

An Empirical Study on the Role of Interpersonal and Institutional Trust in Organizational Innovativeness

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Abstract

The main purpose of this paper is to explore the effects of the dimensions of organizational trust such as interpersonal trust (coworkers trust and trust in supervisors/leaders), and institutional trust on the dimensions of organizational innovativeness such as product, process, behavioral, and strategic innovativeness in beverages companies serving in Pakistan and Turkey, and banking companies operating in Pakistan. A quantitative research design was employed. Data were collected through survey instrument from 202 participants relating mainly from marketing, R&D and finance & accounting departments of beverages and banking companies. The results indicate that institutional trust is vital for both product and process innovativeness. Moreover, coworkers trust was positively associated to strategic innovativeness. Therefore, the results have confirmed the view of the prior researchers that the root of trust lies in individual relationships is not in opposition to the experience of trust both inside interpersonal relationships and as an institutional phenomenon beyond interpersonal relationships.

Keywords: Organizational Trust, Interpersonal Trust, Institutional Trust, Organizational Innovativeness

1. Introduction

Organizational researchers are of the view that “trust” remains the basis of high performance management team, and organizations seeking to enrich work, increase openness, risk taking, high levels of commitment, loyalty, and productivity (e.g. McGregor, D. 1967; Likert, R. 1967; Argyris, C. 1962; Ouchi, W.G.1981). Trust in the workplace whether it exists between co-workers, leaders and followers, employers and employees, between different organizations or towards an institution has been shown to have a strong and robust influence on a variety of organizational phenomena, including job satisfaction, organizational citizenship behaviors, organizational commitment, turnover, job, employee & team performance, innovative, workplace, and counterproductive behaviors, organizational revenue and profit (e.g. Dirks, 2000; Ferrin, 2001; Flaherty & Pappas, 2000; Frenkel, & Orlitzky, 2005; Tan and Tan, 2000; Simmons & Mclean, 2000; Colquitt et al., 2007)

Viewing the relationship between trust and innovativeness, researchers are of the view that trust can provide a sense of security, and can facilitate risk taking necessary for survival in contexts of high ambiguity, uncertainty and

complexity (Six, 2005). Where trust is lacking, people feel they have to examine and justify their actions. As a result, instead of finding and doing the right thing, developing exciting new ideas, taking risks and adding value, they spend their time working in an atmosphere of distrust. Thus trust is critical to the developing of ideas within a business organization. It is just as important in the realization practices that convert those ideas into new products, services and/or work practices (Dovey, 2009). In the same manner, Carolyn (2009) contends 'when we trust someone to do something, we let them get on with it. We don't waste time double-instructing and double-checking. When we're trusted, we don't waste time covering ourselves or playing politics, we feel free to innovate and experiment'. In sum, trust enables innovation to flourish – and mistrust stifles innovation and risk-taking.

However, the role of trust in promoting organizational innovativeness has so far attracted very little interest in academic research (Ellonen et al., 2008). Similarly, Maguire & Philips, 2008 provided that even though calls for a 'shift in research attention from trust in dyadic relations to trust in aggregate social systems (McEvily, Perrone, & Zaheer, 2003), but, the concept of institutional trust which creates a context conducive to more trusting interpersonal relationships and its difference from interpersonal trust have been studied very little in the organizational context (McKnight, Cummings, & Chervany, 1998; Rousseau et al., 1998). To fulfill this gap, although Ellonen et al.'s (2008) study has confirmed the major role of institutional trust as compared with interpersonal trust (coworkers trust and trust in supervisors/leaders) on different dimensions of organizational innovativeness such as product, process, behavioral, and strategic innovativeness. But main limitation of their study was that their survey sample was limited to information and communication technology and paper and pulp industries in Finland.

The main purpose of this paper is to explore the effects of the dimensions of organizational trust such as interpersonal trust (coworkers trust and trust in leaders/supervisors), and institutional trust on the dimensions of organizational innovativeness such as product, process, behavioral, and strategic innovativeness in beverages companies serving in Pakistan and Turkey, and banking companies operating in Pakistan. Our focus here is exclusively with trust within organizations i.e. as an intra-organizational phenomenon, such as between employees and supervisors/leaders or among co-workers where institutional trust is likely to be complementary and positively relate to that of interpersonal organizational trust (e.g. McKnight, Cummings, & Chervany, 1998; Ellonen et al., 2008)

2. Theory and Hypotheses

2.1. Organizational Trust

Merriam-Webster on line dictionary has defined trust as an assured reliance on the character, ability, strength, or truth of someone or something. Thus, according to this definition trust can be conceptualized in both forms i.e., personal and impersonal forms. Trust is conceptualized differently in various disciplines, including management, ethics, sociology, psychology, and economics as: 1) a behavioral intention or an internal action, similar to choosing, judging, or preferring, 2) synonymous with trustworthiness within the context of personal characteristics that inspire positive expectations on the part of other individuals, 3) a facet of personality that develops early in life and remains relatively stable through adulthood, and 4) a synonym for cooperation or risk taking (e.g. Rousseau et al., 1998; Colquitt et al., 2007).

