

LI Ning, YAN Jin, JIN Mingxuan

How does organizational trust benefit work performance?

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Abstract We studies the relationship between organizational trust and work performance through questionnaire method. By establishing six nested models and two non-nested models and comparing them with the hypotheses model, we find that an employee's trust in his/her immediate superior, co-workers, and the top manager all exert positive influences upon his/her work performance and these influences are independent and supplementary to one another. We also discuss the complex effects of an individual's perception of different organizational members upon their behaviors. It is found that the influence of an employee's trust in top manager upon individuals' job performance is partially mediated by his/her trust in immediate superiors.

Keywords organizational trust, trust in top manager, trust in immediate superior, trust in co-workers, work performance

摘要 通过问卷调查,对组织内信任与工作绩效之间的关系进行了研究。研究采用结构方程建模方法,通过建构6个嵌套模型和2个非嵌套模型,将其与假设模型进行比较验证研究假设。结果表明,个体对直接领导、同事和高层管理者的信任都会对个体的工作绩效产生影响,并且彼此间的效应相互独立,彼此互补。同时,研究也讨论了多种不同信任对个体工作行为产生影响的过程中,个体对不同对象的知觉对行为复杂影响,并发现基于对高层管理者的信任,进而对工作绩效的影响效应部分由对直接领导的信任传递。

关键词 组织内信任, 高层信任, 直接领导信任, 同事信任, 工作绩效

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LI Ning, YAN Jin (✉)

School of Management, Zhejiang University, Hangzhou 310058, China

E-mail: yanjin@zju.edu.cn

JIN Mingxuan

Department of Psychology, Zhejiang University, Hangzhou 310028, China

1 Introduction

Trust in working settings has many positive influences upon organizational management and employment relationship. Thus, it has drawn more and more attentions from researchers and managers alike in recent years (Argyris, 1964; Dirks and Ferrin, 2002). In the field of organizational behavior, an individual's trust in other organizational members is regarded as an important topic and has been studied extensively. For example, in leadership theories, researchers have laid great emphases on the function of trust: transformational leaders and charismatic leaders are different from the traditional leaders in that they can build mutual trusts between themselves and their subordinators (Podsakoff et al., 1990; Kirkpatrick and Locke, 1996). Organizational trust is beneficial to an organization because it can effectively reduce supervision cost, promote collaboration among organizational members, support organizational innovation and bring forth inimitable competitiveness for the organization (Hogan et al., 1994). Trust is also the core concept of leader-member exchange theory, which assumes that it is easier for mutually trusted superiors and subordinators to build a high quality relationship (Schriesheim et al., 1999). Also, since trust is such a universal concept, it has been stressed in a number of other fields, such as team building, conflict management, communication management, organizational fairness and psychological contracts, etc.

After a brief review of the studies on trust, we can find hundreds of different definitions of trusts in different settings (such as inter-organizational trust, trust in negotiations, etc). Since we only focus on an individual's trust in other organizational members in the present article, we adopt Rousseau's definition of trust (Rousseau et al., 1996), which defined trust as "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviors of another". It is so far the most widely used definition of trust in human relationship studies (Dirks and Ferrin, 2002)

Kramer once called organizational trust a "lubricant" for it can not only reduce internal conflicts in an organization, but facilitate an organization to operate more smoothly. Bromiley pointed out that when there is not enough trust in organization, an individual will have to spend more time and energy to supervise others' behaviors so as to protect his own interests (Bromiley and Cummings, 1996). On the contrary, when there is a high level of trust among organization members, an individual can put more of his resources into jobs that will bring forth profits for both himself and his organization. Thus, a lack of interpersonal trust in an organization will give rise to higher supervision cost.

Porter and Lilly (1996) and Dirks (2000) found that trust among team members will encourage an individual to cooperate with others, thus enhancing the whole team's coherence. When in an atmosphere of highly trusting team, team members

can communicate ideas and share experiences more efficiently. This provides a good foundation for team innovation behaviors. Davis et al. (2000), Morgan and Zeffane (2003), and Connell et al. (2003) studied the effect of an employee's trust in top manager on the employee's job performance. They found that the ideas of fairness and human-oriented reflected from a company's strategies and regulations all have an important impact upon an employees' job satisfaction and organizational commitment. For example, when implementing company strategies or carrying out organizational reforms, companies with higher level of employee trust will face comparatively less resistance. To sum up, organizational trust can not only harmonize employment relationship, but also cultivate certain inimitable competitiveness for an organization.

