

Sugin Chang*

A Moderating Role of Network Embeddedness in the Relationship Between ICT Personnel's Attitude and Behavior in the Korean Cultural Context**

This study, using samples of four different ICT Chaebol companies, shows how the perceptions of organisational justice predict OCB in the ICT context and how such relationships react with Korean cultural features. Additionally, employees' interactional justice accounted for significantly more variance in OCB than did procedural justice or distributive justice. This study found that expanding this relational model, perceived network embeddedness was taken as a moderating variable which might influence the relationship between interactional justice dimensions and OCB. The study extends the dyadic relationship perspective of social exchange theory and the academic area of organisational justice and OCB outside the Western region. Moreover, since cultural features and management literature indicated that employees from diverse cultural backgrounds and social values would have diverse expectations and value systems and have different work attitudes and perceptions, the findings may contribute to the diffusion of literature which indicate that understanding cultural values and its reflection is crucial in investigating employees' perceptions and OCB intentions in organizational settings.

Keywords: network embeddedness, organisational justice, organisational citizenship behaviour, ICT workers, Korean cultural context (JEL-Codes: D23, D91, M12, M14)

Introduction

Rapidly changing technology and the growth of ICT (Information & Communication Technology)-related activities in all sectors have led to shortages of highly-qualified ICT professionals. However, working environments of ICT personnel are often highly stressful and professionally demanding to at times, cause ICT personnel to adopt an irresponsible and apathetic attitude. Prior research in the information technology personnel area has focused on attitudes and motivation (Agarwal & Ferratt, 2000), moral behaviour and professional spirit of ICT workers (Murata & Higashimoto, 2004), required skills (Nelson, 1991), and IT professionals' ethical attitudes (Jin, Drozdenko, & Basset, 2006). Particularly, this field has received a large

* Prof. Dr. Sugin Chang: Kongju National University, Department of Business Administration, Gongju-Daehak Ro 56, Gongju City, Chungnam, 32588 South Korea, Email: schang@kongju.ac.kr.

** Article received: February 8, 2016.
Article accepted: Mai 24, 2017.

amount of attention in the relevant literature because many important organisational attitudes and behaviours can be directly linked to personnel's perceptions of fairness and reciprocal trust (Roch & Shanock, 2006) and discretionary behaviour (Colquitt et al., 2013; Cohen-Charash & Spector, 2001). One of the most substantial issues to workers organised labour, and management is organisational justice in the workplace (Greenberg, 1993; Cropanzano, Bowen, & Gilliland, 2007), which emerges as an impotent determinant of employee attitudes, decisions, and behaviour (Konovsky, 2000; Gilliland & Chan, 2001).

According to an employee's perceptions of fair rewards for work performed (Adams, 1965), employee job performance may either increase or decrease. Specifically, employees who perceive unfairness at work may be inclined to reduce their organisational citizenship behaviour (OCB). Finding that the perception of organisational justice exerted strong effects on OCB, Moorman (1991) demonstrated that employees' interaction with managers or supervisors communicated meaningful information about this relationship. Organizational fairness perception should increase the likelihood that highly embedded employees will exhibit OCB. Much of such logic explicitly has an impact of network embeddedness on voluntary extra-role behaviour like OCB that is seen as procedures that help others better perform their jobs such as training co-workers, thereby enhancing organisational effectiveness (Van Dyne, Cummings, & Parks, 1995).

As Greenberg (2001) mentioned, the perception of employees' attitude and fairness cannot be considered entirely without understanding the difference in national culture and social structures. Eastern studies demonstrated that employees in Taiwan (Farh, Earley, & Lin, 1997), Hong Kong (Lam, Schaubroeck, & Aryee, 2002), China (Brockner et al., 2001; Tyler, Lind, & Huo, 2000) and Korea (Chung, Lee, & Jung, 1997) were influenced differently by justice perceptions, depending on their value orientation of cultural divergence. Particularly, the Korean cultural context is constructed on traditional cultural legacy embedded primarily by Confucian values, which support the function and role of collective management in Korean organisations (Choi, 2004; Chung et al., 1997). In an individualistic society, people tend to accentuate their own objectives over those of their clan or group (Ramamoorthy & Carroll, 1998; Ramamoorthy, Gupta, Sardesai, & Flood, 2005) and are more likely to focus on self-interests, whereas in collectivist cultures, people belong to groups that look after them in exchange for loyalty (Soares, Farhangmehr, & Shoham, 2007).

This study was motivated by the following considerations. First, the ICT industry of Korean conglomerates (e. g. Chaebol like Samsung) is one of the main knowledge-intensive industries that Korea has managed to successfully compete with core nations since the late 1970s. Second, the notion of management of employees' fairness has been broadly accepted by Korea firms in recent years and has shown some potential in boosting firms' bottom line. However, systematic evidence for the rela-

relationship between personnel's attitudes and behaviour in a developing economy like Korea is still needed. Third, recent researchers agree that workers' attitudes and behaviours and network embeddedness have stronger effects than others in improving firm performance, and the association between such attitudes and cultural elements further improve firm effectiveness in the Korean context (Choi, 2004), as they do in the studies using Western samples.

The purpose of this study investigates whether the attitude of workers and workplace behaviour, i. e. OCB, in ICT industries, can be explained by the degree of perceived fairness of decision outcomes (distributive justice), decision-making processes (procedural justice) and of the interpersonal treatment that one receives (interactional justice). Additionally, the study examines whether the relationship between ICT employees' organisational justice perception and OCB would be moderated by social network embeddedness in a Korean context such as in-group collectivism, higher power distance, affiliative relationships, and traditional family values (Hofstede, 1980; Choi, 2004). Based on the above, the present study extends earlier research in several ways. First, this study will expand the discussion of organisational justice and OCB, with an emphasis on how it can be brought to the workplace, and particularly attempts to further understand the nature of the relationship between justice and work outcomes in the Korean cultural context. Second, from a theoretical perspective, this is expected to fill the void in the literature concerning justice perceptions and various work outcomes among employees in some APEC (Asia Pacific Economic Cooperation) countries, in particular, Korea. Third, the study will contribute to the expansion of the literature on workplace behaviour and employees' attitudes by examining the direct and indirect relationship between employees' organisational justice and OCB in the Korean context.

Theoretical Framework

Organisational Justice

Employees take an interest in both the fairness of the outcomes that they receive and the fairness of their treatment within the organisation, and such fairness influences their behaviour and attitude. Three forms of justice are often distinguished: distributive, procedural, and interactional justice (Cropanzano et al., 2007; Cohen-Charash & Spector, 2001; Fassina, Jones, & Uggerslev, 2008; Lavelle, Rupp, & Brockner, 2007). Starting with Adams's (1965) equity theory, earlier justice research was conceptually dominated by a distributive justice orientation, which is concerned with whether people perceive distributions of rewards resources as fair, and their reactions to unfair allocations. After reviewing much equity research, Deutsch (1975) suggested that equity is only one of a number of possible distributive rules that can be used to judge distributive justice. Distributive justice is predicted to be concerned mainly with cognitive (e. g. cognitively distorted input and outcomes of himself/herself or of the other; Adams, 1965; Walster, Walster, & Berscheid, 1978),

affective (e. g. experience anger, happiness, pride, or guilt), and behavioral (e. g. performance or withdrawal) reactions to (un)fair outcomes. Apprehending the potential implications of distributive justice within the organizational context, and particularly equity theory, Walster et al. (1978) and Lavelle et al. (2007) observed the perceived fairness of organizational outcomes (e. g. payment system, training opportunities, and promotion decisions) and the relativeness of these justice perceptions to numerous criterion variables, including quality and quantity of work.

Procedural justice refers to the perceived fairness of decision-making procedures and procedures used to make allocation decisions when allocating resources to organisational members. Previous research (e. g. De Cremer, 2004; De Cremer, van Dijke, & Mayer, 2010) has highlighted that employees perceived as more fairly when procedures are applied consistently over time and people, accurately and regardless of managers' self-interest, and when allowing employees a voice in the decision-making process. According to relational models of procedural fairness such as the relational model of authority (Tyler & Lind, 1992) and the group value model (Lind & Tyler, 1988), individuals are naturally predisposed to belong to social collectives, and thus they are very attentive to signals that designate their status in the organisation. For example, unfairly enacted procedures signal to employees that they are marginal, low-status organisational members. Contrariwise, fairly enacted procedures signal that the organisation and manager respects and values their associates, therefore, designating that the employee has high status in the organisation (Lind & Tyler, 1988; Tyler & Lind, 1992).

As the last element, interactional justice is primarily a function of the relationship between employees and their supervisors, rather than workplace support (Masterson, Lewis, Goldman, & Tyler, 2000). Konovsky (2000) suggested that when an employee perceives interactional injustice, he/she is predicted to negatively react toward his/her supervisor rather than negatively reacting toward the organisation as a whole, as is predicted by the procedural justice model. According to Greenberg's (1993) assertions, the social aspect of justice could be more meaningfully assessed by considering two distinct types of interactional treatment: interpersonal justice, which relates to how workers are treated during the enactment of procedures (respect, concern for one's plight, treatment with dignity), and informational justice (i. e. accuracy and quality of explanations individuals receive about procedures), which relates to the use of honest and adequate explanations for decisions. Particularly, early research on equity theory (e. g. Gelfand, Erez, & Aycan, 2007; Greenberg, 2001) suggested that culture influences how people form their perceptions of justice. Similar to Rego and Cunha's (2010) assertions related to cultural features of Portugal's employees, high level of collectivism and hierarchism in Korea tend to lead employees to perceive the manager who interacts fairly with them positively (Choi, 2004; Greiner, 2012).

