



Job definition discrepancy between supervisors and subordinates: The antecedent role of LMX and outcomes

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This study proposed that leader–member exchange (LMX) might encourage an employee to define job breadth close to or beyond the level of his/her supervisor's expectation (enlargement effect), while simultaneously fostering a reduction in supervisor–subordinate definition discrepancy on job content (congruence effect). Using data from 184 subordinate–supervisor dyads in Taiwan, we examined the relationships among LMX, job definition discrepancy, in-role/extra-role behaviour, and performance rating. Results showed that LMX was positively related to employee relative job breadth and the supervisor–subordinate congruence on job content, supporting the existence of enlargement effect and congruence effect. Additionally, employee relative job breadth was positively related to extra-role behaviour and the congruence on job content was positively related to in-role behaviour. However, neither in-role nor extra-role behaviour was related to performance rating. Theoretical and practical implications are discussed.

Although employment contracts and job descriptions formally specify job responsibilities and duties, quite frequently, employees' job definitions differ from their supervisors' (Morrison, 1994). Definition discrepancies might result in negative consequences. For example, an employee may overlook an in-role task thus making a bad impression on his/her supervisor who perceives the task as important. Similarly, an employee may feel a supervisor imposes extra-role tasks, which can generate psychological resistance within the employee, or even a breach of the psychological contract (Lam, Hui, & Law, 1999; Morrison, 1994; Rousseau, 1995). Given these potentially unfavourable consequences, researchers have called for further

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examinations of the job definition discrepancies between supervisors and subordinates and their antecedents (Lam *et al.*, 1999; Morrison, 1994).

Although empirical studies have identified a number of factors related to job definition issues, most of them have adopted an employee perspective (e.g. Axtell & Parker, 2003; Blakely, Srivastava, & Moorman, 2005; Coyle-Shapiro, Kessler, & Purcell, 2004; Kidder & McLean Parks, 2001; Morgeson, Delaney-Klinger, & Hemingway, 2005). Only a handful of published studies have taken into account perspectives of both managers and employees, simultaneously examining the two parties' discrepancies on job definitions (Diefendorff, Richard, & Croyle, 2006; Klieman, Quinn, & Harris, 2000; Lam *et al.*, 1999; Morrison, 1994). Among these studies, Morrison (1994) found a relatively high disagreement between supervisors and subordinates on in-role/extra-role job definitions. Extending Morrison's work, Lam *et al.* (1999) highlighted the importance of addressing the directional differences between ranks, finding supervisors defined work-roles more broadly than subordinates.

While the above findings are inspiring, literature has paid little attention to the various forms and the extents of these job definition discrepancies. Therefore, the first objective of this study is to examine varied types of supervisor-subordinate definition discrepancies and their extents. In our view, definition discrepancies can be divided into two types: the discrepancy on job breadth and the discrepancy on job content. The former refers to whether supervisors and subordinates have a perceptual gap on job breadth, namely, the scope of in-role tasks; and the latter refers to the supervisor-subordinate perceptual difference in whether certain behaviours can be defined as in-role or extra-role. Such a construct differentiation is essential because an employee may act differently on these two types of definition discrepancies and both discrepancies may involve different psychological meanings. Narrowing job breadth may imply an employee is unwilling to accept increased duties (Lam *et al.*, 1999), whereas misjudging job content may imply an employee is unclear or unfamiliar about his/her job (Morrison, 1994). Thus, understanding the forms of definition discrepancy could offer a knowledge base for managers and employees to deal with their perceptual gaps more accurately. Moreover, past research (e.g. Klieman *et al.*, 2000; Lam *et al.*, 1999) has examined whether or not supervisors and subordinates have discrepant definitions on specific kinds of behaviours, but research has not yet gauged the extent of these discrepancies for a given job. Since negative consequences will increase with the magnitude of discrepancy, it is important for managers and employees to understand the extent of their discrepancies.