Trust among people is the precondition of fellowship and communication. A working environment with a highly trusting atmosphere is the foundation for harmonious employment relationship. Trust is a kind of psychological state with high directivity. Thus, an employee's trust in organizational environment and other organization members will affect his perceptions, attitudes and behaviors. In addition, since individuals tend to attribute what has happened to different reasons, trust is also characterized by idiosyncrasy. Meanwhile, studies in the fields of organizational conflicts and organizational politics showed that trust in different trustees influences an individual's behavior and attitude from different ways, for an individual tends to have different attributions of what have happened (McAllister, 1995; Dirks and Ferrin, 2002; Mayer and Gavin, 2005).

Mayer found that an individual's trust in his immediate superior and in top manager will arouse quite different organizational citizenship behaviors (OCB). When an employee trusts his immediate superior, his OCB will be beneficial to the immediate superior; when the employee has trust in the top manager, his OCB may benefit the whole organization (Kramer, 1999; Aryee et al., 2002). Some researches discovered that the key factors influencing an individual's trust in other organizational members are different. Tan found that an employee's trust in immediate superior depends on the employee's judge of the latter's reliability, good faith and honesty, while his trust in the top manager rests with the organizational support, procedure fairness and distribution fairness he perceived (Tan and Tan, 2000). We thus can speculate that there are different mechanisms by which individuals build different trusts in different trustees and these diverse trusts will influence the individual's behavior and psychology from a number of different ways (Dirks and Ferrin, 2001; Payne and Clark, 2003). Although numerous researchers have studied how does organizational trust influence an employee's behavior and attitude in an organization, most of these researches have only focused on certain trustee, such as immediate superior or top manager (Ellis and Shockley-Zalabak, 2001; Atuahene-Gima and Li, 2002; Gould-Williams, 2003). The comprehensive study on the function mechanism of

trust upon job behavior is still lacking. In the present article, we will discuss the influence of trust upon an individual's behavior from three perspectives and attempt to find out the mechanism behind this influence. To do so, we need to comprehensively examine how an employee's trust in different organizational members differentially affects his/her job behavior. Past studies have concentrated on an employee's trust in the immediate superior and top manager. In step with the progress of team studies, an employee's trust in fellow workers has drawn more attention from researchers (Ferres et al., 2004). As main stakeholders of an employee, an employee's trust in his immediate superior, co-workers and top manager will undoubtedly affect his job behavior (Costigan et al., 1998). In this article, we are going to systematically study the relationships between the above three kinds of trusts and an employee's job performance, so as to find out how these organizational trusts affect organizational effectiveness.

Western researchers have found out that once employees have built trust in their immediate superiors, they are more willing to accept job assignment from these supervisors and have a higher level of commitment on the quantity and quality of his job (Tan and Tan, 2000; Mayer and Gavin, 2005). Deeply edified by Confucianism, Chinese employees tend to develop their trusts in immediate superiors into a loyalty. This is a special phenomenon in Chinese cultural settings that people tend to maintain their interests through interpersonal relationship. A new look at psychological climate and its relationship to job involvement, effort (Brown and Leigh (1996)). In nature, this loyalty is a higher-quality leader-member exchange relationship, in which leaders take care of their subordinates' interests and subordinates repay this kindness with high-performance behaviors and high commitment. Thus, we develop Hypothesis 1.

Hypothesis 1: an employee's trust in the immediate superior is positively related to his/her job performance.

In an organization, the top manager is responsible for strategy formulation and establishment of organizational institutions. Whether these decisions are fair and human-oriented becomes an important clue for employees to evaluate the top manager. Researchers have noticed that when employees have trust in the top manager, their organizational commitment and organizational identity also improve, which in turn cause employees to work harder and spend more time and energy in their jobs (Brown and Leigh, 1996; Aryee et al., 2002). We therefore presume that a higher level of job involvement enables employees to perform better.

Hypothesis 2: an employee's trust in the top manager is positively related to his/her job performance.

