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Role Breadth and OCB: An Investigation of Antecedents and Consequences

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A Dissertation Submitted to The Graduate School at the University of Missouri – St. Louis in partial fulfillment of the requirements for the degree Doctor of Philosophy in Psychology with an emphasis in Industrial and Organizational

2013

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Abstract

Two studies were conducted to further investigate how organizational citizenship behavior (OCB) is conceptualized through the psychological mechanisms relating to OCB role definition, outcomes of OCB role definition, and the structure of OCB definition ratings. Previous research on OCB has suggested that organizational members have different perspectives, such that supervisors have a broader role definition than do their subordinates (Morrison, 1994). Study 1 tested a theoretical model using SEM that included the underlying psychological processes that relate to role breadth as well as individual-level and organizational-level outcome variables. The results supported a significant positive relationship between employee rated OCB definition and supervisor rated OCB performance, which extended work by Chiaburu and Byrne (2009). OCB role definition mediated the relationship between relational psychological contracts and OCB performance. Study 2 investigated the structure of role breadth by comparing subordinate and supervisor ratings through measurement invariance and multidimensional scaling. While supervisors are more likely to rate OCB as being in-role than employees, the results from Study 2 concluded that employees and supervisors may have a similar cognitive understanding of OCB definition. Limitations and implications of this study were discussed.

Acknowledgments

This has been a long process and I would like to thank some of the people who have helped me along this journey. To John, thank you for all of your ideas, comments, and questions as we navigated this project. I appreciate all of your help along the way as my original idea grew and took shape. At every step, you challenged me to make this a better project. To all of my committee members (Mark, Stephanie, Ekin, and Cody), I appreciate the time you've taken out of your busy schedules in addition to all of your suggestions. To my wonderful research assistant, Emily, thank you for making my life so much easier. Data collection was an easier task with all of your assistance. To Jean and Mary Jo, I could not have navigated this process without your encouragement, advice, and support.

To all of the faculty members who allowed me access to your students, I appreciate your willingness to help me. Data collection was long process and I could not have gotten to this point without you. To all of my fellow graduate students and friends, I so appreciate all of your support. I especially want to thank Alicia, Sasha, AJ, Shirley, Jessica, Lisa, and Wanyi for listening, commiserating, and suggesting ideas on how to tackle any and all issues that arose.

Last, but certainly not least, I need to thank my family for their love and never-ending support. You have been on this rollercoaster ride with me even when you had no idea what I was talking about.

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Role Breadth and OCB: An Investigation of Antecedents and Consequences

Organizational citizenship behavior (OCB) is an increasingly studied topic in research today, from its definition and dimensionality to its antecedents and consequences. OCB can be defined as the discretionary behaviors that directly or indirectly (i.e., directly helps another person) benefit the organization and enhance organizational effectiveness (Williams & Anderson, 1991). Organizations want their employees to perform OCB to make the workplace more successful, whether it is helping another employee without being asked, orienting new employees, or not calling in sick. It is important to examine OCB because it is related to other behaviors that organizations want to encourage (i.e., task performance) or discourage (i.e., counterproductive work behavior) and OCB is thought to contribute to organizational effectiveness (Organ, 1988). OCB is often studied within the context of social exchange theory (Blau, 1964; Hanson & Borman, 2006) and the norm of reciprocity (Gouldner, 1960). The idea is that employees choose to repay the organization for fair and equitable treatment through OCB (Organ, 1988). For this exchange behavior to occur, individuals need to feel as though they have balance in their relationship with the organization (Bowler & Brass, 2006). Research by Koster and Sanders (2006) showed that employees will reciprocate through organizational compliance and altruism for supervisors and coworkers, respectively. However, this is predicated on employees actually defining behavior in this way. It is important to know why individuals are categorizing OCB as in-role compared to extra-role behavior. More recently, researchers have focused on assessing OCB role definition, which is an individuals' categorization of OCB behaviors as in-role or extra-role. However, we do not know if the relationships between antecedents, OCB role definition,

OCB performance, and other consequences will hold when tested simultaneously as a theoretical model as opposed to testing them in isolation, one-by-one. It is important to test multiple antecedents together as the relationships of individual antecedents to OCB role definition, OCB performance, or other consequences may be different from what extant research has found. For example, established positive relationships involving an antecedent may be less important when additional antecedents are included. By assessing the theoretical model as a whole, the omitted variables problem can be avoided. We also do not know how supervisors or subordinates are conceptualizing OCB role definition.

Research on OCB has more recently focused on the importance of subordinate OCB role definition in predicting OCB performance (Chiaburu & Byrne, 2009; Kamdar, McAllister, & Turban, 2006; Lam, Hui, & Law, 1999; McAllister, Kamdar, Morrison, & Turban, 2007; Morrison, 1994; Tepper, Lockhart, & Hoobler, 2001; Tepper & Taylor, 2003; Vey & Campbell, 2004). This research provided a step forward by investigating the constructs related to subordinate OCB role definitions. It was important to test the entire model as some of these relationships may change when they are no longer tested individually. By including multiple antecedents, the relationship of any one antecedent to OCB role definition or performance may no longer be positive or be significantly reduced. When testing these relationships individually, we cannot account for the interrelationships among the antecedents and how these relationships may influence the relationship between each of the antecedents and OCB role definition and/or performance. The purpose of this study was to investigate a set of previously studied antecedents in determining subordinate OCB role definitions and performance and answer some questions remaining in the literature. Study 1 contributed to the literature by

presenting a theoretical model that includes both the antecedents and consequences of OCB role definition in a single study. This study also included a wider variety of subordinate behaviors (i.e., task performance, OCB, and counterproductive work behavior) and related those behaviors to perceived organizational effectiveness. Previous research had not tried to show how all of these behaviors were related to organizational effectiveness in a single study. Hanson and Borman (2006) proposed a theoretical model that included many of the outcome variables of interest in this study (e.g., OCB performance, task performance as supervisory ratings, and perceived organizational effectiveness), but they did not test that model. The extant research has commonly analyzed the constructs of interest through correlation and regression, including mediation. Another major theoretical contribution of this study was testing the model as a whole instead of testing variables and relationships in isolation, which filled a gap in the research.

Study 2 contributed by assessing how supervisors and subordinates conceptualize OCB role definition, which previous research had not investigated. Measurement invariance is a method of assessing these perspectives (supervisor and subordinate) of OCB role definition and has been used in the research on performance ratings (Faction & Craig, 2001; Woehr, Sheehan, & Bennett, 2005) and OCB performance (Lievens & Anseel, 2004). In addition, research has utilized multidimensional scaling to assess the dimensionality of OCB (Coleman & Borman, 2000) and counterproductive work behavior (Gruys & Sackett, 2003; Robinson & Bennett, 1995). It was important to know if supervisors and subordinates were even talking about the same concept. These analyses could determine if supervisors and subordinates were even talking in the same language

so to speak. Neither measurement invariance nor multidimensional scaling had been applied to supervisor and subordinate ratings of OCB definition. Both analyses provided useful information on how each group conceptualizes this construct as well as how similar (or different) those conceptualizations were.

Background on Organizational Citizenship Behavior

The OCB construct has evolved over time from the early work of Katz and Kahn (1966) and the renewed interest in the construct from Organ's work (Organ, 1988; Smith, Organ, & Near, 1983). The extant literature contains a variety of conceptualizations regarding the OCB construct, including a mixture of definitions and dimensions. There are also a number of constructs very similar to OCB, such as contextual behavior (Borman & Motowidlo, 1993; Motowidlo & Van Scotter, 1994), prosocial organizational behavior (Brief & Motowidlo, 1986), and organizational spontaneity (George & Brief, 1992). While these constructs all have different names, there seems to be a degree of conceptual overlap in the behaviors indicative of these constructs. These constructs are concerned with a specific set of non-task performance behaviors in the workplace. With these labels come a variety of definitions, with three main differences: one is concerning whether these behaviors are defined as extra-role and discretionary, another is concerning whether these behaviors enhance organizational effectiveness, and the last is motivation for performing these behaviors. Some constructs are defined as extra-role and discretionary behaviors (OCB, organizational spontaneity; George & Brief, 1992; Organ, 1988), while others maintain that these behaviors can be rewarded (contextual performance, prosocial organizational behavior; Borman & Motowidlo, 1993; Brief & Motowidlo, 1986; Motowidlo & Van Scotter, 1994). OCB, organizational spontaneity,

and contextual performance maintain that these types of behaviors enhance organizational effectiveness (George & Brief, 1992; Motowidlo & Van Scotter, 1994; Organ, 1988), while prosocial organizational behavior maintains that these behaviors can either enhance or impede organizational effectiveness (Brief & Motowidlo, 1986). Contextual performance is defined as the “behaviors that support the broader organizational, social, and psychological environment in which the technical core must function” (Borman & Motowidlo, 1993, p. 73). Prosocial organizational behavior is defined as behavior meant to benefit an individual, group, or organization (Brief & Motowidlo, 1986). Organizational spontaneity is defined as extra-role behavior that makes achieving goals easier and may or may not be rewarded (George & Brief, 1992).

The final main difference in these constructs is concerning the proposed motives for this behavior in the first place. The theory behind some of these constructs assumes that social exchange and the norm of reciprocity are the motivational basis for these extra-role behaviors, while other constructs delineate more specific motivations. The most prevalent assumption is that employees perform extra-role behaviors “in reaction or in response to their perceptions of their jobs and the organizations in which they work” (Hanson & Borman, 2006, p. 128). Social exchange, the norm of reciprocity, and the functional perspective are theorized to be motives of OCB (Organ, 1988), which are influenced by job attitudes (e.g., satisfaction, perceptions of fairness, and organizational commitment; Hanson & Borman). Organizational commitment based on identification and internalization of organizational values is a motive for prosocial organizational behavior (O’Reilly & Chatman, 1986). George and Brief (1992) proposed that there are four motives for organizational spontaneity: Primary work group relationships,

instrumental individual rewards (money and recognition), instrumental system rewards, and internalization of organizational goals and values. While employees may engage in the same behaviors that are considered OCBs, employees may have different motivations or reasons for those behaviors (Snyder, 1993, as cited in Borman & Hanson, 2006). Other motives for OCB have been discussed in the literature, such as prosocial values, impression management, and personality traits (Borman & Hanson, 2006).

As there are different definitions for each of these constructs, there are a multitude of models regarding the dimensionality of OCB. Researchers have conceptualized anywhere from one to five underlying dimensions of the construct, with the review by Podsakoff, MacKenzie, Paine, and Bachrach (2000) finding seven possible dimensions. There is certainly overlap in the various dimensions between the conceptualizations (Coleman & Borman, 2000; LePine, Erez, & Johnson, 2002; Podsakoff et al., 2000). Coleman and Borman (2000) developed a three dimensional model based on having psychologists sort items into categories. Their dimension of interpersonal support is captured by altruism (Morrison, 1994; Organ, 1988), courtesy (Organ, 1988), OCB individual (Williams & Anderson, 1991), and social participation (Van Dyne, Graham, & Dienesch, 1994). Coleman and Borman's dimension of organizational support is captured by sportsmanship (Morrison, 1994; Organ, 1988), civic virtue (Organ, 1988), conscientiousness (Morrison, 1994; Organ, 1988), OCB organizational (Williams & Anderson, 1991), involvement (Morrison, 1994), keeping up with changes (Morrison, 1994), loyalty (Van Dyne et al., 1994), and obedience (Van Dyne et al., 1994).

Many researchers use the five factor model described by Organ (1988). Organ (1988) has defined OCB as "individual behavior that is discretionary, not directly or

explicitly recognized by the formal reward system, and that in aggregate promotes the effective functioning of the organization” (p. 4). This model includes the dimensions of altruism (helping behavior), courtesy (preventing problems), conscientiousness (going above and beyond role requirements), civic virtue (participation or involvement in the organization), and sportsmanship (not complaining).

Both Smith et al. (1983) and Williams and Anderson (1991) advocated for two dimensional models as the best representation of OCB. These models are different beyond the labels chosen for each dimension. Smith et al. conceptualized altruism (behavior intended to help individuals) and generalized compliance (adhering to rules, norms, and expectations) as the two factors that comprise OCB. Williams and Anderson differentiate between the target or intended beneficiary of the behaviors and based their conceptualization on Organ’s (1988) model. Those two dimensions are: (1) behaviors directed at the organization in general (OCBO) and (2) behaviors directed at specific individuals (OCBI). Behaviors such as giving advance notice when you are unable to come to work, adhering to informal rules devised to maintain order, and attendance at work is above the norm are all examples of OCBO. OCBI behaviors will indirectly benefit the organization but will directly benefit a specific individual, such as a coworker or supervisor. Behaviors such as helping others who have been absent, taking a personal interest in other employees, and passing along information to other co-workers are all examples of OCBI. Williams and Anderson deliberately chose different labels from the Smith et al. conceptualization so as to avoid a connotation regarding being rewarded for these behaviors.

Other researchers have viewed OCB as a unidimensional construct (Allen & Rush, 1998) and as a latent construct (Hoffman, Blair, Meriac, & Woehr, 2007; LePine et al., 2002). Allen and Rush (1998) simply aggregated the scores across a measure of Organ's (1988) five dimensions to represent OCB. LePine et al. (2002) concluded that OCB is a single, latent construct as the dimensions of OCB are highly intercorrelated and have similar relationships to antecedents from a meta-analysis; they did not specifically test this model in their meta-analysis. Hoffman et al. (2007) also conducted a meta-analysis, but they tested competing models to determine the dimensionality of the OCB construct. Hoffman et al. found that OCB was best conceptualized as a latent construct with the existing dimensions of OCB as indicators compared to the Williams and Anderson (1991) model.

Antecedents of Organizational Citizenship Behavior

Whether or not an employee chooses to perform OCB may depend on how narrowly or broadly they define their role. Job performance may include both task, or in-role, performance which is delineated by a formal job description and extra-role, or OCB, performance. Subordinates with a narrow role definition only consider task performance as being required for their job and any other behaviors would be extra-role. Subordinates with a broad role definition willingly consider OCB as a part of their job in addition to task performance. It would be important to know what determines how employees distinguish between in-role and extra-role performance, as this could relate to employees actual performance of OCB. Research has shown that employees who categorize OCB as in-role are more likely to perform OCB on the job than those employees who categorize OCB as extra-role (Kamdar et al., 2006; Morrison, 1994). Kamdar et al. (2006) showed

that employees who defined one category of OCB, interpersonal helping, as in-role behavior were more likely to perform other types of OCB, such as loyal boosterism (promoting a positive organizational image to outsiders).

Research has demonstrated that individuals differ in what behavior they perceive should be considered in-role versus extra-role job performance. Morrison (1994) found that subordinates have different perceptions regarding role breadth from their supervisors, such that subordinates are more likely to define behaviors considered to be OCB as extra-role whereas their supervisors were more likely to define these same behaviors as in-role. Lam et al. (1999) replicated this finding that supervisors have broader definitions across four international samples. It has also been suggested that definitions of OCB as in-role versus extra-role performance may be different between employees, across jobs and organizations, as well as subject to change over time (Podsakoff et al., 2000). In terms of why individuals have different definitions of performance, Podsakoff et al. concluded that these differences in OCB definition arise because both subordinates and supervisors have trouble distinguishing between behaviors that are in-role versus extra-role. It may be important to take into consideration how individuals define job performance when studying OCB. Kidder and McLean Parks (2001) argue that regardless of whether the behavior is in-role or extra-role, employees may be rewarded or punished for not behaving in accordance with their supervisors expectations. Research has shown that supervisors do take OCB into account when giving performance ratings (Borman & Motowidlo, 1997; Johnson, 2001; Motowidlo & Van Scotter, 1994; Podsakoff et al., 2000) with employees who perform OCB receiving better evaluations (Allen & Rush, 1998). Podsakoff et al. also suggested that supervisors may consider any behavior that

positively contributes to the organization when evaluating performance as an explanation for why supervisors seem to define OCB as in-role performance. Similarly, Hui, Lam, and Law (2000) found that self and supervisor rated OCB (altruism and compliance) before promotion decisions were made was related to getting a promotion for a sample of bank tellers. Tellers' belief that OCB would help them get the promotion was related to OCB (altruism and compliance), which suggests that the tellers in this study seemed to have a functional perspective of OCB. OCB was also rated after learning of promotion decisions; supervisor rated OCB after announcing the promotion decisions declined for all tellers who believed that performing OCB would help them get the promotion regardless of promotion decision. These findings suggest that the tellers who were promoted and believed OCB would be instrumental in promotion decisions also decreased their OCB performance after learning about the decision. It could be that once these tellers achieved their goal (promotion), the behaviors that helped (OCB) were no longer functional for them. In other words, the motivation behind OCB was not relevant anymore. Social exchange theory (Blau, 1964) also could provide an explanation for these results. The bank tellers were rewarded with a promotion due in part to their engaging in OCB.

Study 1

There may be psychological constructs, situational characteristics, and motivating mechanisms that are related to OCB definition as well as how OCB definition may impact the performance of OCB. Such constructs may be organizational position, job involvement, and psychological contracts (see Figure 1).

Organizational Position

One situational characteristic that may determine how narrowly or broadly an individual defines their role is organizational position. Organizational position refers to where a specific job is within the hierarchy. Morrison (1994) demonstrated that supervisors have broad job definitions, in which they include behaviors typically defined as citizenship behavior, while employees had more narrow definitions (they defined OCB as extra-role behavior to a greater extent). In a field study, Wanxian and Weiwu (2007) found similar results to Morrison in that employees in a higher-level position in the organization were more likely to define OCB as in-role behavior compared to employees at a lower level in the organization. The results of Chiaburu and Byrne (2009) also showed that supervisors have broader job definitions compared to subordinates concerning OCB for the subordinates' job. Roles typically become broader as individuals progress through the hierarchy. While the research has demonstrated that supervisors tend to have broader job definitions than do subordinates, there is a lack of research on why this occurs. It could be a difference in how these employees are paid. Supervisors may hold salaried positions and have a broader perspective on what behaviors can be expected from them. Subordinates may be more likely to hold hourly positions and take a more narrow perspective on the behaviors the organization can expect from them. In addition, researchers have advanced the idea that for those individuals in the organization who hold higher level jobs, either they have less well-defined formal roles (Organ, 1988) or that the distinction between task and citizenship performance is less clear cut (Borman & Motowidlo, 1993). As a result, it may be that supervisors categorize OCB as in-role for their own position and take that same perspective when it comes to the roles of their

subordinates. On the other hand, motivation may play a role in how jobs are defined depending on an employee's position within the hierarchy. In developing their model of organizational spontaneity, George and Brief (1992) relied on the motivational bases set forth by Katz (1994) to better understand why individuals display extra-role behaviors. Katz argued that compared to instrumental individual and system rewards, internalization of the organizations goals and values would be a strong motive for displaying extra-role behaviors. Katz also argued that it would be the higher level employees who would internalize the organizational values and goals by making them their own personal values and goals, not the employees with positions lower in the hierarchy. Podsakoff et al. (2000) argued that higher level jobs are more intrinsically satisfying for employees as an explanation for why the literature has demonstrated a consistent relationship between task characteristics and performing OCB. Higher level employees may be more intrinsically motivated by their jobs and lower level employees may have a stronger extrinsic motivation which influences both OCB definition and performance. In support of this explanation, Van Dyne et al. (1994) found that employees with a higher job level were more likely to perform OCB.

Hypothesis 1: Supervisors have a broader OCB role definition than do subordinates (i.e., define OCB as in-role performance) for the subordinates' job.

Employees will display the behaviors they believe are required of them by their formal job description regardless of organizational position. In this way job definitions have an impact on performance. If employees categorize OCB as in-role, they should be more likely to then perform OCB since they believe that these behaviors are required of them. While the employee will regard OCB as in-role, others will rate this employee

highly in terms of performing OCB. Others are rating the behaviors and not how employees themselves are categorizing those behaviors. When employees categorize OCB as extra-role, these behaviors are no longer required of them but are now up to that individual to decide if they want to engage in these behaviors (i.e., OCB is discretionary). Previous research has supported this relationship between OCB definition and performance (Kamdar et al., 2006; Morrison, 1994).

