

# Team Effectiveness, Innovative Work Culture and Employee Engagement in Selected Information Technology Companies in Kolkata, India: A Study

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## ABSTRACT

*Highly competitive, transmuting market demand, and expeditious technology change, has made the management of knowledge, indispensable. The contented, committed and loyal project teams have always proved themselves to be the asset to the companies. Impeccable blends of personnel with subject matter experts (SMEs), project managers, team lead ensure the companies a competitive advantage in the market. Transformational leadership, cohesiveness, perpetual sharing of information helps each individual in one hand, on the other, stiff competition among group members, organizational politics always engenders grievance and conflict resulting in poor organizational performance. The exploratory study aimed to understand the impact of project team over employee appreciation, task autonomy of the organization and sequentially their comprehensive effect on employee Engagement. Empowerment in decision making, team reward schemes has shown a positive influence on team effectiveness. The research study has been conducted to understand the role of team, on employee Engagement mediated through the innovation appreciating organizational culture.*

**Keywords:** *Team Effectiveness, Empowerment Agreement, Innovation*

## INTRODUCTION

Complex modern organizations accelerate their growth by continuously delivering value to their customers. The companies gain competitive advantage through proper utilization of their human capital (Edvinsson & Sullivan, 1996). Employees are the key drivers of any IT business. Rapid change and advancement in technological know-how, complex nature of

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the business model, flexi-work time, globally distributed workplace with multi linguistic, multicultural workforce working around different time zones of world has made the IT- ITES and BPO industry unique as well as complex in its operation. Being a project based and knowledge intensive industry, IT companies follow a project team structure with personnel from various specializations, catering the transnational customers. The success of project teams depends on the performance of specialized, talented personnel with complementary skill set. The HRD concept has advocated about the importance of deploying a self managed band of highly committed, creative, proactive (Kling, 1995) personnel with technical and domain experts, administrative staffs (Boxall & Macky, 2007) who are adaptive to change. A sustainable escalation in organizational performance can be achieved by efficient usage of this high performing team. The synergy effect resulting from the group cohesiveness is treated as an indicator of group performance (Festinger, 1950). Organizations, especially engaging the knowledge workers, are in a continuous search of techniques and process which can motivate and retain the highly talented workforce. Employee participation, empowerment, competitive incentive structure, etc., are some proposals provided by some eminent scholars (Delaney & Huselid, 1996).

## LITERATURE REVIEW

### Work Team and Its' Structure in IT Companies

A group of people from a bigger social system, interlinked through the task they perform together under another social system to provide benefit/ desired result to the stakeholders is generally defined as “work group” (Guzzo & Dickson, 1996). The multifunctional work teams’ plays pivotal role in all managerial developmental processes, expediting and managing the organization change process to revitalize (Kanter, 1983; Ketchum, 1984; Walton, 1985) and achieve a sustainable growth. Campion, Papper, & Medsker, 1996, re-established and extended the relation between work team characteristic and it’s effectiveness. Their research revealed that process characteristic out of the five characteristic, influences most the team effectiveness. The five characteristics are: job design (self management, employee participation, task variety, task significance, task identity) (Shea & Guzzo, 1987; Campion & Medsker, 1992), interdependence within the team (task, goal, feedback and reward interdependence) (Guzzo & Shea, 1992; Salas, Dickinson, Converse, & I, 1992), composition of

the group (heterogeneity, flexibility, relative size, preference for team work)(Gladstein, 1984; Hackman, 1987), context (training, management, communication and cooperation between the team members)(Dyer, 1984; Liden, Wayne, Bradway, & Sparrowe, 1994), Process (Potency, social support, workload sharing, communication and cooperation within the team)(Gladstein, 1984; Guzzo & Shea, 1992; Pearce & Ravlin, 1987).

Software industry came into existence in mid 1950's in an unqualified manner and with a very small size (Phister, 1979). But the actual journey started during 1970's when IBM in 1969 build the Personal Computer. The market gets accelerated when Microsoft contracted with IBM to supply MS-DOS with each IBM computer. Different new operating systems developed by Microsoft and IBM speed up the progress (Bakke, 1992). The Indian IT companies have become matured from their initial years of development, and moved up in the value chain from body shopping to complex business solutions provider and contributing in the range of product management solutions to their offshore clients (Messner, 2009). The IT firms provide training to its employees, who in turn improve firm's capability and helps the organization to create a brand in the market to attract the multinational investments, venture capitalists, suppliers and finally generating more fund (Tschang, 2001). The software companies owe its success to their talented and cohesive teams comprising of operational and team skill (Wick, 1995). The IT workforce is characterised mobility, flexibility, individualization. The software companies strive to search for culture-fit personnel, as the employees come from heterogeneous culture, and family background. The IT companies use a normative management to inculcate common values and team skill among the personnel (Upadhya & Vasavi, 2006).

