

Trust, individualism and job characteristics as predictors of employee preference for teamwork

Sandra A. Kiffin-Petersen and John L. Cordery

Abstract Employee resistance has long been recognized as a key constraint on the success of organizational change initiatives. However, it is only recently that employee attitudes towards working in teams has been specifically investigated as a factor influencing team effectiveness. Using data from 218 employees in 40 self-managing work teams, we examined the relationship between trust, individualism, job characteristics and team members' attitudes towards teamwork. Providing a partial test of Mayer *et al.*'s (1995) relational model of trust, the results indicate that the two situational forms of trust (trust in co-workers and trust in management) were stronger predictors of an employee's preference for teamwork than propensity to trust. Trust in co-workers was found to partially mediate the relationship between a person's propensity to trust strangers and their preference for working in a team. The importance of considering the dispositional variables of propensity to trust and individualism as factors that influence an employee's preference for teamwork, as well as their trust in management, trust in co-workers and their opportunity for skill utilization are discussed.

Keywords Propensity to trust; trust in co-workers; trust in management; individualism; job characteristics; preference for teamwork.

Introduction

Despite the fact that the introduction of teamwork is among the most popular and pervasive managerial interventions aimed at increasing employee and organizational effectiveness (Cohen and Bailey, 1997; Osterman, 1994, 2000), employee attitudes towards teamwork remain relatively under-researched. Though teams are frequently reported to fail (Hackman, 1990), and employee resistance has long been recognized as a key constraint on the success of organizational change initiatives (Odiome, 1981), it is only recently that employee attitudes towards working in teams have been empirically investigated. Factors that have been found to influence employees' attitudes towards working in teams include dispositional explanations, such as a low tolerance for change (Kirkman *et al.*, 2000) and cultural values (Kirkman and Shapiro, 1997, 2001), as well as the situational variables of justice perceptions (Kirkman *et al.*, 1996; Kirkman *et al.*, 2000; Shapiro and Kirkman, 1999), managerial support for team

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decision making, role clarity, workload distribution and team social support (Jones and Lindley, 1998) and trust (Kirkman *et al.*, 2000).

The purpose of this paper is to expand the list of predictors of attitudes towards teamwork to include both dispositional and situationally derived forms of interpersonal trust as well as the content of a person's job. The hypothesized relationship between these predictors and preference for teamwork is shown in Figure 1. This paper will contribute to the literature on teamwork in several important ways. First, Kirkman *et al.*'s (2000) content analysis of the comments of employees in two Fortune 500 companies in the process of implementing self-managing work teams found that 23 per cent of all comments centred on the issue of trust. However, they did not identify the referent for that trust, that is, whether it was in relation to their co-workers, management or a generalizable trait of the individuals concerned. Distinguishing between the influence of dispositional (e.g. a person's propensity to trust others) and various situational bases of trust (e.g. trust in co-workers, trust in managers) has the potential to add significantly to our understanding of the precise source of attitudes associated with resistance to teamwork. Second, despite the fact that individualistic orientations have been identified as potential antecedents of employee preferences for teamwork (Kirkman and Shapiro, 1997), a mechanism linking such values and preference for teamwork has not been proposed. In this study, the possibility that trust in co-workers mediates the relationship between individualistic orientation and attitude towards teamwork is investigated. Third, the possibility that attitudes to teamwork are influenced by the extent to which working in teams has resulted in individuals

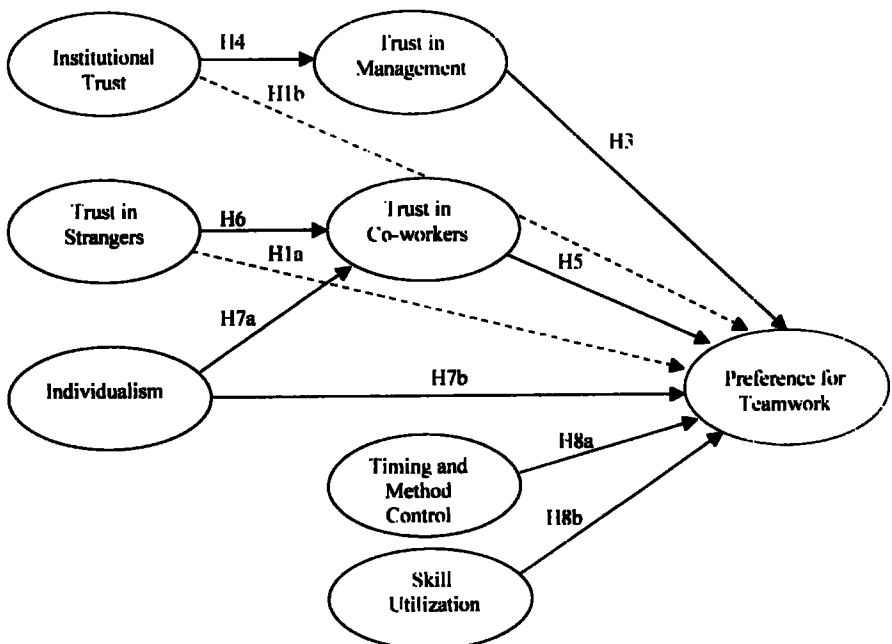


Figure 1 Hypothesized relationships between the predictor variables and preference for teamwork

experiencing jobs that are intrinsically motivating and rewarding has also yet to be investigated.

Trust and preference for teamwork

Golembiewski and McConkie observed that 'perhaps there is no single variable which so thoroughly influences interpersonal and group behavior as does trust' (1975: 131). Interpersonal trust is widely considered to be critical for effective functioning in groups (Creed and Miles, 1996; Dirks, 1999; Friedlander, 1970; Jones and George, 1998; Lawler, 1992; Mayer and Davis, 1999; Mayer *et al.*, 1995; Kiffin-Petersen and Cordery, 1998; Simons and Peterson, 2000). Yet, remarkably little effort has been devoted to articulating the key role that trust plays in an employee's willingness to accept greater degrees of self-management and the increased interdependence associated with teamwork (Costigan *et al.*, 1998; Lewicki and Bunker, 1996; Mayer and Davis, 1999).

Research into trust in work teams has been hindered somewhat by the lack of consensus over a suitable definition of the construct. In a recent review, Kramer (1999: 571) concluded, somewhat pessimistically, 'a concise and universally accepted definition of trust [has] remained elusive'. However, vulnerability and positive expectations are common to most definitions (Rousseau *et al.*, 1998), and so interpersonal trust is defined here as:

the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party.