Hypothesis 2: Employees who have a broader job definition (i.e., define OCB as in-role performance) are more likely to perform OCB.

Job Involvement

Beyond just the organizational position held, individuals may differ in their OCB definition depending on their level of job involvement. Job involvement is “the degree to which one is cognitively preoccupied with, engaged in, and concerned with one’s present job” (Paullay, Alliger, & Stone-Romero, 1994, p. 224). Job involvement may be a motivating mechanism that influences OCB definition. Individuals who are working just to pay the bills, such as students with part-time jobs, may define OCB as extra-role for a variety of reasons. The particular job may not be salient for them because they are only extrinsically motivated by their job. They do not expect to stay in their current position and/or be promoted within the organization. So, these individuals would not expect to receive any intrinsic benefits from performing OCB. Research has shown that employees expecting to be with the company for a shorter period of time are less likely to engage in OCB (Joireman, Kamdar, Daniels, & Duell, 2006). On the other hand, individuals who are further along in their career, who are professionals, may have a job in which they have a high level of involvement. This is because these individuals may be more

intrinsically motivated by their job. Rabinowitz and Hall (1977) presented a profile of an individual with high job involvement; this profile includes someone who “has strong growth needs, has a stimulating job (high autonomy, variety, task identity, and feedback), is satisfied with the job, has a history of success, and is less likely to leave the organization” (p. 284). For these individuals, they may be more likely to define OCB as in-role performance. These individuals consider their job to be very important to them, so they may put forth that extra effort to maintain a high level of overall performance (Rabinowitz & Hall, 1977). These individuals may have internalized the values and goals of their organization, which may serve as the motivation behind engaging in OCB. Research has shown that employees with a high level of job involvement are more likely to perform citizenship behaviors (Diefendorff, Brown, Kamin, & Lord, 2002; Dimitriades, 2007). So, job involvement may influence OCB performance through its effect on OCB definition.

Hypothesis 3: OCB definition mediates the relationship between job involvement and performance.

Organizational Position and Job Involvement

Most previous research has focused on relationships among single constructs, such as organizational position or job involvement, predicting OCB performance, but there may be more complex relationships (i.e., interactions) that have received little attention to date. One such relationship would be the interaction of organizational position and job involvement. Wegge, Van Dick, Fisher, Weckling, and Moltzen (2006) found in a field study that full-time employees were more likely to perform OCB than part-time employees, but the relationship between full or part-time status and OCB

performance was mediated by organizational identification. Part-time employees who identified with the organization were more likely to perform OCB than the part-time employees who had not identified with the organization, while organizational identification had little impact on OCB performance for full-time employees.

Motivation for displaying OCB also can play a role in how the interaction of organizational position and job involvement may relate to OCB performance. In a study of temporary employees, Moorman and Harland (2002) found that if money was a motivation for taking the temporary position, then those workers were less likely to perform OCB. If the temporary workers took the position to gain experience or learn new skills, then they were more likely to perform OCB (Moorman & Harland). This would suggest that employees who are extrinsically motivated (i.e., money) are less likely to perform OCB compared to employees who are intrinsically motivated (i.e., gaining experience or learning new skills). Individuals who have lower levels of job involvement may also view their job as a means to an end. These individuals may only be extrinsically motivated. On the other hand, individuals who are more involved in their job may be more intrinsically motivated, rather than extrinsically motivated. The profile of a high job involved individual by Rabinowitz and Hall (1977) suggests that high job involvement is linked to intrinsic motivation.

Hypothesis 4: Job involvement mediates the relationship between organizational position and OCB performance.

Type of Psychological Contract

The psychological contract is an implicit understanding between the employee and their employer that the employer will give certain inducements for employee

contributions (i.e., performance). As these contracts are implicit, there may be misunderstandings between employees and supervisors as to what those inducements and contributions are (Rousseau, 1989). Researchers have identified different types of psychological contracts (Robinson & Morrison, 1995), such as transactional and relational. Transactional contracts are based on short-term economic exchanges (e.g., employees are offered limited involvement in the organization and only perform a narrow set of duties) (Rousseau, 2000). Relational contracts are based on longer term, loose exchange relationships, whereby one party will fulfill their part of the contract with the belief that the other party will fulfill their end even if the exchange is not immediate (e.g., employee will support the organization and will have stable employment) (Rousseau, 2000). Relational contracts are reminiscent of social exchange theory (Blau, 1964) in that neither expects immediate exchanges and both involve trust in the other party fulfilling their end of the agreement.

Social exchange theory (Blau, 1964) can be used to understand how psychological contract types may be related to OCB definition. Employees with a transactional contract may be less likely to voluntarily perform OCB as a part of their job performance as a result of their limited contract. Due to the short-term nature of a transactional contract, employees may be less likely to expect to be involved in the organization to a degree where they could receive any benefits from willingly including OCB as a part of job performance. Transactional contracts may lack the trust needed for employees to voluntarily engage in OCB as a part of their job performance. On the other hand, employees with a relational contract may be more likely to voluntarily perform OCB as a part of their job performance as a result of their longer term relationship. Employees may

be more likely to willing include OCB as a part of job performance because they may be more involved and have many opportunities to receive benefits from this exchange relationship.

Employees may be more likely to perform OCB if they hold a relational contract and less likely if they hold a transactional contract because relational contracts are more informal and loose exchange relationships. While subordinates may have expectations of the overall organization, subordinates often see their supervisor as an agent of the organization. Researchers have conceptualized and measured psychological contracts as occurring between a subordinate and their supervisor because organizations are entities that cannot make or carry out promises (Rousseau, 1989). OCB is one way subordinates can reciprocate for their expectations being met based on the subordinates' psychological contract within the supervisor-subordinate relationship. Previous research has shown that there is a positive relationship between relational psychological contracts and OCB (Hui, Lee, & Rousseau, 2004; Robinson & Morrison, 1995). Hui et al. (2004) determined relational and balanced (transactional plus relational) contracts had indirect effects on OCB performance through employee instrumentality beliefs in two Chinese samples, although both relational and balanced contracts were positively correlated to each dimension of OCB (altruism, courtesy, conscientiousness, sportsmanship, and civic virtue). Subordinates in these samples were more likely to perform OCB if they believed they would be rewarded for that behavior. The authors did not ask about what kinds of rewards the subordinates in this study expected to receive by displaying OCB, but the authors concluded that the subordinates who had balanced or relational contracts expected a positive outcome for themselves as a result of engaging in OCB. Subordinates

with transactional contracts did not believe they would be rewarded for displaying OCB. Hence the type of psychological contract that subordinates have may impact their belief as to possible consequences for displaying OCB. This study highlights that employees display behaviors that they perceive will benefit them at some point. Depending on what types of rewards subordinates expect for displaying OCB (increased income, promotion, recognition, affiliation, etc.), this could have implications for what type of reward structure would be effective in maintaining these behaviors over time. Chiaburu and Byrne (2009) studied employee exchange ideology, which they argued was similar to psychological contracts. They maintained that employees with weak exchange ideologies would not expect immediate reciprocation for their contributions. Employees with weak exchange ideologies may be similar to employees with relational psychological contracts, as they have more loose exchange relationships. Chiaburu and Byrne found that employee exchange ideology was negatively related to OCB definition. So, psychological contracts may influence OCB performance through its effect on OCB definition.

Hypothesis 5: OCB definition mediates the relationship between psychological contracts and OCB performance. (a) There is a positive relationship between relational contract, OCB definition, and OCB performance. (b) There is a negative relationship between transactional contract, OCB definition, and OCB performance.

Outcomes related to OCB Performance

It would be important to investigate all aspects of OCB role definition, including the potential outcomes. Most research to date has focused mainly on the antecedents, with some research including OCB performance as an outcome. In addition,

organizations are interested in other types of behaviors besides OCB performance, especially those behaviors that are thought to benefit the organization in some way, such as increasing organizational effectiveness. At the individual level, organizations are interested in encouraging task performance and discouraging counterproductive work behaviors (CWB). At the organizational level, organizations are interested in behaviors that contribute to the effectiveness of the organization. By definition, OCB, as well as organizational spontaneity and contextual performance, contribute to organizational effectiveness (George & Brief, 1992; Motowidlo & Van Scotter, 1994; Organ, 1988).

Task Performance

OCB is only one part of overall job performance; another part of overall job performance is in-role behavior or task performance. Task performance can be defined as activities directed at the “organization’s technical core, either by executing its technical process or by maintaining and servicing its technical requirements” (Motowidlo, Borman, & Schmit, 1997, p. 75). Research has supported the distinction between task performance and OCB (Borman & Motowidlo, 1997; Motowidlo & Van Scotter, 1994).

Research has found strong positive correlations between task performance and OCB (Hoffman et al., 2007; Podsakoff, Whiting, Podsakoff, & Blume, 2009; Williams & Anderson, 1991). In a meta-analysis, Podsakoff, Whiting, et al. (2009) found that OCB (measured as OCBO and OCBI) was strongly related to task performance. Individual-level OCB was positively related to performance ratings and reward allocation decisions (Podsakoff, Whiting, et al., 2009). Podsakoff, Whiting, et al. (2009) found that employees who were rated highly on OCB were also rated highly on task performance. Researchers (Allen & Rush, 1998; Borman & Motowidlo, 1997; Motowidlo & Van Scotter, 1994)

have found that supervisors include OCB performance while rating the performance of their subordinates.

Hypothesis 6: OCB performance is positively related to task performance.

Counterproductive Work Behavior

Counterproductive work behavior (CWB) is “any intentional behavior on the part of an organization member viewed by the organization as contrary to its legitimate interests” (Sackett, 2002, p. 5). CWB includes acts of aggression (physical and verbal), hostility, sabotage, theft and withdrawal (e.g., absenteeism, lateness, and turnover). CWB is commonly divided into two dimensions: behaviors that are intended to harm the organization and behaviors that are intended to harm individuals (Bennett & Robinson, 2000). Spector and Fox (2005) describe two distinct motives states for CWB: volition of behavior and intentionality of the harmful outcome.

While CWB and OCB are both forms of extra-role behavior, an important question is how these domains of behavior are related. Research tends to find a negative relationship between CWB and OCB. Miles, Borman, Spector, and Fox (2002) showed that there was a small negative, but non-significant, relationship between CWB and OCB. Research has supported the view that CWB and OCB are distinct constructs (Dalal, 2005; O'Brien & Allen, 2008; Sackett, Berry, Wiemann, & Laczko, 2006). Sackett et al. (2006) also found that 8.7% of their sample engaged in both OCB and CWB while another 8.1% was engaged in neither OCB nor CWB. When considering only interpersonally directed behaviors, Venkataramani and Dalal (2007) supported OCB and CWB as separate, independent constructs that are not opposing ends of a single continuum.

Dunlop and Lee (2004) found that OCBO was negatively related to both organizationally directed workplace deviance and interpersonally directed workplace deviance. Podsakoff, Whiting, et al. (2009) found that individual-level OCB was negatively related to withdrawal behaviors (absenteeism, turnover intentions, and actual turnover). In general, the extant research demonstrates a negative relationship between OCB and CWB.

Hypothesis 7: OCB performance is negatively related to CWB.

As CWB represents behaviors that harm the organization or its' members, CWB would be expected to have a negative relationship to task performance. Sackett (2002) reported that CWB was negatively related to task performance. In a meta-analysis, Viswesvaran, Schmidt, and Ones (1999, as cited in Sackett, 2002) found that CWB had a strong negative relationship to task performance. Rotundo and Sackett (2002) found that supervisors include CWB while rating the overall performance of their subordinates. Supervisors may give lower overall performance ratings to subordinates who engage in CWB as a result. Overall, there does seem to be a negative relationship between CWB and task performance.

Hypothesis 8: CWB is negatively related to task performance.

Perceived Organizational Effectiveness

Some of the extra-role behavior constructs are defined as influencing organizational effectiveness, such as OCB, organizational spontaneity, and contextual performance (George & Brief, 1992; Motowidlo & Van Scotter, 1994; Organ, 1988). So, it is important to measure organizational effectiveness when investigating OCB. Researchers have offered eight different reasons for why OCB could influence

organizational effectiveness by: (1) enhancing coworker productivity, (2) enhancing managerial productivity, (3) freeing resources up for more productive purposes, (4) reducing the need to devote scarce resources to purely maintenance functions, (5) serving as an effective means of coordinating activities between team members and across work groups, (6) enhancing the organization's ability to attract and retain the best people by making it a more attractive place to work, (7) enhancing the stability of organizational performance, and (8) enhancing an organization's ability to adapt to environmental changes (Podsakoff & MacKenzie, 1997). Relatively few studies have previously investigated the OCB-organizational effectiveness relationship, and those studies that have investigated organizational effectiveness have used unit/department effectiveness, productivity, profitability, customer satisfaction, and turnover as some of the measures of effectiveness. Researchers tend to either have participants respond about unit-level OCB or aggregate individual-level responses to the group-level.

In a field survey, DeGroot and Brownlee (2006) had respondents use the department as the frame of reference for the OCB measure. They found that department OCB was strongly related to department effectiveness. DeGroot and Brownlee (2006) also found that department OCB mediated the effect of department structure (mechanistic or organic) on department effectiveness. In a military sample, Ehrhart, Bliese, and Thomas (2006) had participants complete the OCB measure about their unit. Ehrhart et al. (2006) found that unit-level OCB was positively related to all four of the unit effectiveness measures (combat readiness, physical fitness, award rate, and M16 score). Unit-level OCB was a significant predictor of physical fitness, award rate, and M16 score

over and above the effects of cohesion, conflict, and leader effectiveness (Ehrhart et al., 2006).

In a longitudinal study of restaurant employees, Koys (2001) found that HR outcomes (employee satisfaction, unit-level OCB, and turnover) influenced organizational effectiveness but organizational effectiveness was not found to influence HR outcomes. Koys (2001) also found that OCB influenced profitability while employee satisfaction influenced customer satisfaction. Sun, Aryee, and Law (2007) found that service-oriented OCB (aggregated to the organizational level) was related to high-performance HR practices, unemployment, and both measures of organizational performance (turnover and productivity). Service-oriented OCB partially mediated the relationship between HR practices and organizational performance (turnover and productivity) (Sun et al., 2007). In a meta-analysis, Podsakoff, Whiting, et al. (2009) found that unit-level OCB was positively related to organizational effectiveness measures (productivity, efficiency, and profitability) and customer satisfaction. Unit-level OCB was negatively related to costs and unit-level turnover (Podsakoff, Whiting, et al., 2009). Overall, research seems to demonstrate a positive relationship between OCB and organizational effectiveness.

Hypothesis 9: OCB performance is positively related to perceived organizational effectiveness.

As task performance is defined as behaviors that contribute to the functioning of the organization, it would be expected that these behaviors would help the organization to be effective. As long as employees are meeting performance expectations, the organization should be effective. The organization should be able to run smoothly as

employees are at least meeting their performance expectations. Task performance should have a positive relationship to perceived organizational effectiveness. Kahya (2009) found that job performance was positively related to two of three organizational effectiveness measures (productivity and innovation but not quality).

Hypothesis 10: Task performance is positively related to perceived organizational effectiveness.

As counterproductive work behavior is defined as behaviors that harm the organization, it would be expected that these behaviors could harm the effectiveness of the organization. For example, organizations may be less effective when the employees come into work late, are absent on short notice, or quit. These types of withdrawal behaviors exert pressure on the organization to adjust staffing levels on short notice, which may negatively impact the other employees (e.g., need to work longer hours or more hours to make up for the late, absent, or no longer employed employee) and/or the customers. This could be particularly difficult if the employee has a specific role or knowledge set. Employees who engage in interpersonal counterproductive work behaviors may also detract from the effectiveness of an organization by making the work environment stressful for other employees through insensitive behavior and comments, harassment, or violence. Another way in which counterproductive work behaviors may adversely impact organizational effectiveness is by deliberately putting forth less effort or working at a slower pace. Dunlop and Lee (2004) measured workplace deviance (WDB) and OCB as two-dimensional constructs based on target of the behavior (organization and interpersonal). Supervisor ratings of business unit performance were positively related to all forms of unit-level extra-role behavior (WDBO, WDBI, and OCBO). WDB predicted

supervisor ratings of performance and two of three objective measures of performance (drive-through service time and unexplained food figures). CWB should have a negative relationship to perceived organizational effectiveness.

Hypothesis 11: CWB is negatively related to perceived organizational effectiveness.

Method

Participants

The sample was composed of 351 employed undergraduate students at a midsized public Midwestern and a small private Midwestern university who participated in exchange for extra credit in psychology or business courses. Students were given other options to obtain extra credit besides participation in research. Since part-time employment was a requirement for participation, eight participants who worked less than 15 hours per week were removed from the dataset.

The item and scale level data for OCB was positively skewed. After assessing the multivariate normality of the sample on OCB performance and definition ratings, 13 additional cases (12 students/employees and one supervisor) were deleted since their Mahalanobis distance exceeded the critical value using an alpha of .05. Subsequently, the results changed when these 13 cases were excluded in terms of whether or not there was support for the hypotheses. These 13 cases were outliers on at least one of the OCB performance or definition ratings and had an inconsistent response pattern. Out of the 331 cases, there was matched data for 195 participants (completed employee survey and completed supervisor survey). The matched data was used for the remaining analyses unless otherwise noted.

For the total sample, participants were 27 years old on average (range = 18-31, *SD* = 7.71). A majority of the sample was female (65%; 17 participants did not identify their gender) and Caucasian (67%; 18 participants did not identify their ethnicity). Most of the students were upperclassman (81.80%, 16 participants did not identify their standing) and worked at least 36 hours each week (39.50%). In addition, most of the students held entry level positions, such as server, sales associate, intern (79.20%).

Procedure

Participants completed the measures of the focal constructs and demographic questions online. The participants were assigned a unique random identifying number so that the responses from employees and supervisors could be matched. Participants emailed the researcher for the link to the survey and to receive their identifying number. The participants were asked to have their supervisor contact the researcher through email for a link to their own survey on the employees' OCB as well as the identifying number for that student.

Measures

Employed students completed the demographic questions (see Appendix A), job involvement, psychological contract, OCB definition, in-role performance, and OCB performance measures online. Supervisors completed the in-role performance, OCB performance, counterproductive work behavior, perceived organizational effectiveness, and OCB definition measures online about their employees' performance.

Organizational Position. Two independent raters coded employees' responses on two questions to determine organizational position: (1) job title and (2) a short description of their job. Employees were coded as having entry-level positions (coded as

a value of 1) or being in management (coded as a value of 2). The raters discussed any differences in coding and came to a consensus. Some examples of entry-level positions include customer service representative, server, sales associate, cashier, and intern. Some examples of management positions include manager, Senior Financial Analyst, Food Service Manager, customer service supervisor, Account Executive, and Senior Director. Organizational position has an inter-rater reliability of .93.

Job Involvement. Kanungo (1982) developed the Job Involvement Questionnaire (JIQ) which has 10 items on a Likert-type response scale that ranges from 1 (strongly disagree) to 6 (strongly agree). An example item is “Most of my personal life goals are job-oriented.” The JIQ has an internal consistency reliability of .85. Higher scores on the JIQ indicate a higher level of job involvement. The full scale is presented in Appendix B.