***Hypothesis 1:*** *Team effectiveness is associated with perceived organizational performance in selected IT companies' under study.*

## **Team and Innovative Culture**

The modern organizations are continually emphasizing on new ideas, initiating behaviour from their employees. The fast changing technology has made it absolutely imperative for the organizations to continuously change and evolve in ideas. The researchers and practitioners are in search of techniques that motivate individuals to create and extend newer ideas which will provide leverage and competitive advantage to the companies in this fast changing business environment (Van de Ven, 1986). The prerequisites to the innovative behaviour as identified by the researchers are many: organization culture and climate (Scott & Bruce, 1994), relationship with their supervisors (Janssen & Van Yperen, 2004), job characteristics

(Oldham & Cummings, 1996), social/group context (Munton & West, 1995), and individual differences (Bunce & West, 1995), and intermediate psychological processes (individual creativity: Amabile, 1996; Woodman, Sawyer, & Griffin, 1993; a sense of intrinsic enjoyment: Janssen, 2003; expected payoffs: Farr & Ford, 1990). Innovative behaviour has been envisaged as a very critical three phased process: recognition of problem, promote own ideas as and solution, realization and implementation of ideas in the work setting (Kanter R., 1988). An organizational climate with six variables: open communication, group problem solving, atmosphere of trust, flexible management style, risk taking, and guidance are always found to be conducive to practice of innovation (Pattern, 1981). According to King & Anderson, 1990, transformational leadership, cohesiveness, group longevity, group composition, group structure influences the creative behaviour of the team members. Team process variables as: support for innovation, visionary leadership, task orientation, and external communication has strong relationships with creativity and innovation. Research established a strong relationship with team process variables to creativity and innovation at the team level than the individual level (Hu'lsheger, Anderson, & Salgado, 2009).

***Hypothesis 2: Innovation oriented organizational culture is associated to the team effectiveness in selected IT companies' under study.***

### **Team and Empowerment**

The complex HR practice that facilitates the specialized and potential personnel to take part in the strategic decision making and in the other issues related to the individual interest by decentralization and delegation of 'power' to the employees at lower levels of the organizational hierarchy is 'employee empowerment' (Ghosh, 2013). Empowerment is an effective tool to improve employee engagement and self efficacy (Ugboro & Obeng, 2000) as it recognizes the individual effort, own energy, understanding, skill and competence and authorize to take decisions related to his/ her job. The empowerment practice increases the feeling of togetherness with the team as well as the organization and also creates a sense of belongingness among the workers (BoseBiswas, 2014). As the IT companies are working with a group of knowledge workers with specific skills, it is evident that these people can contribute a lot towards the effective and efficient completion of the projects. Contented team members create an environment of mutual trust and collaboration between them through sharing knowledge, values, views among them and facilitating the team members to extend their contribution together to achieve the common goal as an integral part

of the organization (Harris & Harris, 1996; Johnson & Johnson, 1995). Management of team is critical in the knowledge intensive IT industry as the performance of team is vital for design and deployment of software projects (Jiang, Klein, & Pick, 2003; Gottschalk & Karlsen, 2005). The software teams are diverse in demography, social category, informational or knowledge base, value system (Jehn, 1999; Nonaka & Takeuchi, 1995). Team leads in a software project team, ensures a clear communication of expected results, respective roles, accountability of each team members to achieve goal. Adequate availability of resources, acceptance of individual assignments and roles, support and philosophy of top level management can encourage an empowered team to produce desired result.