The second objective of this study is to investigate the relationship between leader-member exchange (LMX) and supervisor-subordinate discrepancies over job breadth and job content. LMX theory, focusing on exploring the reciprocal exchange, mutually support, mutual influence, and interdependence between supervisors and subordinates (Graen, 1976; Graen & Uhl-Bien, 1995), has been linked to supervisor-subordinate perceptual congruence, such as the congruence on behaviour attribution (Wilhelm, Herd, & Steiner, 1993) and climate perception (Ford & Seers, 2006). Along this line, we propose that LMX might also predict job definition discrepancies. LMX theory points out that high-quality LMX subordinates may respond to their supervisors by performing activities beyond written job descriptions and are likely to behave consistently with their supervisors' expectations (Graen & Uhl-Bien, 1995). Such behaviours may be attributed to subordinates' internal interpretations of job breadth and job content. The current study proposes that LMX may have two effects on employees' relative job definitions: one is enlargement effect and the other is congruence effect. The former

encourages an employee to expand job breadth close to or beyond the definition held by his/her supervisor; the latter leads an employee to define job content congruently with his/her supervisor, resulting in similar perspectives on in-role and extra-role behaviours. It is well recognized that supervisors benefit from having employees who are willing to go beyond required behaviours and hold similar perspectives on job roles with themselves (Bauer & Green, 1996; Morrison, 1994). If LMX influences job definition discrepancies, our results can make a contribution by illuminating a specific way to reshape employees' job definitions more in line with managers' expectations.

The third objective of this study is to examine two direct outcomes (in-role and extra-role behaviours) and one indirect outcome (performance rating) of job definition discrepancies. Given the importance of employees' work behaviours and job performance to the effectiveness of their work units, it is important to understand whether job definition discrepancies would influence employee work outcomes. Morrison (1994) indicated that defining extra-role tasks as in-role encourages employees to engage in these tasks with greater frequency. Thus, variations in job definition can be expected to lead to variations in in-role behaviours and extra-role behaviours. The displays of in-role behaviours and extra-role behaviours may further influence the performance evaluations that managers give to employees. Because empirical research regarding consequences of job definition discrepancies is still rare (Lam *et al.*, 1999; Tepper, Lockhart, & Hoobler, 2001), we believe including work outcome variables in this investigation may provide empirical evidence that enriches our understanding of job definition.

To achieve these objectives, we developed a context-specific work behaviour scale that measures the perceptual gap between supervisors and subordinates. We also proposed a process model that links LMX, job definition, in-role/extra-role behaviour, and performance rating. The theoretical model is presented in Figure 1.

Conceptual background and hypotheses

Leader-member exchange theory

LMX theory is based on the concepts of role-making, social exchange, and reciprocity, suggesting supervisors build relationships one-on-one with subordinates

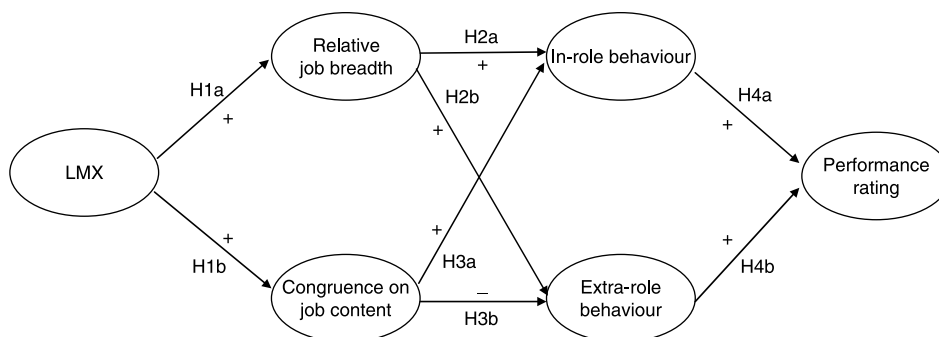


Figure 1. The hypothesized model. '+' indicates a positive relationship; '-' indicates a negative relationship.

(Deluga, 1994). This theory states that the development of leader-member relationships goes through several stages. In the early stage, supervisors and subordinates come together as strangers. With limited information about each other, they interact based on formal role obligations and rules of economic exchange. Supervisors provide subordinates only with what they need to perform, and subordinates behave only as required (Graen & Uhl-Bien, 1995). As time goes on, supervisors may assess subordinates by offering a range of assignments, from less demanding to more demanding, and then evaluate the extent of subordinates' acceptance, motivation, and performance. In this stage, supervisors also send role expectations to their subordinates; subordinates may embrace or reject these role expectations, and actively negotiate how their roles should be defined within the organization (Graen & Scandura, 1987). The dyads that successfully pass this process will develop social exchange relationships by sharing different kinds of tangible and intangible resources. Because of the varied interaction experiences, some dyads are willing to continue investing in each other, and finally develop mature and reciprocal partnerships, whereas other dyads remain within formally prescribed roles and behave according to employment contracts (Uhl-Bien, Graen, & Scandura, 2000).