Type of Psychological Contract. Subscales from Rousseau’s (2000) Psychological Contract Inventory assessed the type of psychological contract employee’s had. The 26 item scales for transactional and relational contracts used a five point Likert-type response scale from 1 (not at all) to 5 (to a great extent). Thirteen items measured transactional contract, seven of which measured the employer’s obligations to their employee and six items measured the employee’s obligations to their employer. Thirteen items measured relational contract, six of which measured the employer’s obligations to their employee and seven items measured the employee’s obligations to their employer. Within each contract type, the items were averaged to create scores for employer obligations and employee obligations. An example item for the transactional employee obligations is “Work here for a limited time only.” An example item for the relational employer obligations is “Make decisions with my interests in mind.” Cronbach’s alpha

was .62 for transactional organization obligations, .83 for relational organization obligations, .73 for transactional employee obligations, and .75 for relational employee obligations. The full scale is presented in Appendix C.

OCB Performance. Tsui, Pearce, Porter, and Tripoli's (1997) OCB measure assessed OCB on a 1 (strongly disagree) to 7 (strongly agree) rating scale. An example item is "Informs management of potentially unproductive policies and practices." The wording of item eight was changed to make it more consistent with the other original items from Tsui et al.'s ("Is willing to speak up when policies do not contribute to goal achievement of department" to "Speaks up when policies do not contribute to goal achievement of department"). Three experimental items were used to ensure adequate coverage of the OCB performance content domain. The experimental items covered the content domains of helping ("Helps others with their work without being asked" and "Helps orient new employees") and loyalty ("Talks positively about the organization") because both of these domains are commonly included in other models of OCB (helping: Brief & Motowidlo, 1986; Coleman & Borman, 2000; Katz, 1964; Organ, 1988; Smith et al., 1983; Williams & Anderson, 1991; loyalty: Katz, 1964; Moorman & Blakely, 1995; Morrison, 1994; Organ, 1988; Van Dyne et al., 1994). The Cronbach's alpha was .94 for the employee-rated and .93 for the supervisor-rated 12-item measure. The full scale is presented in Appendix D.

OCB Definition. The OCB measure compiled by Tsui et al. (1997) was used to assess how employees make the distinction between in-role and extra-role behaviors including the three experimental items. Following the procedures of Kamdar et al. (2006), participants rated each of the nine items on a 1 (strongly disagree) to 7 (strongly

agree) scale for three separate assessments: if the behavior is (1) a voluntary part of the job, (2) recognized and rewarded, and (3) associated with sanctions (formal or informal) if not performed. This resulted in three composite measures: voluntary part of the job, recognized and rewarded for OCB, and sanctions for OCB. The reliabilities were .91 for employee-rated and .92 for supervisor-rated voluntary assessments, .97 for employee-rated and .98 for supervisor-rated sanctions assessments, and .94 for both employee and supervisor-rated rewards assessments. The full scale is presented in Appendix E.

In-Role Performance. Williams and Anderson's (1991) in-role behavior measure assessed task performance on a 1 (strongly disagree) to 7 (strongly agree) rating scale. An example item is "Performs tasks that are expected of him/her." The reliability was .81 for employee-rated and .72 for supervisor-rated performance. The full scale is presented in Appendix F.

Counterproductive Work Behavior. Bennett and Robinson's (2000) organizational deviance scale assessed CWB (interpersonal and organizational) on a 1 (never) to 7 (daily) scale. There are 19 items with seven for interpersonal and 12 for organizational. An example item for interpersonal deviance is "publicly embarrassed someone at work." An example item for organizational deviance is "intentionally worked slower than you could have worked." The reliabilities for interpersonal and organizational deviance were .83 and .83, respectively. The full scale is presented in Appendix G.

Perceived Organizational Effectiveness. DeGroot and Brownlee's (2006) department effectiveness measure assessed perceived organizational effectiveness on a 1 (strongly disagree) to 7 (strongly agree) scale. An example item is "this is a very

productive department.” The internal consistency for this scale is .95. The full scale is presented in Appendix H.

Data Analytic Procedure

Before testing the hypotheses, I assessed how the three experimental OCB items function along with the original nine items from Tsui et al. (1997) for both OCB performance and OCB definition. As a part of this scale refinement process, I ran an EFA in order to examine the item loadings and communalities (see Tables 1-4). I also examined the item-total correlations (see Tables 1-4) and reliability (see Table 5). Indicators of a good item include item loadings of .40 or greater, high communalities, and an item-total correlation of .50 or greater (Kline, 2005). All of the item loadings were greater than .40 except for the last item (Talks positively about the organization) for the self-rated voluntary scale of OCB definition (.35). The experimental items had some lower communalities (values lower than .40) on the self- and supervisor rated OCB performance scale and voluntary scale of OCB definition (see Table 2). Only four of the item-total correlations were less than .50. The last item (Talks positively about the organization) had lower item-total correlations for self-rated OCB performance (.43), supervisor rated OCB performance (.47), and self-rated voluntary scale of OCB definition (.36). Another item (Helps orient new employees) also had a lower item-total correlation on self-rated voluntary scale of OCB definition (.45). The reliabilities for each scale ranges between .91 and .98 (see Table 5). Overall, the experimental items were functioning well and the scales with the experimental items demonstrated good reliability, so they remained in all of the analyses.

To test hypothesis 1, I compared the mean OCB definition for self and supervisor ratings with paired sample t-tests. To find support for the hypothesis, mean self-ratings of OCB definition should be significantly lower than mean supervisor ratings of OCB definition (high ratings on OCB definition are associated with behaviors that are part of the job).

The remaining hypotheses were tested through the full theoretical model in structural equation modeling using LISREL 8.72 (Jöreskog & Sorbom, 2001; see Figure 2). Item parceling was used to reduce the number of paths to estimate. Parcels have some advantages over items as indicators in addition to reducing model complexity. Research has shown that parcels tend to be more reliable (Little, Cunningham, Shahar, & Widaman, 2002), are more efficient (Little, Lindenberger, & Nesserloade, 1999), and are more likely to be distributed normally (Little et al., 2002). Following the recommendations of Little et al. (2002), I ran exploratory factor analyses of the study variables before creating the item parcels using the congeneric strategy. When creating congeneric parcels, items were grouped based on factor loadings. For example, if I were creating three parcels of a nine item measure using the congeneric strategy, the first parcel contained the three highest loading items. The second parcel contained the three items with the next highest loadings and the third parcel contained the three items with the lowest loadings. Research has found the congeneric strategy to be more efficient and less biased than the item-to-construct balance strategy (Fletcher & Perry, 2007). I assessed the fit of the theoretical model through the following fit indices: chi-square statistic, root mean square error of approximation (RMSEA; Steiger & Lind, 1980), nonnormed fit index (NNFI; Bentler & Bonett, 1980), and comparative fit index (CFI; Hu

& Bentler, 1999). Since the chi-square statistic is sensitive to sample size, Hughes, Price, and Marrs (1986) recommend using the normed chi-square (the ratio of chi-square to the degrees of freedom) as another index of model fit. A RMSEA value of less than .06 is considered to be good fit (Hu & Bentler, 1999). CFI values of .95 or higher are indicative of good fit and a value of .90 is considered to be the lower bound of adequate fit (Hu & Bentler, 1999).

Following Anderson & Gerbing's (1988) two-step approach, the measurement (i.e., CFA) model was examined prior to testing the full structural model. In order to get the best fitting model, the 22 items¹ with communalities less than .40 were removed. The measurement model that included these items had numerous inadmissible parameters and poor model fit. The items were removed in two groups. The first set of items came from the antecedents (job involvement and psychological contract). The last set of items came from the outcomes (OCB definition, in-role performance, OCB performance, and CWB). The measurement model showed some improvement in terms of model fit after removing the first set of items, but there were still inadmissible parameters so the second set of items were also removed. The measurement model demonstrated good fit ($\chi^2 (195, N = 195) = 330.33, p < .05, RMSEA = .06, CFI = .95, NNFI = .94$). The theoretical structural model also demonstrated good fit ($\chi^2 (216, N = 195) = 389.74, p < .05, RMSEA = .06, CFI = .94, NNFI = .93$; see Table 6).

I also compared the theoretical model to alternative models using the likelihood ratio test (change in chi square between models), the Expected Cross-Validation Index (ECVI), and the change in CFI to determine which model was the best fit for the data. If the likelihood ratio test is significant, the more complex of the nested models is accepted

as the better fitting model for the data. Since lower values of ECVI represent better fit, the model with the lowest ECVI would be accepted as the best fit for the data. If the change in CFI between nested models is less than .01, the more complex of these models is accepted as the better fitting model for the data (Cheung & Rensvold, 2002). The decision to add new paths to the models was based on (1) if the path made theoretical sense and (2) the value of the modification index.

One new path was added in each of the six alternative models tested and each successive model built upon the previous model. For example, alternate model A has all of the paths from the hypothesized model in addition to the one path with the largest Lagrange multiplier (modification index) value that made theoretical sense. Table 6 contains the goodness-of-fit indices for all of the models tested. The results showed that each alternate model demonstrated only a slight improvement over the preceding model. In other words, the alternative models demonstrated a significant likelihood ratio test, a lower value for ECVI, and less than a .01 change in CFI. Since the alternate models only resulted in slight improvement in terms of model fit, the hypothesized model was accepted as the best fitting model and used to test the remaining hypotheses (see Figure 3).

Results

The means and standard deviations for all study variables are presented in Table 7. Mean OCB definition for supervisors ($M = 5.49$) were significantly higher than the mean OCB definition for self-ratings ($M = 5.12$; $t(191) = 4.51, p < .05, d = .33$; see Table 7). Supervisors also provided significantly higher mean ratings the OCB definition aspects of willingness to engage in OCB ($t(189) = 6.74, p < .05, d = .49$; self-ratings: $M =$

5.48; supervisor ratings: $M = 5.95$) and reward expectations for engaging in OCB ($t(190) = 5.51, p < .05, d = .40$; self-ratings: $M = 5.24$; supervisor ratings: $M = 5.72$). OCB definition (self-ratings) was also significantly positively related to OCB performance as rated by supervisors ($\beta = .19, SE = .06, p < .05$). In addition, both self and supervisor ratings demonstrated significant positive correlations between OCB definition and OCB performance (self-ratings: $r = .68, p < .05, N = 331$; supervisor ratings: $r = .73, p < .05$). These findings supported hypotheses 1 and 2 as employees had more narrow definitions of job required behaviors for their job than their supervisors did.

Structural equation modeling (SEM) has a number of benefits when testing for mediation, which include accounting for measurement error (Kenny & Judd, 1984) as well as having multiple antecedents in the mediation model, tests of individual parameters, tests of full model fit, and the ability to compare nested models (LeBreton, Wu, & Bing, 2009). To find support for these hypotheses, there would be a significant indirect effect. OCB definition did not mediate the relationship between job involvement and OCB performance ($\beta = .00, SE = .00, p > .05$; see Table 8), which failed to support hypothesis 3. Job involvement significantly mediated the relationship between organizational position and OCB performance ($\gamma = .01, SE = .00, p < .05$; see Table 8), which supported hypothesis 4. There was mixed support for OCB definition as a mediator between psychological contracts and OCB performance. OCB definition significantly mediated the relationship between relational psychological contracts ($\gamma = .14, SE = .00, p < .05$), which supported hypothesis 5a. OCB definition did not mediate the relationship between transactional psychological contracts and OCB performance ($\gamma = .02, SE = .01, p > .05$), which failed to supported hypothesis 5b (see Table 8).

OCB performance was significantly positively related to task performance ($\beta = .43, SE = .07, p < .05$), which supported hypothesis 6. OCB performance was significantly negatively related to CWB ($\beta = -.29, SE = .04, p < .05$), which supported hypothesis 7. Task performance was significantly negatively related to CWB ($\beta = -.36, SE = .13, p < .05$), which supported hypothesis 8. Perceived organizational effectiveness was positively related to OCB performance ($\beta = .14, SE = .10, p < .05$), which supported hypothesis 9. Perceived organizational effectiveness was significantly positively related to task performance ($\beta = .33, SE = .22, p < .05$) and was negatively related to CWB ($\beta = -.08, SE = .20, p > .05$), although the relationship was not significant. So, hypothesis 10 was supported but hypothesis 11 was not supported.

Discussion

Overall, the majority of the hypotheses were supported. Supervisors provided higher ratings of OCB definition than did employees, which was consistent with research. OCB definition mediated the relationship between relational psychological contracts and OCB performance. Job involvement also mediated the relationship between organizational position and OCB definition. Most of the outcome variables demonstrated significant relationships. Perceived organizational effectiveness was related to OCB performance task performance in the hypothesized direction, but those relationships were not significant.

Study 2

The purpose of study 2 was to investigate the structure of subordinate and supervisor perspectives on role breadth. It is important to know if subordinates and supervisors are conceptualizing OCB definition in the same manner. Study 1

demonstrated there were mean differences in OCB definition ratings between supervisors and subordinates, but we do not know if those mean differences would translate into differences in how supervisors and subordinates conceptualize OCB definition.

Measurement invariance and multidimensional scaling provide ways to investigate these potential differences between supervisors and subordinates. Measurement invariance provides a statistical test of how supervisors and subordinates conceptualize OCB definition, while multidimensional scaling provides a graphical representation of how these groups conceptualize OCB definition. Research has previously investigated the structure of performance ratings (Faction & Craig, 2001; Woehr et al., 2005) and OCB performance (Lievens & Anseel, 2004) through measurement invariance and both OCB (Coleman & Borman, 2000) and CWB (Gruys & Sackett, 2003; Robinson & Bennett, 1995) through multidimensional scaling. These analyses are important as they can provide more information on the similarities and/or differences in how supervisors and subordinates conceptualize OCB definition.

Measurement invariance can determine if we are able to compare the ratings made by supervisors to the ratings made by subordinates. In other words, measurement invariance allows us to determine if supervisors and subordinates are talking about the same thing. It is important that different groups (e.g., supervisors and subordinates) demonstrate measurement invariance as the lack of measurement invariance impacts what substantive interpretations and conclusions can be made. When groups are not equivalent, their scores or ratings cannot be meaningfully compared. It would also be very difficult to then interpret any mean differences in supervisor and subordinate ratings.

Multidimensional scaling is another way to test OCB definition ratings of supervisors and subordinates. Multidimensional scaling is a more exploratory analysis that depicts the data in a visual format to determine the similarity/dissimilarity of items to each other. It is important to know if supervisors and subordinates have the same cognitive knowledge structure, or schema, of OCB definition. If these groups have the same schema, then the question to address is why they define OCB differently when they rate behaviors. If these groups have different cognitive maps, then the question to address is what is it about these groups that they have such different cognitive representations of OCB definition.

Measurement Invariance

Measurement invariance may be another method of testing the hypothesized difference in the role definitions between supervisors and subordinates. Measurement invariance is a method to determine if different groups have similar interpretations of a construct. Some research has shown that task performance appraisal ratings made by employees, supervisors, and peers/co-workers demonstrate measurement invariance (Fecteau & Craig, 2001; Woehr et al., 2005). Lievens and Anseel (2004) found that supervisor and peer OCB performance ratings of targets employed at different IT organizations were invariant. These psychological constructs, situational characteristics, and motivating mechanisms may also impact whether or not there is measurement invariance for OCB definition, but research to date has not assessed the equivalence of supervisor and subordinate OCB definitions. In line with the findings of measurement invariance for performance, I would expect self and supervisor ratings of OCB definition to also demonstrate measurement invariance. Even though the research has shown that

supervisors and subordinates do rate OCB definition differently, there may be some degree of shared understanding of OCB definition. In the in-role performance domain, Woehr et al. (2005) reported that the subordinate or self-ratings were consistently higher than the supervisor ratings for all of the task performance dimensions (the significance of these mean differences was not tested) but they supported the invariance of subordinate, supervisor, and peer/coworker performance ratings.

There are degrees of measurement invariance that can be assessed. Vandenberg and Lance (2000) present eight potential tests for measurement invariance. They recommended following a specific order to these tests of measurement invariance. Vandenberg and Lance concluded from their review that the most common method of testing measurement invariance is to first use an omnibus test of the equality of covariance matrices across groups (i.e., $\Sigma^g = \Sigma^{g'}$, where g and g' are different groups). In this study, subordinates and supervisors are considered to be two different samples or groups. This omnibus test assesses the null hypothesis that the covariance matrices are invariant across the groups. If the covariance matrices across groups are invariant, no other tests are needed. If the covariance matrices across groups are found to be different, then the next step is to test for full configural invariance (i.e., the specified pattern of fixed and free factor loadings are equivalent across groups). If the specified pattern of factor loadings is found to be invariant, then further tests can be conducted since the construct of interest is not different across groups (Vandenberg & Lance, 2000). If the pattern of factor loadings is found to be invariant, then the next step is to test for the equality of factor loadings across groups or testing for metric invariance (i.e., $\Lambda_X^g = \Lambda_X^{g'}$). The factor loadings of items in the pattern are constrained to be equal across

groups when testing for metric invariance. If the factor loadings are found to be invariant, then the next step is to test for the equality of the item intercepts across groups or the test for scalar invariance (i.e., $\tau_x^g = \tau_x^g$). In order to establish measurement invariance, it is necessary to support configural and metric invariance (Cheung, 1999; Steenkamp & Baumgartner, 1998; Vandenberg & Lance, 2000).

If subordinates and supervisors are defining OCB differently, measurement invariance may still hold in terms of the factor structure of OCB definition demonstrating the same pattern across supervisors and subordinates (configural invariance), being equal across supervisors and subordinates (metric invariance), and in terms of item means being equal across subordinate and supervisor ratings of OCB definition (scalar invariance). Research has demonstrated that subordinates have a narrower definition of performance than do supervisors (Chiaburu & Byrne, 2009; Lam et al., 1999; Morrison, 1994). Chiaburu and Byrne found significant mean differences between subordinates and their supervisors on the overall OCB definition construct in addition to significant mean differences for all nine of the OCB definition items. Vandenberg and Lance (2000) argued that researchers could reasonably expect to find differences on the item level across groups if it was also expected to find mean differences at the construct level. It could be expected that subordinates would have a lower mean rating on OCB definition than would supervisors. Woehr et al. (2005) demonstrated the metric invariance of subordinate, supervisor, and peer/coworker performance ratings and they did not test for scalar invariance. Woehr et al. also found that metric invariance was the best fitting model based on the likelihood ratio test even though the fit indices were good for the configural invariance model and the error variance invariance model.

Previous research on OCB definition (Chiaburu & Byrne, 2009; Lam et al., 1999; Morrison, 1994) has not assessed the measurement invariance of supervisor and subordinate ratings. If measurement invariance holds, then there is no concern with comparing these perspectives on OCB definition. When measurement invariance holds, we can make comparisons because we would be comparing like things. When measurement invariance does not hold, any comparisons between supervisors and subordinates may lose meaning since we would be comparing two different things. The empirical relationship between latent variables and their indicators are not equivalent for supervisors and subordinates, in this case, without measurement invariance (Drasgow & Kanfer, 1985). The subordinate and supervisor ratings are not directly comparable and reflect the use of different scales by these groups or different constructs when there is a lack of measurement invariance (Drasgow & Kanfer, 1985).

Hypothesis 1a: Subordinate and supervisor ratings of OCB definition will demonstrate configural invariance.

Hypothesis 1b: Subordinate and supervisor ratings of OCB definition will demonstrate metric invariance.

Hypothesis 1c: Subordinate and supervisor ratings of OCB definition will demonstrate scalar invariance.

Multidimensional Scaling

Multidimensional scaling is a spatial representation of the data's structure (Young, 1987). MDS is a method of trying to "find n points whose interpoint distances match in some sense the experimental dissimilarities in n objects" (Kruskal, 1964, p. 1). The key aspect of MDS is the plot that spatially represents the distances between the

objects, in this case OCB definition similarity ratings. Items close together on the plot would represent their cognitive similarity in terms of the rating scale used in the study. Items far apart would represent their cognitive differences in terms of the rating scale.