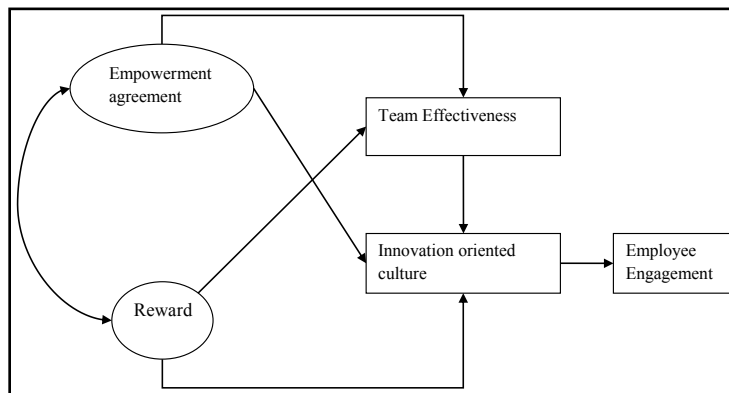
**Hypothesis 3:** *The empowerment agreements promotes Team effectiveness*

### Team and Recognition

It is evident from different literatures that an empowered team produce result and initiates innovation when the efforts of the individual as well the team contributions are recognized. Team reward schemes help to foster cooperation among the people. The rationale behind preferring team reward scheme over individual reward are: interdependency of skills (Mohrman, Mohrman, & Lawler, 1992), inseparability of task and person in a flattened and borderless service providing organizations, multi-employee work unit where it is difficult to identify individual contribution (Landy & Farr, 1983).

**Hypothesis 4:** *The reward system increases the team effectiveness.*

A four factor model depicting the relation between team effectiveness and employee engagement is proposed:



**Fig. 1: Proposed Model: Influence of Team Effectiveness On Employee Engagement Mediated Through Innovation Culture**

## OBJECTIVE OF THE STUDY

- To study the association between team effectiveness and perceived organizational performance.
- To study the relation between team effectiveness and organizational innovation oriented culture.
- To study the relations of team effectiveness with empowerment practice and employee recognition.
- To study the influence of team effectiveness on employee engagement mediated through the organizational innovation oriented culture.

## RESEARCH METHODOLOGY

Total 633 data are collected from 19 companies out of 59 NASSCOM enlisted software companies, working from Kolkata (NASSCOM, 2014) working in Kolkata, taking a cross section of small/medium enterprises (SMEs), major Indian companies (MICs) and multinationals or firms with foreign equity participation (MNCs/FEs) as obtained from NASSCOM member database (NASSCOM, 2012). Almost 900 questionnaires were mailed and distributed out of which 769 responses returned. 78 are rejected due to part filling and 58 responses were rejected as the respondents have not attended at least one performance appraisal session. Due to high data secrecy and data espionage, a high rejection rate of the questionnaire is observed. The sample consisted of 256 Jr. Employees (40.4%), 183 Sr. Employees (28.9%), 130 managers (20.5%) and 60 (10.1%) non IT executives. The demographic profile of the data describes 65.9% male and 34.1% female participation. The 31.8% response is between less than 26 years, 42% are between 27 – below 31 years, 16.9% between 31 – below 36 years, 5.8% between 36 – 40 years and above 40 years 2.5%. Descriptives related to experience in the current company states 35.3% response having 1- 2 years of experience, 43.2% between more than 2 – 5 years, 18.1% between more than 5 years – 10 years, 3.3% over 10 years experience in the same organization.

### Research Instrument

The independent variables in this paper are age, gender, employee engagement. The validated questionnaire on Performance Management by Armstrong & Baron, 2006, is used to construct the items for

innovation orientation, reward as the derivatives of the appraisal process. Organizational commitment questionnaire developed by Meyer & Allen, 1991 to measure three dimensions of organizational commitment and employee engagement is also used to construct the items.

## ANALYSIS AND FINDING: ANALYSIS AND DISCUSSION

The study consisted of 633 respondents who had undergone at least one appraisal session. A five point Likert type scale is used where 5= strongly agree, 1 = strongly disagree. As the selected 19 IT companies vary in size, business focus, customer base, etc., the selected IT companies in West Bengal, the data are divided on the basis of their workforce size and clustered in two groups: employee strength above 15000 and below 15000 (NASSCOM, “Members”, 2012). A chi-square testing is done in these two different groups. The hypothesis 1 is tested, which establishes the association between team effectiveness and organizational performance in the system irrespective of the size of the companies. The Pearson chi-square was calculated 1350.313 with p value 0.000 which is less than 0.05 (table – 1), resulting in rejection of the null hypothesis and accepting the alternative hypothesis (H1) that the employees of the selected IT companies accepted that the team effectiveness and organizational performance is significantly associated in organizations of all size.