The outcomes of such a role-making process are differentiated relationship types and qualities. High-quality LMX relationships, like partnerships, are characterized by mutual trust, loyalty, support, obligation, professional respect, and open communication. In contrast, low-quality LMX relationships, like those between strangers, are characterized by limited levels of trust, support, understanding, and commitment (Dienesch & Liden, 1986; Uhl-Bien *et al.*, 2000).

LMX and job definition

The present study proposes two effects that LMX may have on job definition: enlargement effect and congruence effect. The former encourages an employee to expand job scope, achieving or exceeding management expectations, whereas the latter influences an employee to adopt a working schema in line with that of his or her supervisor.

Enlargement effect

Job definition is a subjective, socially constructed process (Graen, 1976; Rousseau, 1995). A given behaviour regarded as in-role by an employee may be treated as extra-role by his/her supervisor, or vice versa. Morrison's (1994) research found that the boundary between in-role behaviour and extra-role behaviour varies with employee organizational commitment, job satisfaction, and job tenure. We assert the varied perceptions of job boundary are also associated with the quality of the LMX relationship.

Empirical evidence has shown that LMX quality enhances employee cognition of empowerment (Aryee & Chen, 2006). As a high-quality LMX relationship accompanies multiple positive characteristics, such as mutual trust, loyalty, support, and understanding (Graen & Uhl-Bien, 1995), supervisors are more confident to provide resources, autonomy, and decisional responsibility for such employees (Schriesheim, Neider, & Scandura, 1998). Employees who feel empowered not only increase the discretion in their jobs (Wang, Law, Hackett, Wang, & Chen, 2005), but also create an open-ended space for job redefinition (Liden, Wayne, & Stilwell, 1993).

High-quality LMX means that supervisor-subordinate relationships progress to a mature partnership level. Both members recognize their reciprocity is within an extended time frame (Uhl-Bien *et al.*, 2000), and through satisfaction of the partnership, individuals also fulfil their own interests (Graen & Uhl-Bien, 1995). Therefore, subordinates incorporate the concerns of their supervisors, internalize common goals, and are willing to promote the collective welfare (Fairhurst, 1993; Wang *et al.*, 2005).

Lam *et al.* (1999) contended that subordinates do not define a given job as broadly as supervisors do because subordinates are less concerned with being effective. However, within high-quality relationships, subordinates devote much care to the effectiveness of their work unit and the concerns of their supervisors (Wang *et al.*, 2005), so they are less likely to have obviously narrow job definitions relative to their supervisors' perceptions. In such a case, an employee's relative job breadth, defined as the degree of broadness or narrowness of the employee's job definition with reference to that of his/her supervisor's, may even surpass a supervisor's expectation. Thus, the following is proposed:

Hypothesis 1a: The higher the LMX quality, the more broadly employees will define their job responsibilities, such that there will be a positive relationship between LMX and employee relative job breadth.

Congruence effect

Research has found LMX quality to be positively related to cognitive similarity between supervisor and subordinate (Engle & Lord, 1997; Liden *et al.*, 1993; Turban & Jones, 1988). This cognitive similarity may result from frequent social interactions and large amounts of information sharing. Supervisors do not interact with all subordinates on an equal basis. In high-quality LMX relationships, dyadic members build close working relationships and even personal friendships, involving social interactions characterized by greater depth and intensity (Ford & Seers, 2006). Several studies have found that social interaction leads to perceptual congruence. For example, Rentsch (1990) showed that social interactions help individuals attach convergent meaning to organizational events. Krackhardt and Kilduff (1990) also indicated that when people engage in social interaction, interpretations of events and objects are more aligned. In addition, dyadic members in high-quality relationships have more contact opportunities. Engle and Lord (1997) pointed out that a greater contact and mutual influence increases the cognitive alignment in dyads. In the long run, cognitive schemas are highly affected by LMX relationships.