MDS is an exploratory analysis and has been used to help determine the dimensionality of OCB (Coleman & Borman, 2000) and CWB (Gruys & Sackett, 2003; Robinson & Bennett, 1995). These studies used MDS to determine how many dimensions best represented OCB and CWB as researchers had proposed different conceptualizations for these constructs (i.e., varying numbers of dimensions and varying labels for those dimensions). Coleman and Borman (2000) supported a three-dimensional model of OCB (interpersonal, organizational, and job/task conscientiousness) based on experts sorting the behaviors into categories. Robinson and Bennett (1995) found a two-dimension solution for CWB with one dimension representing the seriousness of the behavior (minor to severe) and the other dimension representing the target of the behavior (organization or interpersonal). Gruys and Sackett (2003) also found a two-dimension solution for CWB with one of the dimensions representing the target of behavior (organization or interpersonal). Gruys and Sackett differed in their label for the remaining dimension, which was task relevance (if the behavior was relevant to tasks performed in the context of their job) instead of seriousness of the behavior. One commonality among this research is that the target of the behavior is reflected in the underlying structure of these constructs.

MDS will allow for another comparison of how supervisors and subordinates are interpreting OCB for the subordinate's job. MDS provides a visual representation of OCB definition ratings whereas measurement invariance provides a more quantitative

analysis of these ratings. To better determine how similar or different OCB is from task performance, supervisors and subordinates also provided similarity ratings for task performance. OCB definition may be best represented by a single dimension that reflects either overall performance (e.g., task performance and OCB) or the perspective of the rater (i.e., supervisor and subordinate). There could also be a two-dimension solution with one dimension that reflects the actual behaviors (i.e., performance) and another dimension to represent the perspective of the rater. Another two-dimension solution could reflect task performance and OCB as separate dimensions. There may be three-dimensions that best represent the underlying structure OCB definition data: (1) two dimensions to represent the structure of OCB and another dimension to represent the rater (i.e., subordinate and supervisor) or (2) one dimension each to represent task performance, OCB, and the rater (i.e., subordinate and supervisor). Another possibility would be a four-dimension solution to represent OCB definition: two dimensions to represent OCB, one dimension to represent the subordinate perspective, and another dimension to represent the supervisor perspective. In addition, a possible four-dimension solution could be one dimension to represent each task performance, OCB, the subordinate perspective, and the supervisor perspective.

It would be expected from previous research on OCB performance that there will be at least one dimension, potentially more, that best represents the structure of OCB definition and one dimension to represent task performance. If supervisors and subordinates have a similar cognitive understanding of OCB definition, then there should not be a dimension(s) to represent the rating source or perspective. In this case, supervisors and subordinates would give matching similarity ratings for the subordinate's

job that would show up as the items plotted in similar places within separate spatial representations or as a single point for each item within a shared spatial representation. This may be similar to the finding of measurement invariance between these ratings. On the other hand, if supervisors and subordinates have different cognitive representations, there should be a dimension(s) to represent the rating source. Item placement within the spatial representation would depend on the organizational position of the individual who provided the similarity rating. The items would be placed some distance apart between the separate spatial representations or there will be one point for each item and additional dimension(s) to represent the cognitive differences implied by the different perspectives. This may be similar to the finding of equivalent ratings between supervisors and subordinates from measurement invariance. Unlike measurement invariance, MDS is an exploratory approach with less emphasis on statistical tests. There are implications for the appropriateness of comparing supervisor and subordinate ratings in other analyses based on the results of MDS. MDS will assist in showing visually how task performance and OCB are conceptualized as well as how supervisor and subordinate ratings of task performance and OCB definition are related to each other. Researchers will have more information about the degree of similarity or differences between supervisors and subordinates on task performance and OCB definition.

Research Question 1: How many dimensions best represent the subordinate and supervisor similarity ratings of task performance and OCB definition?

Methods

Participants

The data for Study 1 and Study 2 were collected simultaneously. The sample was composed of 351 employed undergraduate students at a midsized public Midwestern and a small private Midwestern university who participated in exchange for extra credit in a psychology or business course. There were 331 cases used for the remaining analyses unless otherwise noted (Subordinate/Self: $N = 331$ and Supervisor: $N = 195$).

Procedure

Participants completed the measures of the focal constructs and demographic questions online at the same time they completed the Study 1 measures. The participants were assigned a unique random identifying number so that the responses from employees and supervisors could be matched. Participants emailed the researcher for the link to the survey and to receive their identifying number. Participants were asked to have their supervisor contact the researcher through email for a link to their own survey on the employees' OCB as well as the identifying number for that student.

Measures

Participants completed the OCB definition and OCB similarity measures online. Supervisors completed online measures of OCB definition about their employees' and OCB similarity for their subordinate's job.

OCB Definition. The OCB measure compiled by Tsui et al. (1997) assessed how employees make the distinction between in-role and extra-role behaviors including the three experimental items. Following the procedures of Kamdar et al. (2006), participants rated each of the nine items on a 1 (strongly disagree) to 7 (strongly agree) scale for three

separate assessments: if the behavior is (1) a voluntary part of the job, (2) recognized and rewarded, and (3) associated with sanctions (formal or informal) if not performed. This resulted in three composite measures: voluntary part of the job, recognized and rewarded for OCB, and sanctions for OCB. The reliabilities were .91 for employee-rated and .92 for supervisor-rated voluntary assessments, .97 for employee-rated and .98 for supervisor-rated sanctions assessments, and .94 for both employee and supervisor-rated rewards assessments. The full scale is presented in Appendix E.

OCB Similarity Ratings. Williams and Anderson's (1991) in-role behavior measure and Tsui et al.'s (1991) OCB measure assessed the similarity of task performance and OCB items, including the three experimental items, respectively. These 19 items were measured on a 1 (very dissimilar) to 7 (very similar) rating scale. To reduce respondent fatigue, participants completed a portion of the possible 171 pairwise comparisons which resulted in four versions of this measure. I used a cyclic design (Spence, 1982) to assign the each possible pairwise comparison of task and OCB items to each version of the survey. Participants were randomly assigned to which of the four versions they completed. Employed students and their supervisors made 42 or 43 pairwise comparisons as a distance measure. The full scale is presented in Appendix I.

Data Analytic Procedure

To test hypothesis 1, I used multigroup confirmatory factor analysis in LISREL 8.72 (Jöreskog & Sörbom, 1996) to assess the measurement invariance of subordinate and supervisor ratings of OCB definition. A series of nested models were compared using the likelihood ratio test (change in chi square between models) as well as the change in the other fit indices to determine which model was the best fit for the data. The

conceptual model tested of OCB definition for measurement invariance was presented in Figure 4. If the likelihood ratio test was significant, then it indicated a significantly closer fit and the more complex of the nested models was accepted as the better fitting model for the data. If the change in CFI between nested models was less than .01, the more parsimonious of these models was accepted as the better fitting model for the data (Cheung & Rensvold, 2002). When the likelihood ratio test is non-significant and the values of the goodness of fit indices are the same between these models, then the more parsimonious model (e.g., metric model between configural and metric invariance or scalar model between metric and scalar invariance) is accepted as the best fit.

Four models were tested to determine measurement invariance between self/employee and supervisor ratings of OCB definition. The first model constrained the covariance matrices to be equal (omnibus model) between groups. The second model constrained the lambda parameters (e.g., factor loadings) to have the same pattern across the two groups (configural invariance). Configural invariance would determine if the 36 items for OCB definition have the same pattern of factor loadings for subordinates and supervisors. Another model constrained the lambda parameters to be equal across the two groups (metric invariance). Metric invariance would determine if the 36 items for OCB definition have the same factor loadings for subordinates and supervisors. The last model constrained the OCB definition latent means (e.g., willing to engage in these behaviors, rewarded for engaging in these behaviors, and sanctioned for not engaging in these behaviors) to be equal across the two groups (scalar invariance). Scalar invariance would determine if the three latent means for OCB definition were equal for subordinates and supervisors. Following the recommendations of Bollen (1990), multiple goodness of fit

indices were used to assess model fit. I examined the chi-square statistic, RMSEA, NNFI, and CFI (Hu & Bentler, 1999; Cheung & Rensvold, 2002). A RMSEA value of less than .06 is considered to be good fit (Hu & Bentler, 1999). CFI values of .95 or higher are indicative of good fit and a value of .90 is considered to be the lower bound of adequate fit (Hu & Bentler, 1999). To find support for hypothesis 1a, the likelihood ratio test will not be significant and there will be no change in fit indices between the nested models for the test of configural invariance. To find support for hypothesis 1b, the likelihood ratio test will not be significant and there will be no change in fit indices between the nested models for the test of metric invariance. To find support for hypothesis 1c, the likelihood ratio test will not be significant and there will be no change in fit indices between nested models for the test of scalar invariance. Support of hypothesis 1c would indicate that the lambda parameters are equal for self and supervisor ratings of OCB definition and that the item intercepts are equal.

To test research question 1, I used proximity scaling (PROXSCAL) in SPSS to test the asymmetric similarity matrices for supervisors and subordinates as PROXSCAL offers a wider variety of goodness of fit indices than ALSCAL. I used the similarity ratings between all task performance and OCB definition items for both subordinates and supervisors as a measure of the distances between any two items. I created a similarity matrix based on the similarity ratings as the data matrix to be analyzed. I used goodness of fit indices (stress values, Dispersion accounted for, and Tucker's coefficient of congruence) as one method of determining model fit between one, two, three, and four dimension models. Stress is an index that represents how well the model fits the data (Kruskal, 1964). Low stress values (close to zero) and higher values for Dispersion

accounted for (DAF) and Tucker's coefficient of congruence (TCC) are indicative of good fit. Kruskal (1964) recommends that lower stress values represent better fit where values of .05 are good and .10 are fair. In order to determine how many dimensions best represent the structure of the data, Kruskal (1964) offered three criteria for model comparison. One criterion is to choose the model where stress is small enough but that models with more dimensions do not have significantly smaller stress values as stress will decrease as the number of dimensions increase. Another criterion is to choose a model that has an interpretable solution. The final criterion is that models with additional dimensions are acceptable as long as there is an independent estimate of the statistical error in the data that shows the data is accurate. I also used the scree plot of stress values plotted against dimension to help determine the best fitting model, where the point in which the slope of the line changes from a steep negative slope to a gentler negative slope would indicate the optimum number of dimensions (adding dimensions would not significantly drop the stress value). The labels for the dimension(s) for the best fitting model were determined by the content of the items that compose the dimension(s).

Results

Measurement Invariance

Self and supervisor ratings of OCB definition were tested for measurement equivalence. There was some missing data at the item level for the measures of OCB definition. For the purposes of these analyses, those data points were left as missing and excluded by LISREL. That left a sample of 321 for self-ratings and 195 for supervisor ratings of OCB definition.

First, these ratings were tested for configural invariance or to determine if the same pattern of factor loadings would hold across ratings for OCB definition items between employees and supervisors. This model provided a poor to adequate fit to the data considering that the RMSEA value was outside the bounds of adequate fit (Model 1; see Table 9). RMSEA values should be .08 or less for adequate fit, but RMSEA for Model 1 was .14. On the other hand, the values for NNFI and CFI demonstrated an adequate fit for this model (.92 for both indices). Since the model for configural invariance provided a poor fit, this indicated that the factors of OCB definition (willing to engage in these behaviors, rewarded for engaging in these behaviors, and sanctioned for not engaging in these behaviors) did not represent the same theoretical construct across ratings, which did not support hypothesis 1a.

Another test of equivalence was for metric invariance or to determine if the same factor loadings for OCB definition items would hold across employees and supervisors. This model also provided a poor to adequate fit to the data with very similar values for the fit indices as model for configural invariance (see Table 9). The change in chi-square between the tests for metric and configural invariance was not significant ($\Delta\chi^2(33) = 40.43, p > .05$) while there was no change in CFI between these models (Cheung & Rensvold, 2002), so model 2 (metric invariance) was accepted as the better fitting of the two models. The metric invariance test demonstrated that there was no change in the measurement of the latent variables of OCB definition (willing to engage in these behaviors, rewarded for engaging in these behaviors, and sanctioned for not engaging in these behaviors) across self/employee and supervisor ratings. While the metric invariance

model provided a better fit, the overall model fit was generally poor, which did not support hypothesis 1b.

The last test of equivalence was for scalar invariance or to determine if the latent means of OCB definition (willing to engage in these behaviors, rewarded for engaging in these behaviors, and sanctioned for not engaging in these behaviors) would hold across employees and supervisors. This model also provided a poor to adequate fit to the data with very similar values for the fit indices as the models for configural and metric invariance (see Table 9). The global fit statistics suggest that all models assessed provide a poor to adequate fit to the data. The change in chi-square between the tests for metric and scalar invariance was significant ($\Delta\chi^2(36) = 109.86, p < .001$) while there was no change in CFI between these models (Cheung & Rensvold, 2002), so model 3 (scalar invariance) was accepted as the best fitting model for the data. While the likelihood ratio test (change in chi-square between the tests of metric and scalar invariance) was significant, Cheung and Rensvold (2002) do not recommend using this test as it is sensitive to sample size. The scalar invariance test demonstrated that there was no change in the measurement of the latent variables of OCB definition (willing to engage in these behaviors, rewarded for engaging in these behaviors, and sanctioned for not engaging in these behaviors) across self/employee and supervisor ratings. While the scalar invariance model provided a better fit compared to the metric invariance model, the overall model fit was generally poor, which did not support hypothesis 1c. The factor loadings from the test of scalar invariance are presented in Table 10.

In terms of the group fit statistics, there was a similar trend across the four tests of equivalence (see Table 11). The employee rating of OCB definition made the largest

contribution to the global chi square (around 59%), with the supervisor rating consistently contributing the least to the global chi square (about 41%).

Multidimensional Scaling

To answer the research question, I used PROXSCAL to estimate a one, two, three, and four-dimension model to represent the structure of task performance and OCB definition ratings for supervisors and subordinates. All four models had similar values for stress, DAF, and TCC (see Table 12). All three goodness of fit indices showed that all models provided a good fit to the data (stress values less than 0.05 and DAF and TCC values close to 1.00). The scree plot showed that a one dimension model was the best fit for the data (see Figure 5). All of the models had similar values on normalized raw stress, so there was not a significant drop off to indicate that additional dimensions would better fit the data.

The stress values, DAF, TCC, scree plot, and interpretability of solution seem to indicate that a one dimension solution best fits the task performance and OCB definition similarity ratings. In the two dimension solution, one dimension captured performance and the other dimension captured the target of the behavior. The performance dimension ranged from the items indicative of poor in-role or task performance on one end and items indicative of meeting (task performance) or exceeding (OCB definition) role expectations. The two items that stood apart on the performance dimension both indicated not meeting role expectations (Neglects aspects of the job he/she is obligated to perform and Fails to perform essential job duties). The remaining task performance and OCB definition items were clustered together toward the other end of the performance dimension. The ends of this target of behavior dimension were behaviors targeted toward

the work group or organization at one end and behaviors targeted toward the individual at the other end. There was only one item that stood apart on this target of the behavior dimension from the OCB definition items (Helps orient new employees; see Figure 6). All of the other task performance and OCB definition items were clustered between the final coordinate values of $-.20$ and $.20$. In addition, an OCB definition item with a focus on helping the individual (Helps others with their work without being asked) was not clustered with the other individual as the target item. So, the one dimension model was accepted as the best fit since it was the most interpretable solution (see Figure 7). An MDS solution with one dimension indicated that supervisors and subordinates have similar cognitive understandings of task performance and OCB definition. The one dimension captured performance and would be interpreted just like the performance dimension from the two dimension solution. The same two items were separated from all of the other task and OCB definition items. These two items captured failing to meet task or in-role performance expectations.

Discussion

Study 2 demonstrated that subordinates and supervisors did not have similar cognitive schema for OCB definition. Self- and supervisor-rated OCB definition did not demonstrate measurement invariance such that the two groups did not have the same pattern of factor loadings. On the other hand, MDS showed that subordinates and supervisors had some difficulty in distinguishing in-role performance from OCB. The results supported a one dimension solution for MDS with most of the in-role performance and OCB definition items clustering together.

General Discussion

This study tested a theoretical model of the antecedents and outcomes of OCB definition (Study 1) as well as the structure of OCB definition ratings of supervisors and subordinates (Study 2). This study demonstrated that supervisors provide higher ratings of OCB definition compared to subordinates, which was consistent with previous research (e.g., Chiaburu & Byrne, 2009; Kamdar et al., 2006; Lam et al., 1999; McAllister et al., 2007; Morrison, 1994). Study 2 highlighted that supervisors may not have a broader role definition than do subordinates as there was mixed results as to how similar or different the schemas are for these groups in regards to OCB role definition, which contradicted the interpretation of extant research. OCB definition mediated the relationship between relational psychological contracts and OCB performance, but not the relationships between job involvement or transactional psychological contracts and OCB performance. Job involvement mediated the relationship between organizational position and OCB performance. OCB performance was positively related to task performance and perceived organizational effectiveness. Task performance was related to perceived organizational effectiveness, but CWB was not related to perceived organizational effectiveness. OCB performance and task performance were related to CWB. Meanwhile, subordinates and supervisors demonstrated measurement invariance for OCB definition. Subordinates and supervisors also seem to have a similar cognitive understanding of task performance and OCB definition.

These studies advance OCB theory. Most of the hypotheses in this study were supported. Specifically, out of the 15 hypotheses, nine were supported. Study 1 demonstrated that different constructs were related to how employees conceptualize what

behaviors were in-role compared to OCB. The theoretical model included antecedents and individual- and organizational-level outcomes. In addition, there are a variety of potential antecedents of OCB definition from different groups of variables, such as psychological constructs, situational characteristics, and motivating mechanisms.

There has been an emerging trend of investigating OCB definition in the literature (Chiaburu & Byrne, 2009; Kamdar et al., 2006; Lam et al., 1999; Morrison, 1994; Tepper et al., 2001), but only some of these studies have also assessed the relationship between OCB definition and OCB performance (Kamdar et al., 2006; Morrison, 1994; Tepper et al., 2001). Lam et al. (1999) focused more on explaining differences and similarities in OCB definition across cultures than relating OCB definition to actual outcomes.

Chiaburu and Byrne (2009) set out to predict OCB definitions, so OCB definition became the relevant focal outcome in their study. While it is interesting to know how individuals are conceptualizing OCB (e.g., as in-role or extra-role behavior), it is also important to determine whether OCB definition is actually related to outcomes relevant for organizations, such as OCB performance. Study 1 extended the work of Chiaburu and Bryne (2009) through the relationship between OCB definition and OCB performance. An important contribution of this research was the significant positive relationship between employee-rated OCB definition and supervisor-rated OCB performance. When employees included at least some aspects of OCB in their role definitions, their supervisors rated them as actually engaging in OCB on the job.

It was not unexpected that a hypothesis including CWB was not supported. There is a low base rate of employees engaging in CWB overall, and particularly in this sample. On a 1 (never) to 7 (always) scale, supervisors gave an average rating of 1.29 with a

standard deviation of .40 for engaging in CWB. There are a number of plausible explanations for this low rating. One explanation is that supervisors are unaware that their employees engage in CWB. Another explanation is that any employees who have engaged in CWB were already terminated by their employer and could not participate in this research. So, the participants truly didn't engage in this type of behavior. Interested participants and supervisors were informed that this research was focused, in part, on workplace performance. Employees who have engaged in CWB may have elected not to participate in this research. On the other hand, the employees may have participated but their supervisor didn't complete the survey on their behalf. In addition, supervisors may not be in the best position to observe their employees engaging in CWB. It could be that peers or co-workers are in a better position to observe and have knowledge of CWB. As employees and supervisors were the focus of this research, peers were not included in this study.

One of the three hypotheses that involved perceived organizational effectiveness was not supported in the theoretical model (CWB). The data would have supported these hypotheses if they were tested through correlation rather than as a model in SEM. Perceived organizational effectiveness was significantly correlated with CWB ($r = -.28, p < .05$). CWB had significant indirect effects on perceived organizational effectiveness rather than the hypothesized direct relationships. This result highlights the importance of testing all of the hypothesized relationships as a model rather than testing the hypotheses in isolation.