Interpersonal trust, thus can be defined as a psychological state comprising the intention to accept vulnerability to the actions of another individual (a trustee), based upon the expectation that the other will perform a particular action that is important to the trustor (e.g. Mayer, Davis, & Schoorman, 1995; Lewis, & Weigert, 1985).

This trust literature distinguishes trustworthiness (the ability, benevolence, and integrity of a trustee) and trust propensity (a dispositional willingness to rely on others) from trust (the intention to accept vulnerability to a trustee based on positive expectations of his or her actions (Colquitt et al., 2007). This conception of interpersonal trust holds that a trustor will be willing to be vulnerable to another party based both on the trustor's propensity to trust other people in general, and on the trustor's perception that the particular trustee is trustworthy (Mayer, Davis, & Schoorman, 1995). Lewis and Weigert (1985) suggested that trust is based on "'good reasons' constituting evidence of trustworthiness".

Mayer et al. (1995) provided that trustworthiness is encompassed of three factors: ability, benevolence, and integrity. Ability is that group of skills, competencies, and characteristics that permit a party to have influence within some domain. Benevolence is the extent to which a trustee is believed to want to do good to the trustor, aside from an egocentric profit motive. Integrity is defined as the trustor's perception that the trustee adheres to a set of principles that the trustor finds acceptable. These trustworthiness dimensions reflect both cognition-based and affect-based sources of trust (McAllister, 1995): a cognitive calculation of the skills, capabilities, values, and principles of the trustee (in the forms of ability and integrity) may be supplemented by a more affective acknowledgment of the mutual concern inherent in the relationship (in the form of benevolence). The results of Colquitt et al.'s (2007) meta

analytic study suggest that trustworthiness may be important even aside from their trust-fostering role i.e., ability, benevolence, and integrity had significant, unique relationships with behavioral outcomes even when trust was considered simultaneously.

By following Ellonen et al. (2008), in this paper we define organizational trust as the positive expectations individuals have about the competence, reliability and benevolence of organizational members, as well as the institutional trust within the organization (e.g. Mayer et al., 1995; McKnight, Cummings, & Chervany, 1998). Thus, in an organization, trust is a multidimensional variable i.e. an employee may trust his coworkers but distrust his supervisor or top management. Fox (1974) differentiated this as lateral or vertical trust; the former refers to trust relations among peers or equals who share a similar work situation, whereas the latter refers to trust relations between individuals and either their immediate supervisor, top management or the organizations as a whole (cited in McCauley & Kuhnert, 1992).

The present study will center on trust between coworkers, followers and supervisors, and towards an institution. This institutional trust is called as impersonal trust which does not refer to degrees of trust or distrust that are embodied in personal attitudes between individuals, however, the ability of top management to develop relationships with employees, beyond those with whom they interact frequently, is seen as limited. Thus, top management is regarded as group of persons at or near the top of the organizational chart is seen as deriving from the roles, rules, and structured relations of the organization and through influencing the organization's culture, the role of top management involves the creation and management of a system conducive to trust (McKnight et al., 2002).

McKnight et al. (1998) defined this institution based trust as “the belief that proper impersonal structures are in place to enable one to anticipate a successful future endeavor” such as: 1) structural assurance in shape of safeguards as regulations, guarantees, or contracts are in place to promote success, and 2) situation normality i.e., environment is in proper order and success is likely because situation is normal or favorable within the attributes of competence, benevolence, and integrity of management or organization to promote success..

According to Ellonen et al. (2008), this institutional trust could be characterized as the trust of its members in the organization's vision and strategy, its technological and commercial competence, its fair processes and structures, as well as its HR policies, and this impersonal trust is based on the roles, systems and reputations from which inferences are drawn about the trustworthiness of an individual, and its success is determined by the efficiency and the fairness of the organization-wide systems, such as the HR policies (Costigan et al., 1998).

2.2. Organizational Innovativeness

Dasgupta & Gupta (2009) argue:

As global competition intensifies and product life cycle shortens, the pressure to innovate heightens. Achieving low cost coupled with high quality are just the qualifying criteria and might not be the winning criteria. Critical to growth in most sectors is the combination of launching new products and services, entering lucrative markets, creating new competitive advantages, and deploying new business models. Sustainable development cannot happen without innovation. The challenge before every organization is to develop innovation strategies that not only respond to changes in the environment and societal pressures but also consider the needs and expectations of various stakeholders.

