (N=113)		t	P
	Mean Value	SD	Mean Value	SD		
Proclivity for Social or Organizational Innovation	17.36	2.13	18.64	2.30	-4.686	.000*
Sensitivity about System and Structure	19.36	2.17	20.52	2.40	-4.111	.000*
Problem Solving Skills	18.84	2.14	20.29	2.38	-5.233	.000*
Task Accomplishment Drive	18.97	1.97	20.07	2.03	-4.47	.000*
Win Drive	19.04	1.86	19.86	1.82	-3.612	.000*
Interpersonal Sensitivity and Skills	17.87	1.96	18.58	2.06	-2.85	.005*

*Significant at 0.05 level of significance (Table Value = 1.96)
Note: Same as in Table 1

As regards Innovation Sponsoring Capabilities as perceived by various management cadres (viz., senior, middle and junior level managerial personnel) almost all the studied capabilities (except 'Proclivity for Innovation' and 'Interpersonal Sensitivity & Skills') have been perceived as of high level, but, by and large, with the significant variation among the various management levels at 0.05 level of significance. 'Interpersonal Sensitivity & Skills' was perceived as of high degree by senior and junior managers but the same was perceived by the middle level managers as of moderate degree. Such a variation among various management cadres has been found significant at 0.05 level of significance. 'Proclivity for social or Organizational Innovation' was perceived by senior managers as of a high degree but the middle level and junior managers perceived the same as of moderate degree. Such a variation among the management cadres has been found significant at 0.05 level of significance (Table 3).

The Creative Abilities of managerial personnel found highly creative are: (i) Hunger for Knowing, (ii) Independence and Courage, (iii) Reality Contact, (iv) Self Sufficiency. 'Sensitivity' and 'Entrepreneurship' has been found moderately creative (Table 4). High or moderate degree of positive correlation was found to exist between the various Creative Abilities (CAs), between the various Innovation Promotion Competencies

Table 3: 'Innovation Promotion Competencies' of Senior Level, Middle Level & Junior Level Managers of Selected Organizations (Results of ANOVA)

Innovation Promotion Competencies	Senior Level Managers (N=54)		Middle Level Managers (N=183)		Junior Level Managers (N=33)		F	P
	Mean Value	SD	Mean Value	SD	Mean Value	SD		
Productivity for Social or Organizational Innovation	18.75	2.37	17.71	2.11	17.54	2.81	4.83	.009*
Sensitivity about System and Structure	20.46	2.16	19.62	2.31	20.09	2.60	2.89	.057
Problem Solving Skills Task	20.66	2.27	19.12	2.21	19.24	2.64	9.64	.000*
Accomplishment Drive	20.33	2.09	19.15	1.96	19.51	2.22	7.04	.001*
Win Drive	20.31	1.79	19.12	1.70	19.36	2.49	8.84	.000*
Interpersonal Sensitivity and Skills	18.88	2.16	17.91	1.94	18.42	2.00	5.21	.006*

*Significant at 0.05 level of significance

Note: Standards for Analysis: If mean value of the specific 'Innovation Promotion Competencies' is above 16 it has been considered as 'highly innovative'; if the mean value is between 8 and 16 it has been considered as 'moderately innovative'; and, if the mean value is less than 8 it has been considered as 'less innovative'.

Table 4: Creative Abilities of Managerial Personnel in Selected Service Provider &Manufacturing Organizations

Creative Abilities	Mean Value (N=270)	SD	Extent of Creativity
Hunger for Knowing	12.20	2.03	Highly Creative
Sensitivity	11.53	2.42	Moderately Creative
Entrepreneurship	11.91	2.71	Moderately Creative
Independence and Courage	16.20	2.13	Highly Creative
Reality Contact	13.17	1.91	Highly Creative
Self Sufficiency	13.03	2.43	Highly Creative

Note: Standards for Analysis: If mean value of the specific creative personality is above 12 it has been considered as 'highly creative personality'; if the mean value is between 6 and 12 it has been considered as 'moderately creative personality'; and, if the mean value is less than 6 it has been considered as 'less creative personality'.

Table 5: Inter-correlation Among Various Creative Abilities and Innovation Promotion Competencies of The Managerial Personnel in the Selected Organizations [Karl Pearson's Coefficient of Correlation (r)}

