



Elucidating the Influence of Demographics on Managerial Competencies of Indian IT Sector Employees

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Abstract

Purpose- This paper aims to determine the key dimensions of managerial competencies and elucidating the effect of demographics on managerial competencies of employees of Indian IT sector.

Research Methodology- Respondents have been selected by using convenient sampling method. Data has been collected through a structured questionnaire from 455 employees at various positions working in different Indian IT companies. Statistical tools like mean, standard deviation, factor analysis and independent sample t-test have been applied in order to draw result.

Findings: Analysis reveals that male respondents found better in planning and organising at workplace than female respondents. Married IT professionals found better in technical knowledge, planning and organising, goal setting and perseverance, risk taking, and flexibility and adaptability than unmarried respondents. It further shows that public sector employees found better in problem solving than private sector employees. It has also found that public sector employees have been found more flexible and adaptable than private sector employees.

Keywords: Demographics, Managerial Competencies, IT Sector, Private Sector, Public Sector.

Introduction

Information Technology (IT) industry in India has played an important role in putting India on the global map. Recently IT sector have become the significant growth catalysts for the emergence of Indian economy on world map. Indian IT industry is also positively influencing the lives of common people through an active contribution to various socio-economic parameters such as employment, social networking, standard of living and diversity. The IT industry has played a very important role in transforming India from a bureaucratic economy to a land of innovative entrepreneurs, a global player of world class technology solutions and business services, according to National Association of Software and Service Companies (NASSCOM). The biggest challenge faced by Indian IT industry is retaining talents. High turnover is a serious issue for this sector now a days'. Talented employees are also not blindly loyal to the organisations. They easily switch over when they find any attractive opportunity outside. Retaining the talent is therefore a strategic issue and a competitive business advantage. Thus, management of competent employees is vital to maintain competitive advantage. Hence, successful firms are now focusing on integrating functions and processes, and management need to be proactive in an integrative and collaborative learning process. Effective managers help their employees in fulfilling their individual needs on one hand, while contributing in achieving organisational goals on the other hand (Schultz *et al.*, 2003).

Whenever business organizations search the right people for the specific job, competencies are the sought as most significant factors. Based on McClelland's (1973) view, competency term was defined by "Boyatzis in 1982" as underlying characteristics that the person possesses lead to achieve outstanding performance. Competency basically is a perfect blend of knowledge and skills that are needed for an effective performance, (Bhardwaj, 2013). Many studies showed that competencies are a cluster of related knowledge, skills, characteristics and attitudes that correlates with effective performance and are able to be measured, evaluated, and strengthened through training and development programs. Successful and effective managers possesses several competencies that have enabled them to perform their work efficiently and effectively at different managerial positions and in different types of organisations. Spencer and Spencer (1993) defined competency as "*an underlying characteristic of an individual that is causally related to criterion-referenced, effective and/or superior performance in a job or situation*". According to Hellriegel *et al.* (2005), "*competency is a combination of knowledge, skills, behaviours, and attitudes that contributes to the effectiveness of an individual.*" Dragoni *et al.* (2009) defines competency as "*interrelated set of skills and abilities required for effectiveness*".

In the light of this, present study is framed to enhance one's understanding about the role of managerial competencies in IT sector and how IT employees of various demographic traits differentiates for managerial competencies. The present paper is divided into four sections; part one is devoted to introduction followed by literature review and research methodology. The subsequent sections give a detailed discussion of results followed by conclusion and managerial implications.

Review of Literature

There are many studies related to the importance of managerial competencies in the organisations existed. This shows the attention to the need of understanding how different these competencies are working in business organizations, so that most effective competency is to be

highlighted in order to improve organisational performance. Barney (1991), and Ulrich and Lake (1991) stated that the potential human resource can improve the efficiency and effectiveness of the organization, neutralize potential threats and exploit market opportunities. Mankidy (1991) found a positive linkage between career paths planning with other sub-systems like placement, training and performance appraisal. She, further in year 1996 formulated four attributes in her study titled “*Developing Potential Appraisal System for Banks*” are as: technical competencies, managerial competencies, interpersonal competencies and personal competencies or attributes. He also found that personal competencies like ambition, openness, creativity etc. are perceived relatively less important across the three positions. While managerial competencies receive the first rank for almost all the positions, difference is perceived for the importance given to interpersonal and technical competencies for all three positions.