(Mayer *et al.*, 1995: 712)

The recent organizational behaviour literature on interpersonal trust has also tended to distinguish between dispositional and situational bases of trust. For example, Mayer *et al.*'s (1995) relational model incorporates propensity to trust, a dispositional variable, as well as trust that arises from the person's perception of the other's trustworthiness (i.e. their perceived ability, integrity and benevolence in a specific situation). An individual's propensity to trust is a generalized predisposition or personality trait that develops in varying degrees depending on a person's personal experiences with significant others, particularly during their early socialization (Rotter, 1967, 1971; Wrightsman, 1964). Stack observed that '[a]fter many experiences with *different agents in varying situations*, an individual builds up generalized expectancies' (1978: 568, emphasis added). These expectancies are learned not only from a person's immediate experiences with their parents, peers and teachers, but also from others with whom the person may have little direct contact, such as the news media, repairpersons, politicians, salespersons, judiciary and people in general (Rotter, 1967, 1971). Therefore, in this paper we also distinguish between two forms of dispositional trust: trust in strangers and institutional trust, since this may provide better prediction than trust as a generalized expectancy (Wright and Tedeschi, 1975). Trust in strangers is concerned with a person's perception that unknown individuals might behave towards them in an exploitative manner. In contrast, institutional trust refers to trust towards specific entities in society such as the justice system and public officials.

In the majority of studies, situational-based trust has been found to be a stronger predictor of attitudes and behaviour than a person's propensity to trust (Butler, 1983, 1991; Driscoll, 1978; Kee and Knox, 1970; Schlenker *et al.*, 1973; Scott, C. L., 1980; Scott, D., 1980). Dispositional trust is considered more predictive of behaviour in novel, ambiguous or unstructured situations (Bigley and Pearce, 1998; Mayer, *et al.*, 1995;

Rotter, 1971). Therefore, in the context of established work teams, dispositional trust is expected to be a weaker predictor of attitudes, and hence behaviour, than situational trust. The internal structure of established work teams is potentially too well developed to permit generalized expectancies to play a significant role. However, trust in strangers might play a greater role in the success of newly formed teams and in the attitudes and behaviours of new team members towards their co-workers. Similarly, institutional trust might better predict a new employee's initial trust in management prior to more specific information about the ability, integrity and benevolence of management (Mayer *et al.*, 1995) becoming available.

The high degree of co-operation required for teamwork suggests that groups composed of high-trust employees will be more effective than those composed of low-trust members. Rotter (1971) found that high-trust individuals were perceived as less dependent on others (in making decisions and seeking advice and assistance) and were considered by their peers to be more co-operative and trustworthy. Hollon and Gemmill (1977) also found dispositional trust to be positively related to employees' perceived participation in decision making and job satisfaction. High-trust employees might therefore hold a more positive attitude towards self-management and teamwork, thereby helping to reduce process losses, lower transaction costs and contribute to effective task behaviour in work teams (Hackman, 1987). Hence, in the context of established work teams we hypothesize the following:

Hypothesis 1: An employee's propensity to trust, as measured by the degree to which they trust strangers (H1a) and institutions (H1b), will be positively related to their preference for teamwork.

Hypothesis 2: An employee's trust in management (H2a) and trust in co-workers (H2b) will be stronger predictors of their preference for teamwork in established work teams than either their trust in strangers or institutional trust.

Trust in management

Some evidence exists to suggest that trust in management may be associated with positive organizational outcomes, including satisfaction with participation in decision making (Driscoll, 1978), job satisfaction (Cook and Wall, 1980; Driscoll, 1978; Hollon and Gemmill, 1977; Scott, D., 1980), organizational commitment (Cook and Wall, 1980), receptiveness to organizational change initiatives (Condrey, 1995; Hollman, 1976; Scott, D., 1980) and satisfaction with autonomous work group membership (Ward, 1997). An employee's reaction to breaches of the psychological contract (Robinson, 1996) and their intention voluntarily to leave the organization (Costigan *et al.*, 1998) have also been found to be related to trust in management. Previous correlates of trust in management are summarized in Table 1.

Employees' trust in management may therefore be a significant factor in their attitude towards major organizational changes, such as the implementation of self-managing teams (Kirkman *et al.*, 2000), which involve extensive structural, philosophical and value changes (Goodman *et al.*, 1988). Manz and Sims observed that the successful implementation of self-managing teams in a paper mill was associated with a 'pervasive sense of trust in and respect for the mill's top management' (1993: 72). In a study of work teams in a chemical plant, Ward (1997) also found a positive relationship between production employees' satisfaction with autonomous work group membership and their trust in management. According to motivated reasoning theory, employees who trust

Table 1 *Previous correlates of trust in management*

<i>Variable (study)</i>	<i>Correlation</i>
Job satisfaction (Cook and Wall, 1980)	.43 to .57***
Overall job satisfaction (Driscoll, 1978)	.52**
Satisfaction with participation in decision making (Driscoll, 1978)	.35**
Organizational commitment (Cook and Wall, 1980)	.42 to .61***
Management by objectives (Scott, D., 1980; Hollman, 1976)	.50 to .53***
Satisfaction with autonomous work group membership (Ward, 1997)	.58***
Intention to voluntarily leave (Costigan <i>et al.</i> , 1998)	-.54***
Propensity to trust (Mayer and Davis, 1999)	.21**

Note

* $p < .05$, ** $p < .01$, *** $p < .001$.

management are more likely to perceive management's espoused reasons for the organizational changes as legitimate, generating greater acceptance of the subsequent changes (Rousseau and Tijoriwala, 1999). In a study of nurse empowerment, Rousseau and Tijoriwala (1999) concluded that trust in management played a central role in the change process since it significantly influenced employees' interpretation of the reasons given to justify the changes. In a longitudinal study of newly hired managers, Robinson (1996) found that an employee's initial trust in their employer was negatively related to subsequent perceived breaches of the psychological contract. Robinson suggested that this relationship might be explained by the fact that untrustworthy employers are more likely to violate an employee's contract, and also that selective perception may cause employees to seek out and recall only the information that confirms their prior attitudes. A particularly significant finding in Robinson's study is that trust in management also mediated the relationship between contract violation and the employee's subsequent contributions to the organization (e.g. self-rated performance, civic virtue behaviours, intentions to remain and turnover). Employees who had a low initial trust in management also experienced a greater decline in trust subsequent to contract violation than did those with high initial trust. Continued contract violations by management can therefore result in a downward spiralling of trust and, hence, employees' subsequent contributions to the organization. As employees' distrust of management increases, they may revise their psychological contracts and move away from the more socio-emotional aspects, such as loyalty, commitment and extra-role behaviours, towards a more transactional focus on pay and short-term obligations (Rousseau, 1989, 1990; Rousseau and McLean Parks, 1993).