Previous studies argued that Korean collective organisations in high power distance relationships according to Hofstede's (1991) framework tend to lead employees to undervalue important components of procedural justice such as opportunities for affording input to organisational decisions and policies and a chance to voice their concerns (Choi, 2004; Greiner, 2012). Korean collective features are also higher affiliation oriented (Hofstede, 1991), and this can make personnel more sensitive to the inequity principle present in most definitions of distributive justice. This tendency is reinforced by cultural features of the Korean context, where emotional in-group harmony, networking beyond the group, and hierarchical management styles make employees more sensitive to affiliative and cooperative relationships with managers, characterized by interactional justice, than impersonal and self-possessed procedures represented in procedural justice (Greiner, 2012; Choi, 2004).

Organisational Citizenship Behavior

The term 'organisational citizenship behaviour' was given to Katz's (1964) category of extra-role behaviour (e. g. Bateman & Organ, 1983) and recently OCB has received plenty of attention (Feather & Rauter, 2004). OCB, defined as job behaviour that is discretionary, is not explicitly recognised by the formal reward system, but in the aggregate, will contribute to organisational effectiveness (Organ, 1988; Organ, Podsakoff, & MacKenzie, 2006; Johnson, Holladay, & Quinones, 2009). Particularly, Organ et al. (2006) highlighted that performing OCB is a specific behaviour, which means that employees are not formally required to engage in any specific OCB. A number of OCB dimensions have since been proposed in the literature. Organ (1988) proposed a variety of OCB-dimensions (e. g. altruism, conscientiousness, sportsmanship, and civic virtue). According to Williams and Anderson (1991), OCB incorporates two primary areas, altruism, and compliance. The former is altruistic effort to help others in the organisation without being asked or directly required, whereas the latter is showing compliance and using time efficiently. However, Moorman and Blakely (1995) identified interpersonal helping, individual initiative, personal industry, and loyal boosterism as forms of citizenship behaviour. These behaviours lead to the improvement of organisational efficiency and effectiveness by contributing to resource transformations, innovativeness, and adaptability because they help people work together, which results in a more effective service delivery to organisational standards (Organ, 1988; LePine, Tyler, & Huo, 2002).

Particularly, in Korea's collective cultural context, the functional classification of such OCB facilitates interactions and relationships among employees and between the organisation and its employees. Due to Confucian values in Korea, certain traditional family values and concepts in Korean organisations provide, as an ideological basis, a mode to determine the relationship between employee and employer. Features of such propensity tend to lead employees to affiliative-promotive dimensions of extra-role behaviours as proposed by Van Dyne et al. (1995). For example,

being treated well by a supervisor might influence the employee's perception of justice in the organisation and result in behaviours that benefit the organisation. Korean employees in higher power distance relationships may keep displaying OCB even when things are not fair because inequity is accepted.

Network Embeddedness

Individuals do not act in isolation, but have relationships with each other; this describes 'network embeddedness' (Granovetter, 1985). Network embeddedness, or the number of friends that two individuals in a relationship share in common (Easley & Kleinberg, 2010), has long been theorised to affect the level of trust, altruism, communication, and cooperation in relationships of organisations (Uzzi, 1996). Thus, organisational membership may enhance a member's efforts to perform well, and individual efforts depend, at least partly, on network characteristics (Sparrowe, Liden, Wayne, & Kraimer, 2001).

Consistent with Granovetter's (1992) and Gulati's (1998) study referring to network embeddedness as social actions and outcomes, which are affected by the actor's dyadic relations and by the structure of the overall network relations, most researchers do share consensus in several dimensions, such as relational embeddedness and structural embeddedness (for a detail comparison and discussion, see Gulati, 1998; Inkpen & Tsang, 2005; Nahapiet & Ghoshal, 1998). Additionally, Nahapiet and Ghoshal (1998) suggested that network embeddedness describes the structure of a firm's relationship with other firms - specifically, the extent to which a firm is connected to other firms and how interconnected those firms are, in turn, to each other. Consistent with Smith-Doerr and Powell's (2005) study referring to the degree of network ties, Nelson (1989) highlighted that low levels of network embeddedness indicates that a firm belongs to a sparse network in which few of its contacts are not connected to each other, while high levels of network embeddedness promotes the development of trust (e. g. Nelson, 1989) and represents that a firm belongs to a dense network of other firms, many of which are tightly connected with each other. In Hofstede's (1991) perspective, managers in Korean organisations underline good relationships with employees, formal communication and network strength tending to follow vertical hierarchies, a top-down approach (Chung et al. 1997; Cho & Yoon, 2002). For example, superiors give directives and subordinates carry out those directives (Greiner, 2012). Among an organisation's employees in Korea, communication and network embeddedness are more personalised, smoothly synchronised and easier with in-group members.

Korean Culture Context

Several studies have revealed that the effectiveness of organizational practices depends on how well these methods are suitable with the cultural contexts in which they are implemented, including Hong Kong (Ngo, Turban, Lau, & Lui, 1998),

Singapore (Barnard & Rodgers, 2000), Korea (Bae, Chen, & Lawler, 1998), US, Japan and Germany (Pudelko, 2006), China, Japan and South Korea (Rowley, Benson, & Warner, 2004). Generally, the culture characteristic of Korea is opposite to the Western context, scoring high/low in features in which the Western culture scores low/high, particularly the US (Hofstede, 1991). The traditional collectivism, femininity, and assertiveness (House, Hanges, Javidan, Dorfman & Gupta, 2004) mean that people value nurturance, relationship, and cooperation with the organisation and avoid confrontation and direct/frank communication. This situation is consistent with the strong affiliative motivational feature identified by McClelland (1987) and confirmed by Rego (1998). Contrary to what occurs in the Western context, where the more effective leaders show low affiliation motivation matched with high power motivation, many Korean employees place greater value on a leader with high power (Choi, 2004; Fukuyama, 1995; Greiner, 2012).

In Hofstede's model, Korea is collectivist as well as cohesive in-groups, meaning that organisational employees of the same birth year and region are integrated into strong, which throughout an individual's lifetimes continue to protect them in exchange for unquestioning loyalty. In this regard, Korean researchers (e. g. Cho & Yoon, 2002; Chung et al., 1997; Choi, 2004) tacitly agreed that such features of the Korean culture have been built on traditional cultural legacy embedded mainly by Confucian values such as emotional in-group harmony, collectivism, high power distance, hierarchical principle, discrimination against out-groups, networking beyond the group, and paternalistic management style. Consistent with Coyner and Jang's (2010) assertions, Korean employees tend to have strong loyalty to their family or clan (Choi, 2004; Fukuyama, 1995; Greiner, 2012). For instance, the emphasis in *inwha*, i. e. social harmony (Coyner & Jang, 2010), implies that relationships are highly regarded. It is expected that, in contrast to what happens in other countries, Korean personnel places more value on a paternalistic and affiliative relationship with their superiors than fair procedures that shape obvious rules of the game and chances for voicing opinions. As noted by Greiner's (2012) study, the high power distance in Korean organisations is reflected in the centralisation of power and decision making, and indicates that status and rank is important, but also that there are relatively high inequalities of power and wealth.

Hypotheses

Organisational Justice Versus OCB

Consistent with Organ's (1990) and Moorman's (1991) assertions, Moorman, Niehoff, and Organ (1993) suggested a reason why a measure of perceived justice predicts discretionary behaviour. Based on that line of reasoning, the probability of OCB may increase as an employee's perceptions of fairness increase. Most research has supported such robust relationships between perceptions of organizational justice and OCB (Colquitt et al., 2013; Farh et al., 1990; Moorman, 1991; Moorman

et al., 1993; Van Dyne et al., 1995; Cohen-Charash & Spector, 2001; Colquitt, Conlon, Wesson, Porter, & Ng, 2001; LePine et al., 2002).

For example, based on data collected from 217 employee-supervisor dyads, Karriker and Williams (2007) extended this research by investigating three types of organisational justice and their influences on OCB. They suggested that system-referenced distributive justice concerns may have an effect on citizenship according to predictions derived from equity theory. In their empirical study about employees who are working in large hotels located in a Malaysian context, Van Dyne et al. (1995) suggested that distributive justice positively and significantly contributes to the prediction of OCB intention. Furthermore, a large number of studies demonstrated that such rules of procedural fairness promote employee OCB (Cohen-Charash & Spector, 2001; Colquitt et al., 2001). Particularly, Chang's (2015) meta-analysis revealed that procedural justice had a stronger positive relationship with OCB-O than OCB-I and interactional justice did not have a stronger positive relationship with OCB-I than OCB-O.

According to Moorman et al.'s (1993) study, perceived procedural unfairness modifies an employee's relationship with the organization from one of social exchange such as diffuse obligations based on reciprocal trust, in which OCB is likely, to one of economic exchange including contractual obligations and precise terms of exchange, in which employees do only what is required. For example, organisation employees respond to higher levels of OCB to fair procedures particularly when managers are perceived as actually controlling the procedures (Van Dijke, De Cremer, & Mayer, 2010) and are representative of the organisation's identity (De Cremer et al., 2010).