Pandit (2001) conducted a study on 22 top leader-managers and identified following common traits: commitment (drive, dedication, passion and zeal), risk-taking or entrepreneurship, persistence (determination, hard work and insistence), curiosity (creativity, intelligence and clarity of thought), difference (distinct, innovativeness and talent), learning, persuasiveness (negotiation, presentation skills etc.), focus (concentration and goal orientation), values (honesty, integrity, influencing and honoring commitment) and humility (modesty and unpretentiousness).

Abraham *et al.* (2001) identified six most critical competencies that are problem solver, leadership skills, result orientation, customer focus, communication skills and team leader to be an effective manager. Hellriegel *et al.* (2005) identified six core managerial competencies required for an effective and successful manager as: planning and administration, strategic action, global awareness, communication, teamwork and self-management. Rao (2007) found that for a successful manager, ‘job knowledge’ is the most relevant competency. The study further suggested that effective communication skills, hard work, team skills and calmness are also frequently used competencies by service, manufacturing and pharmaceutical sector managers. The study also recommended that to be world class manager, the Indian managers need to develop vision, self renewal, result-orientation, continuous learning and learning perseverance, sensitivity, delegation, empowerment, ability to recognize, empower and develop juniors, integrating ability, and sense of priority and purpose. Qiao and Wang (2008) found in their study that team building, execution, co-ordination, communication and continual learning are the most vital managerial competencies for the success of middle managers in China and further observed that middle managers require different combination of competencies from senior managers. Wickramasinghe and Zoysa (2009) discovered broad level competencies in their research that are essential for managers working in different functional areas. They divided 31 individual competencies into three broad competency groups (knowledge, skill and value) across all functional areas and suggested that competencies from value and skill groups are more important than knowledge group.

Human Resource Management field is full of challenges for organizations as the human resource is the most precious and most crucial resource so they must be managed properly. In the field of Human Resource Management, potential appraisal is one of the most important practice for well-functioning of all organizational operations because it helps to identify the potential candidate for the future successors. Lack of potential appraisal is one of the prominent reasons behind high level of attrition in IT sector. Despite being important for organizational effectiveness, potential appraisal is deprived of the attention of researchers resulting lack of literature available on this particular field. This shows that lots of research works are supposed to be done in this area. With this research gap, current study is carried out with the objectives given below:

1. To study the determinants of employees' managerial competencies in IT sector; and
2. To study the managerial competencies across various demographic traits.

In order to achieve above said objectives of current study, the hypotheses set are as:

H₀₁: Employees' managerial competencies do not exhibit significant difference across age.

H₀₂: Employees' managerial competencies do not exhibit significant difference across gender.

H₀₃: Employees' managerial competencies do not exhibit significant difference across marital status of the respondents.

H₀₄: Employees' managerial competencies do not exhibit significant difference across position of the respondents.

H₀₅: Employees' managerial competencies do not exhibit significant difference across type of organisation of the respondents.

Methodology

The present study is based on descriptive-cum-exploratory research design. A sample of 455 respondents selected by convenient sampling has been studied from selected IT companies in India. Random sampling has been used for selecting IT companies. Primary data has been collected through a structured questionnaire. In order to study the determinants of managerial competencies, Exploratory Factor Analysis (EFA) has been applied. Chronbach's alpha technique has been applied for checking the reliability of extracted dimensions. Further, data has been analyzed through mean, standard deviation, factor analysis, independent sample t-test in order to study managerial competencies across demographic traits.

Results and Discussion

Samples of 455 IT employees are investigated during the study. In order to find out key determinants of managerial competencies, factor analysis has been applied. A structure questionnaire consisting of 22 statements which are devoted to managerial competencies has been used. Below, statistical evidence has been presenting for the key dimensions of managerial competencies.

Determining the Dimensions of Managerial Competencies

Managerial competencies are a set of knowledge, skills, behaviours, and attitudes that is required by managers for their effective contribution in managing employees and achieving organizational goals (Hellriegel *et al.*, 2005).