Sufficient evidence therefore exists to suggest that trust in management may be a major factor in an employee's receptivity to organizational change, such as their preference for working in a team. High managerial trust may act as a buffer to reduce employee resistance and maintain their continued goodwill in the face of the significant organizational changes that accompany team-based forms of work organization. When trust is present, employees are more likely to perceive the introduction of teams as legitimate rather than self-serving (Rousseau and Tijoriwala, 1999), potentially reducing their resistance to the changes. Given that trust develops slowly in the workplace (Taylor, 1989), and that once destroyed it is not easily restored (Fukuyama, 1995; Robinson, 1996; Rousseau and McLean Parks, 1993), management can ill afford to ignore the influence of trust on employees' attitudes and their subsequent contributions to the organization, including their job performance, citizenship behaviours and intention to remain. We therefore hypothesize that:

Hypothesis 3: An employee's trust in management will be positively related to their preference for teamwork.

Hypothesis 4: An employee's trust in management will mediate the relationship between their institutional trust and preference for teamwork.

Trust in co-workers

The relevance of trust in co-workers for effective teamwork appears obvious. Effective work teams have a number of defining characteristics that highlight the need for members to trust each other in a significant manner. First, such teams typically involve increased levels of interdependence (Wageman, 1999), where team members are naturally vulnerable to the actions of others in carrying out their work. Interdependence is a key characteristic of teams since members are dependent on each other to accomplish both the organization's and their own goals (Mayer *et al.*, 1995). The only pathway to effective task performance and goal attainment is through co-operation, and trust is considered a key antecedent of co-operation (Smith *et al.*, 1995). The level of interdependence in work teams typically varies depending on the nature of the task, the structure of the reward system and whether goal setting and performance feedback occur at the team level (Campion *et al.*, 1993). Higher interdependence increases the frequency of team members' interactions, potentially increasing the degree of risk involved in trusting co-workers. Indeed, some employees have expressed the fear that working in teams may lead to greater confrontation with their co-workers (Orsburn *et al.*, 1990). Hence, employees who experience low trust, either as a consequence of their disposition and/or because of situational influences, are likely to try to limit their dependence on other team members, resisting any changes which might serve to increase their reliance on, and therefore vulnerability in relation to, others (Zand, 1972). Low-trust team members are also likely to be less open and more defensive in their relationships with other members (Gibb, 1964) resulting in ineffective problem solving (Boss, 1978; Zand, 1972) and reduced creativity (Klimoski and Karol, 1976). Mutual learning will also be influenced by low trust through reduced opportunities to learn and utilize new skills and in the sharing of information and knowledge of the work process. Low trust may also be manifested in resistance behaviours, such as the deliberate withholding of information (Zand, 1972), refusal to co-operate, frequent monitoring of co-workers (Strickland, 1958) and the absence of group citizenship behaviours such as helping, civic virtue and team sportsmanship (Podsakoff *et al.*, 1997).

A second reason for the significance of trust in co-workers in team contexts is that, in contemporary organizations, teams are frequently required to exercise high levels of self-management, carrying increased responsibility or accountability for decision making in relation to the conduct of work and the internal functioning of the team. In contrast to traditional work groups, where control is exercised through a system of hierarchical supervision located externally to the group, teams with high levels of self-management typically rely on self-regulation from within the group (Manz and Sims, 1987). Work roles are defined in terms of their contribution to the group's primary or 'whole' task, rather than to a specific job or to the organization, necessitating the development of internal control mechanisms to co-ordinate the activities of individual team members and reduce uncertainty. Often team members must establish their own roles, mission, goal and value statements, reward systems, career development procedures, justice systems, behavioural norms and selection/placement mechanisms (Manz and Sims, 1993). Goals, for example, cannot be accomplished unless team

members know what the goal is and co-operate in its attainment. Again, this potentially exposes the team member to risk, consequent on the actions of others in the team. For example, the team may decide to organize its patterns of work in such a way that it favours certain individuals and not others. Or, certain team members may refuse to accept their share of the team's self-management responsibilities, leading to enhanced workload for others in order to achieve the team's goal. Such divergent messages may generate further role conflict and role ambiguity, contributing to the development of poor exchange relationships with other team members (Seers *et al.*, 1995) and a less than positive attitude towards teamwork. As a result, both self-management and increased interdependence place considerable demands on the need for interpersonal trust between individual team members. In this paper, we therefore argue that team members' specific trust in their co-workers will influence their attitudes towards teamwork. In the context of a study of established work teams, it is hypothesized that:

Hypothesis 5: An employee's trust in their co-workers will be positively related to their preference for teamwork.

Hypothesis 6: An employee's trust in their co-workers will mediate the relationship between trust in strangers and their preference for teamwork.

Individualism

Kirkman and Shapiro (1997) identified the cultural values of individualism and collectivism as factors potentially influencing an employee's preference for (or resistance to) teams. In the present study, the individualistic orientation of team members was investigated since it is proposed that these values are also likely to influence the extent to which employees' trust their co-workers. Individualism-collectivism is one of four dimensions identified by Hofstede (1980) in his seminal study of national cultural values. Individualistic societies tend to accord one's personal interests greater importance than the needs of the group (Wagner, 1995). People are expected to look after themselves such that there is 'emotional independence' of the individual from the group and a 'belief [is placed] in individual decisions' (Hofstede, 1980: 48). Conversely, Hofstede defines collectivism as a tight social framework where a person's identity is derived from the social system rather than the individual. Loyalty towards the group in exchange for protection is an important aspect of collectivistic societies. An individual's orientation towards the self versus the group is therefore likely to influence their attitude and behaviour in the context of work teams significantly. The development of trust in co-workers, for example, requires that team members accept their interdependence and emotionally invest in their interpersonal relationships. Furthermore, teams entrusted with a high degree of self-management must organize their work in such a way that the responsibility for the workload is evenly shared if they are to minimize process losses and develop interpersonal trust. Yet Earley (1989) found a higher incidence of social loafing among the highly individualistic culture of the United States than among the Chinese, a highly collectivist culture.