These studies also helped to advance the measurement of OCB. The theoretical model tested all of the Study 1 hypotheses as an entire model in structural equation

modeling using parcels, which made another important contribution to the research. Study 1 demonstrated support for the majority of these relationships when assessing the entire model simultaneously. Previous research has mainly tested hypotheses on an individual basis without accounting for the fact that many of these variables are related to each other. Study 2 contributed to the research by utilizing two different measurement approaches to determine how employees and supervisors conceptualized OCB role definitions. Assessing supervisor and subordinate ratings of OCB role definition through measurement invariance and multidimensional scaling allowed for an initial understanding of these perspectives beyond assessing mean differences of overall OCB definition. The results of the measurement invariance analyses led to the conclusion that supervisors and subordinates have different schemas when it comes to OCB definition. The results of multidimensional scaling approach led to the conclusion that supervisors and subordinates do have a similar schema for OCB definition and task performance. These analyses contributed to our understanding of each perspective. While supervisors do have broader role expectations, there remains a question as to how both groups tend to conceptualize OCB role definition.

Study 2 did not establish measurement invariance for OCB definition between employees and supervisors because these ratings were not invariant for the tests of both configural and metric invariance (Cheung, 1999; Steenkamp & Baumgartner, 1999; Vandenburg & Lance, 2000). Overall, the models for configural, metric, and scalar invariance demonstrated poor fit due to the large RMSEA value (.14). To further investigate the general poor fit of the model, two additional models were tested. The first model allowed the error terms for each item to correlate for the OCB definition

assessments of voluntary, rewarded, and sanctioned. In other words, the error term for the item “Makes suggestions to improve work procedures” was allowed to correlate for each of the three OCB definition assessments. This correlated error model resulted in an improvement in CFI, but still showed poor fit for RMSEA ($\chi^2 (1158, N = 321) = 5563.69$, $p < .05$, RMSEA = .13, CFI = .93, NNFI = .92). The second model tested included a general factor of OCB definition and demonstrated no change in model fit compared to the hypothesized configural model ($\chi^2 (1182, N = 321) = 6027.63$, $p < .05$, RMSEA = .14, CFI = .92, NNFI = .92). Neither of the additional models tested in an attempt to improve model fit were able to resolve the poor model fit for the test of configural invariance.

So, supervisors and subordinates have different perspectives regarding OCB definition. These groups may have different perspectives for a variety of reasons. Supervisors, in particular, may have trouble making the distinction between which behaviors are in-role compared to which behaviors are extra-role. As Podsakoff et al. (2000) suggested, it may be that supervisors take the approach that all behaviors that make positive contributions are expected from subordinates and rewarded. In addition, as employees move up through the organization, roles tend to become broader with more expected of employees. Supervisors may apply the standards set for their own positions, rather than the standards for the positions of their subordinates. For subordinates, it would be beneficial to make a distinction such that OCB would be extra-role behavior. If OCB is extra-role, then subordinates cannot be punished for not engaging in those behaviors. It may also be that there is some amount of variability within the subordinate perspective. About 20% of the subordinates were in supervisory or higher level

management positions themselves. The subordinates in management positions may have schemas more similar to the supervisors in this study compared to the rest of the subordinates who had more entry-level positions. Each group perceived these behaviors differently, which calls into question the meaningfulness of any mean comparisons of OCB definition between these groups, like those found in Study 1. Vandenberg and Lance (2000) concluded that any mean differences would be uninterpretable after finding the groups to be variant or not equivalent. In this case, you would no longer be comparing like things.

There is the possibility that other variables, such as the task and OCB performance ratings of supervisors and subordinates, may be more informative when testing for measurement invariance. It would be interesting to determine if supervisors and subordinates have the same perspective when it comes to the behaviors employees are demonstrating on the job rather than or in addition to how supervisors and subordinates define the subordinate's role. Additionally, a measure of OCB that captures different aspects of the content domain could impact measurement invariance analyses. This study utilized the scale by Tsui et al. (1997), which focused more on OCB directed toward the organization. Three items were added to assess the helping and loyalty dimensions. The use of another measure that more fully captures the interpersonal aspect of OCB could be useful in determining the measurement invariance. Supervisors and subordinates may be more likely to agree that some of the interpersonal OCBs are more likely to be defined as in-role. Furthermore, there are potential antecedents of OCB definition that were not measured in this study that could influence OCB definition. Job satisfaction, organizational commitment, organizational culture, and organizational

politics may impact how an employee defines what behaviors they define as in-role compared to extra-role.

Interestingly, the main analyses in Study 2 led to two very different conclusions. Supervisors and subordinates seemed to share a schema as they rated the similarity of task performance and OCB definition items in the same manner from multidimensional scaling. While these analyses are very different and not directly comparable, these contradictory findings highlight the importance of using multiple methods to analyze these perspectives.

Through the process of model testing in Study 1, a number of items were removed in order to obtain admissible parameter estimates and a better fitting model. All of the scales demonstrated good reliability and are well established measures. There are some potential explanations for why these items did not function very well. Possible explanations may include ambiguity; small item variance; the behavior was not applicable for the position or had no opportunity to engage in that behavior; and/or the behavior would result in termination. The one in-role performance item removed seems to be ambiguous (“Engages in activities that will directly affect his/her performance evaluation”). Due to the low base rate of CWB by the employees in this study, it was not surprising that some of the CWB items did not work as well. For example, the item “Discussed confidential company information with an unauthorized person” was removed. Considering that most of this sample worked in entry-level positions, employees probably did not have access to company information that they would discuss with others. Other items such as “Played a mean prank on someone at work” or “Come in late to work without permission” may result in that employee’s termination, especially if

this was habitual behavior. In addition, the supervisor may not be aware of their employee engaging in some of these behaviors. Supervisors may remain unaware of their employee's talking positively about the organization (OCB performance item).

The results from Study 1 and Study 2 tell two different stories. Study 2 utilized the full data set (Subordinate/Self: $N = 331$ and Supervisor: $N = 195$) while Study 1 only used the matched data ($N = 195$). These different stories are mainly due to the types of analyses used. Study 2 focused on comparing the ratings of OCB definition in new ways for this topic while Study 1 focused on testing a theoretical model of some antecedents and consequences of OCB definition.

Practical Implications

A key finding from Study 1 demonstrated that the employees who had a thought of OCB as being in-role were more likely to engage in OCB on the job, while the employees who considered OCB as extra-role and not required were less likely to engage in OCB on the job. As OCB definition was distally related to positive outcomes for the organization, such as task performance and perceived organizational effectiveness, it is important for organizations to encourage employees to define their roles more broadly. Organizations and/or managers could take a number of steps in order to encourage employees to define their role more broadly. Managers could establish a norm in their workgroup that engaging in OCB is an expected part of everyone's role. OCB could also be incorporated into the culture of the organization, such that employees at all levels would be expected to define their individual roles more broadly.

Study 1 also made a contribution by relating OCB performance to outcomes of interest to organizations. Organizations and managers want employees to engage in OCB,

so it is important to understand how to facilitate employee OCB. A practical implication is that organizations should try to facilitate a broader OCB role definition among employees. The outcomes of those employees who engage in OCB were also more likely to have a high level task performance and enhanced supervisor perceptions of organizational effectiveness. Moreover, the voluntary and reward aspects of employee OCB role definition were positively correlated with perceived organizational effectiveness. Managers could enjoy the benefits of OCB performance by encouraging employees to define their roles more broadly. Some methods of doing so would include modeling the behaviors they desire from their subordinates; rewarding those employees who are already engaging in OCB performance; setting clear in-role performance expectations; and setting realistic goals for in-role performance.

Another practical implication is that organizations should try to facilitate the development of relational psychological contracts for subordinates. As an antecedent, relational psychological contracts were distally related to positive outcomes for the organization through OCB role definition. The results showed that employees with this type of psychological contract also had a broader OCB role definition and were more likely to engage in OCB. For example, managers could help their subordinates find developmental opportunities to develop a relational psychological contract.

Although only some of the predicted relationships for job involvement were supported, organizations may want to encourage a high level of job involvement in their employees. It may be worthwhile to have managers who are more involved in their job. The results showed that those who were in management type positions were more likely to have a broader role definition.

Organizations would want to discourage solely transactional psychological contracts. The employees who are showing up because they are paid to do so with little expectation of getting more out of their job tend to have a narrower role; they view OCB as being above and beyond the call of duty. These employees would be less likely to engage in OCB. It would be of interest to organizations to reduce any behavior detrimental to the company, such as CWB. Those employees who were better in terms of task performance were also less likely to engage in CWB. In addition, the voluntary and reward aspects of supervisor OCB role definition were negatively correlated with CWB.

It would be important for organizations to know whether or not supervisors and subordinates had the same perspective regarding what behaviors are expected. If there are differences regarding role definition, this could result in conflict and more importantly could impact performance evaluations. When supervisors expect their subordinates to engage in OCB on the job, supervisors will use their role definition for their subordinate during the performance evaluation. Performance evaluations can have a significant impact on a subordinate's path through the organization as well as their income. A subordinate may miss out on a promotion, transfer, or development opportunity within their organization due to a less than satisfactory performance evaluation if they are being held to a set of expectations they are unaware of and not meeting. Subordinates may also lose out on incentives for performance, such as a raise or bonus, altogether or in terms of the amount for not engaging in behavior they were not aware was expected by their supervisor. Subordinates may change their behavior to at least meet the expectations of their supervisors, but subordinates need to know where that bar has been set in the first place.

Limitations

One possible limitation was that this was a sample of working students and the results might not be considered as generalizable to the population of working adults in the US compared to a pure organizational sample. However, Highhouse and Gillespie (2009) argue that samples of undergraduate students do not automatically lack generalizability and they cite meta-analyses that have supported their argument. In other words, the majority of employed students in this sample might be more generalizable because they held entry-level positions (79.20%) in their organization with less overall job experience compared to the population of working adults. On the other hand, these students were employed at a variety of organizations from different industries. Participants were employed in the following industries: health care ($n = 63$), restaurant/food service ($n = 46$), retail ($n = 43$), financial services ($n = 34$), education ($n = 18$), hotel/hospitality/tourism ($n = 11$), transportation and logistics ($n = 10$), construction and facilities ($n = 8$), telecommunications and media ($n = 5$), manufacturing ($n = 4$), housing and real estate ($n = 3$), energy ($n = 3$), and other ($n = 69$). Fourteen participants declined to provide a response. Chiaburu and Byrne (2009) recommended sampling employees from multiple organizations to better assess organization-level variables. There are benefits to sampling from multiple organizations and industries. Organizational culture could impact OCB definition by dictating what behaviors are expected of employees. By sampling from multiple organizations and industries, any potential impact of organizational culture should be minimized.

Participants did self-select for this study. It is possible that the better performers were also the students who participated in this study. They knew up front that their

supervisor would also need to participate in the research. As a better performer, they may have established a good subordinate-supervisor relationship where they felt comfortable asking their supervisor for a favor. Not all of the students had an accompanying completed supervisor survey (195 matched surveys out of 331). It may be that supervisors chose not to participate for the employees that were not performing up to expectations or with whom they did not have a good relationship.

Range restriction is another potential limitation. Overall, the means were fairly high and indicative of at least agreement on the Likert scales. Students and their supervisors rarely used the low-end of the response scale, with the exception of CWB where respondents rarely used the high-end of the response scale. This lack of variance could explain why some of the hypotheses tested in the theoretical model were not supported. For example, CWB was not significantly related to perceived organizational effectiveness. Again the potential range restriction could be explained by participant self-selection. Underperforming employees may (1) chose not to participate, (2) participate and their supervisor may choose not to complete the survey, or (3) participate and not ask their supervisor to complete the survey. It is also possible that those who should be given low ratings are not employed. Employers fire the employees who do not perform to expectations.

Common method variance may be a limitation for some relationships where data were collected from one source at a single point in time (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Crampton and Wagner's (1994) meta-analysis showed that common method variance is only a problem for particular bivariate relations and that self-reported data did produce small, but significant, inflation. Data were collected from both

supervisors and subordinates for OCB definition, OCB performance, and task performance. One major contribution of this study demonstrated the significant relationship between employee rated OCB definition and supervisor rated OCB performance. So, CMV should not be a concern since these ratings for OCB definition and OCB performance were given by different sources.

Future Directions

Research could further investigate why employees and supervisors have different OCB definitions. More research is needed to get a better idea of exactly where and how supervisors and subordinates differ in their schemas and role definitions. It would also be important to know any areas of similarity in regards to role definitions. Important outcomes for employees and the organization are often tied to performance evaluations. This was the first study to investigate the potential similarity of supervisor and subordinate role definitions and more research is needed.

Research could investigate how supervisors could influence employees to broaden their role definitions to include OCB. It may be important to learn how organizations can increase the job involvement of their employees. If organizations can increase their employees' involvement, they may be more likely to have a work force with a broader OCB definition which may translate into an increased likelihood to perform OCB on the job.

Motivation may also become an important aspect of research on OCB as motives can influence how OCB is conceptualized or defined as well as the likelihood of displaying OCB. Some previous studies (Chiaburu & Byrne, 2009; Lam et al., 1999; Morrison, 1994; Tepper et al., 2001) did not assess expectations of reward or recognition

for engaging in OCB or expectations of punishment for not engaging in OCB. Whether the expected outcomes for behavior are desirable or undesirable provide motivation for engaging (or not) in that behavior. The motivation for displaying OCB could have an impact on whether or not reward systems are effective. If employees perform OCB expecting to receive a social benefit, a monetary reward may not encourage these behaviors in the future. On the other hand if employees perform OCB expecting to receive a monetary benefit (raise, bonus, etc.), then a monetary reward would be needed to maintain these behaviors in the future. Overall, the participants viewed OCB as voluntary behaviors ($M = 5.43$), but they also perceived they were rewarded for engaging in OCB ($M = 5.16$). Participants had a slightly more neutral response in regards to whether or not they were sanctioned or punished for not engaging in OCB ($M = 4.56$). There was at least some agreement among participants that they had experienced some negative consequences for not engaging in OCB.

It is important to know what factors can influence OCB definition, because definition was related to the performance of OCB. Organizations could fulfill their obligations to their employees with the aim of increasing the OCB definition and performance of OCB. In order for organizations to be able to meet employee expectations, it may be useful for supervisors to meet with each of their subordinates and discuss their psychological contract and role expectations in terms of OCB.

Future research could focus on utilizing other ratings than supervisors to assess OCB performance and CWB, such as peers, subordinates, and customers, if applicable. Depending on the job, supervisors may not be in the best position to observe an employee's behavior while at work. Supervisors may be unaware of some aspects of

behavior, while others are in a better position to observe and come into contact with that employee in the course of their work. Employees may also be on the best behavior when their boss is around to observe them. On the other hand, some behaviors may be targeted specifically towards a co-worker or subordinate and not their supervisor. The theory and measurement of OCB and CWB distinguish between behaviors directed to the organization and behaviors directed toward others.

It could also be interesting to compare the OCB role definitions of employees holding similar jobs. To some degree, OCB role definition could be an individual difference. Some people may be more likely to perceive OCB as being in-role while others may perceive OCB to be extra-role, regardless of their circumstances at work (e.g., job involvement, job satisfaction, relationship with supervisor, relationship with co-workers, organizational culture, organizational commitment, etc.). Future research could study whether OCB role definition and OCB performance are individual differences, driven by context, or an interaction between individual differences and the context. Employees may be more willing to change how they define their role and behavior when their organization is downsizing and the unemployment rate is high compared to when their organization is doing really well and the unemployment rate is very low.

In addition, it would be helpful for organizations to know if they could manipulate OCB role definitions and OCB performance on the job. OCB performance was significantly positively related to both task performance and perceived organizational effectiveness. If most of the workforce had broader role definitions and engaged in OCB, there could be a positive impact on the organization. In order to determine if OCB role

definitions and OCB performance could be manipulated, researchers would need to develop and carry out experiments.

On the other hand, if OCB role definition is at least in part an individual difference, organizations could be more proactive and try to select job candidates who tend to have a broader job definition rather than manipulate those role definitions after being hired. Organizations would benefit from having a workforce that tends to have a broader role definition as those employees would also tend to engage in OCB on the job. Organizations could assess OCB role definition within the selection process as another interview question(s) or an additional assessment included with other selection tests.

Overwhelmingly, students held entry-level positions as indicated by the small standard deviation. Organizational position was coded for either entry-level or managerial positions. It is logical that many undergraduate students would hold entry-level positions while attending college. It may be helpful to take a more fine-grained approach and code for additional levels of organizational position to increase the variability. It would be interesting to know if there are differences in what influences OCB definition as well as how OCB definition relates to in-role performance and OCB on the job.

General Conclusions

In conclusion, how an employee defines their role in terms of OCB does influence the likelihood that employee will also meet task performance expectations and engage in OCB. The employees who define OCB as being a part of their role are more likely to be good performers and engage in OCB. While supervisors are more likely to expect their subordinates to engage in OCB, both supervisors and subordinates have trouble

distinguishing between what can legitimately be expected of an employee in their role and what behaviors go above and beyond. Supervisors do not necessarily have broader OCB role definitions compared to subordinates so much as higher expectations that these behaviors are in-role.

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Footnote

¹ Items excluded in Study 1 due to low communalities.

Scale	Item
Job Involvement	To me, my job is only a small part of who I am
Job Involvement	Usually I feel detached from my job
Job Involvement	Most of my personal life goals are very job-oriented
Psychological Contract Inventory	Quit whenever I want
Psychological Contract Inventory	I have no future obligations to this employer
Psychological Contract Inventory	Work here for a limited time only
Psychological Contract Inventory	Take this organization's concerns personally
Psychological Contract Inventory	Employment for a specified time period
Psychological Contract Inventory	It has made no promises to continue my employment
Psychological Contract Inventory	Be responsive to employee concerns and well-being
Psychological Contract Inventory	Made decisions with my interests in mind
OCB Definition: Voluntary	Helps others with their work without being asked
OCB Definition: Voluntary	Helps orient new employees
OCB Definition: Voluntary	Talks positively about their organization
In-Role Performance (Supervisor)	Engages in activities that will directly affect his/her performance evaluation
OCB Performance (Supervisor)	Helps others with their work without being asked
OCB Performance (Supervisor)	Helps orient new employees
OCB Performance (Supervisor)	Talks positively about their organization
Workplace Deviance Scale	Played a mean prank on someone at work
Workplace Deviance Scale	Come in late to work without permission
Workplace Deviance Scale	Littered your work environment
Workplace Deviance Scale	Discussed confidential company information with an unauthorized person

Appendix A

Demographic questions

- 1) What is your position or job title at work (e.g., cashier, sales associate)?
- 2) Please provide a short description of your job. (open ended)
- 3) What industry do you work in?

Construction & Facilities	Manufacturing
Energy	Retail
Education	Restaurant / Food Service
Financial Services	Telecommunications & Media
Health Care	Transportation & Logistics
Hotel / Hospitality / Tourism	Other
Housing & Real Estate	
- 4) On average, how many hours do you work in a week?

Less than 15 hours	31-35 hours
15-20 hours	36-40 hours
21-25 hours	40+ hours
26-30 hours	
- 5) How long have you worked with your current supervisor?

Less than a month	1-2 years
3-6 months	More than 2 years
6-12 months	
- 6) How old are you (in years)?
- 7) What is your ethnicity? Please check all the boxes that apply to you

American Indian	Hispanic
Asian	Native Hawaiian
Asian Indian	White
Black	Multiple Race
- 8) Are you (male/female)?

Male	Female
------	--------
- 9) What year student are you?

Freshman	Junior
Sophomore	Senior
- 10) What is your academic major or academic area of interest (i.e., psychology)?