Team studies have revealed that an individual's trust in other team members is beneficial to his/her performance. Edmondson found that an individual's trust in other team members affects communication openness directly (Edmondson,

1999). Because only if members feel others are trustworthy, they are willing to share their skills and experiences. Particularly, during the course of workflow improvement, individuals will not expose their own mistakes and shortcomings until they feel it is safe to do so. Otherwise, they may worry that this exposure of weaknesses will bring a negative influence upon their future career (McAllister, 1995). Studies on knowledge management also confirm that mutual trust among co-workers is beneficial to knowledge sharing and voluntary coordination in an organization. This will enhance greatly employees' working efficiency and work quality. Based on these analyses, we propose Hypothesis 3 as below.

Hypothesis 3: an employee's trust in co-workers is positively related to his/her job performance.

Dirks and Ferrin (2002) pointed out that when considering how an employee's trust in different organizational members affects his/her job behaviors, the interactions among these different-directed trusts should arouse attentions from researchers. In this article, we are going to further study the topic. Although the top manager may have formulated human-oriented policies and open and fair reward and punishment systems, employees usually only contact with their immediate superiors while at work. Since the immediate superiors are the policy executors, employees tend to owe procedure fairness and other distribution fairness to them. Meanwhile, the immediate superiors are in charge of important resources and can exert control over an employee's direct interests. Compared with their Western counterparts, Chinese managers are noted for their paternalistic leadership style (Brown and Leigh, 1996; Wong et al., 2002). They may sometimes choose not to abide by some institutional rules, depending on concrete situations. In some cases, they may even intentionally violate the spirits of fairness in order to achieve their goals. These phenomena are quite common in enterprises managed in a traditional way and enterprises with over-complex bureaucratic organs, resulting in the fact that an employee's trust in the top manager is mediated by his immediate superior. But we conjecture that this mediating effect must be limited because although immediate superiors have important influences on employees' perceptions of organizational fairness, employees are quite capable of distinguishing the differences between behaviors of practicing favoritism and institutional unfairness (Mayer and Davis, 1999). Thus, we argue that immediate superiors are only limited mediators of employees' trust in the top manager. Given these assumptions, we develop the following hypothesis.

Hypothesis 4: the effect of an employee's trust in the top manager upon his/her job performance is partially mediated by his/her trust in immediate superior.

As above, we can see that an employee's trust in his immediate superior, top manager and co-workers influences his job performance from different

paths. And these paths are based on different logic and function mechanisms. Specifically, an employee's trust in these three different trustees affects his job performance through different mechanisms and these mechanisms are independent and supplementary to each other. Therefore we presume that an employee's trust in different organization members independently influences his job performance. Then the following hypothesis seems reasonable.

Hypothesis 5: employees' trust in different organization members influences his job performance through different paths and these paths are independent to one another.

2 Methods

2.1 Samples and study procedures

Samples of this study come from a large state-owned enterprise in north China. The enterprise manufactures train-related equipments and has about 2,500 workers. We chose from the enterprise three representative departments as our samples, namely equipment workshop, engineering R&D center and financial department. Considering our questionnaire contains trust questions and thus is prone to the problem of social desirability, we adopted Aryee et al.'s (2002) sampling procedure to reduce the social desirability problem. We first of all told the workers that our study is about employment relationship and is for scientific research purpose only. Thus, we promised that any results got from the investigation will remain a secret to their superiors. We then let the workers decide for themselves whether to join the survey or not. All those participated into in our survey get a small gift.

Voluntary participants received an envelope enclosed with two independently sealed questionnaires for employees (Questionnaire A) and his immediate superior (Questionnaire B) respectively. Questionnaire A contains questions measuring an individual's trust in his immediate superior, co-workers, and top manager; Questionnaire B measuring the employee's job performance. There is also a special announcement attached with Questionnaire B noticing the superior that the performance appraisal is for scientific study purpose only and the appraisal results will be kept secret. In addition, to further ensure the confidentiality of all the information, we used an encoding system to all questionnaires. Specifically, Questionnaire A contains codes of both employees tested and their immediate superiors, while Questionnaire B contains only the employees' codes. All participants had two weeks to fill in their questionnaires and sent them back to us.

In all, we heard from 279 participants. Among them, 157 were from the equipment workshop ($N = 157$), 64 from engineering R&D center ($N = 64$), and 58 from financial department ($N = 58$). After omitting those questionnaires which we were unable to match between supervisors and subordinators, we got altogether 188 valid questionnaires (response rate = 67.38%). The average age of the samples was 38.69, of them were male with 9.2 years at the present position on average. Forty-eight percent were skilled workers or semi-skilled workers. Forty-five percent were functional department workers or workers with professional titles. The samples' average years of education of were 15.2. We also obtained background information of all workers in the enterprise and checked the variations in demographic variables between sample and non-sample data. No significant deviation was found.