Kirkman and Shapiro (1997) therefore proposed that an individualistic values orientation would predispose an employee to resist the interdependence associated with teamwork. A recent test of their proposition found that employees who were more individualistic did tend to report greater resistance towards working in teams, and were

also less satisfied and committed to their organization (Kirkman and Shapiro, 2001). Hence, it is hypothesized in this paper that:

Hypothesis 7: Individualism will be negatively related to an employee's trust in their co-workers (H7a) and their preference for teamwork (H7b).

Job characteristics

Other factors that can potentially influence employees' attitudes towards teamwork are those that arise from the design of jobs within those teams. To the extent that working in teams results in individual jobs and work roles that are intrinsically rewarding, one would expect greater levels of employee acceptance of the concept of teamwork. Jobs offering higher levels of autonomy or job control are typically associated with higher levels of job satisfaction and employee performance motivation (Parker and Wall, 1998). Job control in manufacturing settings has been found to have two main components – timing control and method control (Wall and Jackson, 1995). Timing control refers to the 'individual's opportunity to determine the scheduling of his or her work behavior, and method control refers to individual choice in how to carry out given tasks' (Jackson *et al.*, 1993: 754). As hierarchical control mechanisms are removed and the team itself assumes responsibility for various aspects of the work process, such as task assignments, methods for carrying out the work and scheduling of activities, an employee's job control potentially increases. Job characteristics theory predicts that, as job control increases, employees will find their work more and more intrinsically rewarding, sustaining increased levels of job satisfaction and motivation (Hackman and Oldham, 1980). Yet, the creation of teams, even self-managing ones with heightened levels of collective control over work timing and methods, does not of itself guarantee that the jobs of individual members will be high in opportunities for job control (Barker, 1993). Therefore, we would predict that an individual's preference for teamwork would be dependent to a significant extent on how they perceive teamwork as impacting on the levels of control they have within the job that they do.

The introduction of teams can also result in individual job roles that offer greater opportunities for the development and use of valued skills (Girardi *et al.*, 1998). Frequently, teams involve a heavy investment in team skill development, usually through multi-skilling or cross training of team members to achieve greater team flexibility and an improved understanding of the work process. Teamwork thus potentially also benefits individual team members by providing them with opportunities to learn and utilize new skills, an outcome that could contribute towards a more favourable attitude towards teamwork. The opportunity to learn and utilize new skills has been termed skill utilization (O'Brien, 1982), and this aspect of an employee's work experience has been found to have a consistent and powerful impact on job satisfaction (Girardi, 2000). Given these arguments, we would hypothesize that employee preferences for teamwork would be influenced by their perception of the extent to which working in teams provides opportunities for both increased job control and increased skill utilization.

Hypothesis 8: Perceived job control, as measured by method and timing control (H8a), and skill utilization (H8b) will be positively related to an employee's preference for teamwork.

Method

Sample and procedure

The sample in this study comprised 218 members of forty self-managing work teams employed by a large Australian water utility. These teams were variously responsible for fresh water transport and treatment, and for operating wastewater treatment plants prior to the release of the effluent into the rivers and ocean. Pressure to comply with stringent environmental standards had resulted in increasingly complex treatment processes which required advanced computer-based automation and control systems in place of the previously manually operated plants (Wright, 1996). As a result, the skill level required by the plant operators had greatly increased. Several years prior to this study, the organization, through training and widespread restructuring of jobs and work roles, began to gradually move to a self-managing team approach in both its wastewater treatment (see Wright and Cordery, 1999) and water supply divisions. The current study involved the administration of a survey as part of the ongoing evaluation of the impact of these changes on employee attitudes and team performance, since it can take up to five years for self-managing teams to be fully implemented (Manz and Sims, 1993).

The survey was administered to all employees located in one business unit of the water authority during work time. Participation was voluntary, and both the union and management within the company supported the study. To ensure confidentiality, two union officials oversaw the administration of the survey. Completed surveys were then mailed directly to the researchers. Of the 287 employees invited to respond, a total of 220 returned completed questionnaires with 4.53 per cent on sick or maternity leave. Of these, 218 questionnaires were usable, representing an overall response rate of 76 per cent.

The majority of the respondents were male (93.6 per cent) with only 2.8 per cent female and 3.7 per cent unreported. The average age of the participants at the time of the survey was 42 years with an average length of employment with the organization of 13.6 years. The sample included employees with a wide range of educational qualifications: 11 per cent had no additional qualifications beyond high school, 17 per cent had a certificate and 7 per cent had a diploma from a technical college, 30 per cent had a trade qualification, 15 per cent had an undergraduate degree, 2 per cent had a postgraduate degree and 9 per cent had other qualifications.

Measures

All of the scale items were measured using a seven-point Likert scale anchored by strongly disagree and strongly agree. Items used in the final analyses to test the hypotheses are shown in Table 2.

Preference for teamwork Preference for teamwork was measured using two positively worded items from Kirkman and Shapiro's (2001) five-item scale assessing a person's resistance to teams and the three-item scale measuring a person's preference for working in groups developed by Campion *et al.* (1993).

Propensity to trust Individual propensity to trust was measured using eight items from Rotter's Interpersonal Trust Scale (ITS) with four items addressing trust in strangers and four items referring to institutional trust (Rotter, 1967, 1971). The use of the scale has the advantage that its discriminant validity has been previously established (Rotter, 1971). Items with a high correlation with the Marlowe-Crowne Social