On the basis of research connecting interactional justice with these behaviours directed at other individuals (e. g. Materson et al., 2000), employees who receive fair interactional treatment from their supervisors reciprocate with behaviours and attitudes that benefit the supervisor. On the contrary, lack of interactional fairness from the direct supervisor will cause employees to exercise their discretion and withhold OCB. Similar to Orsingher, Valentini, and de Angelis' (2010) assertion that proposed employees from cultures high in uncertainty avoidance attach importance to relationships between interactional justice and satisfaction with complaint handling, Korean employees tend to respond to a managerial approach characterized by high levels of interactional justice with greater levels of affiliative trust and discretionary behavior. This cultural tendency tends to lead employees to adopt a discretionary role towards organisations and is consistent with Yamaguchi's (2005) argument that determined that for Japanese workers factors of interactional justice affected employee willingness to cooperate and perform extra-role behaviours. Rego and Cunha's (2010) suggested that interactional justice of individuals from 37 medium-sized and large organisations operating in Portugal's cultural features is a predictor of overall OCB. Recent researchers (e. g. Chiaburu, 2007) have supported that there is

a significant positive correlation between interactional justice and OCB. Thus, on the basis of theory and empirical research, the following hypotheses are proposed:

Hypothesis 1: Distributive justice perception will be positively related to OCB.

Hypothesis 2: Procedural justice perception will be positively related to OCB.

Hypothesis 3: Interactional justice perception will be positively related to OCB.

Network Embeddedness as Moderator

It is interesting that research that examines moderating roles of embeddedness has primarily focused on alleviating negative shocks to employees regarding turnover intention. For instance, Lee, Mitchell, Sablinski, Burton, and Holtom (2004) found that on-the-job embeddedness moderated the impacts of volitional absences, OCBs and job performance on turnover. Additionally, recent researchers (e. g. Collins & Mossholder, 2014) highlighted the importance of job embeddedness as a moderator variable in examining the relationships between an interactional justice climate and organisation-directed citizenship behaviour. They highlighted how the salience of employees' attachment moderates their response to organisational fairness.

The actions of competitive organisations are characterised by the embedded networks of organisations rather than by an atomistic mass of discrete firms (Uzzi, 1996). Even though the processes of employees' cognitive attachment can influence the outcomes of perceived fairness, researchers have argued that they can also be emotionally rooted in their organisations (Colquitt et al., 2013). Therefore, based on the relational model of authorities (Tyler & Lind, 1992), it is predicted that the relation of organisational justice to OCB would depend on the network embeddedness perceptions as cultural value orientations of individuals in Korea. In collectivist societies, embedded employees generally tend to have multifarious connections to other employees or projects (i. e. networks).

It is possible for them to acquire opportunities and resources such as technical and contextual knowledge and information through the social web within the organisation, which will help to perform their tasks better and engage in OCBs in timely and appropriate manners. Thereby, highly embedded employees are less likely to withdraw from their in-role and extra-role behaviours, which keep their task performance and OCBs relatively higher than those less embedded (Lee et al., 2004). Utilizing cognitive facets of employees' attachment, network embeddedness is concerned with a potentially moderating role in the relationship between the beneficial effects of organisational fairness and discretionary behaviour. Based on the theory and empirical research, the following hypotheses are proposed:

Hypothesis 4: Network embeddedness perception will moderate the relationship between organisational fairness and OCB.

Research Method

Research Setting

The ICT industry provides the most interesting example of a proper understanding of the evolution of Korean industrial systems. According to UNCTAD data, in the first half of 2011, Korean companies were the world's largest and second largest manufacturer of ICT products, including mobile phones, flat panel TVs, memory chips, and display panels (Jeong, 2012). In an era of rapidly enhancing technological capabilities and priority of economic development through large enterprise (e. g. Chaebol like Samsung), there is a need to understand the attitude and behaviour of Korean ICT Chaebol industries and their employees. This paper used samples of four different ICT Chaebol companies: Samsung SDS, LG CNS, SK C&C, and POSCO ICT. The sample organisations are part of a single ICT industry located in the Seoul, Gyeonggi, Daejeon, Jeonnam and Pohang areas in Korea. The data was collected on ICT manufacturing activities, ICT services activities, and semiconductor activities from the *Korea Telecommunications Technology Association* and the *Korea Association for ICT Promotion*. In consultation with companies' HR personnel, questionnaires were distributed to employees and managers in the respective Korean ICT companies. Two sets of questionnaires were designed for this research: One was for managers, and the other was for the staff. The employees received their questionnaires by internal mail together with a letter from their HR director. The letter aimed to encourage the employees by stating that the questionnaire was on a voluntary basis and their responses would be kept confidential. It was communicated that the personal identification number on the surveys could not be traced back to the employee and would be used exclusively to connect surveys completed by the same person at different time periods. After completion, the questionnaire could be sent directly to the authors of the study in a provided return envelope.

Measures

Following Brislin's (1980) suggestion, to assure equivalence of the measures in the Korean and English versions, all scales used in this study were translated into Korean and then translated back into English. Whenever it was found that the original version was not equivalent to the translated version, discussions with the translators were conducted to find a solution (Brislin, 1993). The research participation population rated their responses on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Distributive justice. According to Moorman's (1991) and Colquitt et al. (2001), four items were adopted, for example: *'I am fairly rewarded considering my responsibilities.'* The Cronbach's alpha value was 0.893.

Procedural justice. Four items from Moorman's (1991) and Colquitt et al.'s (2001) procedural justice scale were adopted, for example: *'This company has developed pro-*

cedures designed to provide opportunities to appeal or challenge decisions.' Three items were used in this research. The Cronbach's alpha value was 0.929.

Interactional justice. According to Colquitt et al. (2001) and Shapiro, Buttner, and Barry (1994), four items were adopted, for example: *'My supervisor treats me with respect and consideration.'* The Cronbach's alpha value was 0.889.

Organizational citizenship behaviour (OCB). OCB was measured using the item scales developed by Williams and Anderson (1991) and Coleman and Bornman (2000). For OCB a sample item was *'I help others who have been absent.'* Six items were used in this research. The Cronbach's alpha value was 0.945.

Network embeddedness (NE). According to Mitchell, Holtom, Lee, Sablinski, and Erez (2001), Granovetter (1973) and Uzzi (1996), network embeddedness measures the frequency, intensity, and stability of interactions between exchange partners. A sample item was *'How many coworkers do you interact with regularly?'* Four items were used in this research. The Cronbach's alpha value was 0.734.

The demographic control variables were gender, education, job tenure, and status as they were found to affect the dependent variables in previous studies. These personal variables were measured using single items.

Common method bias (CMB) testing

The problem of the CMB may be resolved in different ways, and at three stages, such as research design, data collection, and statistical processing, when conducting empirical studies (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Richardson, Simmering, & Sturman, 2009). In the research design stage, when the variables are measured, the CMB problem can be resolved by separating the response source or measurement environment for each variable. Respondents were assured that the identification number on the survey was for data matching purposes only and that neither the researchers nor company management would know their individual responses.

In the data collection stage, questionnaires were distributed to employees and managers in a Korean firm. The first questionnaires, containing measures of organisational justice, network embeddedness, were distributed to approximately 500 employees. The second questionnaire, containing the measure of OCB, was distributed to 230 managers, who were the immediate supervisors of the 500 employees. This procedure assured that the measures of job attitudes and OCB were not subject to CMB. Additionally, the data was collected at different times in order to reduce the potential for bias. For example, the survey for employees in respect to organisational justice and network embeddedness variables was conducted between November 10, 2013, and December 15, 2013, and for managers including supervisors concerning OCB, variables were conducted between January 5, 2014, and February 5, 2014.

In the statistical processing stage, the application of Harman's (1967) single-factor test to all the relevant variables in the model, using an eigenvalue of greater than 1 criterion, revealed five factors, rather than just one, with the first factor explaining 31.38% of the variance in the data. Podsakoff et al. (2003) assembled the advantages and disadvantages associated with methods of assessing and controlling for CMB. Among the various techniques (e. g. Harman's single factor test, partial correlation, etc.), those founded upon confirmatory factor analysis (CFA) tend to be the most rigorous (Podsakoff et al., 2003). This survey applied the single-common-method-factor approach (also known as the unmeasured latent method construct; Williams, Cote, & Buckley, 1989) in AMOS where the study created a common latent factor (CLF) which was loaded reflectively onto all items in the CFA (Podsakoff et al. 2003). Particularly, results designated that the variance among items in the measurement model could be attributed to a single common latent factor. This outcome comports with Harmon's test and suggests that method bias did not pose a significant overall threat. Item loadings were compared with and without the CLF to determine how method effects were spread (Richardson et al., 2009; Appendix A). No techniques or remedies to control method bias were required, because both examinations indicated that method bias appeared to be constrained to only one dimension, and method variance was below the threshold. Regarding the overall model fit, adding the CLF resulted in a slight but statistically significant improvement in the model fit according to the difference in chi-squared (Table 1).