**Table 1: Chi-Square Tests Showing an Association Between Team Effectiveness and Perceived Organizational Performance**

Employee Strength	Value	df	Asymp. Sig. (2-sided)
For all organizations	1350.313	792	.000
Above 15,000	1414.670	682	.000
Below 15,000	844.585	736	.003
	Source: Primary Data		

The table 1a also confirms the correlation between the two variables.

**Table 1a: Correlation Between Team Effectiveness and Perceived Organizational Performance**

	Mean	SD	Team	POP
Team	3.49	.766	1	
POP	3.53	.701	.467**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed). Source: Primary data

The association between team effectiveness and innovation oriented culture, empowerment agreement, and reward system are tested for their respective organizations using a chi-square method (table 2).

**Table 2: Chi-Square Tests Showing An**

Association between team effectiveness and innovation oriented culture	Employee strength	Value	df	Asymp. Sig. (2-sided)
Association between team effectiveness and innovation oriented culture	For all companies under study	649.700	396	.000
	Above 15,000	417.289	310	.000
	Below 15,000	457.846	384	.005
Association between team effectiveness and team reward	For all companies under study	1021.368	594	.000
	Above 15,000	1105.369	558	.000
	Below 15,000	680.219	576	.002
Association between team effectiveness and team reward	For all companies under study	812.737	495	.000
	Above 15,000	839.697	465	.000
	Below 15,000	611.000	480	.000

Source: Primary Data

Though during the personal interview of the management personnel and IT executives in smaller IT companies expressed their grievance and shared some conflicting issues to adapt with high employee turnover rate and changing work team occasionally.

To understand the influence of team effectiveness on employee engagement, an exploratory and confirmatory factor analysis is conducted. The Reliability coefficient, with Cronbach's Alpha is turned up to 0.937 for 33 items and the value is sufficient for further progress of the analysis with the data. The factor analysis technique is used to determine the factors grouped from 33 variables. Six factors extracted show a positive and significant association with their observed variables with very high factor loadings. The varimax rotated component for six factors extracted together

account for 66.703% of the total variance (information contained in the 49 original variables). This suits the intention of economize on the number of variables (from 33 it is reduced to 6 underlying factors). The factors are: Team effectiveness, Innovation reinforcing culture, employee recognition, empowerment, perceived organizational performance, employee engagement. The factor loadings for the factor- Team effectiveness are: *commitment* towards organizational goal (0.725), *Leadership in the team* (0.766), *Culture of openness and honesty* within team (0.784), *Satisfaction with the team spirit* (0.756), *Easy and informal Communication* between the team members (0.744), *Encouragement to diverse arguments or positive conflicts* within team (0.740), *High coordination* between team mates (0.729), *Team proactive nature* to the organizational goal (0.776), *Mutual respect* (0.804). To establish the objective of the study, a confirmatory factor analysis is done between the five factors (Team effectiveness, Innovation reinforcing culture, employee recognition, empowerment) with 26 observed variables and 377 distinct sample moments. Number of distinct parameters to be estimated is 85. Degrees of freedom (377 – 85): 292. In the model CMIN  $\chi^2$  value is 737.286, with degrees of freedom 292 and a probability level .000. In the covariance structure modeling root mean square error approximation (RMSEA = 0.04 for this model) has been recognized as one of the most informative criteria and the RMSEA value advocates the model fit. NFI and CFI values are 0.926 and 0.954 respectively, and these models adequately described the sample data. The covariances are showing a values indicate that the model fits the data well in the sense that the hypothesized significant relationship ( $p < 0.05$ ) among all factors.

The correlations between the factors extracted are also showing a significant and positive correlation (Table 3). The correlation matrix establishes a strong relationship between innovations oriented culture and team effectiveness. In turn, empowerment agreement establishes a strong relations innovation oriented culture and empowerment agreement (0.427). Reward scheme and empowerment agreement shows influence on employee engagement.