Table 1: Extracting the dimensions of managerial competencies

Factor	Initial Eigen Values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	Per cent of variance	Cumulative per cent	Total	Per cent of variance	Cumulative per cent	Total
1	3.656	16.617	16.617	3.656	16.617	16.617	2.822
2	2.940	13.362	29.980	2.940	13.362	29.980	2.693
3	2.555	11.612	41.591	2.555	11.612	41.591	2.362
4	2.169	9.857	51.449	2.169	9.857	51.449	2.346
5	1.936	8.800	60.249	1.936	8.800	60.249	2.246
6	1.193	5.424	65.673	1.193	5.424	65.673	1.979

Extraction Method: Principle Component Analysis. Rotation Method : Varimax

KMO value--0.762

Table 1 indicates factor solution for employees’ managerial competencies. Total 6 factors (eigen value ≥ 1) have been extracted out of 22 statements. These 6 factors collectively accounted for 65.673 per cent of the total variance. The profiling of these extracted factors is given below:

Table 2: Profiling the dimensions of managerial competencies

Factors	Variables	Nomenclature of Factors	Factor Loading
Factor 1	I take a logical and systematic approach to perform work related Activities.	<i>Planning and Organizing</i> (Chronbach α= 0.857)	0.859
	I think of different ways to accomplish things.		0.852
	I think of all the problems I may encounter and plan what to do if such problem occurs.		0.822
	When I make plans, I make them certain to work.		0.807
Factor 2	I have been successful in attaining most of my goals.	<i>Goal Setting and Perseverance</i> (Chronbach α= 0.834)	0.842
	I revise my goals regularly in view of progress till date.		0.842
	I find it difficult to prioritize my tasks.		0.839
	I usually set my goals and I proceed accordingly.		0.735
Factor 3	I don’t usually examine my mistakes.	<i>Problem Solving</i> (Chronbach α= 0.841)	0.893
	I feel confident while solving my problems.		0.850
	I take the problems with a feeling of hope and expectations.		0.843
Factor 4	I have the practice of buying things on credit.	<i>Risk Taking</i> (Chronbach α= 0.838)	0.880
	I don’t mind taking chances on a good idea even if I am not sure.		0.847
	If there is a chance of failure I would rather not do such task.		0.827
Factor 5	I always seek new information to do my job in a better way.	<i>Flexibility and Adaptability</i> (Chronbach α= 0.710)	0.783
	I quickly grasp the new information.		0.776
	I am open to change according to new situation.		0.633
	I take some time to adjust myself according to the changing condition.		0.581
Factor 6	When working on a project for someone, I ask many questions to make sure that I understand what the person wants.	<i>Information Seeking</i> (Chronbach α= 0.639)	0.706
	I frequently seek the advice of people who know a lot about the problems or tasks I am working on.		0.698
	I go to several different sources to get information to accomplish tasks.		0.668
	When starting a new job / project, I gather a lot of information about it.		0.637

Source: Primary Data

Table 2 indicates profiling the dimensions of managerial competencies. A total of six factors have been extracted from 22 statements. Factor loading more than 0.5 has been considered. Internal consistency for each extracted factor is calculated using Chronbach’s alpha and its values for the extracted dimensions ranging from 0.639 to 0.857. This means that the scale fulfils the criteria of internal consistency (Hair, *et al.*, 2009). The naming of these extracted factors is done considering the nature of variables constituting the factors. First factor of managerial competency is named as *planning and organising* which consists of statements related with logical and systematic approach to make plans as a part of managerial competencies followed by *goal setting and perseverance*. This factor deals with setting clear and specific goals/objectives, and work in a direction to achieve them effectively. *Problem solving* comes out as third factor. This factor indicates the application of appropriate knowledge and skills in order to solve a problem arising during job tasks. The variables like items related with examination, confidence, hope and expectation have been loaded significantly (more than 0.5) on this factor. Fourth factor is named as *risk taking* as it indicates the level of risk bearing. Persons who are taking decisions under uncertainty, shows their willingness to bear risk followed by *flexibility and adaptability*. This factor indicates the sense proficiency in adapting one’s actions to current social contexts. Concluding factor of managerial competencies is classified as *information seeking*. It indicates an urge to look for the required information in order to make a good decision to solve specific problem.