Analysis of Data

This study conducted both exploratory factor analyses (EFA) and confirmatory factor analysis (CFA) in order to verify the convergent validity and discriminative validity (Podsakoff et al., 2003). All twenty items for the five variables were subjected to a principal component factor analysis with varimax rotation. The items with corrected-item total correction of $< .5$ were deleted, and the factors with eigenvalues above one were extracted. Ten items remained in the organisational justice scale and automatically loaded on three factors, namely, distributive, procedural, and interactional justice. The three factors explained for an accumulative total of 48.53, 60.30, and 69.21 percent of the variance, respectively. Eigenvalue for three factors were 2.354, 1.783, and 3.430 respectively. All six items of the OCB scale were retained and loaded on one factor, accounting for a total of 31.38 percent variance. Eigenvalue for OCB was 6.277. The remaining four items of network embeddedness loaded on one factor and explained 74.37 percent of the variance. Eigenvalue for network embeddedness was 1.031.

Additionally, confirmatory factor analyses (CFA) were used to test how well the measured variables represent the number of constructs and were conducted to investigate whether the factor structure was similar across data source (O'Brien & Allen, 2008). Factor structures of six different models were compared. The model comparison aimed to remove the risk connected with an existing niche model likely

to offer a better adjustment to the data than the five-factor model. Therefore, it was important to compare the five-factor model with competitive models. As recommended by Hu and Bentler (1999), root mean square error of approximation (RMSEA), comparative fit index (CFI) and standardised root mean square residual (SRMR) were used to evaluate the model fit. This study was focused on other fit indices, including the incremental fit index (IFI), as they are relatively unaffected by large sample sizes.

As shown in Table 1, the CFA results reveal that the hypothesized measurement models provided a significantly better fit than the several different factor models (see $\Delta\chi^2$ in Table 1) and showed that the five-factor model fit the data well ($\chi^2 = 572.557$, $p < 0.01$; $df = 160$; $\chi^2 / df = 3.5$; GFI = .94; CFI = .95; SRMR = .03; RMSEA = .05). In summary, this indicates that the convergent validity of the questionnaire items was within an acceptable range (Bagozzi & Yi, 1988; Vandenberg & Lance, 2000) and the results of the CFA demonstrate that the hypothesised measurement models possess satisfactory discriminant validity.

Table 1: Results of confirmatory factor analysis of study variables (N = 450)

Model	χ^2	df	$\Delta\chi^2$	GFI	CFI	SRMR	IFI Delta2	RMSEA
5-factor model	572.557	160	-	.942	.952	.035	.952	.052
4-factor model 1	813.910	164	241.353	.841	.843	.064	.844	.094
4-factor model 2	1064.753	164	492.196	.790	.782	.085	.784	.111
4-factor model 3	885.218	164	312.661	.828	.826	.078	.827	.099
3-factor model	1418.398	167	845.841	.730	.698	.096	.699	.129
2-factor model	1934.480	169	1,361.923	.672	.573	.136	.576	.153

Note: 5-factor model: distributive, procedural, interactional justice, OCB, and network embeddedness

4-factor model 1: (distributive + procedural), interactional justice, OCB, and network embeddedness

4-factor model 2: (distributive + interactional), procedural justice, OCB, and network embeddedness

4-factor model 3: (procedural + interactional), distributive justice, OCB, and network embeddedness

3-factor model: (distributive + interactional + procedural), OCB, and network embeddedness

2-factor model: (distributive + interactional + procedural), OCB, and network embeddedness

Results

Table 2 presents the individual-level means, standard deviations, and zero-order correlations, where applicable, for all study variables. Organizational tenure, gender, and schooling years do not correlate significantly with OCB. However, males tend to perceive network embeddedness, OCB, and interactional justice except for distributive and procedural justice as more positive than do females. Similar to Kim, Shin, and Young's (2009) assertion, it was proposed that employees who relate to

more years of formal education tend to feel high interactional justice, while individuals with higher tenure tend to feel a sense of lower distributive justice.

The correlations between each variable should be less than .75 in order to avoid multicollinearity problems. On average, perceptions of interactional justice and OCB are high, while perceptions of distributive and procedural justice are low/modest. Discriminant validity is established if the average variance extracted (AVE) for each item accounts for .50 or more of the total variance (Fornell & Lacker, 1981). The AVE for the factors were: .71 for OCB, .63 for distributive justice, .62 for interactional justice, .75 for procedural justice, and .69 for network embeddedness. The highest factor correlation obtained with the oblique rotation in this study was between ICT employees' OCB and distributive justice ($r = .35$, $p < .01$). Employees' network embeddedness is positively associated with interactional justice ($r = .21$, $p < .01$), indicating a reasonable direct association between these variables, whereas their OCB was correlated with a form of interactional justice ($r = .09$, $p < .05$).

Table 2: Means, standard deviations and correlations

	M	SD	1	2	3	4	5	6	7	8	
Gender	1.380	.325	1								
Educa- tion	3.390	1.189	-.031	1							
Tenure	2.520	.803	-.072*	.103**	1						
Status	2.190	.955	-.111**	.108**	.108**	1					
IJ	3.605	.820	.201**	-.038	.047	-.125**	(0.62)				
PJ	2.729	.815	.092*	-.085*	.123**	-.116**	.436**	(0.75)			
DJ	3.560	.690	-.085*	.124**	.017	.084*	.042	-.052	(0.63)		
NE	3.353	.853	-.012	-.081*	-.142**	-.347**	.215**	.138**	.049	(0.69)	
Overall OCB	3.717	.702	.041	-.046	.131**	-.095*	.352**	.142**	.354**	.313**	(0.71)

Note 1: significant at * $p < .05$; ** $p < .01$

Note 2: $N=450$; gender: 1=male, 2=female; education: 1=high school, 2=college, 3=university, 4=graduate school; tenure: 1=under 3 year, 2=3-6 year, 3=7-10 year, 4=over 10 year; status: 1=entry level, 2=assistant section chief, 3=section manager, 4=department head, DJ: distributive justice; IJ: interactive justice; PJ: procedural justice; NE: network embeddedness. () is the average variance extracted (AVE).

Hypotheses Testing

The study conducted a hierarchical regression analysis to test the effect of organisational justice on OCB. As presented in Table 3, the results showed that ICT employees' distributive justice (H1) had a positive impact on their OCB at the significant level of $p < .01$ ($\beta = .46$). Recently, previous findings (e. g. Cohen-Charash & Spector, 2001) stating that distributive justice enhanced the discretionary act re-

flecting propensities of goodwill contributors feel toward recipients (Organ et al., 2006) have supported this result.

Hypothesis 2 predicted that procedural justice perception is positively related to OCB. The beta coefficient for the relationships between procedural justice and OCB was insignificant ($\beta = .03$, $p > .05$). Recent research (e. g. Hemdi & Nasurdin, 2008) has supported this finding as regarding a negative relationship between procedural justice and forms of OCB. However, Cohen-Charash and Spector (2001) found that levels of OCB were predicted by measures of procedural and distributive justice perception (weighted mean $r = .23$, $.25$ respectively). The fact that procedural justice was not related to OCB obviously needs to be verified, but this finding makes it clear that OCB theories should not be automatically assumed to be valid in different societies like the Korean. Hypothesis 3 predicted that interactional justice is positively related to OCB. There is a significant positive correlation between interactional justice and OCB toward ICT employees, providing support for this hypothesis ($\beta = .36$, $p < .01$). This result supported previous researchers (e. g. Chiaburu, 2007). However, contrary to most studies (e. g. Cohen-Charash & Spector, 2001) which reported that distributive justice is strongly related to OCB, the current study found that the perception of interactional justice was more strongly related to OCB than distributive and procedural justice. This means that Korean employees are potentially more reactive to the interactional dimension than that of distributive and procedural justice. In line with this reasoning, Kim et al. (2009) were supported by this result.

To investigate predicted moderation effects (H4), moderated hierarchical regression analysis was used to test the hypothesised interactions between network embeddedness and organisational fairness. The analyses consisted of four steps. Age, gender, tenure, and education were included in the first step to control for the effects of demographic variables. The three dimensions of organisational fairness were entered in the second step, and the moderator term was entered in the third step. In the fourth step, interaction effects were added to investigate the moderating effects of network embeddedness on the relationships of organisational fairness with OCB. At step 2, the main effects of independent variables explained an additional 25% of the variance in OCB ($R^2 = .25$; $F = 61.22$, $p < .01$). This result confirmed that distributive justice tended to increase OCB. The model in step 3 indicated that the moderator term explained 28% of the variance in OCB ($R^2 = .28$; $F = 63.77$, $p < .01$). The main effects of network embeddedness explained an additional 5% of the variance in OCB. Network embeddedness was significantly related to OCB. At step 4, additionally, model 4 explains 33% of variance in OCB which, compared to model 3, was a small increase in the explained variance (3%) of OCB at a 90% significance level ($R^2 = .33$; $\Delta R^2 = .03$). F-value indicates 67.56 ($p < .01$) in this regression table. The results indicated that the interaction effect between independent variables (e. g. distributive, procedural and interactional justice) and network embeddedness

is positively related to OCB. This finding has supported Hypothesis 4. Prior research (e. g. Cohen-Charash, 2001) was identified in this result.