Prior research put the innovativeness as the development and/or use of new ideas or behaviors can pertain to a new product, service, market, operational and administrative structures, processes and systems (Damanpour et al., 2009). Soo et al. (2002) defined innovation as ‘ a mixture of process and product outputs that include new or modified products and services, patents, new marketing techniques, new managerial tools and administrative processes, licenses and wider thought leadership represented by things like presentations at conferences and publications’ (cited in Dasgupta & Gupta, 2009). Researchers regard people are champions and change agents who bring about change by interacting with each other and by networking within and across organizations (Dasgupta & Gupta, 2009).

For this study, we have used the dimensions of organizational innovativeness as put by Wang and Ahmed (2004) and also used by Ellonen et al. (2008) in shape of Product, market, process, behavioral and strategic innovativeness: 1) Product innovativeness has been put as “the novelty and meaningfulness of new products introduced at the market at a timely fashion”. 2) Market innovativeness is defined as “the newness of approaches that companies adopt to enter and exploit the targeted market”. 3) Process innovativeness conceptualized as “the introduction of new production methods, new management approaches and new technology that can be used to improve production and management processes”. 4) Behavioral innovativeness has been demonstrated through individuals, teams and management enables the formation of an innovative culture, the overall internal receptivity to new ideas and innovation”. Finally, 5) Strategic innovativeness is defined as “an organization's ability to manage ambitious

organizational objectives, and identify a mismatch of these ambitions and existing resources in order to stretch or leverage limited resources creatively”.

Innovation or innovativeness is thus ‘production or adoption, assimilation, and exploitation of a value-added novelty in economic and social spheres; renewal and enlargement of products, services, and markets; development of new methods of production; and establishment of new management systems. Therefore, it is both a process and an outcome (Crossan & Apaydin, 2009)

2.3. Linkage of Organizational Trust with Organizational Innovativeness

Lee’s (2004) study shows that trust within employees has positive effect on continuous improvement showing by employees through recognition of and perceived responsibility for quality and participation in activities aimed at improving quality are often seen as critical in enhancing companies’ competitiveness. Hsien Niu’s (2010) recent study found that interorganizational trust has positive effect on knowledge acquisition and creation that is considered an effective way for firms to remain competitive in turbulent environments and for improving the long-term innovativeness of an organization. Again within the context of projects, Maurer (2009) empirically found that trust between project team members working on an inter-organizational project positively impacts the acquisition of external knowledge which, in turn, promotes product innovation. In the same sense, Sarah et al.’s (2009) study shows the importance of trustworthiness of top management team members is vital for knowledge sharing. Garcia (2008) found that trust promotes inter functional integration between different departments e.g., R&D and marketing in shape of helping each other, tried to achieve goals jointly, shared ideas, information and resources, and took the project’s technical and operative decisions together that in turn promotes internal success in shape of cost product and time goals and external success in shape of market performance. Clegg et al. (2002) study found that trust is implicated in the innovation process as a main effect and ‘trust that benefit’ is associated with the suggestion of ideas, whereas ‘trust that heard’ is associated with their implementation. Finally, trust in supervisor has positive effect on subordinate’s innovative Behavior (Tan and Tan, 2000). All these studies have statistically significant results ($p < .05$) with positive Pearson’s correlation coefficient (r) ranging from .20 to .83 as shown in table 1. Although contexts of these studies vary from continuous improvement, knowledge acquisition, creation & sharing, and ideas suggested and implementation to functional integration and innovation behavior, however, it convey the message that high levels of trust have a positive effect on the effectiveness and quality of organizational knowledge sharing and Innovation (Ellonen et al., 2008). Thus, the literature exposed above would lead us to formulate the following hypothesis:

H1: Coworkers trust is positively related to organizational innovativeness.

H2: Employees trust in their immediate supervisors is positively related to organizational innovativeness.

Moreover, in Ellonen et al.’s (2008) study imply that the impersonal form in particular, namely institutional trust, has an important role in determining organizational innovativeness. So we further propose that:

H3: Institutional trust is positively related to organizational innovativeness.