Appendix B

Job Involvement Questionnaire (JIQ; Kanungo, 1982)

1	2	3	4	5	6
Strongly Disagree					Strongly Agree

1. The most important things that happen to me involve my present job.
2. To me, my job is only a small part of who I am. (R)
3. I am very much involved personally in my job.
4. I live, eat and breathe my job.
5. Most of my interests are centered around my job.
6. I have very strong ties with my present job which would be very difficult to break.
7. Usually I feel detached from my job. (R)
8. Most of my personal life goals are job-oriented.
9. I consider my job to be very central to my existence.
10. I like to be absorbed in my job most of the time.

Note. (R) denotes items that have been reverse coded.

Appendix C

Psychological Contract Inventory (Rousseau, 2000)

1	2	3	4	5
Not at all	Slightly	Somewhat	Moderately	To a great extent

To what extent has your employer made the following commitment or obligation to you?

1. Employment for a specified time period*
2. Concern for my personal welfare^
3. Secure employment^
4. Makes no commitments to retrain me in the future*
5. Limited involvement in the organization*
6. Stable wages over time^
7. Short-term employment*
8. Be responsive to employee concerns and well-being^
9. Training me only for my current job*
10. It has made no promises to continue my employment*
11. Made decisions with my interests in mind^
12. A job limited to specific, well-defined responsibilities*
13. Steady employment^

To what extent have you made the following commitment or obligation to your employer?

14. Quit whenever I want*
15. Be loyal to this organization^
16. Remain with this organization indefinitely^
17. I have no future obligations to this employer*
18. Make personal sacrifices for this organization^
19. Take this organization's concerns personally^
20. Do only what I am paid to do*
21. Do what it takes to keep my job^
22. Work here for a limited time only*
23. Fulfill a limited number of responsibilities*
24. Be a steady employee^
25. Only perform specific duties I agreed to when hired*
26. Make no plans to work anywhere else^

Note. Subscales: Employer Obligations: 1-13; Employee Obligations: 14-26;

*Transactional contract; ^Relational contract.

Appendix D

OCB Performance Measure: Organizational Citizenship Behavior Scale (Tsui et al.,

1997)

1	2	3	4	5	6	7
Strongly Disagree			Neither Disagree nor Agree			Strongly Agree

1. Makes suggestions to improve work procedures.
2. Expresses opinions honestly when others think differently.
3. Does not keep doubts about work issues to him/herself, even when everyone else disagrees.
4. Makes suggestions to improve the organization.
5. Calls management attention to dysfunctional activities.
6. Makes innovative suggestions to improve the department.
7. Informs management of potentially unproductive policies and practices.
8. Speaks up when policies do not contribute to goal achievement of department.
9. Suggests revisions in work to achieve organizational or departmental objectives.
10. Helps others with their work without being asked.
11. Helps orient new employees.
12. Talks positively about their organization.

Appendix E

OCB Role Definition Measure: Organizational Citizenship Behavior Scale (Tsui et al., 1997)

1	2	3	4	5	6	7
Strongly Disagree			Neither Disagree nor Agree			Strongly Agree

1. Makes suggestions to improve work procedures.
2. Expresses opinions honestly when others think differently.
3. Does not keep doubts about work issues to him/herself, even when everyone else disagrees.
4. Makes suggestions to improve the organization.
5. Calls management attention to dysfunctional activities.
6. Makes innovative suggestions to improve the department.
7. Informs management of potentially unproductive policies and practices.
8. Is willing to speak up when policies do not contribute to goal achievement of department.
9. Suggests revisions in work to achieve organizational or departmental objectives.
10. Helps others with their work without being asked.
11. Helps orient new employees.
12. Talks positively about their organization.

Appendix F

In-Role Behavior Scale (Williams & Anderson, 1991)

1	2	3	4	5	6	7
Strongly Disagree			Neither Disagree nor Agree			Strongly Agree

1. Adequately completes assigned duties.
2. Fulfills responsibilities specified in job description.
3. Performs tasks that are expected of him/her.
4. Meets formal performance requirements of the job.
5. Engages in activities that will directly affect his/her performance evaluation.
6. Neglects aspects of the job he/she is obligated to perform. (R)
7. Fails to perform essential duties. (R)

Note. (R) Reverse-scored items.

Appendix G

Workplace Deviance Scale (Bennett & Robinson, 2000)

1	2	3	4	5	6	7
Never						Always

1. Made fun of someone at work.
2. Said something hurtful to someone at work.
3. Made an ethnic, religious, or racial remark at work.
4. Cursed someone at work.
5. Played a mean prank on someone at work.
6. Acted rudely toward someone at work.
7. Publicly embarrassed someone at work.
8. Taken property from work without permission.
9. Spent too much time fantasizing or daydreaming instead of working.
10. Falsified a receipt to get reimbursed for more money than you spent on business expenses.
11. Taken an additional or longer break than is acceptable at your workplace.
12. Come in late to work without permission.
13. Littered your work environment.
14. Neglected to follow your boss' instructions.
15. Intentionally worked slower than you could have worked.
16. Discussed confidential company information with an unauthorized person.
17. Used an illegal drug or consumed alcohol on the job.
18. Put little effort into your work.
19. Dragged out work in order to get overtime.

Note. Subscales: Interpersonal: 1-7; Organizational: 8-19.

Appendix H

Perceived Organizational Effectiveness Scale: Department Effectiveness Scale (DeGroot
& Brownlee, 2006)

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

1. This department is very effective at meeting its objectives.
2. Compared to other departments, this one is very productive.
3. This department contributes its fair share toward the over all organizational goals.
4. This department is very effective at meeting stated deadlines.
5. This is a very productive department.

Appendix I

Task and OCB Definition Similarity: In-Role Behavior Scale (Williams & Anderson, 1991) and Organizational Citizenship Behavior Scale (Tsui et al., 1997)

1	2	3	4	5	6	7
Very Dissimilar						Very Similar

Version 1

1. Adequately completes assigned duties.
Fulfills responsibilities specified in job description.
2. Fulfills responsibilities specified in job description.
Performs tasks that are expected of him/her.
3. Performs tasks that are expected of him/her.
Meets formal performance requirements of the job.
4. Meets formal performance requirements of the job.
Engages in activities that will directly affect his/her performance evaluation.
5. Engages in activities that will directly affect his/her performance evaluation.
Neglects aspects of the job he/she is obligated to perform.
6. Neglects aspects of the job he/she is obligated to perform.
Fails to perform essential duties.
7. Fails to perform essential duties.
Makes suggestions to improve work procedures.
8. Makes suggestions to improve work procedures.
Expresses opinions honestly when others think differently.
9. Expresses opinions honestly when others think differently.
Does not keep doubts about work issues to him/herself, even when everyone else disagrees.
10. Does not keep doubts about work issues to him/herself, even when everyone else disagrees.
Makes suggestions to improve the organization.
11. Makes suggestions to improve the organization.
Calls management attention to dysfunctional activities.

12. Calls management attention to dysfunctional activities.
Makes innovative suggestions to improve the department.
13. Makes innovative suggestions to improve the department.
Informs management of potentially unproductive policies and practices.
14. Informs management of potentially unproductive policies and practices.
Speaks up when policies do not contribute to goal achievement of department.
15. Speaks up when policies do not contribute to goal achievement of department.
Suggests revisions in work to achieve organizational or departmental objectives.
16. Suggests revisions in work to achieve organizational or departmental objectives.
Helps others with their work without being asked.
17. Helps others with their work without being asked.
Helps orient new employees.
18. Helps orient new employees.
Talks positively about their organization.
19. Adequately completes assigned duties
Neglects aspects of the job he/she is obligated to perform.
20. Fulfills responsibilities specified in job description.
Fails to perform essential duties.
21. Performs tasks that are expected of him/her.
Makes suggestions to improve work procedures.
22. Meets formal performance requirements of the job.
Expresses opinions honestly when others think differently.
23. Engages in activities that will directly affect his/her performance evaluation.
Does not keep doubts about work issues to him/herself, even when everyone else disagrees.
24. Neglects aspects of the job he/she is obligated to perform.
Makes suggestions to improve the organization.
25. Fails to perform essential duties.
Calls management attention to dysfunctional activities.
26. Makes suggestions to improve work procedures.
Makes innovative suggestions to improve the department.

27. Expresses opinions honestly when others think differently.
Informs management of potentially unproductive policies and practices.
28. Does not keep doubts about work issues to him/herself, even when everyone else disagrees.
Speaks up when policies do not contribute to goal achievement of department.
29. Makes suggestions to improve the organization.
Suggests revisions in work to achieve organizational or departmental objectives.
30. Calls management attention to dysfunctional activities.
Helps others with their work without being asked.
31. Makes innovative suggestions to improve the department.
Helps orient new employees.
32. Informs management of potentially unproductive policies and practices.
Talks positively about their organization.
33. Adequately completes assigned duties
Makes innovative suggestions to improve the department.
34. Fulfills responsibilities specified in job description.
Informs management of potentially unproductive policies and practices.
35. Performs tasks that are expected of him/her.
Speaks up when policies do not contribute to goal achievement of department.
36. Meets formal performance requirements of the job.
Suggests revisions in work to achieve organizational or departmental objectives.
37. Engages in activities that will directly affect his/her performance evaluation.
Helps others with their work without being asked.
38. Neglects aspects of the job he/she is obligated to perform.
Helps orient new employees.
39. Fails to perform essential duties.
Talks positively about their organization.
40. Adequately completes assigned duties
Helps others with their work without being asked.
41. Fulfills responsibilities specified in job description.
Helps orient new employees.

42. Performs tasks that are expected of him/her.
Talks positively about their organization.

Version 2

1. Adequately completes assigned duties
Performs tasks that are expected of him/her.
2. Fulfills responsibilities specified in job description.
Meets formal performance requirements of the job.
3. Performs tasks that are expected of him/her.
Engages in activities that will directly affect his/her performance evaluation.
4. Meets formal performance requirements of the job.
Neglects aspects of the job he/she is obligated to perform.
5. Engages in activities that will directly affect his/her performance evaluation.
Fails to perform essential duties.
6. Neglects aspects of the job he/she is obligated to perform.
Makes suggestions to improve work procedures.
7. Fails to perform essential duties.
Expresses opinions honestly when others think differently.
8. Makes suggestions to improve work procedures.
Does not keep doubts about work issues to him/herself, even when everyone else disagrees.
9. Expresses opinions honestly when others think differently.
Makes suggestions to improve the organization.
10. Does not keep doubts about work issues to him/herself, even when everyone else disagrees.
Calls management attention to dysfunctional activities.
11. Makes suggestions to improve the organization.
Makes innovative suggestions to improve the department.
12. Calls management attention to dysfunctional activities.
Informs management of potentially unproductive policies and practices.
13. Makes innovative suggestions to improve the department.
Speaks up when policies do not contribute to goal achievement of department.

14. Informs management of potentially unproductive policies and practices.
Suggests revisions in work to achieve organizational or departmental objectives.
15. Speaks up when policies do not contribute to goal achievement of department.
Helps others with their work without being asked.
16. Suggests revisions in work to achieve organizational or departmental objectives.
Helps orient new employees.
17. Helps others with their work without being asked.
Talks positively about their organization.
18. Adequately completes assigned duties
Fails to perform essential duties.
19. Fulfills responsibilities specified in job description.
Makes suggestions to improve work procedures.
20. Performs tasks that are expected of him/her.
Expresses opinions honestly when others think differently.
21. Meets formal performance requirements of the job.
Does not keep doubts about work issues to him/herself, even when everyone else disagrees.
22. Engages in activities that will directly affect his/her performance evaluation.
Makes suggestions to improve the organization.
23. Neglects aspects of the job he/she is obligated to perform.
Calls management attention to dysfunctional activities.
24. Fails to perform essential duties.
Makes innovative suggestions to improve the department.
25. Makes suggestions to improve work procedures.
Informs management of potentially unproductive policies and practices.
26. Expresses opinions honestly when others think differently.
Speaks up when policies do not contribute to goal achievement of department.
27. Does not keep doubts about work issues to him/herself, even when everyone else disagrees.
Suggests revisions in work to achieve organizational or departmental objectives.
28. Makes suggestions to improve the organization.

- Helps others with their work without being asked.
29. Calls management attention to dysfunctional activities.
Helps orient new employees.
 30. Makes innovative suggestions to improve the department.
Talks positively about their organization.
 31. Adequately completes assigned duties
Calls management attention to dysfunctional activities.
 32. Fulfills responsibilities specified in job description.
Makes innovative suggestions to improve the department.
 33. Performs tasks that are expected of him/her.
Informs management of potentially unproductive policies and practices.
 34. Meets formal performance requirements of the job.
Speaks up when policies do not contribute to goal achievement of department.
 35. Engages in activities that will directly affect his/her performance evaluation.
Suggests revisions in work to achieve organizational or departmental objectives.
 36. Neglects aspects of the job he/she is obligated to perform.
Helps others with their work without being asked.
 37. Fails to perform essential duties.
Helps orient new employees.
 38. Makes suggestions to improve work procedures.
Talks positively about their organization.
 39. Adequately completes assigned duties
Speaks up when policies do not contribute to goal achievement of department.
 40. Fulfills responsibilities specified in job description.
Suggests revisions in work to achieve organizational or departmental objectives.
 41. Performs tasks that are expected of him/her.
Helps others with their work without being asked.
 42. Meets formal performance requirements of the job.
Helps orient new employees.
 43. Engages in activities that will directly affect his/her performance evaluation.
Talks positively about their organization.

Version 3

1. Adequately completes assigned duties
Meets formal performance requirements of the job.
2. Fulfills responsibilities specified in job description.
Engages in activities that will directly affect his/her performance evaluation.
3. Performs tasks that are expected of him/her.
Neglects aspects of the job he/she is obligated to perform.
4. Meets formal performance requirements of the job.
Fails to perform essential duties.
5. Engages in activities that will directly affect his/her performance evaluation.
Makes suggestions to improve work procedures.
6. Neglects aspects of the job he/she is obligated to perform.
Expresses opinions honestly when others think differently.
7. Fails to perform essential duties.
Does not keep doubts about work issues to him/herself, even when everyone else disagrees.
8. Makes suggestions to improve work procedures.
Makes suggestions to improve the organization.
9. Expresses opinions honestly when others think differently.
Calls management attention to dysfunctional activities.
10. Does not keep doubts about work issues to him/herself, even when everyone else disagrees.
Makes innovative suggestions to improve the department.
11. Makes suggestions to improve the organization.
Informs management of potentially unproductive policies and practices.
12. Calls management attention to dysfunctional activities.
Speaks up when policies do not contribute to goal achievement of department.
13. Makes innovative suggestions to improve the department.
Suggests revisions in work to achieve organizational or departmental objectives.
14. Informs management of potentially unproductive policies and practices.
Helps others with their work without being asked.

15. Speaks up when policies do not contribute to goal achievement of department.
Helps orient new employees.
16. Suggests revisions in work to achieve organizational or departmental objectives.
Talks positively about their organization.
17. Adequately completes assigned duties
Makes suggestions to improve work procedures.
18. Fulfills responsibilities specified in job description.
Expresses opinions honestly when others think differently.
19. Performs tasks that are expected of him/her.
Does not keep doubts about work issues to him/herself, even when everyone else disagrees.
20. Meets formal performance requirements of the job.
Makes suggestions to improve the organization.
21. Engages in activities that will directly affect his/her performance evaluation.
Calls management attention to dysfunctional activities.
22. Neglects aspects of the job he/she is obligated to perform.
Makes innovative suggestions to improve the department.
23. Fails to perform essential duties.
Informs management of potentially unproductive policies and practices.
24. Makes suggestions to improve work procedures.
Speaks up when policies do not contribute to goal achievement of department.
25. Expresses opinions honestly when others think differently.
Suggests revisions in work to achieve organizational or departmental objectives.
26. Does not keep doubts about work issues to him/herself, even when everyone else disagrees.
Helps others with their work without being asked.
27. Makes suggestions to improve the organization.
Helps orient new employees.
28. Calls management attention to dysfunctional activities.
Talks positively about their organization.
29. Adequately completes assigned duties
Makes suggestions to improve the organization.

30. Fulfills responsibilities specified in job description.
Calls management attention to dysfunctional activities.
31. Performs tasks that are expected of him/her.
Makes innovative suggestions to improve the department.
32. Meets formal performance requirements of the job.
Informs management of potentially unproductive policies and practices.
33. Engages in activities that will directly affect his/her performance evaluation.
Speaks up when policies do not contribute to goal achievement of department.
34. Neglects aspects of the job he/she is obligated to perform.
Suggests revisions in work to achieve organizational or departmental objectives.
35. Fails to perform essential duties.
Helps others with their work without being asked.
36. Makes suggestions to improve work procedures.
Helps orient new employees.
37. Expresses opinions honestly when others think differently.
Talks positively about their organization.
38. Adequately completes assigned duties
Suggests revisions in work to achieve organizational or departmental objectives.
39. Fulfills responsibilities specified in job description.
Helps others with their work without being asked.
40. Performs tasks that are expected of him/her.
Helps orient new employees.
41. Meets formal performance requirements of the job.
Talks positively about their organization.
42. Adequately completes assigned duties
Helps orient new employees.
43. Fulfills responsibilities specified in job description.
Talks positively about their organization.

Version 4

1. Adequately completes assigned duties

- Engages in activities that will directly affect his/her performance evaluation.
2. Fulfills responsibilities specified in job description.
Neglects aspects of the job he/she is obligated to perform.
 3. Performs tasks that are expected of him/her.
Fails to perform essential duties.
 4. Meets formal performance requirements of the job.
Makes suggestions to improve work procedures.
 5. Engages in activities that will directly affect his/her performance evaluation.
Expresses opinions honestly when others think differently.
 6. Neglects aspects of the job he/she is obligated to perform.
Does not keep doubts about work issues to him/herself, even when everyone else disagrees.
 7. Fails to perform essential duties.
Makes suggestions to improve the organization.
 8. Makes suggestions to improve work procedures.
Calls management attention to dysfunctional activities.
 9. Expresses opinions honestly when others think differently.
Makes innovative suggestions to improve the department.
 10. Does not keep doubts about work issues to him/herself, even when everyone else disagrees.
Informs management of potentially unproductive policies and practices.
 11. Makes suggestions to improve the organization.
Speaks up when policies do not contribute to goal achievement of department.
 12. Calls management attention to dysfunctional activities.
Suggests revisions in work to achieve organizational or departmental objectives.
 13. Makes innovative suggestions to improve the department.
Helps others with their work without being asked.
 14. Informs management of potentially unproductive policies and practices.
Helps orient new employees.
 15. Speaks up when policies do not contribute to goal achievement of department.
Talks positively about their organization.

16. Adequately completes assigned duties
Expresses opinions honestly when others think differently.
17. Fulfills responsibilities specified in job description.
Does not keep doubts about work issues to him/herself, even when everyone else disagrees.
18. Performs tasks that are expected of him/her.
Makes suggestions to improve the organization.
19. Meets formal performance requirements of the job.
Calls management attention to dysfunctional activities.
20. Engages in activities that will directly affect his/her performance evaluation.
Makes innovative suggestions to improve the department.
21. Neglects aspects of the job he/she is obligated to perform.
Informs management of potentially unproductive policies and practices.
22. Fails to perform essential duties.
Speaks up when policies do not contribute to goal achievement of department.
23. Makes suggestions to improve work procedures.
Suggests revisions in work to achieve organizational or departmental objectives.
24. Expresses opinions honestly when others think differently.
Helps others with their work without being asked.
25. Does not keep doubts about work issues to him/herself, even when everyone else disagrees.
Helps orient new employees.
26. Makes suggestions to improve the organization.
Talks positively about their organization.
27. Adequately completes assigned duties
Does not keep doubts about work issues to him/herself, even when everyone else disagrees.
28. Fulfills responsibilities specified in job description.
Makes suggestions to improve the organization.
29. Performs tasks that are expected of him/her.
Calls management attention to dysfunctional activities.
30. Meets formal performance requirements of the job.