2.2 Variables measurement

2.2.1 Organizational trust

In the present study, we adopted Mayer and Davis' (1999) trust scale which originally contains 21 items, including three-dimensional characteristics of trustees, namely reliability, good faith and honesty. Since our study has a different aim compared to Mayer's study, we modified Mayer's trust scale and kept only the three-dimensional structure and made a questionnaire with three parts and six items¹. In addition, to be able to test an employee's actual trust level in different organization members, we need to use different items to measure different trustees. The another reason why we adopted Mayer's trust scale is it has quite a lot of items. Therefore, one can choose appropriate items when measuring different trustees. Results showed that the internal consistency (α coefficient) of the modified trust scale on top manager, co-workers, and immediate superiors was 0.79, 0.66 and 0.83 respectively. More specifically, questionnaire of an employee's trust in the top manager ($df = 6$): $RMSEA = 0.082$; $GFI = 0.97$; $CFI = 0.98$; $NNFI = 0.95$. Questionnaire of an employee's trust in co-workers ($df = 6$): $RMSEA = 0.029$; $GFI = 0.99$; $CFI = 0.99$; $NNFI = 0.98$. Questionnaire of an employee's trust in immediate superior ($df = 6$): $RMSEA = 0.00$; $GFI = 0.99$; $CFI = 0.99$; $NNFI = 0.99$. All indicated that the new questionnaire has a good structure of validity.

¹In Mayer's (1999) questionnaire, one respondent needs to evaluate three trustees. Many questions in the questionnaire are quite similar. Also, Mayer's questionnaire has too many items and identical response patterns to different trustees. Thus, it is likely to have a negative effect upon respondents' answers. We therefore preserve only two items with highest dimensional loads from the original three trust dimensions (reliability, good faith and honesty) respectively.

2.2.2 Work performance

Since our samples were from three different departments with different work contents, we adopted Tsui et al.'s (1997) work performance scale to assess basic attributes of employees' performance. We used five items in our questionnaire, namely, work efficiency, quality of work, responsibility, work ability and spontaneous innovation behavior. The internal consistency (α coefficient) was 0.78. In addition, to ensure the translated scale still expresses the exact meanings of the original one, so we conducted "back translation" (Brislin, 1970). To begin with, the first author of this article translated the Tsui's scale into Chinese. Then another researcher with a clear understanding of the theoretical background of our study and with an industrial psychology doctor degree translated the Chinese edition back into English. Finally, an independent researcher proficient in both English and Chinese compared the two scales to judge whether the translated Chinese scale trustily conveyed the information in the original scale. Moreover, all questions in our study was responded to on a 7 point Likert-type scale, with 1 for "strongly disagree" and 7 for "strongly agree".

2.3 Statistic methods

The statistical method we used in this study was path analysis with latent variables and data analysis was conducted from Lisrel 8.45.

3 Results

Related matrix analysis of measurement variables exhibits (as shown in Table 1) that an employee's trusts in different organization members are all positively related to his/her work performance, while correlations among different trustees are various: an employee's trust in the immediate superior is not significantly related to his trust in co-workers. In addition, the correlations between an employee's trust in the immediate superior and that in top manager

Table 1 Results of descriptive statistics and correlation among variables ($N = 188$)

	<i>M</i>	<i>SD</i>	1	2	3	4
1) Trust in immediate superior	26.24	4.98	(0.79)			
2) Trust in co-workers	23.11	3.38	0.15	(0.66)		
3) Trust in top management	24.17	5.13	0.47**	0.25**	(0.83)	
4) Employee's work performance	20.17	4.28	0.46**	0.45**	0.32**	(0.78)

Note: * $p \leq 0.05$, ** $p \leq 0.01$; numbers on the diagonal are the measured correlation coefficients (α coefficient).

and co-workers are at either low or moderate level. These results denote that an employee's trusts in different organization members are independent to one another and they are all significantly positively related to work performance, partially supporting our expectation that an employee's trusts in different trustees influence his work performance through different paths.

