



The relationship between Team Trust and Team Performance – A Study with special reference to IT companies

Dr Rajeesh Viswanathan

Assistant Professor, Department of International Business, School of Management, Pondicherry University.

Ms Divya lakshmi

Research Scholar, Department of International Business, School of Management, Pondicherry University.

ABSTRACT

This article aims to explore the relationship between team trust and team performance in Information Technology (IT) companies. Trust is defined as a multi-component variable with distinct but related dimensions. These include propensity to trust, perceived trustworthiness, co-operative and lack of monitoring behaviours

The results are supportive of a multi-component structure for trust and of its importance to the functioning of teams and organisations. Trust was also positively related with perceived task performance and with team satisfaction. In addition, perceived task performance appeared strongly related to team satisfaction.

Team Trust (TT) comprises of the factors such as Team Benevolence, Team Identification (TI), Team Compatibility (TC), Team Predictability (TPr) and Team Performance comprises of Factors such as Team Effectiveness (EF), Team Efficiency (EFF), Timeliness (TA). The model in detail assesses the relation between Trust in Teams with Team Performance. It was observed that Benevolence, Identity, Predictability and Compatibility are almost the strongest component of trust. This is consistent with the dominant way of thinking in the literature about trust and "trustworthiness" – the evaluation of the characteristics and actions of the person(s) to be trusted

KEYWORDS : Trust, Behaviour, Team Benevolence, Team Compatibility (TC), Team Predictability (TPr) and Team Performance

INTRODUCTION

Team Building has become a common phenomenon in today's globalization. Motive behind ever team is to enhance the performance of the organization. Enhancing performance is possible not with mere potentials possessed in the employees but with the level of trust existing within the team members. Effectiveness of team's performance depends on team trust. Trust is key component that underpins for affirmative behaviour and enhances performance (Shockley – Zalaback et al., 2000).

This article keeps a bull's eye on the team's intra team trust and its impact on Team's Performance. The Study was done on the Software Developers indulged in Self-managed Project Teams over the IT Companies.

Recent analysis about Teams have Portrayed that the concept of Intra-Team Trust has a positive impact on the achievement of the Team's Goals.

The older perception of organizations ideologies stated that organization can be made trustworthy by creating and establishing formal policies and strict norms (Grey and Gerstein, 2001). These thoughts can't be completely applies in the modern organizations which perceive the working environment in a different manner. They seek for more flexible structure in which to function and empower. A conducive climate of trust which is evolved with the enduring intensive relationships existing among the employees is subject to facilitate the desired levels of trust and adaptability. Absence of trust would lead to hampering inter personal communication, delegation and empowerment (Owen, 1996)

The intra -team trust or the trust in between the team members is more positively connected to Team's Performance than the other criteria like neither the trust in a Team Leader nor the team's performances in the past years. Intra-Team trust has thrown spot light nowadays as it aids to efficient part taking in the decision making activities within the team.

From the research studies done by the other Author's implications does not prove that the intra- team improves Team Performance but has found that for sure there has been a positive relationship between both. Here the intra-team trust is measured by using the four major dimensions of Team Trust –Team Benevolence(3), Team

Integrity(3), Team Predictability(5) and Team Competence(4). Hence it provides insights as to how the trust acts as a positive catalyst and how it acts upon work-teams and helps the Team Members to collectively focus upon the Team's Goal rather on their Personal Interests.

Intra-Team among the members makes them more susceptible and fight across major differences and thereby makes their work more effective through both the Qualitative and the Quantitative Perspectives. The impact of all the four components of Team Trust is tested with the three major dimensions of Team Performance namely the Efficiency(5), Effectiveness(7) and the Timeliness(4).

Recent studies say that the High Performance Teams are the ones excelling in the industry, they are highly motivated as they come under the category of Self-Managed teams and they have no Official Leadership and it has well planned strategies which complies with the company's Policies, Objectives Mission and Goal Sets. Hence the Self-Managed and the Self-Directed Teams are said to achieve a Quality in Work Life and also in turn boosts the Organizational Effectiveness.