Managerial competencies across various demographic traits

Six dimensions of managerial competencies have been analyzed across demographic traits (age, gender, marital status, position and type of organisation) of respondents. Table 3 exhibits mean values for managerial competencies. The mean value of information seeking is found highest (4.0791; strong concern shown by respondents) followed by flexibility and adaptability with mean value 3.9725 (strong concern). Thereafter planning and organising managerial competencies reported its presence at third order with mean value 3.7747 (strong concern) followed by goal setting and perseverance at fourth order with mean value 3.7555 (strong concern). At fifth order, problem solving managerial competency reported itself with mean value 3.4930 (moderate concern) and risk taking managerial competency ends this order with least mean value 3.3179 (moderate concern) amongst all the dimensions of managerial competencies. This order is also confirmed by the various categories of age.

Table 3: Managerial competencies across age

Age \ Factors	Up to 25 years	26-30 years	31-35 years	36-40 years	41 years and above	Total
<i>Planning and Organizing</i>	3.7615	3.6720	3.8664	3.8026	4.0043	3.7747
<i>Goal Setting and Perseverance</i>	3.7308	3.7661	3.7911	3.7895	3.6681	3.7555
<i>Risk Taking</i>	3.1231	3.4010	3.1826	3.4854	3.2529	3.3179
<i>Problem Solving</i>	3.4462	3.4653	3.5753	3.4620	3.5690	3.4930
<i>Flexibility and Adaptability</i>	3.7731	4.0248	3.9623	3.8904	4.1078	3.9725
<i>Information Seeking</i>	4.0692	4.0495	4.2158	4.0175	4.0819	4.0791

Source: Primary Data

It is evident from the table that the respondents belongs to more age groups shows strong concern for planning and organizing managerial competence as the mean value is 4.0043 for the respondents of 41 years and above age group followed by the age group of 31-35 years with mean value 3.8664 and the age group 36-40 years with mean value 3.8026. It means that the respondents of more age are found believing logical and systematic approach to perform tasks, exploration of different ways to accomplish things, think analytically, encounter problem, generating alternatives, comparative analysis and implementation of plans. With regard to goal setting and perseverance, the responses shown by respondents are ranging from strong to moderate concern as the order of mean values across various age categories is depicted as: mean value 3.7911 is highest for age group of 31-35 years followed by mean value 3.7895 which is second highest for age group of 36-40 years. It means that the respondents of moderate age groups are found strong in opinions that goals are successfully attained, goals are regularly revised in view of progress and goals are set prior than proceeding.

In order to assess the risk taking managerial competencies, the order of responses is showing moderate concern as the mean value for all the age categories are less than 3.5. Though the order of age groups according to their mean values are as: the age group 36-40 years (mean = 3.4854) is at first order followed by 26-30 years with mean 3.4010 indicates that young age employees are more prone to take risk. For problem solving managerial competencies, it has been observed that the respondents show moderate concern as the mean value revolves around 3.4/3.5. As per age categories, it has been observed that the respondents of age group of 31-35 years with mean value 3.5753 reports itself at first order followed by 41 years and above with mean value 3.5690 indicates that with growing age the person is able to solve problem easily. The respondents show strong concern for flexibility and adaptability as the mean values are ranging from 3.7 to 4.1. The order of age categories on the basis of mean values is following as: 41 years and above with highest mean value (4.1078) followed by 26-30 years with mean value 4.0248. The respondents of more age become flexible and adjustable as they are now more experienced and mature. At young age or at the time of entry, one has to be more adjusting and flexible so as to create place for him-selves. It is evident from the analysis that the respondents show strong concern for information seeking behaviour as the mean values are more than 4. It also comes out as most important dimension of managerial competence amongst all the dimensions. According to age categories, the order is observed as: 31-35 years age group with highest mean value 4.2158 reported it at first order followed by 41 years and above with mean value (4.0819) followed by up to 25 years with mean value 4.0692 indicates that information seeking skill is not bound with age albeit at the time of entry, one has to be aware. Further, the respondents of all age groups strongly believe that information seeking managerial competence is the most important competence while working on a project. The employees have to be curious enough so that by asking questions they would get more information and should explore various sources of information. In order to check this difference for all the six dimensions of managerial competencies, one way ANOVA has been applies and the results are discussed below:

Table 4: One way ANOVA for managerial competencies across age

One way ANOVA Factors	Levene Statistics	Sig.	F	Sig.	Welch	Sig.
<i>Planning and Organizing</i>	3.438	0.009	NA		3.353	0.011
<i>Goal Setting and Perseverance</i>	0.421	0.794	0.413	0.800	NA	
<i>Risk Taking</i>	2.378	0.051	2.190	0.069		
<i>Problem Solving</i>	1.034	0.389	0.613	0.654		
<i>Flexibility and Adaptability</i>	3.757	0.005	NA		5.355	0.000
<i>Information Seeking</i>	3.535	0.007			2.973	0.021

Source: Primary Data, Note: NA=Not Applicable

Table 4 assesses the significance of differences in opinions of respondents of various age groups for all dimensions of managerial competencies. Levene test statistics for homogeneity of variance provided insignificant result for the dimensions; goal setting and perseverance, risk taking and problem solving. It indicates that variance in opinions across different age group of respondents for the above dimensions are homogeneous. F test (0.413, 2.190 and 0.613 respectively for goal setting and perseverance, risk taking and problem solving) also mark same result as the value is found insignificant as $p > 0.05$. It indicates that respondents of different age groups have similar views for these dimensions of managerial competencies. It means, change in respondents' age does not bring any significant variation in respondents' opinion for the dimensions; goal setting and perseverance, risk taking and problem solving. Levene test statistics for homogeneity of variance provided significant result for the dimensions; planning and organising, flexibility and adaptability, and information seeking. Welch, a more robust test of equality of means has been applied to examine the significance of difference in opinions. Welch test provides significant results for planning and organising, flexibility and adaptability and information seeking as the Welch values (3.353, 5.355 and 2.973 respectively) found significant ($p < 0.05$). It indicates that for these dimensions, respondents belonging to different age groups exhibits significantly diverse views with respect to managerial competencies. Hence, H_{01} : *Employees' managerial competencies do not exhibit significant difference across age is not accepted for planning and organizing, flexibility and adaptability, and information seeking.* In other words, variation in age of respondents produces significant variations with regard to planning and organizing, flexibility and adaptability, and information seeking.

Table 5: Tamhane post hoc statistics for managerial competencies across age

Age Categories	Up to 25 years	26-30 years	31-35 years	36-40 years	41 years and above
Planning and Organizing					
Up to 25 years	-	-0.08951	0.10490	0.04109	0.24277
26-30 years		-	0.19441	0.13060	0.33228*
31-35 years			-	-0.06381	0.13787
36-40 years				-	0.20168
41 years and above					-
Flexibility and Adaptability					
Up to 25 years	-	0.25168*	0.18925	0.11727	0.33468*
26-30 years		-	-0.06242	-0.13440	0.08301
31-35 years			-	-0.07198	0.14543
36-40 years				-	0.21741
41 years and above					-
Information Seeking					
Up to 25 years	-	-0.01973	0.14652	-0.05169	0.01267
26-30 years		-	0.16625*	-0.03196	0.03239
31-35 years			-	-0.19821*	-0.13386
36-40 years				-	0.06435
41 years and above					-

Source: Primary Data * The mean difference is significant at the .05 level.

Table 5 depicts Tamhane post hoc test statistics which analysis in depth difference across various age categories for managerial competencies. It is evident from the table that for planning and organizing, the opinions of respondents belongs to age categories 26-30 years, and 41 years and above found significantly different as the mean difference (0.33228) is found significant at 0.05 level. It means that with more age the employees would be more planned and organized. For flexibility and adaptability, the difference in the opinions of respondents of age group up to 25 years is significantly different with the opinions of respondents of age groups 26-30 years, and 41 years and above. With regard to information seeking, age category 31-35 years is found significantly different with 26-30 years as well as with 36-40 years age categories. Simply, it is said that the significant difference in opinions of respondents ranges between three age categories 26-30 years to 36-40 years. As the respondents are growing in terms of age, they would be more aware and curious for information.