To further provide more sufficient and solid empirical evidences, we conducted path analysis with latent variables. First, we tested the hypotheses model to verify Hypotheses 1–3 (as shown in Fig. 1 and Table 2). Through testing the hypotheses model, we can see that an employee's trusts in the above three organization members positively and independently affect his/her work performance and all paths have reached the significant level of 0.01. In the present study, based on Hu and Bentler's (1998) suggestions, we selectively reported five representative exponential parameters of model fitness, namely X^2 (chi-square), *NNPI*, *CFI*, *GFI* and *RMSEA*. These five parameters indicate goodness-of-fit between data model and hypotheses model from different logic, thus presenting an all-round reflection of the fitness between data and hypotheses (Hu and Bentler, 1998). According to Hu and Bentler's (1998) studies, when *NNPI* and *CFI* are over 0.90, or *RMSEA* is below 0.1, the model has a high goodness-of-fit. Also, when the ratio of chi-square to degree of freedom is smaller than 4, it also means that the model has good fitness. As shown in Table 2, we can see that our hypotheses model meets all these requirements.

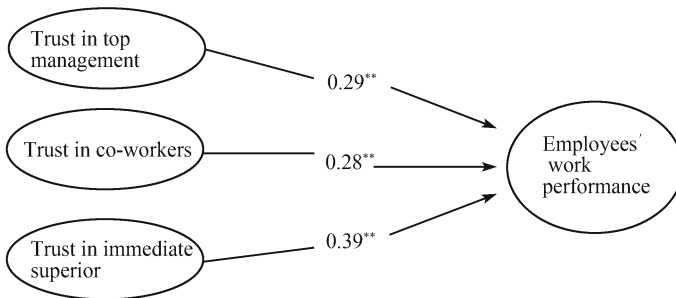


Fig. 1 Hypotheses model

Moreover, Fig. 1 illustrates that the effect of trust in the immediate superior upon an employee's work performance has the biggest path coefficient. Although the path coefficients of trust in the top manager and in co-workers upon an individual's work performance are only 0.29 and 0.28 respectively, both of which reach the significant level of 0.01 (respective t values are $t = 3.01, p < 0.01$; $t = 3.20, p < 0.01$). This indicates that an employee's trusts in the top manager

Table 2 Comparison of fitness exponentials between nested models and hypotheses model ($N = 188$)

Model	χ^2	df	$NNFI$	CFI	GFI	$RMSEA$	$\Delta\chi(\Delta df)$
Hypotheses model	345.33	224	0.95	0.95	0.86	0.054	
Nested model 1 ^a	349.63	225	0.95	0.95	0.85	0.054	4.30 (1)
Nested model 2 ^b	351.03	225	0.95	0.95	0.86	0.055	5.70 (1)
Nested model 3 ^c	359.93	225	0.95	0.95	0.86	0.055	14.60 (1)
Nested model 4 ^d	375.64	226	0.94	0.95	0.85	0.060	30.31 (2)
Nested model 5 ^e	383.09	226	0.93	0.94	0.85	0.061	37.76 (2)
Nested model 6 ^f	361.86	226	0.94	0.95	0.86	0.055	16.53 (2)
Partial mediated model 7 ^g	345.45	225	0.95	0.95	0.86	0.054	1.12 (1)
Nested partial mediating model 8 ^h	360.46	226	0.95	0.95	0.86	0.056	15.13 (1)

Note:

- a. Model 1 deletes the path from trust in immediate superior to work performance in the hypotheses model.
- b. Model 2 deletes the path from trust in co-workers to work performance in the hypotheses model.
- c. Model 3 deletes the path from trust in top manager to work performance in the hypotheses model.
- d. Model 4 deletes both the paths from trust in top manager and from trust in co-workers to work performance in the hypotheses model.
- e. Model 5 deletes both the paths from trust in immediate superior and from trust in top manager to work performance in the hypotheses model.
- f. Model 6 deletes both the paths from trust in immediate superior and from trust in co-workers to work performance in the hypotheses model.
- g. The relationship among variables in Model 7 is shown in Fig. 2.
- h. Model 8 deletes the path from trust in top manager to work performance in the hypotheses model.