The best part of this study would first be the concept of Self-managed Teams and the Next would be the assessment of Team's Performance through Intra-Team Trust which has been observed to be the Horizontal approach that is the trust amongst the co-employees other than seeing the Vertical Perspective which deals with the trust quotient within the leader-subordinate relationships. This would also be addressed as the research gap for the study.

Therefore in the concept of bringing in High Performing Teams in the Team Building synergy the intra-team trust plays a vital role in order to make the Team more proactive thereby improving the intra-team communication for attainment of the Team's desired level of Performance.

The trust in teams thus seems to positively influence the perceived Team's Performance and in turn increases the Team's Satisfaction to the next level. Intra-team also helps the Team to be consistently effective.

REVIEW OF LITERATURE Self-Managed Teams

Nowadays Knowledge-accelerated Teams are inevitable especially in consulting and service delivery firms and the concept of SMT is becoming popular as it is easy to make the teams organized through these SMT formations. These SMTs have been proven to be more effective and they also help to reduce the overhead costs by avoiding the supervision of the managers as they are self regulatory. The SMTs have an active participation in the decision making process and their duty also includes formulating performance management and the tasks related to it. Briefly, the SMTs direct their team's motives and desires in accordance with the company's terms and policies.

The study conducted by Vincent Rousseau and Caroline Aubé examines the role of team member's Self-managing behavior through the three dimensions of Team Effectiveness. Task Routineness has been used as the moderating variable the test the effect of it in the Team Effectiveness. The implications of the study show that the moderating variable seems to be positively influencing the team performance, team's viability and the improvement in the Team's process. The overall implication suggests that there is a true impact of the self-managing behaviors on boosting the Team's Effectiveness and this impact is also proved to be truly incidental on the Task Routineness.

Concept of Trust

The most famous definition of Trust stated by Mayer et al who termed as Trust is the Willingness of an employee to be Vulnerable. According to (Rousseau et al 1998) Trust is developed as a consequence of taking Risk and hence it is termed to be the prepossession of Risk. According to Smith and Barclay trust can be conspicuous through certain behavior like open communication, vulnerability, Endurance from opportunism and paucity in foreseeing.

Guohong (Helen) Han and P.D. Harms aimed to study the relationship between Trust, Team Identification and Team Conflict. Their intention of the study was to explore the mediation effect of Trust in Peers in team identification and Team conflict. The study was on an empirical base whereby the research was done in two fields one is the US fortune 500 R&D based company and the other was a Health care organization in the Midwest. The findings showed that the Team Identification was associated to the Lower Levels of the two Types of Conflict namely Task but only with the presence of the mediation effect of the Trust in peer group. Therefore the suggestions where to improve the Trust Quotient in order to avoid intra-team conflict among the employees within both the Organizations.

In a research study which deals with the ailments Cross-Functional Team Success (Sheila Simsarian Webber) with the study variables Teams, Leadership and Trust. Trust here has been dealt like an element of Micro-Climate in the Team level aspect within the team. The enhancement of Trust is unavoidable for building up a conducive Team Climate for the execution of an efficient leadership mannerism as far as Cross-Functional Teams (CFT) is considered.

Concept of Team Performance

The overall Performance of a team depends upon more than one factor as a single factor could not be able to assess its efficiency. In a research done by Yoo and Alavi Team Performance is positively influenced by an important variable Task Orientation. Task Cohesion is another variable that seems to be associated with Team Performance (Bahli and Büyükkurt 2005). Team Expertise and Expertise contribution is yet another variable explicitly associated with the Team Performance in a Software Development Teams stated by Ong, Tan and Kankanhalli in 2005.

Team Performance

Merce Mach, Simon Dolan and Shay Tzafir in their research study involving variables like Team Trust and Team Performance with the mediation effect of Team Cohesion found that Team trust has a

direct and indirect effect on Team Performance with conformation that Team Cohesion does the mediation in improving Performance efficiency.

According to Na, Simpson, Li, Singh and Kim, 2007 the risk associated with the development of a software project is the major detriment of the Team's Performance.