Table 6: Managerial competencies across gender

Managerial Competencies	Mean values comparison			t-test for Equality of Means	
	Male	Female	Mean Difference	T	Sig. (2-tailed)
Planning and Organizing	3.8257	3.6445	0.18116	2.585	0.010
Goal Setting and Perseverance	3.7638	3.7344	0.02939	0.445	0.656
Risk Taking	3.2956	3.3750	-0.07938	-0.845	0.399
Problem Solving	3.5066	3.4583	0.04829	0.668	0.505
Flexibility and Adaptability	3.9457	4.0410	-0.09530	-1.871	0.062
Information Seeking	4.0864	4.0605	0.02584	0.596	0.551

Source: Primary Data

Table 6 provides t-test statistics to examine the significance of difference in opinions of male and female respondents for managerial competencies. T-test provided significant results for planning and organising. It indicates that for above dimension of managerial competencies, male respondent exhibits significantly different opinions from female respondent as t value (2.585) is found significant at 0.01 level. T test provide insignificant results for rest of the dimensions of managerial competencies indicating that both male and female respondents exhibit similar opinion for the above dimensions of managerial competencies. So hereby accepts H_{02} : Employees' managerial competencies do not exhibit significant difference across gender except planning and organising.

Table 7: Managerial competencies across marital status

Managerial Competencies	Mean values comparison			t-test for Equality of Means	
	Married	Unmarried	Mean Difference	T	Sig. (2-tailed)
<i>Planning and Organizing</i>	3.8831	3.6289	0.25428	4.032	0.000
<i>Goal Setting and Perseverance</i>	3.8238	3.6637	0.16009	2.688	0.007
<i>Risk Taking</i>	3.4061	3.1993	0.20682	2.434	0.015
<i>Problem Solving</i>	3.5134	3.4656	0.04777	0.727	0.468
<i>Flexibility and Adaptability</i>	4.0192	3.9098	0.10936	2.145	0.033
<i>Information Seeking</i>	4.0776	4.0812	-0.00360	-0.086	0.932

Source: Primary data

Table 7 provides t-test statistics to examine the significance of difference in opinions of married and unmarried respondents for managerial competencies. T-test provided significant results for planning and organising, goal setting and perseverance, risk taking and flexibility and adaptability as t values are found significant and explained as: 4.032 at 0.000, 2.688 at 0.007, 2.434 at 0.015 and 2.145 at 0.033 significant level respectively. It indicates that for above dimension of managerial competencies married respondent exhibits significantly different opinions from unmarried respondent. For problem solving and information seeking, married and unmarried respondents possess same opinion as t values (0.727 and -0.086 respectively) are not found significant. Thus, hereby H_{03} : Employees' managerial competencies do not exhibit significant difference across marital status is not accepted for planning and organising, goal setting and perseverance, risk taking and flexibility and adaptability.

Table 8: Managerial competencies across position

Position \ Factors	Manager	Programmer	Trainee	Total
<i>Planning and Organizing</i>	3.8696	3.7145	3.7783	3.7747
<i>Goal Setting and Perseverance</i>	3.7065	3.7066	3.8550	3.7555
<i>Risk Taking</i>	3.3594	3.5351	3.0111	3.3179
<i>Problem Solving</i>	3.5420	3.3000	3.7000	3.4930
<i>Flexibility and Adaptability</i>	3.9978	4.1461	3.7333	3.9725
<i>Information Seeking</i>	4.1783	4.0961	3.9817	4.0791

Source: Primary Data

Table 8 exhibits that the respondents belongs to various positions shows strong concern for planning and organizing managerial competence as the mean value is 3.8696 for the respondents