3. Data Collection & Measurement Scales

For data collection, we have used 65 survey questions along with demographics questions consisted multi-item measures representing to interpersonal trust, institutional trust, and organizational innovativeness constructs: coworkers trust and trust on supervisors constructs have 15 item each; institutional trust has 19 item; and organizational innovativeness construct has 16 items validated and shown to be reliable in previous research (Ellonen et al., 2008). These multi-items measures after slight modifications were adapted by Ellonen et al. (2008). Factor solutions and reliability of this multi-items measures in Ellonen et al.’s (2008) study found that each construct has distinct dimensions: 1) coworkers trust construct has three dimensions of trust in employee reliability (six items, alpha 0.894); trust in employee competence (five items, alpha 0.846); and trust in employee benevolence (four items, alpha 0.859), 2) trust in supervisors construct has three dimensions of trust in the leaders’ reliability (six items, alpha 0.920); trust in the leaders’ competence (five items, alpha 0.935); and trust in the leaders’ benevolence (four items, alpha 0.896), 3) institutional trust construct has four dimensions of situational normality: benevolence and reliability (six items, alpha 0.857); vision, strategy and communication (six items, alpha 0.856); situational normality: competence (four items, alpha 0.804); and structural assurance (two items, alpha 0.665) but finally by arguing that institutional trust was considered one-dimensional construct, Ellonen et al. (2008) developed the final scale by computing the average of all 19 items (alpha 0.918), and 4) organizational innovativeness construct has four dimensions of product innovativeness (five items, alpha 0.833); behavioral innovativeness (five items, alpha 0.825); strategic innovativeness (three items, alpha 0.712); and process innovativeness (three items, alpha 0.557). These constructs presented as statements that respondents show their agreement with on a five-point likert scale of

1=strongly disagree to 5=strongly agree.

This survey was applied to employees working in marketing, production, R&D, and accounting & finance departments of production & distribution units of two multinational beverages companies serving in Pakistan and Turkey and two main branches of two leading banks operating in Pakistan. By using paper format of English version of the survey questionnaire, data were collected by the correspondence author by visiting respondents during July and August, 2009 from Pakistan. For data collection from Turkey, this questionnaire survey was translated in Turkish Language by the experts from Faculty of Business Administration, Istanbul University and through the contact person data collected during November and December, 2009. The survey questionnaire was distributed randomly to the respondents as follows: 90 to banking employees of two branches, 190 to beverages companies' employees of Pakistan, and 80 to beverage company's employees relating to sales & marketing of Turkey. Most of the respondents were male (97%) representing lower and middle management (65%) of marketing (45%), accounting and finance (29%), and production & R&D (22%). The final response rate was 64% (360 questionnaires sent out of which 232 were returned). In total there were 30 deficient responses that did not properly filled; they have been not included in the analysis. Therefore effective response rate was 56% (202/360) which is good in this type of study.

For current study with the help of SPSS, principal component analysis and varimax-rotated factor loadings of coworkers trust, and trust on supervisors/leaders have been presented in Tables 2 and 3. Table 2 shows three factor solution of coworkers trust (one item has been excluded out of 15 item due to low loading) in shape of trust in employees' competency (5 item), integrity (5 item), and benevolence (4 item) explained 61% of total variance. Moreover, last item of table two was treated as integrity item in Ellonen et al.'s (2008) study, where as in this study, it has been perceived as benevolence item. These three factors of coworkers trust have acceptable cronbach's alpha (see table 6) i.e. employees' competency ($\alpha=0.827$), employees' integrity ($\alpha=0.792$), and employees' benevolence ($\alpha=0.814$). Table 3 has provided two factor solution of employees' trust on supervisors/leaders: 1) two dimensions of employees trust on supervisors/leaders such as trust in leaders' integrity and benevolence (confirmed the Colquitt et al.'s 2007 contention that some conceptualizations of trustworthiness combine benevolence and integrity into a single character variable) having 5 item each have been loaded within single factor, 2) where as second factor has loaded the dimension of competence (5 items) explained 59.8% of total variance. These two factor of employees' trust on supervisors/leaders have acceptable cronbach's alpha (see table 6) i.e. trust in leaders' integrity and benevolence ($\alpha=0.909$), and trust in leaders' competency ($\alpha=0.872$). Both of these constructs of interpersonal trust (coworkers trust and employees trust on their supervisors/leaders) having acceptable measure of sampling adequacy in shape Kaiser-Meyer-Olkin (KMO) such as 0.890 and 0.895 respectively.

Although current study also by following the Ellonen et al. (2008) developed the final scale of institutional trust by computing the average of all 19 item with cronbach's alpha ($\alpha=0.909$); however, as practiced by prior research (McKnight et al., 2002), to keep this scale to be restricted to situational normality and structural assurance items, by excluding 5 items out of 19 items relating to vision, strategy, management expertise, in table 4, we produce two factor solution of the institutional construct: 1) two dimensions of situational normality such as integrity and benevolence (7 item), and 2) one dimension of situational normality such as competence (4 item); and structural assurance construct (2 items) having acceptable cronbach's alpha i.e., 0.888 & 0.867 respectively, and together explained 58.8% of total variance with acceptable KMO (0.919).