Steve Sawyer in his thesis entitled "Effects of intra-group conflict on packaged software development team performance" stated that the Team's characteristics, Team member's characteristics and the intra-group conflict accounts to nearly one half of the difference in the best and worst performing teams and hence as the suggestions recommended conflict management helps to provide a moderating effect on the Team's Performance.

Analysis

The main objective of this study is to assess the relationship between intra-team trust and Team Performance, among different software developers in different organizations. If the results obtained seem to be consistent we can arrive at some conclusions towards this relationship between Team trust and performance and the differences in the findings may be concluded with the finding that there has been many other factor internally or externally affecting the relationship between the study variables.

The sample data was obtained from five major IT organizations in Chennai and Bangalore region. Selected organizations mainly comprises of the Software Developer's Team under the Self Managed Team base. These employees mainly come under the first and the second tier that is the Development head and the managerial level software project developers. They sample population is nearly 35000 to 40000 employees per organization. Their designations comprises of Team Analyst, Team Lead, Project Manager, Senior Project Manager, Group Project Manager, Development Manager, Senior Development Management Manager, Development Head, Senior Development Head, Promotion Head.

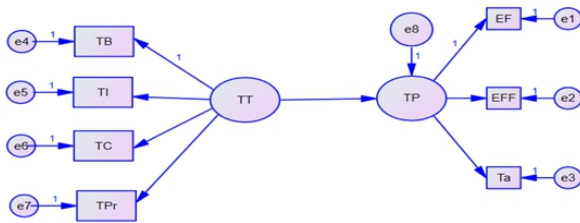
Scale Development

The Measurement scale used in this article for the Trust in Teams was developed to investigate trust in Canadian Forces (CF) military teams later was confirmed by Cook & Wall (1980), Cummings and Bromiley (1996), Erdem and Ozem (2000) and Costa, Roe and Thailieu (2001). Questionnaires to examine trust in teams in the CF were developed because previous measures of trust in teams have shown variable internal reliability and construct validity. The Trust in Teams Scale was developed so that they can be used by researchers to study trust in small teams and trust in direct leaders of small teams. These scales are designed to primarily tap person-based trust that accrues as the direct result of personal experience and shared history. Although constructed within a military context, items are generic to small teams in general. The Trust in Teams scales was designed to capture four major dimensions of trust:

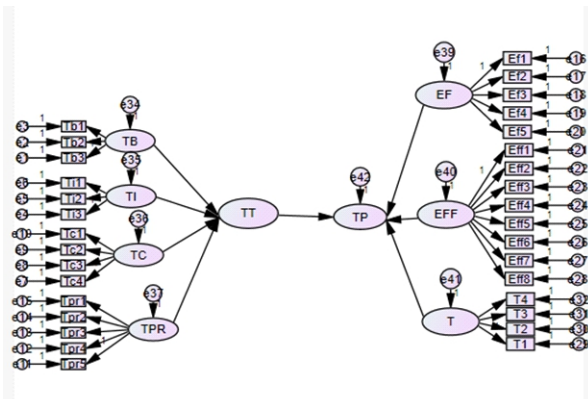
1. Competence - the extent to which the person exhibits a group of skills, competencies and characteristics that allow them to have influence in some domain.
2. Integrity – the extent to which the person is seen as honorable and their words match their actions
3. Benevolence – the extent to which the person is seen to be genuinely caring and concerned
4. Predictability – the extent to which the person's behavior is consistent.

The review of existing trust measures demonstrated positive and negative approaches to questionnaire construction. On the positive side, existing measures indicate common underlying assumptions and theoretical agreement about the core components of trust. Specifically, there appeared to be much agreement that integrity, predictability, competence, and benevolence are the four major

components of trust (see Adams & Webb, 2003, for a complete review).The Team Performance scale has three dimensions as the Performance can be assessed only with multiple dimensions for a complete study such as Effectiveness, Efficiency and Timeliness developed by Ancona & Caldwell (1992) which was later reworked and confirmed by Edmondson (1996).