During the process of role-making, supervisors provide both explicit information and subtle cues about job responsibilities. These cues have an important effect on how employees define behaviours (Morrison, 1994). Frequent social interactions and greater information sharing help dyadic members comprehend the expectations and requirements of others, thus achieving role consensus (Blau, 1988; Engle & Lord, 1997). Therefore, we suggest that in high-quality LMX relationships, dyadic members have higher perceptual congruence on job content; in such a case, subordinates can more correctly predict whether behaviour is seen as in-role or extra-role in the eyes of their supervisors.

Hypothesis 1b: The higher the LMX quality, the more congruently employees will define their job responsibilities with their supervisors, such that there will be a positive relationship between LMX and the congruence on job content.

Job definition and in-role/extra-role behaviour

Job definition represents the categorization of working tasks and the selection of job content (Foti, 1990). Cognitive categorization of in-role or extra-role reflects employee attitudes and motives toward the job, which in-turn influence behaviours. A task defined as in-role is more likely to be performed than when it is defined as extra-role (Morrison, 1994). In-role behaviours are treated as formal requirements by the organization and are directly linked to extrinsic rewards and sanctions, so employees are motivated to fulfil them (Katz, 1964; Morrison, 1994; Organ, 1988). Beyond in-role behaviours, the motivations of extra-role behaviours are complex and not easily pinned down. A positive mood, feelings of organizational justice, altruism, concern for others, reciprocity, conscientiousness, and even impression management are possible factors that may play a role in influencing extra-role behaviours (Bolino, 1999; McNeely & Meglino, 1994; Niehoff & Moorman, 1993; Organ & Konovsky, 1989; Podsakoff, MacKenzie, Paine, & Bachrach, 2000). When it comes to behaviours outside of job prescriptions and immediate rewards, employees are given discretion to participate.

Owing to the varied motivations, the tasks defined as in-role involve more commitment, a higher sense of responsibility, and higher execution priority than those defined as extra-role (Coyle-Shapiro *et al.*, 2004; Wright, George, Farnsworth, & McMahan, 1993). Therefore, people normally perform in-role tasks with greater frequency (Morrison, 1994; Tepper *et al.*, 2001).¹ In addition, broader job definitions mean more tasks are treated as in-role. These in-role task items and their performance frequencies constitute an employee's overall in-role behaviours. Expansion of in-role scope will lead to an increase of in-role behaviours. When subordinates define their jobs broadly, they are also less likely to miss tasks that are regarded as in-role by their supervisors. This causes supervisors to perceive more in-role behaviours performed by such subordinates.

Prior research has indicated that employees engage in organizational citizenship behaviours (OCBs) because they see these behaviours as part of their jobs (Coyle-Shapiro *et al.*, 2004; Tepper *et al.*, 2001). They do not regard OCBs as extra-role behaviours, but define them as in-role. This spontaneous job expansion is usually associated with the feelings of autonomy and responsibility (Morgeson *et al.*, 2005; Pearce & Gregersen, 1991). As discussed earlier, the behaviour defined as in-role is usually associated with greater performance frequency. Thus, an employee who incorporates behaviours into the job, which the supervisor does not treat as in-role, is likely to be seen by the supervisor as performing 'extra-role effort'.

Hypothesis 2a: Relative job breadth will be positively related to employees' in-role behaviours, as perceived by supervisors.

Hypothesis 2b: Relative job breadth will be positively related to employees' extra-role behaviours, as perceived by supervisors.

As illustrated in the preceding discussion, LMX quality contributes to perceptual congruence (Ford & Seers, 2006). One important consequence of perceptual congruence is that dyadic members develop clear and consensual role expectations (Schaubroeck, Ganster, Sime, & Ditman, 1993). Prior research has supported that LMX

¹ The results of the present study showed that the average work frequency of in-role behaviours was higher than that of extra-role behaviours ($M = 2.56$ and 1.45 , respectively, using a five-point Likert scale).

quality can reduce role ambiguity (Dobbins, Cardy, & Platz-Vieno, 1990) and increase role clarity (Blau, 1988; Gerstner & Day, 1997). In role ambiguity, employees are uncertain about job duties and responsibilities, therefore, they may divert time and energy away from accomplishing objectives (Dunegan, Uhl-Bien, & Duchon, 2002). In contrast, role clarity helps employees direct their efforts toward important activities, and allocate their time in line with managerial expectations.