Finally, Organizational innovativeness was measured on 16 item scale having four dimensions of product (5 item); behavioral (5 item), strategic (3 item); and process innovation (3 item) was adapted by Ellonen et al. (2008) from Wang and Ahmed's (2004) study. Wang and Ahmed (2004) classified the items into five factors in accordance with the following dimensions: product; market; process; behavioral; and strategic innovativeness. The present study confirmed Ellonen et al.'s (2008) four factor solutions of organizational innovativeness scale with acceptable KMO (.899) explained 67.2% of total variance. These four dimensions organizational innovativeness construct have acceptable cronbach's alpha (see table 6) i.e. product innovativeness ($\alpha=0.863$), behavioral innovativeness ($\alpha=0.831$), strategic innovativeness ($\alpha=0.813$), and process innovativeness ($\alpha=0.770$).

4. Results

4.1. Correlation Analysis

As indicated in the theoretical discussion that we looked for relationships between the dimensions of organizational trust in shape of coworkers trust, employees' trust on supervisors/leaders, and institutional trust with the dimensions of organizational innovativeness such as product, process, behavioral and strategic innovativeness; table 6 shows the means, standard deviations and Cronbach's alphas of the variables, and provides a correlation matrix. As the matrix shows that every dimensions of interpersonal and institutional trust has statistically significant correlation

(**correlation is significant at the 0.01) with every dimensions of organizational innovativeness. Therefore, this strong correlation between the variables confirm our all the hypotheses. However, the strong positive correlation between trust in coworkers' competency and supervisors' competency that is equal to one that could lead problems of multicollinearity during regression analysis (Ellonen et al., 2008).

4.2. Regression Analysis

To analyze the effects of six dimensions of organizational trust on the four dimensions of organizational innovativeness, with the help of SPSS, we carried out multivariate linear regression as shown in Table 7. Regression models in table 7 confirm that the role of institutional trust in organizational innovativeness seems to be the most important. In addition, interpersonal trust is related to organizational innovativeness, although not all dimensions are positively associated. There is a clear negative relationship between trust in coworkers' integrity, trust in supervisors' integrity & benevolence, and product innovativeness that show the strong multicollinearity in the variables. To confirm, this multicollinearity, regression analysis exclude the 'trust in supervisors competency' by giving the collinearity statistics in shape of 1) tolerance is equal to 0.000 which is less than common cut-off threshold of 0.1, and 2) the condition index is 34.978 which should generally be 30 or less (2008). Therefore, by following Ellonen et al. (2008), alternatively, we attempted to correct for multicollinearity by re-specifying the model so that the original six dimensions of organizational trust were replaced by three components such as coworkers trust, trust on supervisors and institutional trust. Now tolerance values ranges 0.209 to 0.361 which are above than 0.1 and VIF values ranges from 2.77 to 4.79 which are less than 10, but condition index values ranges from 14.386 and 22.978 to 31.492. The final index value is crossing the threshold of 30 slightly but as a whole multicollinearity should not affect the interpretation of the regression coefficients (Ellonen et al, 2008). The results are shown in Table 8. By analyzing the result of regression analysis in shape of Adj. R Square (R^2) of each model shown in table 8, we can conclude that organizational trust with its various dimensions explained 23.3 per cent of the variance in product innovativeness, 24.2 per cent of the variance in behavioral innovativeness, 17.9 per cent of the variance in strategic innovativeness, and 29.54 percent of the variance in process innovativeness. Moreover, the models' respective F values are significant at $P < .05$. Therefore, our base line hypotheses: 1) coworkers trust is positively related to organizational innovativeness, 2) employees trust in their immediate supervisors is positively related to organizational innovativeness, and 3) institutional trust is positively related to organizational innovativeness all are supported. All dimensions of organizational trust are positively related to all the dimensions of organizational innovativeness. However, institutional trust is significantly related to both dimensions of product and process innovativeness, whereas coworkers trust is significantly related to strategic innovativeness.