The most of the Respondents were mainly collected through mail and the gathered data was ensured for confidentiality. The SPSS statistical package 20.0 was used for the basic analysis of the data for performing Reliability tests (Cronbach Alpha=0.82), Frequency analysis was performed first followed by correlation was done to test the relationship between the study variables and carried forward by the SEM analysis for the better understanding of the Relationship among the variables.



Team Trust (TT) comprises of the factors such as Team Benevolence, Team Identification (TI), Team Compatibility (TC), Team Predictability (TPr) and Team Performance comprises of Factors such as Team Effectiveness (EF), Team Efficiency (EFF), Timeliness (TA).

TABLE1 Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
TP	<---	TT	.949
TB	<---	TT	.846
TI	<---	TT	.794
TC	<---	TT	.810
TPr	<---	TT	.829
EF	<---	TP	.869
EFF	<---	TP	.935
Ta	<---	TP	.849

TABLE2 CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	15	106.862	13	.000	2.200
Saturated model	28	.000	0		
Independence model	7	443.364	21	.000	21.113

TABLE3 RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.046	.959	.934	.593
Saturated model	.000	1.000		
Independence model	.362	.372	.233	.304

TABLE3.1 Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.959	.946	.977	.970	.977
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

TABLE3.2 RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.059	.041	.077	.201
Independence model	.337	.324	.350	.000

The model in detail assesses the relation between Trust in Teams with Team Performance and the hypothesis is framed such that

H0: There exists no significant relationship between Team Trust and Team Performance.

H1: There exists a significant relationship between Team Trust and Team Performance.

In order to test the hypothesis SEM- Structural Equation Modeling is been used, as the SEM modeling (Byrne, 1998) can be used for simultaneous assessment of variables and to validate the extent to which the model is convergent with the data. At first the convergent validity was tested with the existing variables in the model in order to determine their level of fitness into the model. Secondly the Model Fitness was tested with the data fitness into the model through the stated theories with the Standardized estimates. The Chi -square indices were used to test the Model fitness with the given population of the Sample data. The result obtained was not significant indicates a good model fit. In addition to this the comparative fit index (CFI), The Goodness of Fit index(GFI) and the Adjusted Goodness of Fit indices (AGFI) was used to again assure the model fit as per the Bentler and Bonnet, 1980 as theoretical base.

The table shows that the regression weights are all above 0.7 and hence the factors are all fit to be present in the model. This can be interpreted that it has been confirmed that the factors like Team Benevolence, Team Identity, Team Predictability and Team Compatibility contributes to the Team Trust dimension. According to the standardized estimates p value for the chi square must be less than .05, Goodness of fit statistics-Chi-square value (p>.05) hence the model fitness has been assured. Table 3, Table 4 illustrates the Absolute Fit Measures such as RMR,GFI,NFI,RFI,CFI values were checked and was observed to be within the limits and the RMSEA values is also below .08 which is also under prescribed limits. Hence the Model was tested and it is found to be fit under the terms and conditions.

Discussion:

The present study aimed to explore the nature of team trust and the relation with team performance and other variables concerning team member's attitudes towards the teams performance.

With respect to the nature of trust, this study supports the conceptualization of trust as a multi-component construct. As in other studies (e.g. Cummings and Bromiley, 1996), several dimensions were identified which suggest that trust is a complex variable with a number of component parts. Although our components cannot be directly compared with those found in other studies, our results support the distinction between propensity, trustworthiness and behaviours of trust often proposed in the literature as dimensions of the trust construct (e.g. Mayer et al. , 1995).