Table 2 *Factor loadings and scale items for all measures*

Item	PT	TC	TW	IT	I	TM	SU	TS	MC
1 I generally prefer to work as part of a team	.95	.05	-.01	-.02	.00	.02	.02	-.03	.01
2 I am eager to be working with other employees in a team	.84	.03	.00	-.03	.00	-.03	-.07	.00	.14
3 I find that working as a member of a team increases my ability to perform effectively	.81	.08	-.03	-.01	-.04	.04	-.07	.00	.14
4 I feel that, if given a choice, I would prefer to work in a team rather than work alone	.77	-.09	.03	.05	-.01	.00	-.04	.06	.02
5 I support the use of teams in this company	.71	-.01	-.05	.01	-.01	-.09	-.03	-.04	.07
6 I decide when to start a piece of work	.03	.94	.03	-.07	.00	.00	.02	-.04	.05
7 I decide when to finish a piece of work	.03	.90	.00	.03	-.04	.00	.04	-.03	.04
8 I decide on the order in which I do things	.00	.71	.06	-.03	.01	.02	-.04	.06	.16
9 I have confidence in the skills of my workmates	-.04	-.03	.89	.04	.00	.04	-.01	.05	.00
10 Most of my workmates can be relied upon to do as they say they will do	.01	.02	.83	.07	-.06	-.04	-.02	.07	.04
11 My fellow workers would get on with their work even if their supervisor wasn't around	.02	-.05	.82	-.07	.12	.06	-.04	-.09	.07
12 If I got into difficulties at work, I know my workmates would try to help me out	.07	.01	.81	.00	.03	.03	-.02	.04	.06
13 I can trust the people I work with to lend me a hand if I need it	.04	-.03	.75	-.03	-.01	-.01	-.05	-.08	.08
14 I can rely on other workers not to make my job more difficult by careless work	.06	.02	.71	.02	-.15	.03	.08	.06	.03
15 Most repairpersons will not overcharge, even if they think you're ignorant of their speciality	-.07	-.02	-.01	.76	-.01	-.01	-.03	-.02	.01
16 Most elected public officials are really sincere in their campaign promises	.03	-.03	-.01	.75	.06	-.05	.00	.06	.07
17 Most salespeople are honest in describing their products	-.01	-.04	.06	.68	-.06	-.08	.02	.11	.04
18 The justice system is a place where we can all get unbiased treatment	.11	.02	.08	.50	-.13	-.13	-.03	.01	.01
19 People tend to think of themselves first, before others	.02	.04	.05	-.10	.72	-.07	-.07	-.03	.06
20 It is natural to put your own interests ahead of others	-.15	-.05	.08	-.02	.65	.10	.02	-.04	.12
21 Society works best when each person serves his/her own interests	-.09	.16	-.06	.26	.34	.01	-.06	.04	.26

22	Management at work seem to be doing an efficient job	.12	-.02	.00	.17	.07	.79	.03	.09	.03
23	Management can be trusted to make sensible decisions for the firm's future	.09	-.09	.01	.22	.16	.77	.04	.05	-.10
24	I feel quite confident that the firm will always treat me fairly	.06	-.01	-.05	.20	.10	.69	-.08	-.02	.08
25	Management in my firm is sincere in its attempts to meet the workers' point of view	.12	-.02	.04	.20	.06	.65	.02	.04	-.02
26	Our firm has a poor future unless it can attract better managers	-.13	.01	-.10	-.18	-.14	.55	-.11	-.02	.04
27	Our management would be quite prepared to gain advantage by deceiving the workers	.06	.02	.04	-.15	-.22	.50	.00	-.20	-.07
28	I participate in activities to learn new skills	.05	-.06	-.02	-.06	.05	-.01	.82	.02	-.10
29	I have the opportunity to learn new skills	.13	-.07	.08	.04	-.01	-.08	.79	.03	.10
30	I use all of the skills, talents and abilities I possess, on a regular basis	.05	.05	-.02	.15	-.02	.16	.72	.02	-.04
31	I apply my skills, knowledge and abilities to my job in a way I think is best	-.03	.06	-.09	-.02	-.06	-.01	.57	.07	-.13
32	I am cross-trained to do other jobs	-.03	.05	-.11	-.13	.13	-.16	.42	-.04	-.09
33	In these competitive times, one has to be alert or someone is likely to take advantage of you (reverse scored)	-.03	-.01	.05	-.10	.03	.01	-.05	.70	-.06
34	Most people would be horrified if they knew how much the news that the public hears and sees is distorted (reverse scored)	-.02	-.06	.00	.01	-.07	-.01	.00	.64	-.02
35	In dealing with strangers, one is better off to be cautious until they have provided evidence they are trustworthy (reverse scored)	.00	.09	-.10	-.01	-.06	.01	-.05	.51	.03
36	It is safe to believe that in spite of what people say, most people are primarily interested in their own welfare (reverse scored)	.10	.02	-.01	-.16	.33	-.06	.06	.38	-.03
37	I can decide how to go about getting my job done	-.01	.11	-.05	.03	.00	.00	-.09	.06	.81
38	I can control the quality of what I produce	.07	.02	-.03	.07	.01	-.04	-.08	-.02	.67
39	I plan my own work	.00	.22	-.08	.03	.09	.00	.03	.07	.64
40	I can choose the methods to use in carrying out my work	-.01	.20	.01	.06	-.04	.06	-.14	.02	.64

Note

PT = preference for teamwork; TC = timing control; TW = trust in co-workers; IT = institutional trust; I = individualism; TM = trust in management; SU = skill utilization; TS = trust in strangers; MC = method control.

Desirability Scale (Crowne and Marlowe, 1964) were eliminated in the construction of the scale.

Individualism Three items were retained from the individualism scale developed by Maznevski and DiStefano (1995) for use at the individual level of analysis. The scale assesses the relative importance a person places on self-interests compared to shared pursuits.

Trust in co-workers This was assessed using the six-item scale developed by Cook and Wall (1980), a measure that includes both cognitive and affective aspects of interpersonal trust (McAllister, 1995).

Trust in management This was assessed using the six-item scale developed by Cook and Wall (1980), which measures the extent to which employees ascribe good intentions to, and have confidence in, the actions of management. Both the trust in co-worker and trust in management scales have been found to exhibit good internal reliability, be factorially discrete and to reveal satisfactory construct validity (Clegg and Wall, 1981).

Job control This was measured in terms of timing and method control using seven items from the scale developed by Jackson *et al.* (1993). Timing control measures the extent to which team members decide when to start and finish a piece of work and on the order in which they do things. Method control assesses whether team members can decide how to go about getting their job done and can control the quality of what they produce.

Opportunity for skill utilization This was measured using a five-item scale developed by Girardi *et al.* (1998) that assesses the extent to which team members have the opportunity to apply their skills, talents and abilities, and to learn new skills.

Analyses

Three sets of analyses were conducted. First, an exploratory factor analysis (EFA) using principal axis factoring with oblimin rotation and pairwise deletion was carried out to assess the dimensionality of the trust and other measures (Conway and Huffcutt, 2001; Fabrigar *et al.*, 1999; Ford *et al.*, 1986). EFA was chosen over confirmatory because of the small sample size and the large number of items (40) (Bentler and Chou, 1987). The minimum accepted sample size for reliable factors using EFA is five individuals per variable, but not less than 100 individuals for any analysis (Comrey and Lee, 1992; Gorsuch, 1983). The sample size of 218 employees was therefore considered adequate. Using the eigen value greater than one rule, an examination of the scree plot and a priori theory (Ford *et al.*, 1986), nine factors were retained, explaining 60 per cent of the total variance. Scale items used in the subsequent analyses are reported in Table 2. A decision rule of including only items with a clear loading of .40 or higher, and cross-loadings of less than .35, was used with two exceptions (Ford *et al.*, 1986). Two items with a loading less than .40 were retained to ensure that the conceptual domain of the construct was adequately covered (Podsakoff *et al.*, 1997). Consistent with previous factor analyses of the Interpersonal Trust Scale, the 'propensity to trust' measure was found to be multi-dimensional, reflecting the relative differences in the trust referent (Kaplan, 1973; Stack, 1978; Wright and Tedeschi, 1975).