Makes innovative suggestions to improve the department.

31. Engages in activities that will directly affect his/her performance evaluation.
Informs management of potentially unproductive policies and practices.
32. Neglects aspects of the job he/she is obligated to perform.
Speaks up when policies do not contribute to goal achievement of department.
33. Fails to perform essential duties.
Suggests revisions in work to achieve organizational or departmental objectives.
34. Makes suggestions to improve work procedures.
Helps others with their work without being asked.
35. Expresses opinions honestly when others think differently.
Helps orient new employees.
36. Does not keep doubts about work issues to him/herself, even when everyone else disagrees.
Talks positively about their organization.
37. Adequately completes assigned duties
Informs management of potentially unproductive policies and practices.
38. Fulfills responsibilities specified in job description.
Speaks up when policies do not contribute to goal achievement of department.
39. Performs tasks that are expected of him/her.
Suggests revisions in work to achieve organizational or departmental objectives.
40. Meets formal performance requirements of the job.
Helps others with their work without being asked.
41. Engages in activities that will directly affect his/her performance evaluation.
Helps orient new employees.
42. Neglects aspects of the job he/she is obligated to perform.
Talks positively about their organization.
43. Adequately completes assigned duties
Talks positively about their organization.

Table 1

Factor loadings, communalities, and item-total correlations for OCB Performance.

OCB Performance	Self-Ratings			Supervisor Ratings		
	Factor Loading	Communality	Item-Total Correlation	Factor Loading	Communality	Item-Total Correlation
Item 1	.87	.75	.83	.83	.75	.77
Item 2	.77	.61	.75	.73	.60	.74
Item 3	.73	.54	.72	.64	.50	.62
Item 4	.85	.74	.82	.86	.83	.78
Item 5	.79	.62	.77	.80	.77	.77
Item 6	.87	.78	.83	.87	.84	.79
Item 7	.83	.70	.79	.82	.78	.79
Item 8	.86	.77	.82	.81	.75	.78
Item 9	.87	.78	.82	.88	.77	.82
Item 10	.62	.72	.62	.54	.30	.60
Item 11	.58	.67	.57	.56	.33	.61
Item 12	.44	.23	.43	.46	.22	.47

Note. Item 1 = Makes suggestions to improve work procedures; Item 2 = Expresses opinions honestly when others think differently; Item 3 = Does not keep doubts about work issues to him/herself, even when everyone else disagrees; Item 4 = Makes suggestions to improve the organization; Item 5 = Calls management attention to dysfunctional activities; Item 6 = Makes innovative suggestions to improve the department; Item 7 = Informs management of potentially unproductive policies and practices; Item 8 = Speaks up when policies do not contribute to goal achievement of department; Item 9 = Suggests revisions in work to achieve organizational or departmental objectives; Item 10 = Helps others with their work without being asked; Item 11 = Helps orient new employees; Item 12 = Talks positively about the organization.

Table 2

Factor loadings, communalities, and item-total correlations for OCB Definition: Voluntary.

OCBD Voluntary	Self-Ratings			Supervisor Ratings		
	Factor Loading	Communality	Item-Total Correlation	Factor Loading	Communality	Item-Total Correlation
Item 1	.81	.74	.75	.77	.66	.71
Item 2	.71	.62	.67	.69	.50	.69
Item 3	.62	.42	.57	.61	.41	.58
Item 4	.84	.74	.79	.87	.82	.79
Item 5	.76	.57	.73	.74	.63	.72
Item 6	.85	.72	.77	.84	.76	.77
Item 7	.77	.74	.71	.80	.75	.77
Item 8	.75	.71	.69	.76	.67	.74
Item 9	.79	.64	.73	.83	.69	.79
Item 10	.51	.26	.55	.49	.24	.51
Item 11	.41	.17	.45	.54	.30	.57
Item 12	.81	.74	.75	.77	.66	.71

Note. Item 1 = Makes suggestions to improve work procedures; Item 2 = Expresses opinions honestly when others think differently; Item 3 = Does not keep doubts about work issues to him/herself, even when everyone else disagrees; Item 4 = Makes suggestions to improve the organization; Item 5 = Calls management attention to dysfunctional activities; Item 6 = Makes innovative suggestions to improve the department; Item 7 = Informs management of potentially unproductive policies and practices; Item 8 = Speaks up when policies do not contribute to goal achievement of department; Item 9 = Suggests revisions in work to achieve organizational or departmental objectives; Item 10 = Helps others with their work without being asked; Item 11 = Helps orient new employees; Item 12 = Talks positively about the organization.

Table 3

Factor loadings, communalities, and item-total correlations for OCB Definition: Rewarded.

OCBD Rewarded	Self-Ratings			Supervisor Ratings		
	Factor Loading	Communality	Item-Total Correlation	Factor Loading	Communality	Item-Total Correlation
Item 1	.87	.76	.85	.81	.67	.78
Item 2	.76	.58	.75	.82	.67	.79
Item 3	.72	.53	.71	.74	.58	.71
Item 4	.84	.71	.81	.84	.71	.80
Item 5	.76	.59	.74	.81	.66	.78
Item 6	.86	.77	.82	.81	.66	.77
Item 7	.83	.72	.80	.83	.71	.80
Item 8	.87	.78	.82	.83	.69	.80
Item 9	.87	.77	.82	.84	.71	.81
Item 10	.62	.78	.60	.64	.63	.63
Item 11	.56	.61	.57	.60	.57	.58
Item 12	.87	.76	.85	.81	.67	.78

Note. Item 1 = Makes suggestions to improve work procedures; Item 2 = Expresses opinions honestly when others think differently; Item 3 = Does not keep doubts about work issues to him/herself, even when everyone else disagrees; Item 4 = Makes suggestions to improve the organization; Item 5 = Calls management attention to dysfunctional activities; Item 6 = Makes innovative suggestions to improve the department; Item 7 = Informs management of potentially unproductive policies and practices; Item 8 = Speaks up when policies do not contribute to goal achievement of department; Item 9 = Suggests revisions in work to achieve organizational or departmental objectives; Item 10 = Helps others with their work without being asked; Item 11 = Helps orient new employees; Item 12 = Talks positively about the organization.

Table 4

Factor loadings, communalities, and item-total correlations for OCB Definition: Sanctioned.

OCBD Sanctioned	Self-Ratings			Supervisor Ratings		
	Factor Loading	Communality	Item-Total Correlation	Factor Loading	Communality	Item-Total Correlation
Item 1	.94	.88	.92	.95	.89	.92
Item 2	.92	.86	.90	.94	.88	.93
Item 3	.88	.77	.85	.89	.79	.88
Item 4	.94	.89	.92	.96	.91	.94
Item 5	.87	.76	.86	.91	.83	.91
Item 6	.94	.88	.91	.96	.92	.94
Item 7	.89	.79	.87	.90	.82	.90
Item 8	.90	.80	.87	.94	.88	.92
Item 9	.92	.85	.90	.97	.93	.95
Item 10	.80	.64	.83	.85	.73	.86
Item 11	.73	.53	.76	.84	.70	.85
Item 12	.94	.88	.92	.95	.89	.92

Note. Item 1 = Makes suggestions to improve work procedures; Item 2 = Expresses opinions honestly when others think differently; Item 3 = Does not keep doubts about work issues to him/herself, even when everyone else disagrees; Item 4 = Makes suggestions to improve the organization; Item 5 = Calls management attention to dysfunctional activities; Item 6 = Makes innovative suggestions to improve the department; Item 7 = Informs management of potentially unproductive policies and practices; Item 8 = Speaks up when policies do not contribute to goal achievement of department; Item 9 = Suggests revisions in work to achieve organizational or departmental objectives; Item 10 = Helps others with their work without being asked; Item 11 = Helps orient new employees; Item 12 = Talks positively about the organization.

Table 5

Reliability for 12- and 9-item OCB scales.

	Self-Ratings		Supervisor Ratings	
	12-items	9-items	12-items	9-items
OCB Performance	.94	.95	.93	.94
OCB Definition				
Voluntary	.91	.93	.92	.93
Rewarded	.94	.95	.94	.95
Sanctioned	.97	.98	.98	.99

Note. 12-item scale has the original 9-item scale by Tsui et al. (1999) and the three experimental items. 9-item scale is the original scale by Tsui et al. (1999).

Table 6

Goodness-of-Fit Indices for Study 1 Model Testing.

Model	χ^2	df	Normed χ^2	RMSEA	NNFI	CFI	ECVI	$\Delta\chi^2$	Δ CFI
Hypothesized Model	389.74**	216	1.80	.06	.93	.94	2.63		
Model A	381.03**	215	1.77	.06	.94	.95	2.59		
Δ Hyp Model & Model A								8.71**	.01
Model B	371.24**	214	1.74	.06	.94	.95	2.55		
Δ Model A & Model B								9.79**	.00
Model C	366.52**	213	1.72	.06	.94	.95	2.54		
Δ Model B & Model C								4.72*	.00
Model D	356.17**	212	1.68	.06	.94	.95	2.50		
Δ Model C & Model D								10.35**	.00
Model E	351.18**	211	1.66	.06	.94	.95	2.48		
Δ Model D & Model E								4.99*	.00
Model F	344.94	210	1.64	.06	.94	.95	2.46		
Δ Model E & Model F								6.24*	.00

Note. $N = 195$. df = degrees of freedom; RMSEA = root mean square error of approximation; NNFI = nonnormed fit index; CFI = comparative fit index; ECVI = Expected Cross-Validation Index. Model A: Psychological Contract-Relational \rightarrow Job Involvement. Model B: Psychological Contract-Transactional \rightarrow Job Involvement. Model C: CWB \rightarrow Job Involvement. Model D: Psychological Contract-Transactional \rightarrow Perceived Organizational Effectiveness. Model E: Task Performance \rightarrow Job Involvement. Model F: Psychological Contract-Transactional \rightarrow Task Performance.

[†] $p < .10$, * $p < .05$, ** $p < .01$.

Table 7

Means, standard deviations, and correlations among study variables.

	M	SD	1 ^a	2	3	4	5	6	7	8	9	10
1. OP	1.19	.39	.93 ^b									
2. JI	3.03	.94	.12	.85								
3. PCOT	2.65	.72	-.24**	-.08	.62							
4. PCOR	3.77	.81	-.07	.32**	-.08	.83						
5. PCET	2.31	.85	-.23**	-.24**	.47**	-.32**	.73					
6. PCER	3.47	.76	.00	.52**	-.07	.57**	-.31**	.75				
7. TP	6.12	.83	.09	.11	-.22**	.24**	-.26**	.23**	.81			
8. OCBP	5.54	.94	.10	.17**	-.11	.29**	-.22**	.27**	.31**	.94		
9. OCBDV	5.49	.88	.14†	.24**	-.21**	.28**	-.28**	.32**	.47**	.84**	.90	
10. OCBDR	5.24	1.10	.02	.37**	-.16*	.44**	-.23**	.35**	.21**	.61**	.61**	.94
11. OCBDS	4.64	1.48	-.11	.23*	.11	.17*	.05	.16*	.02	.39**	.28**	.53**
12. sTP	6.11	.81	-.01	.06	-.15*	.10	-.17*	.08	.06	.16*	.18*	.11
13. sOCBP	5.76	.86	.08	.08	-.05	.21**	-.01	.09	.11	.37**	.33**	.22**
14. sOCBDV	5.94	.84	.07	.16*	-.09	.23**	-.14†	.20**	.12	.32**	.35**	.22**
15. sOCBDR	5.72	.91	.11	.11	-.05	.20**	-.03	.11	.18*	.34**	.33**	.31**
16. sOCBDS	4.78	1.65	-.02	.02	.11	.06	.09	-.04	.07	.10	.03	.02
17. OE	5.92	1.16	.03	.11	-.07	.20**	-.13†	.09	.22*	.18*	.18*	.21*
18. CWB	1.29	.40	.10	-.10	.04	-.05	.05	-.03	-.09	-.03	-.08	-.14†

Note. $N = 195$. Reliabilities are presented on the diagonals. OP = Organizational Position, JI = Job Involvement; PCOT = Psychological Contract – Organization Transactional, PCOR = – Organization Relational; PCET = Psychological Contract – Employee Transactional; PCER = Psychological Contract – Employee Relational; TP = Task Performance; OCBP = Organizational Citizenship Behavior – Performance; OCBDV = Organizational Citizenship Behavior – Definition (Voluntary); OCBDR = Organizational Citizenship Behavior – Definition (Rewarded); OCBDS = Organizational Citizenship Behavior – Definition (Sanctioned); sTP = Supervisor Task Performance; sOCBP = Supervisor Organizational Citizenship Behavior – Performance; sOCBDV = Supervisor Organizational Citizenship Behavior – Definition (Voluntary); sOCBDR = Supervisor Organizational Citizenship Behavior – Definition (Rewarded); sOCBDS = Supervisor Organizational Citizenship Behavior – Definition (Sanctioned); OE = Perceived Organizational Effectiveness; and CWB = Counterproductive Work Behavior.

^aSpearman correlations in this column. ^bInter-rater reliability.

† $p < .10$, * $p < .05$, ** $p < .01$.

Table 7

Means, standard deviations, and correlations among study variables (continued).

	11	12	13	14	15	16	17	18
1. OP								
2. JI								
3. PCOT								
4. PCOR								
5. PCET								
6. PCER								
7. TP								
8. OCBP								
9. OCBDV								
10. OCBDR								
11. OCBDS	.97							
12. sTP	-.01	.72						
13. sOCBP	.10	.44**	.93					
14. sOCBDV	.11	.40**	.74**	.92				
15. sOCBDR	.13†	.30**	.70**	.63**	.94			
16. sOCBDS	.09	.03	.42**	.20**	.44**	.98		
17. OE	.09	.35**	.38**	.34**	.47**	.21**	.95	
18. CWB	-.04	-.29**	-.30**	-.27**	-.23**	-.04	-.28**	.89

Note. $N = 195$. Reliabilities are presented on the diagonals. OP = Organizational Position, JI = Job Involvement; PCOT = Psychological Contract – Organization Transactional, PCOR = – Organization Relational; PCET = Psychological Contract – Employee Transactional; PCER = Psychological Contract – Employee Relational; TP = Task Performance; OCBP = Organizational Citizenship Behavior – Performance; OCBDV = Organizational Citizenship Behavior – Definition (Voluntary); OCBDR = Organizational Citizenship Behavior – Definition (Rewarded); OCBDS = Organizational Citizenship Behavior – Definition (Sanctioned); sTP = Supervisor Task Performance; sOCBP = Supervisor Organizational Citizenship Behavior – Performance; sOCBDV = Supervisor Organizational Citizenship Behavior – Definition (Voluntary); sOCBDR = Supervisor Organizational Citizenship Behavior – Definition (Rewarded); sOCBDS = Supervisor Organizational Citizenship Behavior – Definition (Sanctioned); OE = Perceived Organizational Effectiveness; and CWB = Counterproductive Work Behavior.

^aSpearman correlations in this column. ^b Inter-rater reliability.

† $p < .10$, * $p < .05$, ** $p < .01$.

Table 8

Parameter Estimates for Mediation Hypotheses.

Hypothesis	Effect	Estimate	Standard Error
3	Job Involvement → OCB Definition → OCB Performance	.00	< .01
4	Organizational Position → Job Involvement → OCB Definition	.01**	< .01
5a	Psychological Contract – Relational → OCB Definition → OCB Performance	.14**	< .01
5b	Psychological Contract – Transactional → OCB Definition → OCB Performance	.00	< .01

Note. $N = 195$.* $p < .05$, ** $p < .01$.

Table 9

Global Fit Indices for Measurement Equivalence/Invariance Models of Organizational Citizenship Behavior Definition Ratings.

Model	χ^2	df	Normed χ^2	RMSEA	NNFI	CFI	$\Delta\chi^2$	Δ CFI
1. Configural Invariance	6027.63**	1182	5.01	.14	.92	.92		
2. Metric Invariance	6068.06**	1215	4.99	.14	.92	.92		
Δ Models 1 & Model 2							40.43	.00
3. Scalar Invariance	6177.92**	1251	4.94	.14	.92	.92		
Δ Models 2 & Model 3							109.86**	.00

Note. Employee $N = 321$, Supervisor $N = 195$. df = degrees of freedom; RMSEA = root mean square error of approximation; NNFI = nonnormed fit index; CFI = comparative fit index; OCBDR = OCB Definition-Voluntary; OCBDR = OCB Definition-Rewarded; OCBDS = OCB Definition-Sanctioned.

[†] $p < .10$, * $p < .05$, ** $p < .01$.

Table 10

*Group Fit Indices for Measurement Equivalence/Invariance Models of Organizational
Citizenship Behavior Definition Ratings.*

Model	χ^2 contribution	% contribution	RMR	SRMR	GFI
1. Equality of covariance matrices					
Self	.00		.00	.00	1.00
Supervisor	.00		.00	.00	1.00
2. Configural Invariance					
Self	3564.02	59.13	.16	.08	.58
Supervisor	2463.61	40.87	.11	.07	.54
3. Metric Invariance					
Self	3580.94	59.01	.16	.08	.58
Supervisor	2487.12	40.99	.13	.08	.54
4. Scalar Invariance					
Self	3628.51	58.73	.38	.08	.58
Supervisor	2549.41	41.27	.28	.08	.54
4a. Scalar Invariance					
Self	3620.21	58.87	.39	.08	.58
Supervisor	2529.28	41.13	.27	.08	.54
4b. Scalar Invariance					
Self	3622.90	58.96	.38	.08	.58
Supervisor	2522.08	41.04	.26	.08	.54
4c. Scalar Invariance					
Self	3619.09	58.75	.38	.08	.58
Supervisor	2541.02	41.25	.25	.08	.54

Note. Employee $N = 321$, Supervisor $N = 195$. χ^2 contribution = rating group contribution to the global χ^2 ; % contribution = rating group percentage contribution to χ^2 ; RMR = root mean square residual; SRMR = standardized root mean square residual; GFI = goodness of fit index.

Table 11

Model 4 Factor loadings of Organizational Citizenship Behavior Definition.

	Item	OCB Definition Dimension		
		Voluntary / Willing to Perform	Rewarded for Performing	Sanctioned for not Performing
Factor Loading	1	.80	.87	.94
	2	.73	.80	.93
	3	.65	.77	.88
	4	.85	.85	.95
	5	.73	.79	.89
	6	.83	.87	.95
	7	.75	.84	.90
	8	.73	.87	.91
	9	.80	.86	.94
	10	.45	.59	.83
	11	.45	.53	.78
	12	.39	.58	.76

Note. Common metric completely standardized solution factor loadings are presented.

Table 12

Fit Indices for Multidimensional Scaling of Task Performance and OCB Definition.

Model	Stress	DAF	TCC
1 Dimension	.02	.98	.99
2 Dimensions	.02	.98	.99
3 Dimensions	.02	.98	.99
4 Dimensions	.02	.98	.99

Note. Stress = Normalized Raw Stress; DAF = Dispersion Accounted For; TCC =

Tucker's Coefficient of Congruence.

Figure Caption Page

Figure 1. Study 1 Hypothesized model by variable categories.

Figure 2. Study 1 Theoretical model.

Figure 3. Completely Standardized path estimates for the final model in Study 1.

Figure 4. OCB Definition Measurement Invariance conceptual model.

Figure 5. Scree plot from MDS solution.

Figure 6. Final coordinates of two-dimension solution from MDS.

Figure 7. Final coordinates of one-dimension solution from MDS.