of managerial position followed by trainee respondents with mean value 3.7783. At last, programmers come at third order with mean 3.7154. Further, the mean value for planning and organising (3.77) indicates the responses towards strong agreement. It means that managers are found more logical and systematic in performing tasks, exploration of different ways to accomplish things, think analytically, encounter problem, generating alternatives, comparative analysis and implementation of plans. With regard to goal setting and perseverance, the responses shown by respondents are towards strong concern as the order of mean values across various position categories is depicted as: mean value 3.8550 is highest for trainee respondents followed by mean value 3.7066 which is second highest for programmer respondents afterwards the managerial level respondents comes with mean value 3.7065. It indicates that trainees have expectations that goals should be successfully attained, regularly revised in view of progress and set prior than proceeding. In order to assess the risk taking managerial competencies, the order of responses is showing moderate to low concern as the mean values for all the position categories are less than 3.55. The programmer respondents with mean value 3.5351 shows moderate concern for risk taking behaviour followed by managerial employees with mean 3.3594 (low), at last comes trainee employees who says that they are least interested in risk taking behaviours. For problem solving managerial competencies, it has been observed that the respondents show moderate concern. As per positions, it has been observed that trainee respondents with mean value 3.7000 reported at first order followed by managers with mean value 3.5420, afterwards come programmers with mean value 3.3000. The respondents belongs to IT sector are assumed less social and creative as they are concerned with their technical task only. One has to think creatively for solving a problem. The respondents show strong concern for flexibility and adaptability as the mean values are ranging from 3.7 to 4.1. The order of position categories on the basis of mean values is following as: programmers with highest mean value (4.1461) followed by managers with mean value 3.9978, thereafter trainees with mean value 3.7333 come. The respondents strongly agreed for flexible and adaptive behaviour at work place. They adjust themselves according to the given situations. Whereas trainees with impractical expectations may show less flexible and adjustable behaviour. As he gain practical exposure, he would be more flexible and adjustable. According to position, the order is observed as: managers with mean value 4.1783 are at first order followed by programmers with second highest mean value (4.0961) and at concluding point, trainees with mean value 3.9817 come. It indicates that managers are found more information seekers. It is also the requirement of his job. One way ANOVA has been applies to check the difference across position, and the results are discussed below:

Table 9: One way ANOVA for managerial competencies across position

Managerial Competencies	Levene Statistics	Sig.	F	Sig.	Welch	Sig.
<i>Planning and Organizing</i>	2.223	0.109	1.894	0.152	NA	
<i>Goal Setting and Perseverance</i>	0.946	0.389	2.791	0.062		
<i>Risk Taking</i>	5.340	0.005	NA		16.910	0.000
<i>Problem Solving</i>	15.050	0.000		15.467	0.000	
<i>Flexibility and Adaptability</i>	3.114	0.045		26.909	0.000	
<i>Information Seeking</i>	4.773	0.009		5.493	0.005	

Source: Primary Data

Table 9 depicts that Levene test statistics for homogeneity of variance provided insignificant result for the dimensions; planning and organising, and goal setting and perseverance. F test also

provided insignificant results for dimensions; planning and organising, and goal setting and perseverance (as the f values: 1.894 and 2.791 found insignificant at 0.05 level respectively). It indicates that respondents having different positions produce similar opinions for these dimensions. In other words, it can be said that respondents' position does not bring any significant variation in respondents' opinion for dimensions planning and organising, and goal setting and perseverance. Levene test statistics for homogeneity of variance provided significant result for the dimensions; risk taking, problem solving, flexibility and adaptability, and information seeking. Welch test also provided significant results for risk taking, problem solving, flexibility and adaptability, and information seeking (as the respective Welch values: 16.910, 15.467, 26.909 and 5.493 are found significant at 0.005 level). It indicates that respondents' opinion for risk taking, problem solving, flexibility and adaptability, and information seeking varies significantly with variation in positions of respondents. Hence, H_{04} : Employees' managerial competencies do not exhibit significant difference across position is not accepted for risk taking, problem solving, flexibility and adaptability, and information seeking. It can be said that change in position produces significant variations in respondents' opinion for risk taking, problem solving, flexibility and adaptability, and information seeking.

Table 10: Tamhane post hoc statistics for managerial competencies across position

Position	Manager	Programmer	Trainee
Risk Taking			
Manager	-	0.17567	-0.34831*
Programmer		-	-0.52398*
Trainee			-
Problem Solving			
Manager	-	-0.24203*	0.15797
Programmer		-	0.40000*
Trainee			-
Flexibility and Adaptability			
Manager	-	0.14823*	-0.26449*
Programmer		-	-0.41272*
Trainee			-
Information Seeking			
Manager	-	-0.08221	-0.19659*
Programmer		-	-0.11439
Trainee			-

Source: Primary Data

* The mean difference is significant at the .05 level.