Table 3 Means, standard deviations, reliabilities and intercorrelations for all variables (N = 218)

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1 Trust in strangers	5.26	0.91	(.66)										
2 Institutional trust	3.10	1.26	-.22***	(.79)									
3 Individualism	4.09	1.14	.11	.07	(.58)								
4 Trust in co-workers	5.62	1.02	.23***	-.00	-.18**	(.92)							
5 Trust in management	4.20	1.30	-.02	.33***	.03	.15*	(.84)						
6 Timing control	5.14	1.32	.12*	-.04	.06	.06	-.10	(.92)					
7 Method control	5.62	0.90	.15*	.03	-.17**	.34***	.19**	.32***	(.87)				
8 Skill utilization	5.63	0.90	.16*	.08	-.01	.40***	.25***	.23***	.41***	(.83)			
9 Preference for teamwork	5.69	0.93	.18**	.07	-.14*	.45***	.30***	.15*	.37***	.45***	(.91)		
10 Organizational tenure	13.60	8.86	.06	.02	-.01	.03	-.18**	.06	-.08	-.02	-.14*		
11 Age	42.20	8.39	.09	.09	.00	.09	-.05	.02	.03	.08	.11	.45***	
12 Education level	3.99	1.65	.12	-.03	.04	.14*	-.09	-.09	-.05	-.07	-.07	.37***	.21**

Notes
 Cronbach alpha reliabilities are shown on the diagonal in parentheses.
 * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 4 Summary of hierarchical regression analysis for preference for teamwork

	R^2	Adj. R^2	ΔR^2	SE	ΔF
Step 1					
Tenure	.02	.02	.02	.86	4.11*
Step 2					
Institutional trust					
Trust in strangers	.07	.05	.03	.85	5.20**
Step 3					
Individualism	.10	.08	.03	.84	6.76**
Step 4					
Trust in management	.16	.14	.06	.81	15.51***
Step 5					
Trust in co-workers	.28	.26	.12	.75	35.08***
Step 6					
Timing and method control					
Skill utilization	.36	.33	.07	.71	11.38***

Note

* $p < .05$. ** $p < .01$. *** $p < .001$.

Second, measures of scale reliability using Cronbach's alpha were calculated on the scales retained following the factor analysis and are shown on the diagonal in Table 3. All scales, with the exception of trust in strangers (Cronbach's $\alpha = .66$) and individualism (Cronbach's $\alpha = .58$) had internal reliability coefficients greater than .70 (Nunnally, 1978). Of particular note are the significant correlations between the respective dispositional and situational forms of trust as predicted, but not the reverse relationship, supporting the discriminant validity of these measures. Further, the measure of individualism is uncorrelated with either of the two dispositional trust measures.

Third, hierarchical regression analysis was used to assess the effects of the predictor variables on preference for teamwork. Both age and education level were uncorrelated with the dependent variable and so were excluded from the regression analyses. To control for the differences in tenure, the number of years of employment with the organization was entered as the first step in the hierarchical regression analysis. The second step of the regression analysis added the dispositional variables of trust in strangers and institutional trust, followed by individualism in step 3. In order to test for mediation (Baron and Kenny, 1986) trust in management was entered next, followed by trust in co-workers and, finally, the perceived job characteristics (method control, timing control and skill utilization). Table 4 displays the R^2 , adjusted R^2 , ΔR^2 , standard errors, ΔF and significance level for each of the hypothesized models. All models were significantly different from zero, with the final model explaining 33 per cent of the variance in preference for teamwork. In the final model, trust in management, trust in co-workers and skill utilization were significant predictors of an employee's preference for teamwork as shown in step 6 of Table 5.

Results

Several of the hypotheses were supported, as shown by the descriptive statistics and zero order correlations presented in Table 3. The lowest mean scores for the trust measures were institutional trust and trust in management, reflecting considerable distrust of significant social entities, including the judiciary, salespersons and

Table 5 Hierarchical regression results of test for mediation

	<i>Variable</i>	<i>B</i>	<i>SE</i>	β
<i>Step 3</i>	Tenure	-.02	.01	-.16*
	Trust in strangers	.22	.06	.23***
	Institutional trust	.09	.05	.13
	Individualism	-.14	.05	-.17**
<i>Step 4</i>	Tenure	-.01	.01	-.12*
	Trust in strangers	.21	.06	.21**
	Institutional trust	.02	.05	.04
	Individualism	-.14	.05	-.17**
<i>Step 5</i>	Trust in management	.19	.05	.27***
	Tenure	-.01	.01	-.12*
	Trust in strangers	.11	.06	.12
	Institutional trust	.02	.05	.03
	Individualism	-.07	.05	-.09**
<i>Step 6</i>	Trust in management	.14	.04	.21***
	Trust in co-workers	.35	.06	.38***
	Tenure	-.01	.01	-.11*
	Trust in strangers	.08	.06	.08
	Institutional trust	.02	.05	.02
	Individualism	-.08	.05	-.09
	Trust in management	.10	.04	.16*
	Trust in co-workers	.24	.06	.26***
Skill utilization	.24	.07	.24***	
Method control	.09	.07	.09	
Timing control	.04	.04	.07	

*Note** $p < .05$, ** $p < .01$, *** $p < .001$.

repairpersons, as well as management. In general, employees in this study reported greater trust towards strangers than towards management, a significant finding since the latter was positively correlated with employees' preference for teamwork. Both dispositional trust measures (institutional trust and trust in strangers) were significantly correlated with their respective situational measures (trust in management and trust in co-workers) but not with each other, supporting the need to distinguish between different forms of dispositional trust in future empirical studies. A surprising result is the significant negative correlation between the two dispositional trust measures. This would appear to confirm that a person can develop generalized expectancies with regard to specific entities and that this can lead to individual differences in levels of trustfulness. Interestingly, the results also suggest that an increasing number of years of formal education are associated with greater trust of fellow workers. Also of note is the significant negative relationship between organizational tenure and trust in management, suggesting that over time an employee's trust in management may decline. Long-tenured employees also reported a more negative attitude towards teamwork than their younger counterparts.