Table 3: Hierarchical regression result for the interaction between organisational justice and network embeddedness

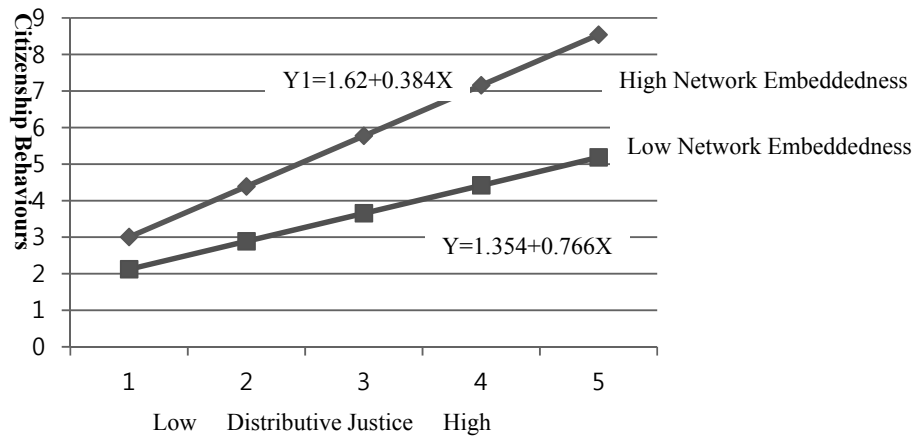
	Model 1			Model 2			Model 3			Model 4		
	B	SE	β	B	SE	β	B	SE	β	B	SE	β
Constant	4.134	.172		2.625	.167		1.416	.189		.842	.715	
Gender	.183	.092	.153**	.217	.091	.182**	.217	.052	.121	.102	.061	.093
Age	-.335	.012	-.118*	-.257	.021	-.123**	-.173	.028	-.104	-.061	.021	-.078
Tenure	.256	.119	.129*	.193	.031	.056	.159	.162	.123	.052	.053	.141**
Education	-.146	.058	-.192**	-.216	.032	-.134**	.083	.053	.043	.011	.041	.023
DJ				.385	.029	.458***	.451	.315	.459***	.227	.041	.219***
PJ				.022	.030	.025	.022	.076	.035	.071	.069	.041
IJ				.313	.035	.361***	.406	.093	.634***	.144	.031	.573***
NE							.215	.032	.313***	.166	.031	.185**
DJ x NE										.185	.032	.277***
PJ x NE										.171	.034	.231***
IJ x NE										.152	.019	.192**
F-value	5.227**			61.216***			63.774***			67.561***		
R ²	.211			.251			.284			.326		
Adjusted R ²	.018			.242			.281			.325		
ΔR^2	.013			.238			.046			.028		

Note: significant at * $p < .1$; ** $p < .05$; *** $p < .01$

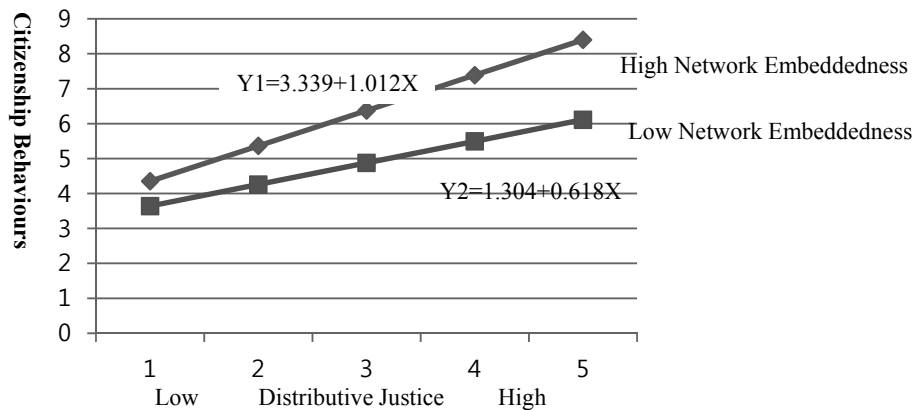
According to Aikin and West (1991), the procedures require the introduction of a multicative interaction term into the regression equation:

$Y_i = b_0 + b_{11}X_1 + b_{12}X_2 + b_{13}X_1X_2 + e_i$ for $i = 1, 2$, and 3, where X_1 is organisational fairness, X_2 is a moderator variable, and X_1X_2 is the multiplicative interaction term. Following such procedures, Figures 1, 2, and 3 were shown.

As illustrated in Figure 1, employees with high network embeddedness who are highly disposed to distributive justice appear to have more OCB, whereas those with low network embeddedness and high distributive justice display less OCB. A strong relationship between distributive fairness and OCB was found when perceived network embeddedness was high. This means that network embeddedness moderates the relationship between distributive justice and OCB such that the relationships become stronger as network embeddedness decreases.

Figure 1: Interaction between network embeddedness and distributive justice on OCB

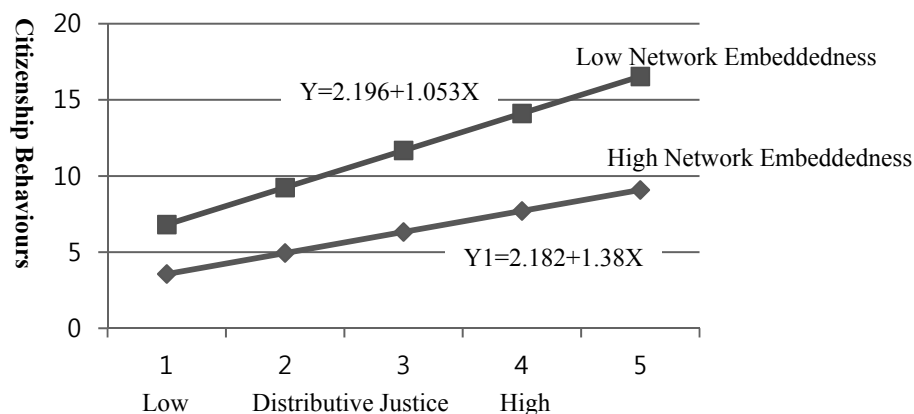
The test result regarding the interaction effect between perceived procedural justice and social network embeddedness on OCB is statistically significant when the interaction variable ($\beta = .23, p < .01$) was used as the criterion. As Figure 2 illustrates, employees who are highly disposed to procedural justice, yet have high network embeddedness appear to have higher OCB.

Figure 2: Interaction between network embeddedness and procedural justice on OCB

Lastly, results of the moderated multiple regression analysis found that employees' interaction effect (interaction of fairness \times network embeddedness) being a strong predictor of OCB, was supported ($\beta = .19, p < .01$). These results confirmed that the coefficients of both the network embeddedness variable and the multiplicative interaction term are statistically significant. As shown in Figure 3, a strong relationship between OCB and interactional fairness was found when perceived network

embeddedness was low. This means that employees who are highly disposed to interactional justice, yet have low network embeddedness, appear to have lower OCB.

Figure 3: Interaction between network embeddedness and interactional justice on OCB



These results confirm the moderating effect of network embeddedness on the relationship between OCB and organisational fairness. Relative to the impact of those who have high network embeddedness, findings showed that those who perceive themselves to be highly embedded would engage in more OCB when network embeddedness is high. So despite the feeling of connectedness or attachment, individuals in this sample who have self-reportedly high network embeddedness were judged by their managers to more often engage in behaviours that are profitable to the organisation.

Conclusion and Discussion

Conclusion

Although many of the studies in justice and OCB areas were carried out and given the desired results in Western contexts (e. g. Colquitt et al., 2001; Rego & Cunha, 2010), an interesting question of this study is whether similar results are to be found in the Korean cultural context. In relation to these issues, this study shows how the perceptions of organisational justice predict OCB in an ICT industry context and how such relationships react with some features of Korean culture including a high power distance, collectivistic, and affiliative relationships (Hofstede, 1991; GLOBE project of House et al., 2004). In rapidly enhancing technological capabilities and a developing economy, the Korean ICT industrial system offers the most appropriate sample for a better understanding of the evolution of the Korean economy. Therefore, there is a need to understand the Korean cultural context, particularly, the attitude and behaviour of ICT employees. Recent research (e. g. Hofstede et al. 2010; Greiner, 2012; Coyner & Jang, 2010) has examined that Korean

organisations usually have hierarchical and collective organisational structures and have a resemblance to traditional Korean families, where leader and manager of organisation tend to have a strong authoritarian style.

In the Korean collective context, this study (H1) shows that ICT employees' distributive and interactional justice had a positive impact on their OCB at a significant level. Therefore, it seems that Korea employees value affiliative behaviour and interpersonal relationships and want to be treated with dignity and respect by their manager and see their manager as a representative of the organisation. These employees are likely to respond to the organisation according to the degree to which they feel fairly treated by the manager (Moorman, 1991).

The finding (H2) found that, under some features of Korean culture, the relationship between procedural justice and OCB in the ICT industry was not significant. This means that Korean employees tend to naturally accept that their manager may not explain decisions to them, not discuss with them procedural processes such as the objectives and plans concerning their performance, and decide about their work without explanation. Yamaguchi (2005) determined that for Japanese workers, factors of procedural justice affected employee willingness to cooperate and perform extra-role behaviours. Contrary to this assertion, findings are consistent with that of McFarlin and Sweeney (2001) who stated that formal procedures might be less important for employees in collectivist and high power distance cultures.

The findings (H3) indicated that in the Korean context organisational members who tend to show positive feelings towards interactional justice are likely to report higher levels of OCB. Confucian values, traditional family values, and concepts in Korean organisations provide an ideological basis as a mode to determine the relationship between employee and employer. The relative perception strength of interactional justice in predicting OCB with more a personal character of Korean culture such as affiliative relationships and interpersonal harmony is meaningfully greater than that of other justice types. Rego and Cunha's (2010) study confirmed this finding.