Creative Abilities and Innovation Promotion Competencies	Hunger for Knowing	Sensitivity	Entrepre-neurship	Independence and Courage	Reality Contact	Self Sufficiency	Productivity for Social or Organizational Innovation	Sensitivity about System and Structure	Problem Solving Skills	Task Accomplishment Drive	Win Drive	Interpersonal Sensitivity and Skill
Hunger for knowing												
Sensitivity	.529											
Entrepreneurship	.547	.496										
Independence and Courage	.394	.433	.331									
Reality Contact	.492	.228	.538	.350								
Self Sufficiency	.556	.392	.672	.475	.728							
Productivity for Social or Organizational Innovation	.390	.104	.229	.327	.346	.361						
Sensitivity about System and Structure	.246	-.110	.103	.115	.204	.130	.679					
Problem Solving Skills	.412	.008	.208	.259	.350	.338	.783	.689				
Task Accomplishment Drive	.274	-.088	.222	.179	.341	.340	.705	.589	.807			
Win Drive	.231	-.118	.098	.118	.330	.202	.635	.599	.696	.674		
Interpersonal Sensitivity and Skill	.140	.080	.201	.188	.264	.324	.158	.149	.319	.372	.306	

1. Correlation is significant at the 0.01 level (2-tailed).
2. Correlation is significant at the 0.05 level (2-tailed).
3. N = 270

Note: A correlation coefficient of 0.5 or higher is considered as of a fairly high degree and a correlation coefficient less than 0.3 is considered negligible or ignorable.

(IPCs), and also among various CAs and IPCs. It means that the various Creative Abilities and Innovation Promotion Competencies are positively related with one another (Table 5).

To find the impact of Creative Abilities on Innovation Promotion Competencies, multiple regression analysis is done the results of which are given in Table 6. The value of R^2 is .125, which means the relation explained by the model is 12.5%. The coefficient â is .354 which is significant and explained that there is a positive impact of creative abilities on Innovation Promotion Competencies.

Almost all the aspects except 'Availability of Diverse Viewpoints of the Intimate People (Diversity of Viewpoints)' have been perceived 'highly favourable' by the managerial personnel of the selected organizations; whereas, 'Availability of Diverse Viewpoints of the Intimate People (Diversity of Viewpoints)' has been perceived as 'moderately favourable' by the managers (Table 7). The five aspects of the work environment which have been perceived as 'highly favourable' by the managerial personnel were: (i) 'Degree of Stimulation', (ii) 'Encouragement and Reward to Creativity', (iii) 'Absence of Premature Criticism of Creative Ideas', (iv) 'Availability of Detailed Constructive Feedback on Creative Idea', and (v) 'Availability of Physical and Financial Facilities to Pursue Interest and Hobbies'.

Table 6: Impact of Creative Abilities on Innovation Promotion Competencies

Model	Coefficient of Multiple Correlation (R)	R Square	Adjusted R Square
1	.354	.125	.122

Independent Variable	Unstandardized Coefficients		Standardized Coefficients	t	P
	B	Std. Error	Beta		
Creative Abilities	95.810	4.958		19.326	.000
	.389	.063	.354	6.180	.000

Predictors: Creative Abilities
Dependent variable: Innovation Promotion Competencies

Almost all the aspects except 'Availability of Diverse Viewpoints of the Intimate People (Diversity of Viewpoints)' have been perceived 'highly favourable' by the managerial personnel of the selected organizations; whereas, 'Availability of Diverse Viewpoints of the Intimate People (Diversity of Viewpoints)' has been perceived as 'moderately favourable' by the managers (Table 7). The five aspects of the work environment which have been perceived as 'highly favourable' by the managerial personnel were: (i) 'Degree of Stimulation', (ii) 'Encouragement and Reward to Creativity', (iii) 'Absence of Premature Criti-

cism of Creative Ideas', (iv) 'Availability of Detailed Constructive Feedback on Creative Idea', and (v) 'Availability of Physical and Financial Facilities to Pursue Interest and Hobbies'.

Table 7: Social and Work Environment of Management Cadre in Selected Service Provider and Manufacturing Organizations

Dimensions of Social Environment	Mean Value (N=270)	SD	Extent of Favorableness of Social Environment	Dimensions of Work Environment	Mean Value (N=270)	SD	Extent of Favorableness of Work Environment
Absence of Premature Negative Feedback for Creative Ideas	4.35	.584	High	Degree of Stimulation	4.47	.693	High
Availability of Encouraging Communication from Intimate People for Creative Efforts	4.42	.604	High	Encouragement and Reward to Creativity	4.32	.594	High
Favorableness of Social Circumstances for Creative Learning	4.46	.676	High	Absence of Premature Criticism of Creative Ideas	4.30	.557	High
Availability of Diverse Viewpoints of the Intimate People	3.32	.951	Moderate	Availability of Detailed Constructive Feedback on Creative Ideas	4.14	.639	High
Availability of Autonomy for Pursuing Creative Acts	4.30	.506	High	Availability of Physical and Financial Facilities to Pursue Interest and Hobbies	4.51	.719	High

Note: Standards for Analysis: If a mean value of the specific environment is above 3.5 it has been considered as 'highly favourable environment'. If the mean value is between 2 and 3.5 it has been considered as 'moderate favourable environment'; and, if the mean value is less than 2 it has been considered as 'less favourable environment'.