$NNFI$ = non-normed fit index; CFI = comparative fit index; GFI = goodness of fit index; $RMSEA$ = root mean square of approximation.

and in co-workers have independent influences upon his/her work performance. Taken together, Hypotheses 1–3 are well supported by empirical evidences.²

To test Hypothesis 4, we added a direct path from the top manager to immediate superior in the hypotheses model (results are shown in Model 8 in both Fig. 2 and Table 2). Figure 2 shows that the path coefficient of this newly added path from top manager to immediate superior is 0.52 ($t = 5.10$, $p < 0.01$). The result is statistically significant. Compared with the original hypotheses model, though one more path is added, $\Delta\chi^2$ only increased a mere 1.12, which is not statistically significant. And there are no obvious changes in other fitness parameters of the two models. Thus, a partial mediating model is supported.

²Results got by using the hierarchical regression method are in consistent with this conclusion.

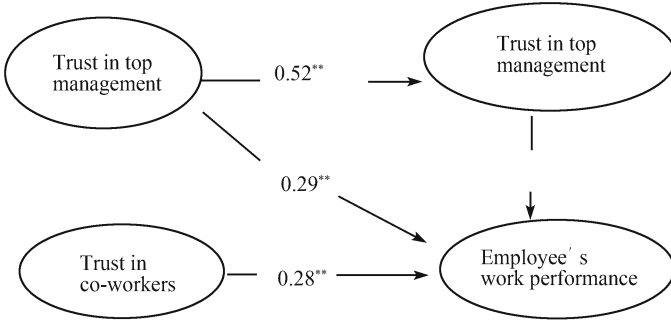


Fig. 2 Partial mediating model of trust in immediate superior upon trust in top manager

Table 3 Load and errors of latent variables upon manifest variables (N = 188)

Manifest variables	TL	TT	TC	Work performance	Error loading
TT1	0.45				0.80
TT2	0.40				0.84
TT3	0.54				0.59
TT4	0.58				0.53
TT5	0.75				0.42
TT6	0.78				0.39
TC1		0.43			0.81
TC2		0.58			0.55
TC3		0.55			0.59
TC4		0.55			0.56
TC5		0.43			0.81
TL1			0.78		0.39
TL2			0.82		0.32
TL3			0.75		0.44
TL4			0.72		0.49
TL5			0.77		0.41
TL6			0.33		0.89
P1				0.59	0.53
P2				0.79	0.37
P3				0.55	0.70
P4				0.65	0.57
P5				0.46	0.78

Note: TL = trust in immediate superior; TT = trust in top manager; TC = trust in co-workers, P = performance. Items with factor loading smaller than 0.30 are not shown in the table.

To further prove that an employee's trust in top manager is partially (rather than fully) mediated by his/her trust in immediate superior, we established a nested model (Model 8) of Model 7. This nested model is deleted of the direct

path from trust in top manager to work performance, implying the effect of an employee's trust in top management upon work performance can be fully mediated by trust in immediate superior. As exhibited in Table 2, compared with Model 7, the ΔX^2 value of Model 8 increased 15.13 ($df = 1, p < 0.01$), implying a worsened model. Thus, the assumption of full mediation is not supported. As above, the partial mediating effect of trust in immediate superior upon trust in top manager is supported.

To test Hypothesis 5 and to future support Hypotheses 1–3, we established six nested models of the hypotheses model. By comparing these nested models with the hypotheses model, Hypothesis 5 can be tested. In Hypothesis 5, it is presumed that an employee's trust in different organization members independently affect the employee's work performance. If the hypothesis is true, when delete any one or two paths in the hypotheses model, the difference between the conceived model and the data model would increase, resulting in a reduced fitness index. That is to say, the chi-square fitness indexes of the nested models should become significantly lower in comparison with the hypotheses model. If the exponential fitness of nested models has not decreased significantly in comparison with the hypotheses model after deletion of one or two paths, it means that the path is not necessary and should be deleted in accordance with the principle of parsimony. In a similar vein, we established two groups (six models in all) of nested models of the hypotheses model to test one by one whether the path from an employee's trust in certain organization member to the employee's work performance is necessary.

The first group of nested models includes three models (from Model 1 to Model 3 in Table 2). Each of these three models deletes one path from an employee's trust in certain organizational member to his work performance. Likewise, each of the nested models (from Model 4 to Model 6 in Table 2) in the second group deletes two paths. As the changes in fitness index in Table 2 shows, compared with the hypotheses model, the exponential fitness of the first group of nested models decreases significantly no matter which path is deleted ($\Delta X^2 = 4.30, df = 1, p < 0.05$; $\Delta X^2 = 5.70, df = 1, p < 0.05$; $\Delta X^2 = 14.60, df = 1, p < 0.01$). In the same way, the exponential fitness of the second group also demonstrates a tendency of decrease ($\Delta X^2 = 30.31, df = 2, p < 0.01$; $\Delta X^2 = 37.76, df = 2, p < 0.01$; $\Delta X^2 = 16.53, df = 2, p < 0.05$). Taken together, through the comparison of the two groups of nested models with the original hypotheses model, we can see that any of the three trust paths is capable of independently affecting an employee's work performance. No matter which one or two paths are deleted from the hypotheses model, the model's explanation ability of data would be reduced to a certain degree. Thus, Hypothesis 5 is supported.