Integrating the embeddedness literature and considering the suggestion of cultural values-organizational practices and attitudes relationships (e. g. Collins & Mossholder, 2014; Begley, Lee, Gang, & Li, 2002), hierarchical regression analysis revealed that individuals who belong to organizations with high network embeddedness are more likely to increase OCB than those in less dense groups. This result (H4) described that network embeddedness not only has an independent effect on OCB but may also function as a contextual catalyst for the effect of individual network characteristics on OCB, possibly indicating that the influence of an individual's network relationship is more important. Findings are consistent with Collins and Mossholder's (2014) conclusion that embeddedness in the workplace moderates the relationships between interactional justice and OCB.

Theoretical and Practical Discussions

The finding provides for the possibility of several theoretical and practical discussions concerning causality between OCB, organisational justice, and network embeddedness. Above all, this supplies a more culturally nuanced concept to organizational justice by testing the effects of cultural characteristics on the relationships between OCB and other variables (Rego & Cunha, 2010) because culture affects how employees form their perceptions of justice and moderates the impact of justice on employees' attitudes and behaviors (Gelfand et al., 2007; Greenberg, 2001; Lind, Tyler, & Huo, 1997; Morris, Leung, Ames, & Lickel, 1999).

This study will extend Blau's (1964) social relationship perspective on promoting confidence and trust through the social exchange and Adams's (1965) equity theory, and Granovetter's (1985, 1992) social network theory in explaining ways to promote benevolence between exchange partners by adopting Echols and Tsai's (2005) and Uzzi (1996)'s view on network embeddedness. In a social exchange relation (Blau, 1964), the findings discovered that treatment and advocacy given by the fair conduct of organisational dimension on formal procedures and reward systems would stimulate employees to reciprocate by showing a willingness to remain longer in the organisation. According to equity perspectives (Adams, 1965), this study indicates that employees who perceived fair payment and reward for their work-related input may be more likely to step beyond formal job requirements and to show discretionary behaviours (Hemdi & Nasurdin, 2008). Therefore, this finding allowed additional empirical support to Ajzen and Fishbein's (1977) Theory of Reasoned Action that offered that a person's appraisal and estimation of an object would inspire one's behaviour and attitude towards the object (Hemdi & Nasurdin, 2008).

This should provide a stepping-stone to a broader debate, whether, in Asian societies of collectivist family arrangements and high power distance, employees' perception of network embeddedness within organisations such as interpersonal exchanges between manager and subordinates can create close ties and promote attachment. This study found that, through the social relational model, perceived network embeddedness was taken as a moderating variable which might influence the relationship between interactional justice dimensions and OCB. By adopting network embeddedness as a contextual factor in promoting Korean employee's benevolence and discretionary behaviour among exchange partners, the study will expand the possibility of implications of emotional regulation literature (Gross, 1998) which illustrated that employees regulate their justice perceptions cognitively and this lead to affective employees' performance in their workplace. The findings are consistent with Brockner et al.'s (2001) study which found that cultural features were significantly related to procedural justice, and such justice perceptions had a significant influence on reactions to employees' voices as they had lower procedural justice when they had lower levels of voice in management in higher power distance

and collective cultures (Rego & Cunha, 2010). In addition, these results will wide the inferences of Basabe and Ros (2005) who have revealed the correlates of cultural dimensions and social behaviours in organisations.

Particularly, the ICT industry is undergoing downsizing, restructuring, change of missions, and higher operations tempo. Many researchers have argued that when employee behaviour goes above and beyond what is expected, this result related to employees' justice and OCB is increased organisational effectiveness (Katz, 1964; Organ, 1988). ICT employees' interactional justice was related to OCB in the Korean cultural context. That is, an industrial society characterised by a collectivist national culture may enhance employees' perceptions of interactional justice by fostering communication and trust between employees and supervisors and among employees. Managers who work within the most competitive and technological ICT industry usually take employees' OCB into account when evaluating their performances, so it is reasonable to assume that engineers and technical staff in the ICT industry have stronger motives to display OCBs than do employees in certain other jobs. The findings have important implications for managers of an organisation who are attempting to plan for future staffing levels and need to retain employees.

Particularly, ICT organisations should train managers to convey information regarding organisational justice to employees in a clear, complete and timely manner. Employees who reported to trained managers exhibited more helpful OCB than employees who reported to un-trained managers. These managers were taught to provide explanations and apologies (e. g. informational justice) and to treat their reports with courtesy and respect (e. g. interpersonal justice). In addition, high-skilled ICT employees may have to acquire new qualifications in order to avoid skill obsolescence. This study's results provide insights into academics studying organisational justice and managers attempting to promote positive employee outcomes in the ICT context. On the basis of these results, it appears that organisations who wish to promote better relationships between employee and manager may be well served to start with the fair treatment of their employees.

To summarise, organisations can encourage and reward employees for pursuing further training on existing skills and to develop new competencies as shown in ICT industries. These kinds of activities strengthen the network embeddedness at the organisational level. However, when ICT organisations are striving to adapt quickly in volatile industries or to compete on the basis of technological innovation, it is important for managers to remember that a network embeddedness strategy of organisational human resources (Mitchell et al., 2001) may not always be appropriate. As implied by Begley et al. (2002), from a relational perspective, higher network embeddedness enables employees to build closer relations with managers, leading to the exchange of favours and obligations. It means that individuals working in a higher network embeddedness environment find it more comfortable to develop a close relationship with their managers. Without this close relationship they cannot

take fairness for granted, thus, organisational justice more influences their discretionary behaviour outcomes.

Limitations and Future Research

Although this study makes some useful contributions to organisational justice and OCB, it is not without limitations to the present research, and this should be noted and be considered by future researchers. Potential limitations to the generalizability of this study should be acknowledged. The sample organisation of the present study is part of a single ICT industry located in both the Gyeonggi and Seoul areas in Korea. Therefore, not only may the results not be generally applicable to all organisations, but also this setting may be unique enough to limit the external validity of the present findings. Future studies may consider a random national sample rather than a local sample.

Though the type of self-reported data incorporated into a single-source design is often used in organisational behaviour research (e. g. Krings & Facchin, 2009), a limitation of this study refers to the fact that this study relied on cross-sectional data. It is suggested that future research not only use longitudinal analyses with inclusion of the same variables on repeated occasions, but also to use other additional behavioral outcomes of employees' attitudes such as work motivation (Vroom, 1964), job effort and performance (Kidwell & Bennett, 1993) and deviant workplace behavior (Robinson & Bennet, 1995). This is needed to allow stronger inference concerning causality among the variables included in this study. Additionally, although the findings make sense in light of some Korean cultural features, they show that the existing models (e. g. Colquitt et al., 2001) are not satisfactory frameworks for making sense of all pathways that lead people to adopt OCB when forming their perceptions of justice. Future research needs to assemble similar samples in different cultural contexts (Lynn, Allik, & Irwing, 2004) and examine whether the pattern of relationships exposed in the present research is replicated in other contexts (Rego & Cunha, 2010).

Acknowledgements

The author thanks the editor and the anonymous reviewers for their valuable comments and suggestions. This work was supported by the research grant of the Kongju National University. The author is grateful to Prof. John Buckley in Kongju National University for excellent English proofreading.

References

- Adams, J. S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2, 267-299). New York, NY: Academic Press.

- Agarwal, R., & Ferratt, T. W. (2000). Retention and the career motives of IT professionals. In J. Prasad & W. Nance (Eds.), *Proceedings of the 2000 ACM SIGCPR conference on computer personnel research* (158-166). New York, NY: Association for Computer Machinery (ACM).
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage.
- Ajzen, I., & Fishbein, M. (1977). Attitude-behavior relations: A theoretical analysis and review of empirical research. *Psychological Bulletin*, 84, 888-918.
- Bae, J., Chen, S., & Lawler, J. (1998). Variations in human resource management in Asian countries: MNC home-country and host-country effects. *International Journal of Human Resource Management*, 4(9), 653-670.
- Barnard, M. E., & Rodgers, R. A. (2000). How are internally oriented HRM policies related to high-performance work practices? Evidence from Singapore. *International Journal of Human Resource Management*, 11(6), 1017-1046.
- Basabe, N., & Ros, M. (2005). Cultural dimensions and social behavior correlates: Individualism-collectivism and power distance. *International Review of Social Psychology*, 18(1), 189-225.
- Bateman, T. S., & Organ, D. W. (1983). Job satisfaction and the good soldier: The relationship between affect and employee "citizenship." *Academy of Management Journal*, 26(4), 587-595.
- Begley, T. M., Lee, C., Fang, Y., & Li, J. (2002). Power distance as a moderator of the relationship between justice and employee outcomes in a sample of Chinese employees. *Journal of Managerial Psychology*, 17(8), 692-711.
- Blau, P. M. (1964). *Exchange and power in social life*. New York, NY: Wiley.
- Brislin, R. W. (1980). Translation and Content Analysis of Oral and Written Material. In H. C. Triandis & J. W. Berry (Eds.), *Handbook of cross-cultural psychology*, (Vol. 2, 389-444). Boston, MA: Allyn & Bacon.
- Brislin, R. (1993). *Understanding culture's influence on behavior*. Fortworth, TX: Harcourt Brace Jovanovich.
- Brockner, J., Ackerman, G., Greenberg, J., Gelfand, M. J., Francesco, A. M., Chen, Z. X., Leung, K., Bierbrauer, G., Gomez, G., Kirkman, B. L., & Shapiro, D. (2001). Culture and procedural justice: The influence of power distance on reactions to voice. *Journal of Experimental Social Psychology*, 37(4), 300-315.
- Chang, C. S. (2015). *Relationships of organizational justice and organizational constraints with performance: A meta-analysis* (Doctoral dissertation). Bowling Green State University, Bowling Green, OH.
- Chiaburu, D. S. (2007). From interactional justice to citizenship behaviors: Role enlargement or role discretion? *Social Justice Research*, 20(2), 207-227.
- Cho, Y-H., & Yoon, J. (2002). The origin and function of dynamic collectivism: An analysis of Korean corporate culture. In C. Rowly, T.-W. Sohn & J. Bae (2002), *Managing Korean business: Organization, culture, human resources and change* (70-88). London: Frank Cass.
- Choi, J. T. (2004). Transformation of Korean HRM based on Confucian values. *Seoul Journal of Business*, 10(1), 1-26.
- Chung, K. H., Lee, H. C., & Jung, K. H. (1997). *Korean Management. Global strategy and cultural transformation*. Berlin: Walter de Gruyter & Co.
- Cohen-Charash, Y., & Spector, P. E. (2001). The role of justice in organizations: A meta-analysis. *Organizational Behavior and Human Decision Processes*, 86(2), 278-321.