5. Discussion and Conclusion

By following the Ellonen et al. (2008), in this study, we have analyzed the effects of both interpersonal and institutional organizational trust on various dimensions of organizational innovativeness. We found the effect of institutional trust to be stronger than that of other types of interpersonal trust in determining the organization's innovativeness. We also found that organizational trust explained a larger proportion of the variance in the process innovativeness (29.9%), followed by behavioral, product and strategic innovativeness (24.2%, 23.3%, and 17.9%). As compared with interpersonal trust dimension, the dimension of institutional trust significantly account for significant variance (36.6%) in product innovativeness, and (34.4%) in process innovativeness. This implied that for process innovation & product innovation to occur, impersonal trust will be relied on more in virtual structures facilitated by technological rather than interactional interfaces (Atkinson & Butcher, 2003) with the aim to increase efficiency and effectiveness of the internal organizational processes (technological process innovation, administrative process innovations), and multidisciplinary process to facilitate the production and delivery of new goods or services to the customers (Damanpour et al., 2009). On the other hand, as compared with institutional trust, coworkers trust dimension of interpersonal trust account for significant variance (29.5%) in strategic innovativeness i.e., an organization's ability to manage ambitious organizational objectives, and identify a mismatch of these ambitions and existing resources in order to stretch or leverage limited resources dynamically. To leverage the limited resources in shape of human capital innovatively, Ferres et al. (2004) found that co-worker trust was found to be a significant predictor of lowered turnover intention. Recognizing this, SAS CEO Dr. James Goodnight noted that 'when 95 percent of a company's assets drive out the front gate every night, the CEO must see to it that they return the following day'. A trust-based environment is among others measures to help get people to return (Kochan et al, 2003). It implies that if the organizational environment encourages a high level of management trust in employees, employees, in turn, will reciprocate high levels of trust towards management that in our perception boost an organizational competitiveness (McCauley & Kuhnert, 1992). The research results have confirmed the view of prior researchers (e.g. McCauley & Kuhnert, 1992; Luhmann, 1979; Costigan et al., 1998; McKnight et al., 1998; McKnight et al., 2002; Atkinson and Butcher, 2003) that the root of trust lies in individual relationships is not in

opposition to the experience of trust both inside interpersonal relationships and as an institutional phenomenon beyond interpersonal relationships.

The present study provides linkages between the dimensions of organizational trust and organizational innovativeness that have previously been studied very little. Moreover, it contributes theoretically and practically by concluding that in order to increase the organizational innovation within today's dynamic organizations, it is important to realize the dual nature of trust i.e. personal and impersonal forms of trust. Importantly, given the importance of institutional trust to organizational innovativeness such as product and process innovativeness, our research results can provide a guide for increasing the importance of institutional trust in shape of the trust of its members in the organization's vision and strategy, its technological and commercial competence, its fair processes and structures, as well as its HR policies, and this impersonal trust is based on the roles, systems and reputations from which inferences are drawn about the trustworthiness of an individual, and its success is determined by the efficiency and the fairness of the organization-wide systems, such as the HR policies.

The sample representing Turkish respondents was small as compared with sample representing Pakistani respondents, so large sample is required to generalize the results fully in Turkey, so our future study will focus to fill this gap. Moreover, as suggested by Ellonen et al. (2008), a full-scale development and validation for institutional trust construct is required.

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Table 1. Research Examining Effects of Organizational Trust on Organizational Innovativeness

Study	Examining Organizational Trust with Organizational Innovativeness	sig	r
Lee (2004)	Trust within employees has (+) effect on continuous improvement	p	.43
Hsien Niu (2010)	Trust among firms has (+) effect on knowledge acquisition & creation	p	.32to.61
Maurer (2009)	Trust between project team members has (+) effect on Knowledge acquisition, which in turn impact product innovation	ns	.41
Sarah et al. (2009)	Trustworthiness within Top Management Team members has (+) effect on knowledge sharing	p	.83
Garcia et al. (2008)	Trust within R&D Managers of innovative firms has (+) effect on Inter functional integration	p	n/a
Clegg et al. (2002)	Trust within design engineers has (+) effect on ideas suggested and implementation	ps	.20to.47
Jong &Thuis (2008)	Interorganizational trust has (+) effect on the performance of high-tech alliances in terms of relational satisfaction	p	.57
Tan & Tan (2000)	Trust in supervisor has (+) effect on subordinate's innovative behavior	p	.69
Lavado et al.(2009)	Social capital has (+) effect on product innovation.	p	.23
Ellonen et al. 2008)	Institutional trust has (+) effect on organizational innovativeness.	p	.37to 53

Notes: Sig = statistically significant finding ($p < .05$); ns = non-significant effect; p = positive, significant effect; n/a = data not available; ps= partially significant; (+) = positive; r (Pearson correlation coefficient).