4 Discussion

Although some scholars presumed in the 1970s that trust in working settings can bring inimitable competitiveness to an organization, relevant empirical studies are still lacking. In this article, we empirically tested the relationship between organizational trust and work performance. Most of relevant researches only focused on a certain trustee (i.e. study only an employee's trust in his immediate superior) in an organization (Dirks and Ferrin, 2002). Recently, a few researches have started to simultaneously study employees' trust in both immediate superiors and top managers (Rousseau et al., 1996). In contrast with these studies, we examined the influence of three trustees upon an employee's behavior. We believe that it is helpful for us to get a more comprehensive picture of the effect of organizational trust upon employees' behaviors as well as to understand the mechanism of organizational trust building. Meanwhile, our results remind managers that it is not enough to notice only employees' trust in their immediate superiors and top managers. The trust in one's co-workers is also of great importance to an employee's work performance. Since the building of trust among team members can enhance a team's working efficiency, we therefore need to set up effective rewards and distribution mechanisms, to avoid harmful suspicion and hostility among team members, and to improve the trust level in a team—all these will lead to a great improvement in the competitiveness of an organization.

By comparing six nested substitute models with the hypotheses model, we found that an employee's trusts in the above three organization members all independently and irreplaceably influence his/her work performance. The result is consistent with Dirks's theory that employees' trust in top managers and immediate superiors independently affects their work performances (Dirks and Ferrin, 2002). Meanwhile, our result also shows that employees' trust in different trustees influence their work performances through different yet supplementary mechanisms.

How does an employee's trust in different organization members interact with one another is a problem worthy of further studying. In the present article, by establishing non-mediated model, partially-mediated model and full-mediated model and comparing these models with each other, we found that the effect of an employee's trust in top manager upon his/her work performance is partially mediated by his/her trust in immediate superior. This result shows that the top manager is important for employees to build organizational trust. Investment in this field can enhance an employee's trust in both top manager and immediate superior. Since these two trustees are important to employees' work performances, an improved trust level will bring organization better returns.

There are, of course, some limitations in this article. For example, all of our samples come from the same enterprise. Although our participants were from three different business units, the ecological validity is inevitably affected. Besides, when collecting data, we failed to take time span into consideration, which is yet another important limitation of this article. After we collected employees' trust information, if we had waited for a certain period of time before we started to measure employees' working performances, the causal relationship between an employee's trust and his working performance would have been much more convincing.

5 Conclusion

In this article, we probed into and empirically tested the affecting mechanisms of an employee's trust in immediate superior, co-workers and top manager upon his/her working performance. Our results show that an employee's trust in different organization members influences his/her working performance through independent paths. Although these trusts all have influences upon an employee's behavior, they also interact with each other to a certain degree. We also found that the effect of an employee's trust in top manager upon his/her working performance is partially mediated by his/her trust in immediate superior.

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References

- Argyris C (1964). *Integrating the Individual and the Organization*. New York: Wiley
- Aryee S, Budhwar P S, Chen Z X (2002). Trust as a mediator of the relationship between organizational justice and work outcomes: Test of a social exchange model. *Journal of Organizational Behavior*, 23: 267–85
- Atuahene-Gima K, Li H (2002). When does trust matter? Antecedents and contingent effects of supervisee trust on performance in selling new products in China and the United States. *Journal of Marketing*, 66: 61–81
- Brislin R (1970). Back-translation for cross-cultural research. *Journal of Applied Psychology*, 1: 185–216
- Bromiley P, Cummings L L (1996). Transaction costs in organizations with trust. In: Bies R, Lewicki R, Sheppard B, eds. *Research on Negotiation in Organizations*. Greenwich, CT: JAI, 219–247
- Brown S P, Leigh T W (1996). A new look at psychological climate and its relationship to job involvement, effort, and performance. *Journal of Applied Psychology*, 81: 358–68
- Connell J, Ferrer N, Travaglione T (2003). Trust in the workplace: The importance of interpersonal and organizational support. *Journal of Management Research*, 3(2): 113–118