- Coleman, V. I., & Bornman, W. C. (2000). Investigating the underlying structure of the citizenship performance domain. *Human Resource Management Review*, 10(1), 25-44.
- Colquitt, J. A., Conlon, D. E., Wesson, M. J., Porter, C. O. L. H., & Ng, K. Y. (2001). Justice the Millennium: A meta-analytic review of 25 years of organizational justice research. *Journal of Applied Psychology*, 86(3), 425-445.
- Colquitt, J. A., Rodell, J. B., Zapata, C. P., Wesson, M. J., Scott, B. A., Long, D. M., & Conlon, D. E. (2013). Justice at the Millennium, a decade later: A meta-analytic test of social exchange and affect-based perspectives. *Journal of Applied Psychology*, 98(2), 199-236.
- Collins, B. J., & Mossholder, K. W. (2014). Fairness means more to some than others: Interactional fairness, job embeddedness, and discretionary work behaviors. *Journal of Management*.
- Coyner, T. L., & Jang, S. H. (2010). *Doing business in Korea: An expanded guide*. Seoul: Seoul Selection.
- Cropanzano, R., Bowen, D. E., & Gilliland, S. W. (2007). The management of organizational justice. *Academy of Management Perspectives*, 21(4), 34-48.
- De Cremer, D. (2004). The influence of accuracy as a function of leader's bias: The role of trustworthiness in the psychology of procedural justice. *Personality and Social Psychology Bulletin*, 30(3), 293-304.
- De Cremer, D., van Dijke, M. H., & Mayer, D. (2010). Cooperating when 'you' and 'I' are treated fairly: The moderating role of leader prototypicality. *Journal of Applied Psychology*, 95(6), 1121-1133.
- Deutsch, M. (1975). Equity, equality, and need: What determines which value will be used as the basis for distributive justice? *Journal of Social Issues*, 31(3), 137-149.
- Easley, D., & Kleinberg, J. (2010). *Networks, crowds, and markets*. Cambridge: Cambridge University Press.
- Echols, A., & Tsai, W. (2005). Niche and performance: The moderating role of network embeddedness. *Strategic Management Journal*, 26(3), 219-238.
- Farh, J., Earley, P. C., & Lin, S. (1997). Impetus for action: A cultural analysis of justice and organizational citizenship behavior in Chinese society. *Administrative Science Quarterly*, 2(3), 421-444.
- Fassina, N. E., Jones, D. A., & Uggerslev, K. L. (2008). Meta-analytic tests of relationships between organizational justice and citizenship behavior: Testing agent-system and shared-variance models. *Journal of Organizational Behavior*, 29(6), 805-828.
- Feather, N. T., & Rauter, K. A. (2004). Organizational citizenship behaviors in relation to job status, job insecurity, organizational commitment and identification, job satisfaction and work values. *Journal of Occupational and Organizational Psychology*, 77(1), 81-94.
- Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(3), 39-50.
- Fukuyama, F. (1995). *Trust: The social virtues and the creation of prosperity*. London: Hamish Hamilton.
- Gelfand, M. J., Erez, M., & Aycan, Z. (2007). Cross-cultural organizational behavior. *Annual Review of Psychology*, 58, 479-514.
- Gilliland, S. W., & Chan, D. (2001). Justice in organizations: Theory, methods and applications. In N. Anderson, D. S. Ones, H. K. Sinangil & C. Viswesvaran (Eds.), *Handbook of industrial, work and organizational psychology* (143-16). Thousand Oaks, CA: Sage.

- Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology*, 78, 1360–1380.
- Granovetter, M. (1992). Problems of Explanation in Economic Sociology. In N. Nohria & R. G. Eccles, *Networks and Organizations* (25–56). Boston, MA: Harvard Business School Press.
- Granovetter, M. S. (1985). Economic action and economic structure: The problem of embeddedness. *American Journal of Sociology*, 91, 481–510.
- Greenberg, J. (2001). Studying organizational justice cross-culturally: Fundamental challenges. *International Journal of Conflict Management*, 12(4), 365–375.
- Greenberg, J. (1993). The social side of fairness: Interpersonal and informational classes of organizational justice. In R. Cropanzano (Ed.), *Justice in the workplace: Approaching fairness in human resource management* (79–103). Hillsdale, NJ: Erlbaum.
- Greiner, C. (2012). *Cultural effects on management style: A case study of Norwegian expatriate managers in Korea* (Master Thesis). Korea University, Seoul.
- Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, 3(2), 271–299.
- Gulati, R. (1998). Alliances and networks. *Strategic Management Journal*, 19(4), 293–317.
- Harman, H. H. (1967). *Modern factor analysis*. Chicago: University of Chicago Press.
- Hemdi, M. A., & Nasurdin, A. M. (2008). Investigating the influence of organizational justice on hotel employees' organizational citizenship behavior intentions and turnover intentions. *Journal of Human Resources in Hospitality & Tourism*, 7(1), 1–23.
- Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. Beverly Hills, CA: Sage.
- Hofstede, G. (1991). *Cultures and organizations: Software of the mind*. London: McGraw-Hill.
- Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and organizations: Software of the Mind*. New York, NY: McGraw-Hill.
- House, R., Hanges, P., Javidan, M., Dorfman, P., & Gupta, V. (Eds.) (2004). *Culture, leadership, and organizations: The GLOBE study of 62 societies*. Thousand Oaks, CA: Sage.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1–55.
- Inkpen, A. C., & Tsang, E. W. K. (2005). Social capital, networks, and knowledge transfer. *Academy of Management Review*, 30(1), 146–165.
- Jeong, D. Y. (2012). The IT industry in Northeast Asia: Present and future. *SERI Quarterly*, 5(1), 13–21.
- Jin, K. G., Drozdenko, R. D., & Basset, R. (2006). Information technology professionals' perceived organizational values and managerial ethics: An empirical study. *Journal of Business Ethics*, 71, 149–159.
- Johnson, S. K., Holladay, C. L., & Quinones, M. A. (2009). Organizational citizenship behavior in performance evaluations: Distributive justice or injustice? *Journal of Business Psychology*, 24, 409–418.
- Katz, D. (1964). Motivational basis of organizational behavior. *Behavioral Science*, 9, 131–146.
- Karriker, J. H., & Williams, M. L. (2007). Organizational justice and organizational behavior: A mediated multifoci model. *Journal of Management*, 35(1), 112–135.