Table 2. Factor Analysis of Coworkers Trust

Coworker Trust Items	Factor		
	1	2	3
I feel very confident about the skills of the employees of the unit	0.812		
I believe that most employees in this organizational unit do a very good job at their work	0.765		
A large majority of the employees of this organizational unit are competent in their area of expertise	0.732		
The employees in this organizational unit have much knowledge on the work that needs to be done	0.594		
The employees in this organizational unit are known to be successful in what they do	0.592		
The employees in this organizational unit try hard to be fair in dealings with others		0.769	
The actions and behavior of the employees in this organizational unit are always consistent		0.727	
Integrity is a key value in the operations of the employees of this organizational unit		0.615	
The employees in this organizational unit have a strong sense of justice		0.607	
In general, most employees in this organizational unit keep their promises		0.569	
My needs and desires are important to the employees of this organizational unit			0.874
A typical employee in this organizational unit is sincerely concerned with the problems of others			0.773
The employees in this organizational unit are concerned with my welfare			0.676
The employees in this organizational unit communicate openly about things that are important to me			0.548
Cumulative percentage of the variance explained (%)	22.2	41.6	61.0

Table 3. Factor Analysis of Employees' Trust on Supervisor/Leaders

Trust in Supervisors items	Factor	
	1	2
My needs and desires are important to the leaders of this organizational unit	0.805	
A typical leader in this organizational unit is sincerely concerned with the problems of others	0.762	
The leaders in this organizational unit are concerned with my welfare	0.747	
The actions and behavior of the leaders in this organizational unit are always consistent	0.707	
Most of the times, the leaders try to be helpful rather than just look out for themselves	0.624	
The leaders in this organizational unit communicate openly about things that are important to me.	0.621	
The leaders in this organizational unit try hard to be fair in dealings with others	0.592	
Integrity is a key value in the operations of the leaders of this organizational unit	0.566	
The leaders in this organizational unit have a strong sense of justice	0.536	
In general, most leaders in this organizational unit keep their promises	0.534	
The leaders in this organizational unit have much knowledge on the work that needs to be done		0.791
I believe that most leaders in this organizational unit do a very good job at their work		0.786
The leaders in this organizational unit are known to be successful in what they do		0.742
A large majority of the leaders of this organizational unit are competent in their area of expertise		0.739
I feel very confident about the skills of the leaders of the unit		0.718
Cumulative percentage of the variance explained (%)	31.1	59.8

Table 4. Factor Analysis of Institutional Trust

Institutional Trust Items	Factor	
	1	2
The management of this organizational unit is concerned with its employees' welfare and future	0.785	
The management of this organizational unit communicates openly of things that are important to me	0.769	
I feel comfortable to rely on this organizational unit to meet its obligations	0.716	
The actions and words of the management of this organizational unit are in line	0.710	
This organizational unit thinks not only about its own advantage but also about what is important to the whole company	0.685	
I feel fine working in this organizational unit, since it generally fulfills its agreements	0.677	
In my opinion, this organizational unit regards other people equally and respectfully	0.643	
Our data systems support our operations well		0.769
I believe that the processes of this unit are of good quality		0.734
Our HR practices support our operations well		0.713
I trust this organizational unit's capability to develop and learn continuously		0.688
Internal communication in this organizational unit works efficiently		0.674
I believe that this unit is technologically competent		0.649
I believe that this organizational unit is commercially competent		0.613
Cumulative percentage of the variance explained (%)	29.7	58.8

Table 5. Factor Analysis of Organizational Innovativeness

Organizational Innovativeness Items	Factor			
	1	2	3	4
The new products and services of this organizational unit are often perceived as very novel and innovative by customers	0.790			
In new product and service introductions, this organizational unit is often first-to-market	0.786			
The new products and services of this organizational unit often beat new competitors	0.711			
During the past five years, this organizational unit has introduced more innovative products and services than its competitors	0.633			
In new product and service introduction, this organizational unit is often at the cutting edge of technology	0.574			
One gets a lot of support from managers if one wants to try new ways of doing things	0.760			
In this organizational unit, people are encouraged to think and behave in original and novel ways	0.717			
Individuals who do things in a different way are accepted and tolerated in this unit	0.704			
In this organizational unit, people are willing to try new ways of doing things and seek unusual, novel solutions	0.645			
When a problem cannot be solved using conventional methods, people in this Organizational unit invent new methods	0.611			
The managers of this organizational unit constantly seek unusual, novel solutions to problems through "idea men"			0.829	
The managers of this organizational unit are willing to take risks to seize and explore "chancy" growth opportunities			0.771	
In comparison with its competitors, this organizational unit's most recent product Marketing program is revolutionary in the market			0.646	
This organizational unit improves its business processes constantly				0.807
During the past five years, this organizational unit has developed many new management approaches				0.709
This organizational unit changes the production methods faster than its competitors				0.660
Cumulative percentage of the variance explained (%)	19.9	38.8	53.0	67.2