To find the impact of social environment on Innovation Promotion Competencies, multiple regression analysis is done, results of which are given in Table 8. Model 1 indicates that the value of R^2 is .219, which means the relation explained by the model is 21.9%. The coefficient â is 3.449 which is significant

Table 8: Relationship between Social Environment and Innovation Promotion Competencies of Managerial Personnel (Results of Multiple Regression Analysis)

Model	Coefficient of Multiple Correlation (R)	R Square	Adjusted R Square
1	.471	.222	.219

	Unstandardized Coefficients		Standardized Coefficients	t	Significance
	B	Std. Error	Beta		
(Constant)	75.199	5.877	.471	12.795	.000
Social Environment	2.449	.281		8.723	.000

Predictors: Social Environment
Dependent Variable: Innovation Promotion Competencies

and explained that social environment has a positive impact on innovation promotion competencies.

To find the impact of work environment on innovation sponsoring capability, multiple regression analysis is done

Table 9: Analysis of Relationship between Work Environment and Innovation Promotion Competencies of Managerial Personnel (Results of Multiple Regression Analysis)

Model	Coefficient of Multiple Correlation (R)	R Square	Adjusted R Square
1	.518	.268	.266

	Unstandardized Coefficients		Standardized Coefficients	t	Significance
	B	Std. Error	Beta		
(Constant)	71.613	5.548		12.909	.000
Work Environment	2.503	.253	.518	9.894	.000

Predictors: Work Environment
Dependent Variable: Innovation Promotion Competencies

results of which are given in Table 9. The value of R^2 is .266, which means the relation explained by the model is 26.6%. The coefficient â is 2.503 which is significant and explained that work environment has positive impact on innovation promotion competencies.

Discussion & Implications

Kanter (1983) suggests that innovative change agents are comfortable with change, i.e. they have a low allergy to ambiguity. They feel confident that uncertainties can and will be clarified. They also tend to have foresight and see opportunities in needs that are not currently met. They also have a clarity of direction and do not get discouraged with setbacks i.e. they have persistence and low fear of failure. They are thorough, and prepare well for meetings and presentations. They have insight into organizational politics and a knack for spotting

powerful or useful supporters. They tend to involve their colleagues and subordinates in decision making, and they can turn them on to put maximum effort as team members. They freely share rewards with others, especially the team members. They are tactful and discreet, but persistent (Khandwala 2003).

The findings of the present study revealed that Innovation Promotion Competencies of Indian managerial personnel are at higher or moderate levels which indicates toward favourable climate for the implementation of innovation at work in the selected organizations. However, merely the presence of innovation promotion environment is not enough for adoption and application of creative and innovative ideas at work successfully as a number of factors influence such a process. The likelihood of introducing an innovation at work successfully is a function of four general factors: (i) the individual's perception about the need for change to occur in the work role, (ii) the individual's perception that change can be successfully implemented in the work role, i.e., one's efficacy beliefs concerning the implementation of change, (iii) the individual's perception that a positive outcome will result from the introduction of change, and (iv) the individual's ability to generate new and useful ideas (Farr & Ford 1990). Though individual innovation is not a function of some of the four factors, some multiplicative combination of the individual's knowledge of innovative possibilities is an important ability needed for implementing innovations (Jain 2010). The actual effectiveness of an innovation is a function not only of perceiving innovation abilities but also of possessing and applying such abilities. Social factors such as feedback from others, effective information systems, favourable leadership styles and effective organization systems including reward systems also influence the individual's efforts to innovate. Keeping such observations in view, merely having innovation abilities may not lead to implementation in practice. In the present study, most of the studied Innovation Promotion Competencies have been perceived to be at high levels by the majority of the respondent managers. However, their claims need to be checked by the perception of their colleagues at work regarding such claims as well as by assessing the group performance at work. Consensus of such cross section perceptions will be closer to the reality. However, availability of Innovation Promotion Competencies indicates that the study organizations certainly have high potential for generation of creative & innovative ideas and adoption & diffusion of innovations therein. The impact of such potentials on the organization's performance has not been measured in the present study. Such an issue needs to be taken up in future research endeavours. Innovation Promotion Competencies of managerial personnel and resultant innovations at a faster rate may enable the organization to consistently bring new quality products / services that too at a lower cost as compared to that by the competitors. Further, such competencies may enable the organizations to further add value to their products / services for the purpose of delighting the customers. This combina-

tion creates a dynamic and sustainable strategic position for an organization which makes it a constantly moving target to the competitors (Kiernan 1996). This view points to the need for managing effectively the main-stream operations along with cultivating innovations in their organizations. Paradoxically, the need to manage main-stream competencies effectively is often seen as hampering the development of successful innovation; and conversely, innovation is a force of instability, often requiring long term vision and commitment to yield results (Lawson &Samson 2001).

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