- Costigan R D, Ilter S, Berman J (1998). A multi-dimensional study of trust in organizations. *Journal of Managerial Issues*, 10: 303–17
- Davis J, Schoorman F D, Mayer R, Tan, H (2000). Trusted unit manager and business unit performance: Empirical evidence of a competitive advantage. *Strategic Management*, 21(1): 563–576
- Dirks K T (2000). Trust in leadership and team performance: Evidence from NCAA basketball. *Journal of Applied Psychology*, 85: 1,004–1,012
- Dirks K T, Ferrin D L (2001). The role of trust in organizational settings. *Organization Science*, 12: 450–67
- Dirks K T, Ferrin D L (2002). Trust in leadership: Meta-analytic findings and implications for research and practice. *Journal of Applied Psychology*, 87: 611–628
- Edmondson A (1999). Psychological safety and learning behavior in work Teams. *Administrative Science Quarterly*, 44: 350–83
- Ellis K, Shockley-Zalabak P (2001). Trust in top management and immediate supervisor: The relationship to satisfaction, perceived organizational effectiveness, and information receiving. *Communication Quarterly*, 49: 382
- Ferres N, Connell J, Travaglione A (2004). Co-worker trust as a social catalyst for constructive employee attitudes. *Journal of Managerial Psychology*, 19: 608–22
- Gould-Williams J (2003). The importance of HR practices and work place trust in achieving superior performance: A study of public-sector organizations. *Human Resource Management*, 14: 28–54
- Hogan R, Curphy G, Hogan J (1994). What we know about leadership: Effectiveness and personality. *American Psychologist*, 49: 493–504
- Hu L, Bentler P M (1998). Fit indices in covariance structure modeling: Sensitivity to under parameterized model misspecification. *Psychological Methods*, (3): 424–53
- Kirkpatrick S A, Locke E A (1996). Direct and indirect effects of three core charismatic leadership components on performance and attitudes. *Journal of Applied Psychology*, 81: 36–51
- Kramer R M (1999). Trust and distrust in organizations: Emerging perspectives, enduring questions. *Annual Review of Psychology*, 50: 569–98
- Mayer R C, Davis J H (1999). The effect of the performance appraisal system on trust for management: A field quasi-experiment. *Journal of Applied Psychology*, 84: 123–36
- Mayer R C, Gavin M B (2005). Trust in management and performance: Who minds the shop while the employees watch the boss? *Academy of Management Journal*, 48: 874–88
- McAllister D (1995). Affect-based and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal*, 38: 24–59
- Morgan D E, Zeffane R (2003). Employee involvement, organizational change and trust in management. *International journal of human resource management*, 14(1): 55–75
- Payne R L, Clark M C (2003). Dispositional and situational determinants of trust in two types of managers. *International Journal of Human Resource Management*, 14: 128–38
- Podsakoff P, MacKenzie S, Moorman R, Fetter R (1990). Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizenship behaviors. *Leadership Quarterly*, (1): 107–142
- Porter T, Lilly B (1996). The effects of conflict, trust, and task commitment on project team performance. *International Journal of Conflict management*, (7): 361–376
- Rousseau D M, Sitkin S B, Burt R S, Camerer C (1996). Not so different after all: A cross-discipline view of trust. *Academy of Management Review*, 1998, 23: 393–404

- Schriesheim C, Castro S, Cogliser C (1999). Leader-member exchange (LMX) research: A comprehensive review of theory, measurement, and data-analytic procedures. *Leadership Quarterly*, 10: 63–113
- Tan H H, Tan C S F (2000). Toward the differentiation of trust in supervisor and trust in organization. *Genetic, Social and General Psychology Monographs*, 126: 241–60
- Tsui A S, Pearce J L, Porter L W, Tripoli A M (1997). Alternative approaches to the employee-organization relationship: Does investment in employees pay off? *Academy of Management Journal*, 40: 1089–1121
- Wong Y T, Wong C S, Ngo H Y (2002). Loyalty to supervisor and trust in supervisor of workers in Chinese joint ventures: A test of two competing models. *International Journal of Human Resource Management*, 13: 883–900