Table 6. Variable & Correlation Matrix

Variable	M	S.D.	<i>a</i>	1	2	3	4	5	6	7	8	9	10
P.I.	3.84	0.726	0.863	1	-	-	-	-	-	-	-	-	-
B.I.	3.67	0.689	0.831	0.637**	1	-	-	-	-	-	-	-	-
S.I.	3.61	0.761	0.813	0.601**	0.606**	1	-	-	-	-	-	-	-
Ps.I.	3.80	0.733	0.770	0.638**	0.580**	0.546**	1	-	-	-	-	-	-
T.C.C.	3.86	0.660	0.827	0.428**	0.343**	0.320**	0.474**	1	-	-	-	-	-
T.C. I.	3.69	0.706	0.792	0.309**	0.345**	0.348**	0.341**	0.611**	1	-	-	-	-
T.C. B.	3.52	0.824	0.814	0.359**	0.465**	0.425**	0.397**	0.569**	0.610**	1	-	-	-
T.S.I.B.	3.58	0.715	0.909	0.403**	0.473**	0.424**	0.476**	0.650**	0.651**	0.688**	1	-	-
T.S.C.	3.86	0.660	0.872	0.428**	0.343**	0.320**	0.474**	1.000**	0.611**	0.569**	0.650**	1	-
I. T.	3.75	0.631	0.909	0.483**	0.471**	0.373**	0.542**	0.702**	0.582**	0.601**	0.823**	0.702**	1

Note: **Correlation is significant at the 0.01 level (2-tailed); P.I. =Product Innovation; B.I. = Behavioral Innovation; S.I. = Strategic Innovation; Ps.I. = Process Innovation; T.C.C. = Trust in Coworkers' Competency; T.C.I. = Trust in Coworkers' Integrity; T.C.B. = Trust in Coworkers' Benevolence; T.S.I.B. = Trust in Supervisors' Integrity and Benevolence; T.S.C. = Trust in Supervisors' Competence; and I. T. = Institutional Trust.

Table 7. Multivariate Regression Analysis

<i>Dimensions of innovativeness</i>	<i>Dependent Variables</i>							
	Product Innovativeness		Behavioral Innovativeness		Strategic Innovativeness		Process Innovativeness	
<i>Model fit</i>	<i>Adj. R²</i>	<i>F</i>	<i>Adj. R²</i>	<i>F</i>	<i>Adj. R²</i>	<i>F</i>	<i>Adj. R²</i>	<i>F</i>
	0.234	13.213*	0.259	14.954*	0.195	10.715*	0.298	17.976*
<i>Independent Variables</i>	<i>Beta</i>	<i>T</i>	<i>Beta</i>	<i>T</i>	<i>Beta</i>	<i>T</i>	<i>Beta</i>	<i>T</i>
Trust in coworker competence	0.170	1.817	-0.059	-0.635	-0.002	-0.018	0.183	2.035
Trust in coworkers' integrity	-0.029	-0.329	0.005	0.060	0.057	0.628	-0.052	-0.613
Trust in coworker's benevolence	0.096	1.058	0.254	2.853	0.232	2.504	0.076	0.874
Trust in supervisors' integrity & benevolence	-0.060	-0.483	0.119	0.973	0.196	1.539	0.037	0.313
Institutional trust	0.371	3.133	0.260	2.227	0.039	0.323	0.367	3.238
Excluded variable: Trust in supervisors' competence: Collinearity Statistics: Tolerance (0.000), condition index (34.978)								

Note: * Significant at 0.05

Table 8. Multivariate Regression Analysis

<i>Dimensions of innovativeness</i>	<i>Dependent Variables</i>							
	Product Innovation		Behavioral Innovation		Strategic Innovation		Process Innovation	
<i>Model fit</i>	<i>Adj. R²</i>	<i>F</i>	<i>Adj. R²</i>	<i>F</i>	<i>Adj. R²</i>	<i>F</i>	<i>Adj. R²</i>	<i>F</i>
	0.233	21.329*	0.242	22.432*	0.179	15.574*	0.299	29.547*
<i>Independent Variables</i>	<i>Beta</i>	<i>T</i>	<i>Beta</i>	<i>T</i>	<i>Beta</i>	<i>T</i>	<i>Beta</i>	<i>T</i>
Institutional trust	0.366	3.018*	0.185	1.532	0.073	0.583	0.344	2.965*
Coworkers Trust	0.153	1.488	0.149	1.459	0.295	2.771*	0.109	1.110
Trust on supervisors	0.005	0.037	0.207	1.537	0.097	0.692	0.138	1.065

Note: * Significant at 0.05