Table 10 depicts Tamhane post hoc test statistics which examines the significance of difference in opinions of IT sector employees within positions. Table shows that for risk taking, trainees show significant differences with manager and programmer respondents as Tamhane values for mean difference (-0.34831 and -0.52398 respectively) are found significant at 0.05 level. For problem solving, programmer respondents show significant difference with manager and trainee respondents as the mean differences: -0.24203 and 0.40000 respectively found significant at 0.05 level. It means that with increase in position, the respondents would be more problem solving. With respect to flexibility and adaptability, trainee respondents show significantly different with managers and programmers as mean differences (-0.26449 and -0.41272 respectively) are at 0.05 significant level. In simple words, with increase in position, the respondents would show less flexible and adaptive behaviour. Further, managers are showing significant difference with

programmers as the mean difference (0.14823) is found significant at 0.05 level. For information seeking, the difference is found significant between managers and trainees as the mean difference value (-0.19659) is significant at 0.05 level. Simply, with increase in position, the respondents would be more information seekers.

Table 11: Managerial competencies across type of organisation

Managerial Competencies	Mean values comparison			t-test for Equality of Means	
	Public	Private	Mean Difference	T	Sig. (2-tailed)
<i>Planning and Organizing</i>	3.7992	3.7706	0.02868	0.318	0.750
<i>Goal Setting and Perseverance</i>	3.8182	3.7449	0.07332	0.871	0.384
<i>Risk Taking</i>	3.4343	3.2982	0.13614	1.135	0.257
<i>Problem Solving</i>	3.6970	3.4584	0.23853	3.431	0.001
<i>Flexibility and Adaptability</i>	4.1705	3.9389	0.23151	4.055	0.000
<i>Information Seeking</i>	4.1667	4.0643	0.10240	1.745	0.082

Source: Primary Data

Table 11 provides t-test statistics to examine the significance of difference in opinions of public and private sector respondents for managerial competencies. T-test provided significant results for problem solving and flexibility and adaptability as t values are found significant and explained as: 3.431 at 0.001 and 4.055 at 0.000 significant level respectively. It indicates that for above dimension of managerial competencies, public sector respondent exhibits significantly different opinions from private sector respondent. The respondents of public sector have been found strong in problem solving skills as well as flexible and adjustable as compared to the respondents of private sector employees. For planning and organizing, goal setting and perseverance, risk taking and information seeking, public and private sector respondents possess same opinion as t values (0.318, 0.871, 1.135 and 1.745 respectively) are not found significant. Thus, H_{05} : Employees' managerial competencies do not exhibit significant difference across type of organisation is not accepted for problem solving, flexibility and adaptability, and information seeking.

Conclusion

Age wise analysis of managerial competencies reveals that the IT employees of more age found better in planning and organizing, flexibility and adaptability, and information seeking while these skills are not restricted to age bar. Hence, it is suggested that IT companies should involve each and every employee in planning and organizing at each level. The young employees should motivate to learn the benefits of being flexible and adaptable. They should motivate to seize more and more information so that managerial competencies should be improved amongst them.

Gender wise analysis stated that male respondent exhibits significantly different opinions from female respondent in case of planning and organising. Male respondents are better in planning and organising at workplace than female respondents of IT sector. Married respondent exhibits significantly different opinions from unmarried respondents for the dimensions; planning and organising, goal setting and perseverance, risk taking, and flexibility and adaptability. Married IT professionals have better in planning and organising, goal setting and perseverance, risk taking,

flexibility and adaptability than unmarried respondents. Married persons are more prone towards flexibility and adaptability. Married life helps them to be more planned and organized as in life too they have to plan many things. Many responsibilities are on their shoulders. That further helps them for goal setting and perseverance.

Type of organisation does not bring any significant variation for opinion towards planning and organizing, goal setting and perseverance, risk taking and information seeking. It exhibits significant difference of opinion towards problem solving, and flexibility and adaptability. It further shows that public sector employees are found better in problem solving and more flexible and adaptable than private sector employees, but it may not be generalized. Because, it is observed in different researches that public sector employees are showing rigidity in changing and adopting with new situations.

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