Table 3: Correlations Among the Team Effectiveness and Other Variables

	Mean	SD	Team Effectiveness	Innovation Culture	Reward Schemes	Empowerment agreement	Engagement
Team Effectiveness	3.49	.766	1				
Innovation Culture	3.48	.824	.404**	1			
Reward Schemes	3.35	.791	.382**	.354**	1		
Empowerment agreement	3.35	.868	.358**	.427**	.408**	1	
Engagement	3.13	.894	.354**	.370**	.507**	.450**	1

\*\* Correlation is significant at the 0.01 level (2-tailed). n = 633  
source: Primary Data

**Table 4: Standardised Regression Estimates**

	Team Effectiveness	Innovation Culture	Reward Schemes	Empowerment Agreement
Team <i>commitment</i> towards organizational goal	.767***			
Leadership in the team	.791***			
Culture of <i>openness and honesty</i> within team	.812***			
<i>Satisfaction</i> with the team spirit	.714***			
<i>Easy and informal Communication</i> between the team members	.740***			
<i>Encouragement to diverse arguments or positive conflicts</i> within team	.764***			
<i>High coordination</i> between team mates	.776***			
<i>Team proactive nature</i> to the organizational goal	.789***			
Mutual respect	.786***			
<i>Positive rating on Innovation</i>		.786***		
<i>Practice of encouraging</i> the Innovative Ideas		.774***		
<i>Management's belief</i> in innovation at lower level		.713***		
<i>Fair Rewards</i> policy			.716***	
<i>Equity in gain</i> sharing within team			.783***	
<i>Career growth opportunity</i>			.751***	
Overseas opportunities			.794***	

	Team Effectiveness	Innovation Culture	Reward Schemes	Empowerment Agreement
<i>Identification of individual performers within a group</i>			.697***	
<i>Employee Participation in management</i>				.767
<i>Autonomy in doing the job</i>				.793
<i>Empowerment to choose the job</i>				.831
<i>Management's belief in employee empowerment</i>				.785

\*\*\*. Regression weights are significant at the 0.01 level (2-tailed). Source: Primary Data  
The following table shows the standardized regression estimations.

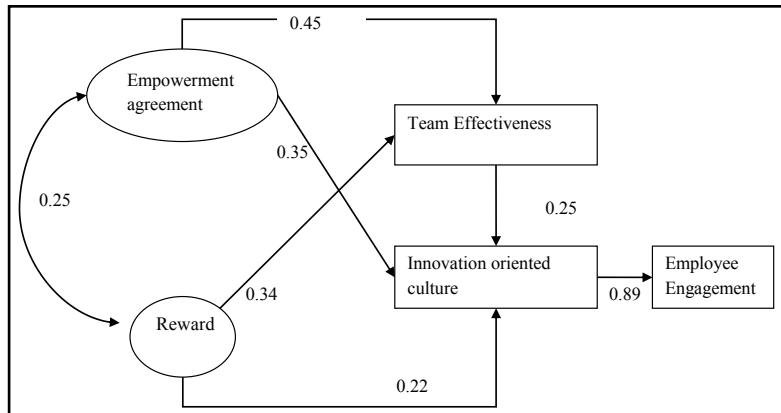
**Table 4.1 : Standardised Regression Estimates Among The Constructs**

	Team Effectiveness	Innovation Culture	Reward Schemes	Empowerment agreement
Team Effectiveness	1			
Innovation Culture	0.254***	1		
Reward Schemes	0.304***	0.194***	1	
Empowerment agreement	0.252***	0.358***	0.249***	1

\*\* . Regression weights are significant at the 0.01 level (2-tailed). Source: Primary Data

All the regression weights of observed variables are showing a significant and high association with their constructs. The regression estimates of the observed variable for the latent “Employee engagement” are also very high: *Membership of the organization* (0.737), *Generating a feeling of motivation* to see the success of the company (0.873), *Employees involvement* in the decisions that is related to them (0.840), *Reference to friends* to join this company (.787), *Desiring to serve* this company till retirement (.787), *Comfortable to share feelings, opinion* within team (0.830).

The figure 2 is showing that the model shows that the specifications are confirmatory. The relationship between the observed variables and the latents are defined and the observed variables are sufficient to describe the latent variables.



Source: Primary Data

**Fig. 2: The Model Showing the Influence of Team Effectiveness on Employee Engagement Mediated Through Innovation Culture**

It can be concluded that the model fairly and accounts for the variables observed in the data. The regression weights show a significant relationship ( $p < 0.05$ ) among all factors with employee engagement which proves the significant relationship of all the factors with employee engagement. Calculating the total effects of the four factors on employee engagement, it is understood that employee loyalty is highly influenced by the innovation oriented culture which is mostly influenced by the empowerment practices in the organizations.