It was observed that Benevolence, Identity, Predictability and Compatibility are almost the strongest component of trust. This is consistent with the dominant way of thinking in the literature about trust and "trustworthiness" – the evaluation of the characteristics and actions of the person(s) to be trusted. Co-operative behaviours were the second strongest component of trust, which supports in

particular the incorporation of behaviours in models of trust. Monitoring behaviours, though, explained the least variance of trust. Propensity to trust explained also only a small percentage of the total variance of trust within teams. However, we consider that both components still should be viewed as important aspects of trust. Since we were dealing with teams where members are working together already for some years, trust between these members may be more based on attributions of trustworthiness made to one another than on general expectancies. As suggested by Bigley and Pearce (1998), different components can be more important in some contexts than others, depending on the degree of familiarity between individuals and the degree of dependence. For instance, Rotter (1980) argues that as situations or people become increasingly unfamiliar the influence of trusting dispositions on behaviour grows.

Except for monitoring behaviours, all components appeared positively related with the trust factor. This is consistent with the notion that trust excludes the deliberate control of others (Ikpen and Curral, 1997). However, teams may demand different requirements for co-operative behaviours and monitoring behaviours depending on various issues such as, work objectives, risks involved, amount of resources committed, etc. (Das and Teng, 1998). For instance, Bijlsma-Frankema (2000) found a positive relation between monitoring and trust in managers in general hospital a case study.

Consequently, a high level of trust may not automatically dictate an increase of co-operative behaviours and a lowering of monitoring behaviours. In situation where the risk of trusting is high, monitoring may become a base for trust. The relation between trust and the dependent variables in this study confirms the idea that trust is important for the functioning of teams in organisations. Consistent with other studies (Smith and Barclay, 1997) various benefits were associated with trust. These benefits are reflected not only in the team outcomes, but also in member's attitudes to the organisation. High work team indicates high perceptions of task performance, high team satisfaction, high attitudinal commitment and low continuance commitment. In relation to task performance, our findings support the main effect between trust and performance also found in similar studies examining trust in other contexts (Smith and Barclay, 1997). The conceptualization of trust as a higher-order construct as we present here provides a clearer picture in relation to these effects, since distinct components of trust are incorporated in one single variable. Also consistent with other studies, a positive relation was obtained between trust and team satisfaction (e.g. Smith and Barclay, 1997). However, team satisfaction was more strongly related with perceived task performance.

This suggests that the overall positive relation of trust has some limitations. Work team trust was particularly strongly associated with the committed with the organisation. When work team trust is low, levels of attitudinal commitment tend to decrease, while more calculative (continuance) commitment tends to arise. Such implications can bring additional problems, for instance in contexts of change when additional levels of effort and involvement are needed to successfully implement those changes. Generally speaking, this study indicates that trust is an important condition for the functioning and well being of teams in organizations. Yet, the extent to which trust may be considered a determinant factor in this functioning remains inclusive, since it is dependent on the trust requirements that are associated with the functioning of teams and organizations.

Conclusion:

Limitations of the study and directions for future research This study represents a step forward in establishing a multi-component conceptualization of trust and team performance in theory building on trust in organizations. Although our study was successful in using aggregated data, several limitations are associated with these results. The foremost limitation is the scope as it was confined to

only ITES sector. Despite the fact that we were able to obtain a sufficient number of teams to perform SEM analyses. Therefore, our conclusions should be carefully interpreted. Another limitation refers to the fact the teams in this study came from organizations within a single sector of activity, which makes it inappropriate to generalize these conclusions to other sectors of activity. Cautions in the interpretation of these results are also associated with the use of self-ratings of task performance.

Scope for future research

The idea that trust has numerous benefits for teams and organizations has been, and continues to be, a major impetus for research on trust. Over the past decades, researchers have increasingly recognized the importance of trust at individual, team and organisational levels. However, empirical evidence has generally, but not consistently, supported this perspective. Different approaches to the concept of trust have lead to several conceptualizations.

Another key variable refers to the life cycle of the team and degree of familiarity between team members. For example, in teams that are created for a specific project and that exists for a fixed period of time (such as project teams), individual members will have the tendency to identify more with the product being performed, than with their colleagues. On the other hand, in multi-project organizations, teams become a much more dispersed notion, and individuals might have difficulties in identifying to which team they belong. While studying trust and its implications for the functioning of teams and organizations, researchers should also address the contextual variables around trust, in order to provide better interpretations of the results.

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