Hypothesis 1 predicted that an employee's propensity to trust, as measured by trust in strangers and institutional trust, would be positively related to their preference for teamwork. Only trust in strangers was significantly correlated with preference for teamwork ($r = .18, p < .01$) (H1a), while institutional trust was positively related, but not significantly (H1b). This finding may be due to a restriction in the range, since these

work teams had been in place for several years prior to the study. Table 5 indicates that trust in strangers is, however, a significant predictor of an employee's preference for teamwork ($\beta = .23, p < .001$) prior to the entry of the other predictor variables.

Hypotheses 2a and 2b theorized that the situational measures of trust would be stronger predictors of an employee's preference for teamwork than either of the dispositional trust measures. This was strongly supported by the findings, with trust in co-workers highly correlated with preference for teamwork ($r = .45, p < .001$) explaining a considerable 12 per cent ($p < .001$, Table 4) of the variance in the model. Trust in management was also correlated with the dependent variable but to a lesser extent ($r = .30, p < .001$), explaining 6 per cent ($p < .001$, Table 4) of the variance. Compared to past correlates of trust in management (see Table 1) this is a moderate effect. Both trust in co-workers ($\beta = .26, p < .001$) and trust in management ($\beta = .16, p < .05$) had significant regression coefficients in the final model (Table 5). Of the dispositional trust measures, only trust in strangers was significantly related to employees' preference for teamwork, explaining 3 per cent ($p < .01$) of the variance, as shown in step 2 of Table 4. Hypotheses 3 and 5 predicted that trust in management and trust in co-workers respectively would be positively related to preference for teamwork and this was supported. These findings support the greater predictive power of situational bases of trust in the context of established work teams. No support was found for hypothesis 4 that trust in management would mediate the relationship between institutional trust and an employee's preference for teamwork.

The mediating role of trust in co-workers in the relationship between trust in strangers and preference for teamwork was tested in hypothesis 6. To establish mediation three conditions must hold. First, trust in strangers must be significantly related to trust in co-workers; second, trust in strangers must be significantly related to preference for teamwork; and, third, trust in co-workers must affect preference for teamwork when trust in strangers is controlled for in the regression (Baron and Kenny, 1986). Hierarchical regression results in Table 5 indicate that trust in co-workers partially mediates the relationship between trust in strangers and preference for teamwork. When trust in co-workers is entered in step 5 the unstandardized regression coefficient for trust in strangers is attenuated by 45 per cent and is no longer significant. However, trust in co-workers still affects preference for teamwork ($\beta = .38, p < .001$), providing support for its role as a mediator in the relationship between an employee's propensity to trust strangers and their preference for teamwork.

Hypothesis 7a was supported by the results, with individualism negatively correlated with trust in co-workers ($r = -.18, p < .01$). Individualism was also a significant (negative) predictor of employee preferences for teamwork ($r = .14, p < .05$), explaining 3 per cent ($p < .01$) of the variance in the dependent variable (H7b). This effect size is consistent with Kirkman and Shapiro's (2001) finding of a correlation of $-.13$ ($p < .05$) between collectivism and employee resistance to teams.

The relationship between job characteristics and preference for teamwork was investigated in hypothesis 8. It was theorized that greater opportunity for skill use and perceived control over timing and method would positively relate to a person's preference for working in a team. Results support skill utilization being strongly related ($r = .45, p < .001$) (H8b), method control to a lesser extent ($r = .37, p < .001$) (H8a) and timing control only weakly related ($r = .15, p < .05$) (H8a). However, in the final model (Table 5) only skill utilization is significant ($\beta = .24, p < .001$). When all other predictors are controlled for, neither perceived timing nor method control is significantly related to preference for teamwork. The addition of skill utilization to the

model explained a further 7 per cent of the variance in preference for teamwork ($p < .001$), as shown by the ΔR^2 in step 6 of Table 4.

Discussion and conclusion

The results of this study have several theoretical implications. First, they provide empirical support for the idea that the degree to which team members trust other workers and management may influence their attitudes towards structural arrangements which bind them in the form of a collective. Including elements of interpersonal trust along with individualistic values (Kirkman and Shapiro, 1997, 2001) within models of employee preference for teamwork should, on the evidence of this study, increase our capacity to predict subsequent employee behaviour and, ultimately, team effectiveness.

Second, the results illustrate the value of distinguishing between dispositional and situational bases of trust, and between different forms of dispositional trust. Results confirm earlier research findings that situational-based trust tends to be a much more powerful predictor of attitudes in structured situations. The findings also suggest that future studies in this area should distinguish between generalized trust in institutions (organizations, societal structures) and trust in strangers (or peers), depending on the context in which the trust relationship is embedded, as this can also add to prediction. This paper does not provide evidence, nor does it claim to, for the influence of generalized expectancies being greater in novel or ambiguous situations. Rotter (1971) has emphasized the misuse of the ITS trust scale in past studies in attempting to predict behaviour in situations which are too highly structured.

Third, it is clear that it is not simply being part of a team of interdependent employees that affects people's reactions to teamwork, but also the nature of the work roles they occupy within that team. It is easy to forget that teams are composed of individuals each occupying specific roles, and that the intrinsic reward characteristics of individual jobs and work roles may be enhanced or constrained by team processes. In particular, the opportunity to use and learn new skills appears to play a significant role in employees' attitudes towards being a member of a team. This finding has clear implications for management in terms of providing employees with the opportunity to increase their skill base through multi-skilling and the provision of a work climate that encourages the transfer of knowledge and skills among co-workers. Investing in extensive technical, interpersonal and team skills training (Katzenbach and Smith, 1993; Lawler, 1992; Stevens and Campion, 1994) is likely to impact positively on team members' attitudes towards working in a team. Team skill development might include, for example, problem solving, decision making, conflict resolution, communication and negotiation, as well as the planning, scheduling and managing of the work itself.