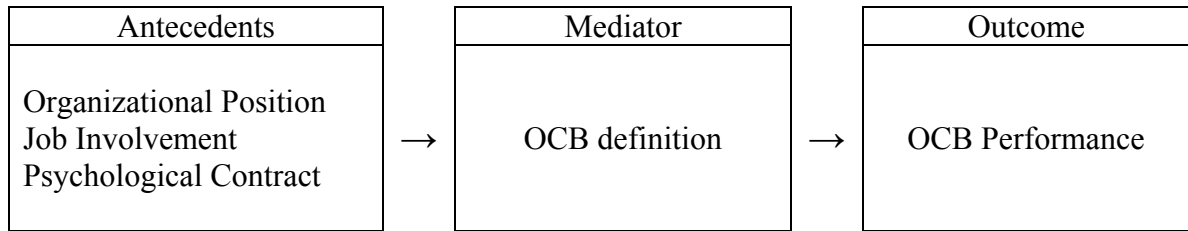


Figure 1. Study 1 Hypothesized model by variable categories.

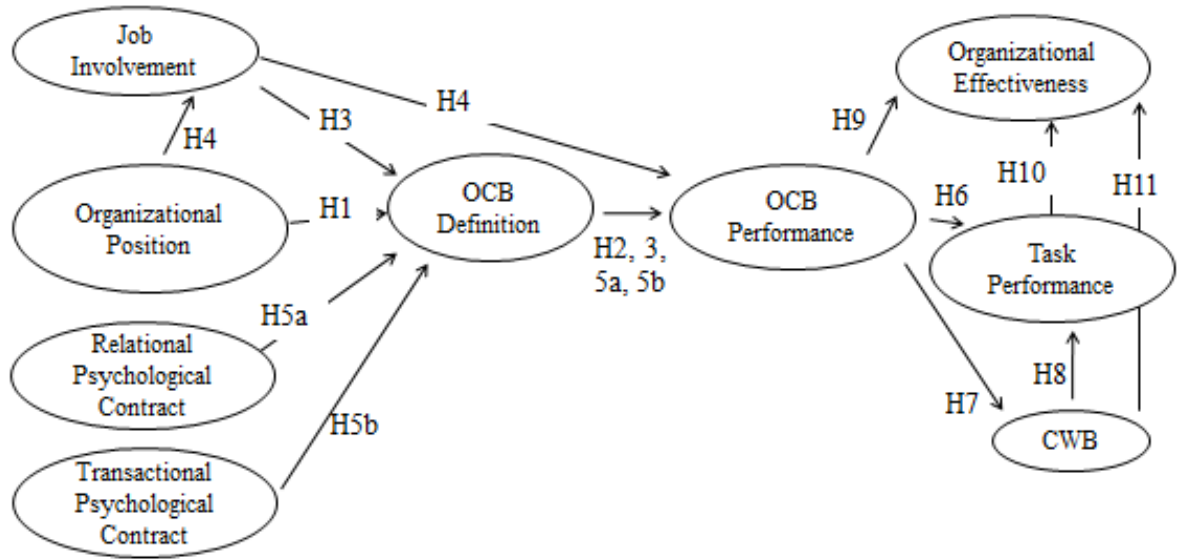


Figure 2. Study 1 Theoretical model.

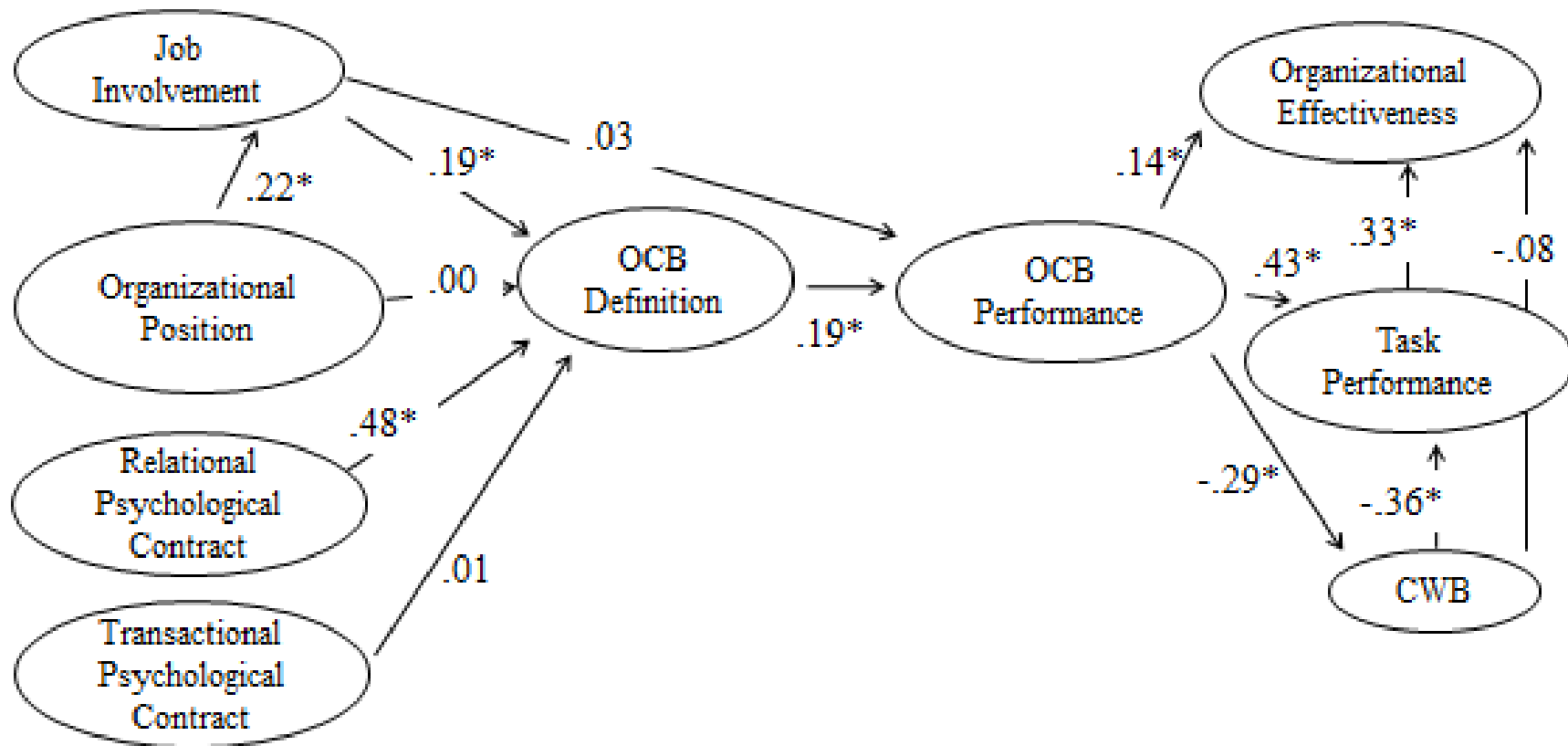


Figure 3. Completely Standardized path estimates for the final model in Study 1.

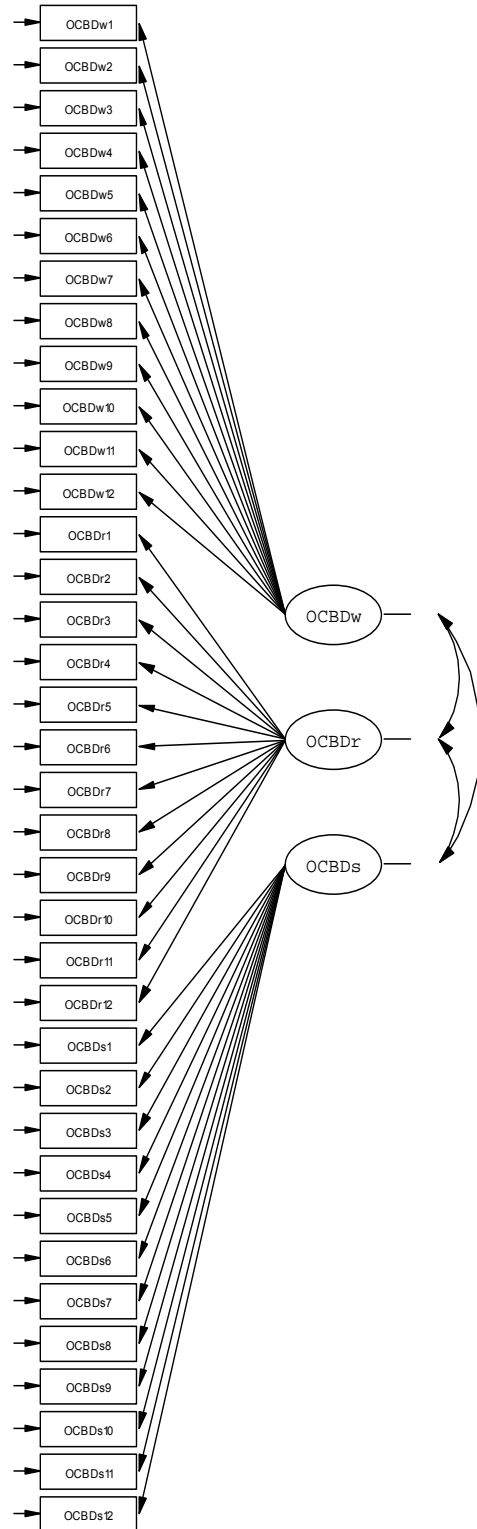


Figure 4. OCB Definition Measurement Invariance conceptual model.

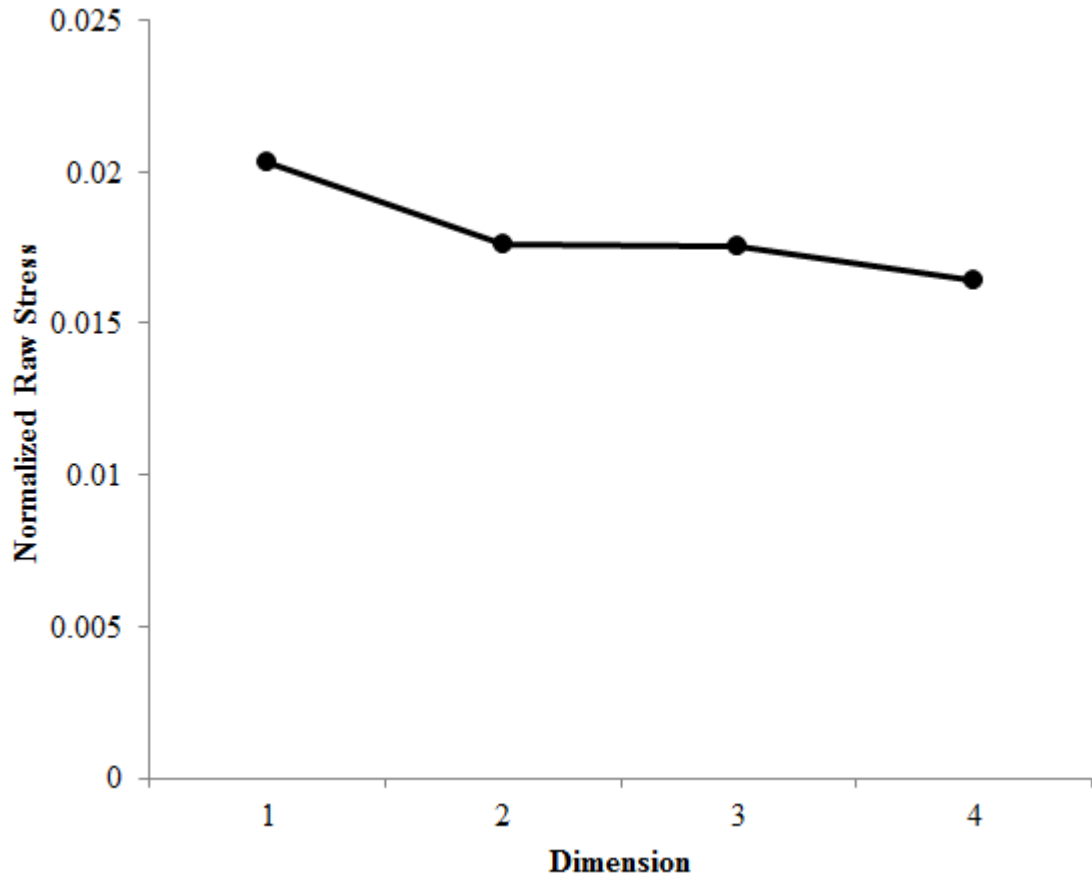


Figure 5. Scree plot for the MDS solution.

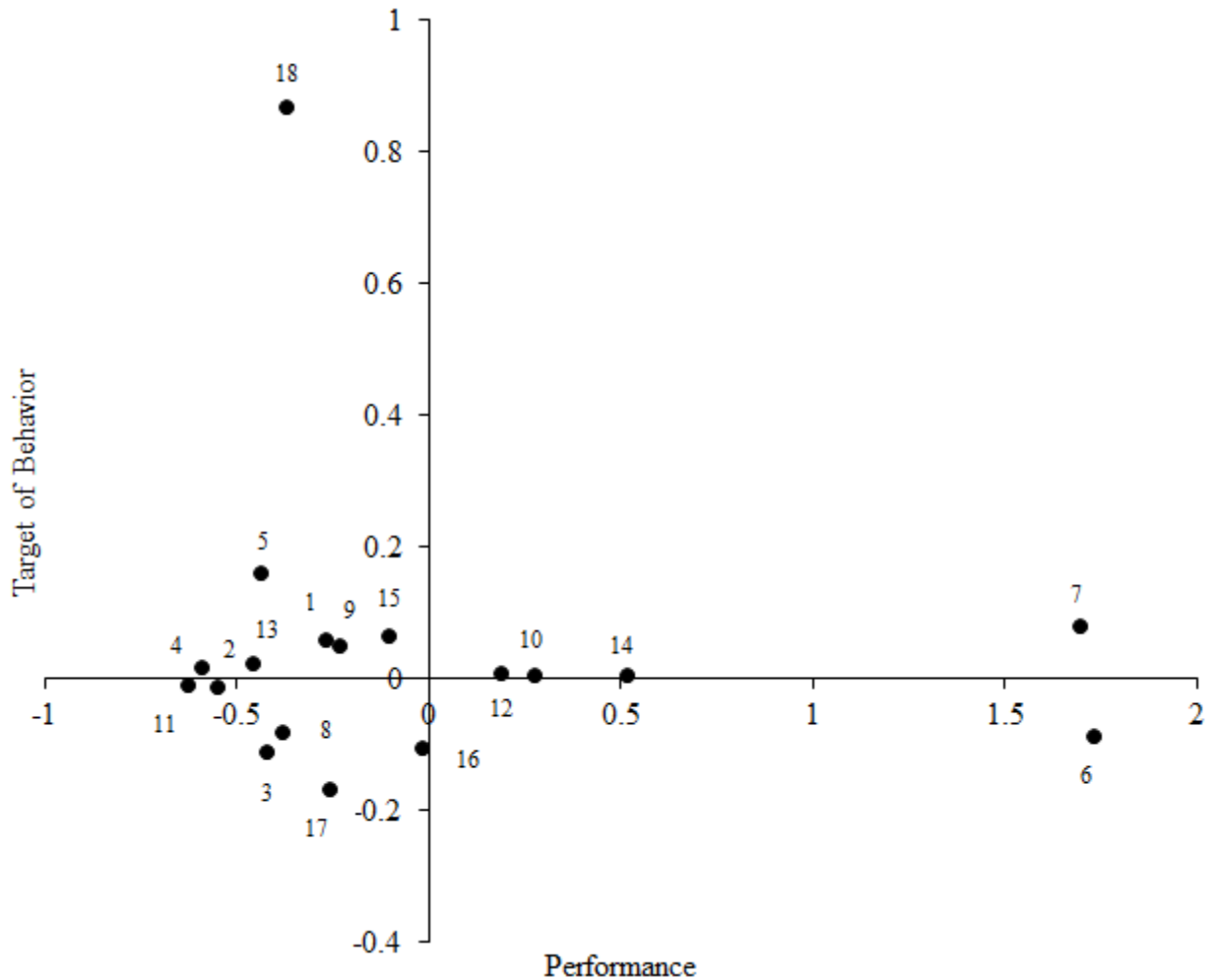


Figure 6. Final coordinates for the two dimension MDS solution. The Performance dimension ranges from meeting task performance expectations and engaging in OCB (left) to not meeting task performance expectations (right). The Target of Performance dimension ranges from the work group or organization (bottom) to another individual (top). Each coordinate is labeled with an item number. Items 1-7 represent the in-role performance items and items 8-18 represent the OCB items.

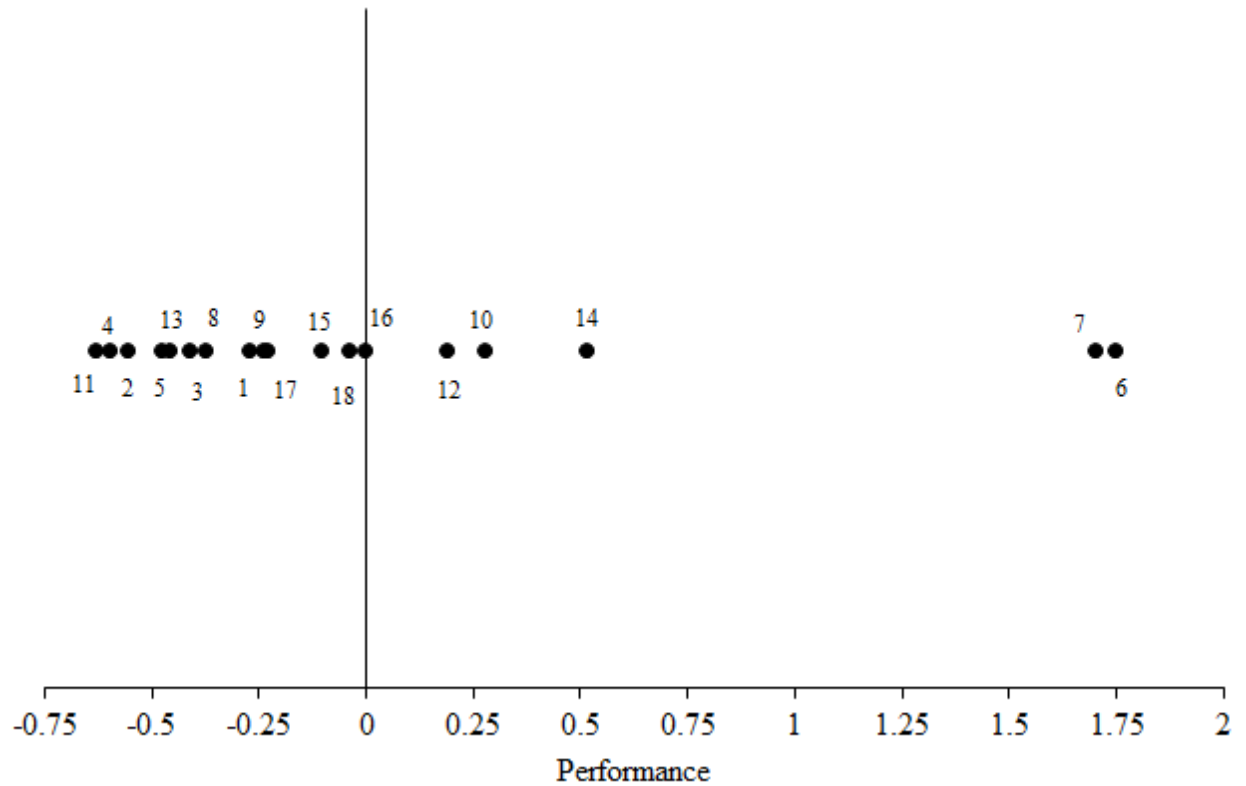


Figure 7. Final coordinates for the one dimension MDS solution. The Performance dimension ranges from meeting task performance expectations and engaging in OCB (left) to not meeting task performance expectations (right). Each coordinate is labeled with an item number. Items 1-7 represent the in-role performance items and items 8-18 represent the OCB items.