## DISCUSSION

After referring an exhaustive number of the literatures, it is evident that team dynamics and supervisory styles have an immense importance in setting the milieu, promoting contentment among the employees. Being a project based industry and working with multidimensional, multilevel projects accommodating global clients with variable demand, swift inter project and inter team transfers results in difficulty for an individual to adapt the demand of the situation. The industry is characterized by young dynamic, talented as well as growth seeking knowledge worker group. With a distinguishing feature of fast perishing skill set, the IT companies are facing a two way trouble with their workforce: 1. Availability of right skill at junior and middle level, 2. Retaining skilled employees at middle level and top level. The problem is even worst with the small sized firms,

which are used by the employees as their stepping stones. Hence retention and employee engagement has become one of the most important issues to ponder over for the HR practitioners at IT industry. Testing the hypothesis has established the linkage between team effectiveness innovation oriented cultures, empowerment agreement. The chi-square test established the hypothesis, testing the association between effectiveness of team and perceived organizational performance. The significant correlation value (0.467\*\*\*) predicts almost 50% association between these two variables, which undoubtedly establishes the importance of effective team. Among the latent variable, “team effectiveness”, culture of openness, leadership style and mutual respect have got high scores than the others. In turn, empowerment to choose one’s job also scored a high estimate. The IT firms are always in search of job – fit and culture fit persons. Identification, development and management of competencies hence play a vital role. The person for the next project is chosen based on the skill set and previous performance data. These issues are generally discussed in appraisal feedback sessions. During the field study, it is evident from the interviews that while deciding personnel for the next project, mode of choosing rights employee are hardly paid any attention. Respondents from some of the small companies expressed their dissatisfaction related to the scope of innovation and empowerment in their job and development decisions. Many of the respondents from big MNCs as well as SMEs expressed grievance about their feedback system and the role of supervisor while managing the team. The respondents from the big MNCs had expressed their distrust about the “bell curve” fixing to assess the employee performance and the normalization process in the appraisal system, which surely affects team spirit. Recommendation for rewards and training are also often found to be biased. Team lead or the project lead plays a vital role to identify and distribute jobs to their subordinates, which are many a time fixed based on the intimacy of the employee with them. This environment creates distrust and they are real cause for most deserving and potential employees.

A causal linkage between the empowerment, reward system, team effectiveness, innovation oriented culture and employee engagement is found to be significant. It is also clear from the regression estimates that innovation oriented culture and team effectiveness are exhibiting a consequential as well as positive effect on faith among the employees. The respondents in all companies irrespective of their size have clearly indicated a positive impact of cohesive team on organizational performance to deliver value to the customer and to maintain long term sustainability in the market.

## IMPLICATIONS AND CONCLUSION

The project based nature of the industry has some inherent issue of dilemma. Most of the decisions are linked to the importance of the project and also the issue of further continuance of the project and possibility to take the incumbent in another project. It creates an environment of hard competition. Subsequently some anomalies crop up. It is also found that the reward system is also not practiced uniformly correlating to individual performance always, but more dependent on the organizational decisions, which creates lacuna of distrust.

It is also understood that the supervisors are less ready to handle the diversity of the teams in an effective way. The supervisors fail to play the role of a visionary leader, and manage a highly talented team. The model suggest that the employee engagement is a function of mutual trust, encouragement to innovate, autonomy in setting own goal, and management of team. For the large companies, it is really a mammoth task to identify really deserving candidates for future project, or nominating for rewards, etc. Here, the team lead and the project lead play the key role. More emphasis on supervisory training, leadership training can help to improve the situation. An endeavour to train the team and project leads about man management can enhance their skill to handle diversity of the team and their understanding the aspirations of team members. The selection of right candidate and their performance in the project can be criteria of supervisory appraisal. This interdependence can force them to reduce the bias. An environment of mutual trust, respect and positive competition can augment the team performance. A clear communication from the immediate supervisory levels about the criteria to allocate assignment or nominations for reward to the job incumbents is always beneficial and prolific towards team management. The organizational citizenship behaviour or membership behaviour of the employees' are not accounted while assessing the performance, which if accounted can work wonder to enhance the employee engagement with job and the organizations.

As the data are taken across the industry, there is a scope for further research to study the perception of the employees cluster wise and countrywide. It can be further be extended by studying the differences in approach state wide. The study can be further elaborated across the gender, age, and level of experience. The Goodness of fit statistics of the model can further be justified through Structural equation modelling.

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