It is clear that there are several limitations to this study, which has been designed as the first in a series of empirical studies examining interpersonal trust and attitudes towards teamwork. First, it is possible to argue that the observed relationship between trust in management and trust in co-workers, job characteristics and preference for teamwork is due to the measurement method. When two or more variables collected from the same source are correlated, the relationship may be due to common method variance (Podsakoff and Organ, 1986) rather than a relationship between the constructs. We are encouraged to believe that this is not entirely the case here, however, by the differential pattern of results. For example, not all the trust measures were significantly correlated either with each other or with preference for teamwork. Additionally, though method control was strongly correlated with trust in co-workers and preference for

teamwork, timing control was uncorrelated with trust in co-workers and only weakly related to preference for teamwork. It would be an unusual common method effect, in our estimation, that gave rise to such a differentiated pattern of findings. Harman's one-factor test also did not support the presence of common method variance since the initial factor explained only 19 per cent of the variance in the model, leaving the other two-thirds of the variance to be explained by the other variables (Podsakoff and Organ, 1986).

Second, the two subscales of dispositional trust, institutional trust and trust in strangers, can be distinguished from each other not only on the basis of differences in the trust referent, but also by the direction in which the items were worded, since some were negatively worded and others positively. The two dimensions obtained from the exploratory factor analysis may therefore potentially be due to a response bias. However, previous factor analyses of the ITP have also found the existence of subscales (Kaplan, 1973; Wright and Tedeschi, 1975). Further, the differential pattern of correlations between the dispositional and situational measures of trust shows the fairly high discriminant validity of the two dispositional trust measures. We also acknowledge that the alpha reliabilities for the trust in strangers measure and individualism were below the generally accepted level. However, these measures were retained because of the theoretical and empirical importance of distinguishing cultural values from dispositional trust directed at specific social entities and that which is related to unknown others (i.e. strangers). In Mayer and Davis's (1999) recent longitudinal study of performance appraisal and trust for management, their eight-item propensity to trust measure also had low alphas of .55 and .66 respectively. Kirkman and Shapiro (2001) also report a borderline reliability for collectivism of .67 for their United States sample. Since the dispositional measures of trust in strangers and individualism in this study included only four and three items respectively, this may have contributed to the low reliability coefficient (Cortina, 1993).

Third, the finding that institutional trust was unrelated to an employee's preference for teamwork may be due to a restriction in the range of values. The four cases that were excluded from the analysis had extreme values for institutional trust, trust in management and preference for teamwork. Thus, employees who are generally distrustful of institutions may harbour substantive long-term negative attitudes towards management, which may then influence other important work attitudes. The context for this study was established work teams, where it might be inferred that both institutional trust and trust in management may have a weaker relationship with attitudes towards teamwork. In the early implementation of work teams it seems likely that both institutional trust and trust in management may be more predictive, given the significant organizational changes that must accompany the introduction of work teams, particularly self-managing ones. Further, this paper did not investigate employees' resistance to self-management (Kirkman and Shapiro, 1997, 2001), which potentially might also be influenced by an employee's institutional trust and their trust in management. Therefore, the generalizability of this paper may be limited to established work teams, with future studies needed to confirm the relative contribution of trust in management and trust in co-workers to employee resistance to teams and, in particular, to the self-management aspects of their work.

Fourth, the research design is cross-sectional rather than longitudinal so that causality can be inferred but not necessarily proven. This is a common flaw in survey-based research into organizational processes, and is a limitation that is acknowledged here. Longitudinal data would have provided a more robust test of the hypothesized causal relationships, but such research in the trust field is relatively rare (Mayer and Davis,

1999), and even rarer in teams research. Hence, given the few empirical studies of interpersonal trust in work teams and the lack of research investigating why teams fail, it is argued that cross-sectional studies of this kind provide important initial support for the inclusion of interpersonal trust and job characteristics in future longitudinal studies of attitudes towards teamwork.

Finally, the paper treated individual attitudes as the dependent variable and did not examine Kirkman and Rosen's (1997) prediction that resistance to teams would ultimately be reflected in diminished team effectiveness. Though sufficient teams exist potentially to carry out an analysis at the team level, unfortunately comparable team effectiveness measures were available for only half the teams. Therefore, the results from this paper are limited to understanding the psychological processes of individual team members (Wekselberg, 1996). To develop our understanding of trust in work teams, future research will need to incorporate interpersonal trust within models of team effectiveness that can be empirically tested. Results from this study suggest that further research at the team level should investigate the relationship between group members' propensity to trust, intra-group trust and team effectiveness, including members' attitudes towards teamwork and the teams' performance.

From a practical perspective this paper has several implications. First, management needs to encourage employees to accept self-management and teamwork by demonstrating their trustworthiness over a reasonable period of time through their ability, integrity and benevolence (Mayer and Davis, 1999). Benevolence is the perception that management is willing to do something positive for team members aside from their self-interests, while integrity is the perception that management adheres to a set of principles that employees find acceptable (Mayer *et al.*, 1995). Issues such as consistency in promises and behaviour, open communications and perceived justice will affect team members' judgements of management's integrity and their future willingness to trust them (Hart *et al.*, 1986). Given trust's importance, consistent information from credible sources is paramount for the acceptance of organizational changes (Rousseau and Tijoriwala, 1999) such as employee empowerment and teamwork.

Second, the results of this paper should encourage those involved in managing teams not to ignore relational aspects of team functioning. Design factors are an important contributor towards employee acceptance of teams (Wageman, 1999) but so, it would appear from this paper, are the potential and actual relationships created by those structures. This suggests that supervisors need to examine ways to make employees more comfortable about accepting and managing the risks associated with team-based interdependence, something that does not currently feature strongly in prescriptive models of team supervision.

Third, in light of Kirkman and Shapiro's (2001) findings that cultural values had a greater impact on employees' resistance to teams in the highly individualistic United States than in other countries, the findings from this study of Australian employees would suggest that managers may also need to pay attention to the influence of individualism on the development of interpersonal trust in teams and, hence, on employees' acceptance of the interdependence associated with teamwork. Too little attention is currently being paid to the fit between cultural values and teamwork, given the widespread popularity of teams in Western countries.

Future research will need to investigate whether or not the relative predictive power of dispositional trust is increased in novel situations, such as when work is redesigned to form self-managing teams. The relationship between trust in management and other types of interpersonal trust that are important in work teams, such as trust in co-workers and trust in the team leader or supervisor, is also an area requiring further research

(McCauley and Kuhnert, 1992). Different, more policy-capturing approaches to the measurement of trust may also give us greater confidence in determining levels, and predicting the outcomes of trust in co-workers. Finally, there is a need to address the antecedents of interpersonal trust in teams. In addition to issues of perceived loyalty and trustworthiness, Mayer *et al.*'s (1995) model would suggest that the perceived ability or competence of co-workers is an important antecedent of trust. We are particularly interested to examine the relationship between multi-skilling and the development of interpersonal trust within work teams.

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