- Kidwell, R. E., & Bennett, N. (1993). Employee propensity to withhold effort: A conceptual model to intersect three avenues of research. *Academy of Management Review*, 18, 429–456.
- Kim, D.-H., Shin, H.-C., & Young, L.-D. (2009). Perceived organizational support as a mediator of the relationship between organizational justice and organizational citizenship behavior. *Korean Security Science Review*, 14, 69–87.
- Konovsky, M. (2000). Understanding procedural justice and its impact on business organizations. *Journal of Management*, 26(3), 489–511.
- Krings, F., & Facchin, S. (2009). Organizational justice and men's likelihood to sexually harass: The moderating role of sexism and personality. *Journal of Applied Psychology*, 94(2), 501–510.
- Lam, S. S. K., Schaubroeck, J., & Aryee, S. (2002). Relationship between organizational justice and employee work outcomes: A cross-national study. *Journal of Organizational Behavior*, 23(1), 1–18.
- Lavelle, J. J., Rupp, D. E., & Brockner, J. (2007). Taking a multifoci to the study of justice, social exchange, and citizenship behavior: The target similarity model. *Journal of Management*, 33(6), 841–866.
- Lee, T. W., Mitchell, T. R., Sablinski, C. J., Burton, J. P., & Holtom, B. C. (2004). The effects of job embeddedness on organizational citizenship, job performance, volitional absences, and voluntary turnover. *Academy of Management Journal*, 47, 711–722.
- LePine, J. A., Erez, A., & Johnson, D. E. (2002). The nature and dimensionality of organizational citizenship behavior: A critical review and meta-analysis. *Journal of Applied Psychology*, 87, 52–65.
- Lind, E. A., Tyler, T. R., & Huo, Y. J. (1997). Procedural context and culture: Variation in the antecedents of procedural justice judgments. *Journal of Personality and Social Psychology*, 73(4), 767–780.
- Lind, E. A., & Tyler, T. R. (1988). *The social psychology of procedural justice*. New York, NY: Plenum Press.
- Lynn, R., Allik, J., & Irwing, P. (2004). Sex differences on three factors identified in Raven's standard progressive matrices. *Intelligence*, 32(4), 411–424.
- Masterson, S. S., Lewis, K., Goldman, B. M., & Taylor, M. S. (2000). Integrating justice and social exchange: The differing effects of fair procedural and treatment on work relationships. *Journal of Applied Psychology*, 43, 738–748.
- McClelland, D. C. (1987). *Human motivation*. Cambridge: Cambridge University Press.
- McFarlin, D. B., & Sweeney, P. D. (2001). Cross-cultural applications of organizational justice. In R. Cropanzano (Ed.), *Justice in the workplace: From theory to practice* (Vol. 2, 67–95). Mahwah, NJ: Lawrence Erlbaum Publishers.
- Mitchell, T. R., Holtom, B. C., Lee, T. W., Sablinski, C. J., & Erez, M. (2001). Why people stay: Using job embeddedness to predict voluntary turnover. *Academy of Management Journal*, 44, 1102–1121.
- Moorman, R. H. (1991). Relationship between organizational justice and organizational citizenship behavior: Do fairness perceptions influence employee citizenship? *Journal of Applied Psychology*, 76, 845–855.
- Moorman, R. H., & Blakely, G. L. (1995). Individualism-collectivism as an individual difference predictor of organizational citizenship behavior. *Journal of Organizational Behavior*, 16, 127–142.

- Moorman, R. H., Niehoff, B. P., & Organ, D. W. (1993). Treating employees fairly and organizational citizenship behaviors: Sorting the effects of job satisfaction, organizational commitment, and procedural justice. *Employee Responsibilities and Right Journal*, 6, 209-225.
- Morris, M. W., Leung, K., Ames, D., & Lickel, B. (1999). Views from inside and outside: Integrating emic and etic insights about culture and justice judgments. *Academy of Management Review*, 24, 781-796.
- Murata, K., & Higashimoto, S. (2004). ICT workers and professional spirit in the eBusiness era. *Journal of Electronic Science and Technology of China*, 4(3), 104-109.
- Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*, 23, 242-266.
- Nelson R. E. (1989). The strength of strong ties: social networks and intergroup conflict in organizations. *Academy of Management Journal*, 32, 377-401.
- Nelson, R. R. (1991). Education needs as perceived by IS and end-user personnel: A survey of knowledge and skill requirements. *MIS Quarterly*, 15(4), 503-525.
- Ngo, H.-Y., Turban, D., Lau, C.-M., & Lui, S.-Y. (1998). Human resource practices and firm performance of multinational corporations: Influences of country origin, *The International Journal of Human Resource Management*, 9, 632-652.
- O'Brien, K. E., & Allen, T. D. (2008). The relative importance of correlates of organizational citizenship behavior and counterproductive work behavior using multiple sources of data. *Human Performance*, 21, 62-88.
- Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Lexington, MA: Lexington Books.
- Organ, D. W. (1990). The motivational basis of organizational citizenship behavior. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior* (Vol. 12, 43-72), Greenwich, CT: JAI Press.
- Organ, D. W., Podsakoff, P. M., & MacKenzie, S. B. (2006). *Organizational citizenship behavior: Its nature, antecedents and consequences*. Thousand Oaks, CA: Sage.
- Orsingher, C., Valentini S., & de Angelis M. (2010). A meta-analysis of satisfaction with complaint handling in services. *Journal of the Academy of Management Science*, 38, 169-186.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5) 879-903.
- Pudelko, M. (2006). A comparison of HRM systems in the USA, Japan and Germany in their socio-economic context. *Human Resource Management Journal*, 16, 123-153.
- Ramamoorthy, N., & Carroll, S. J. (1998). Individualism/collectivism orientations and reactions toward alternative human resource management practices. *Human Relations*, 51, 571-588.
- Ramamoorthy, N., Gupta, A., Sardesai, R., & Flood, P. (2005). Individualism/collectivism and attitudes towards human resource systems: a comparative study of American, Irish, and Indian MBA students. *International Journal of Human Resource Management*, 16(5), 852-869.
- Rego, A. (1998). Configurações motivacionais dos gestores e respectivos impactos nos subordinados [Motivational configurations of managers and their impact on subordinates]. *Revista Portuguesa de Gestão*, 1, 53-65.
- Rego, A., & Cunha, M. P. (2010). Organizational justice and citizenship behaviors: A study in the Portuguese cultural context. *Applied Psychology: An International Review*, 59(3), 404-430.

- Richardson, H. A., Simmering, M. J., & Sturman, M. C. (2009). A tale of three perspectives: Examining post hoc statistical techniques for detection and correction of common method variance. *Organizational Research Methods*, 12, 762–800.
- Robinson, S., & Bennett, R. (1995). A typology of deviant workplace behaviors: A multi-dimensional scaling study. *Academy of Management Journal*, 38, 555–572.
- Roch, S. G., & Shanock, L.R. (2006). Organizational justice in an exchange framework: Clarifying organizational justice distinctions. *Journal of Management*, 32(2), 299–322.
- Rowley, C., Benson, J., & Warner, M. (2004). Towards an Asian model of Human Resource Management? A comparative analysis of China, Japan and South Korea. *International Journal of Human Resource Management*, 15(4), 917–33.
- Shapiro, D. L., Buttner, H.E., & Barry, B. (1994). Explanations: What factors enhance their perceived adequacy. *Organizational Behavior and Human Decision Process*, 58(3), 346–368.
- Smith-Doerr, L., & Powell, W. W. (2005). Networks and economic life. In N. J. Smelser & R. Swedberg (Eds.), *The handbook of economic sociology* (379–402). Princeton, NJ: Princeton University Press.
- Soares, A., Farhangmehr, M., & Shoham, A. (2007). Hofstede's dimensions of culture in international marketing studies. *Journal of Business Research*, 60(3), 277–284.
- Sparrowe, R. T., Liden, R. C., Wayne, S. J., & Kraimer, M. L. (2001). Social networks and the performance of individuals and groups. *Academy of Management Journal*, 44(2), 316–325.
- Tyler, T. R., & Lind, E. A. (1992). A relational model of authority in groups. In M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 25, 115–191). New York, NY: Academic Press.
- Tyler, T. R., Lind, E. A., & Huo, Y. J. (2000). Cultural values and authority relations: The psychology of conflict resolution across cultures. *Psychology Public Policy and Labor*, 6, 1138–1164.
- Uzzi, B. (1996). The sources and consequences of embeddedness for the economic performance of organizations: The network effect. *American Sociological Review*, 61(4), 674–698.
- Van Dyne, L., Cummings, L. L., & Parks, J. M. (1995). Extra-role behaviors: In pursuit of construct and definitional clarity (a bridge over muddied waters). In L. L. Cummings & B. M. Staw (Eds.), *Research in organizational behavior* (Vol. 17, 215–285). Greenwich, CT: JAI Press.
- Van Dijke, M. H., De Cremer, D., & Mayer, D. (2010). The role of authority power in explaining procedural fairness effects. *Journal of Applied Psychology*, 95, 488–502.
- Vroom, V. H. (1964). *Work and motivation*. New York, NY: Wiley.
- Walster, E., Walster, G. W., & Berscheid, E. (1978). *Equity: Theory and research*. Boston, MA: Allyn & Bacon.
- Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management*, 17, 601–617.
- Williams, L. J., Cote, J. A., & Buckley, M. R. (1989). Lack of method variance in self-reported affect and perceptions at work: Reality or artifact? *Journal of Applied Psychology*, 74, 462–468.
- Yamaguchi, I. (2005). Interpersonal communication tactics and procedural justice for uncertainty management of Japanese workers. *Journal of Business Communication*, 42(2), 168–194.

Appendix A: Difference in Standardized Regression Weights after Adding CLF

Latent Variance	indicator	β		Difference
		Without CLF	With CLF	
Distributive Justice	DJ1	0.882	0.564	0.318*
	DJ2	0.782	0.615	0.167
	DJ3	0.766	0.65	0.116
Procedural Justice	PJ1	0.811	0.713	0.098
	PJ2	0.976	0.753	0.223
	PJ3	0.773	0.661	0.112
Interactional Justice	IJ1	0.836	0.543	0.293
	IJ2	0.891	0.765	0.126
	IJ3	0.792	0.703	0.089
	IJ4	0.739	0.654	0.085
OCB	OCB1	0.864	0.729	0.135
	OCB2	0.713	0.631	0.082
	OCB3	0.774	0.664	0.11
	OCB4	0.768	0.619	0.149
	OCB5	0.798	0.672	0.126
	OCB6	0.771	0.503	0.268
Network Embed- dedness	NE1	0.829	0.726	0.103
	NE2	0.881	0.703	0.178
	NE3	0.813	0.692	0.121
	NE4	0.895	0.641	0.254

Note. (N = 450). β = standardized regression weights, *substantive method effect (i. e. β reduced by > .20 after adding CLF)