Under some circumstances (such as limited time or high work demand), employees choose to engage in certain tasks while putting aside the others (Wright *et al.*, 1993). An employee's choice reflects his/her definitions and priorities surrounding the job content (Foti, 1990). Job definition affects how employees distribute time and effort, resulting in varied behavioural patterns among employees. An employee whose job definition is congruent with that of the supervisor better understands the requirements and expectations and thus can focus more time and effort to fulfil in-role tasks, afterward using discretion to engage in extra-role behaviours depending on employee work attitudes and contextual factors such as perceived organizational support (Podsakoff *et al.*, 2000). In contrast, the employee who has an incongruent definition with the supervisor diverts time and effort into both in-role and extra-role behaviours, possibly missing some prescribed in-role behaviours while perceiving some extra-role behaviours as mandatory. Other things being equal, the supervisor may feel the former employee carries out more in-role behaviours than the latter, while perceiving that the latter carries out more extra-role behaviours than the former.

Hypothesis 3a: Congruence on job content will be positively related to employees' in-role behaviours, as perceived by supervisors.

Hypothesis 3b: Congruence on job content will be negatively related to employees' extra-role behaviours, as perceived by supervisors.

In-role/extra-role behaviour and performance rating

Numerous studies have revealed that managers take both in-role and extra-role behaviours into account when evaluating the work performance of their subordinates (MacKenzie, Podsakoff, & Paine, 1998; Rotundo & Sackett, 2002; Werner, 1994). In-role behaviours include those activities that produce goods and services and maintain production over time, directly contributing to the organization's technical core and organizational output (Borman & Motowidlo, 1993; Murphy, 1989). Such behaviours naturally play a major part in performance appraisal (Werner, 1994). Extra-role behaviours, however, include activities such as helping co-workers, volunteering for special assignments, promoting company image, and participating in company activities during vacation. These behaviours directly or indirectly help supervisors and support the social environment in which the technical core must function. Thus, extra-role behaviours contribute to supervisors themselves as well as the overall organizational effectiveness (Bommer, Dierdorff, & Rubin, 2007; Borman & Motowidlo, 1993).

The relationship between extra-role behaviours and supervisory performance rating of subordinates has been examined across different occupations and work settings. With few exceptions, researchers have generally agreed that extra-role behaviours have a positive effect on supervisory performance evaluation (Bommer *et al.*, 2007; Podsakoff *et al.*, 2000). Some potential reasons have been suggested to explain this phenomenon, such as norm of reciprocity/fairness and behavioural

distinctiveness. Podsakoff, MacKenzie, and Hui (1993) indicated that people often try to reciprocate those who help them, do them a favour, or treat them fairly. As a result, managers might repay employees with more favourable performance ratings who exhibit extra-role behaviours. Besides, managers search for distinctiveness when evaluating employees. Extra-role behaviours are likely to be viewed as distinctive because these behaviours are generally not considered to be formally required. Therefore, such actions are likely to stand out (Bommer *et al.*, 2007) and be remembered by managers during the evaluation process (Podsakoff *et al.*, 1993). Empirical findings from Werner (1994) also showed that supervisors took both in-role and extra-role performance information into consideration when making performance ratings. Therefore, the following is proposed:

Hypothesis 4a: Employees' in-role behaviours, as perceived by supervisors, will be positively related to the performance ratings that supervisors give to employees.

Hypothesis 4b: Employees' extra-role behaviours, as perceived by supervisors, will be positively related to the performance ratings that supervisors give to employees.

Method

Sample and procedure

This study collected paired data. Respondents included full-time administrative assistants of departments or graduate institutes from universities in Taiwan, as well as the administrative assistants' direct supervisors (chairpersons of the departments or graduate institutes). Administrative assistants were employed as research participants of the present research for two reasons. First, administrative assistants and their supervisors have regular contact with each other, creating opportunities to establish relationships from low to high-quality exchanges. Second, this position tends to be characterized by moderate complexity, which is beneficial for us to depict its scope and content and examine the subjective view of job definition. The multitudinous activities of a highly complex job would be difficult to document and analyse. Conversely, a low complex job would have responsibilities clearly specified and understood, with little room for supervisor/subordinate interpretation.

A systematic sampling method was adopted to collect data from a pool of 1,179 research or teaching units. Two questionnaires were distributed: one was completed by subordinates (including measures of LMX, job definition, work frequency, and demographic variables), while the other was completed by supervisors (including measures of job definition, job performance, and demographic variables). Every subordinate respondent was telephoned and asked to cooperate. For those who expressed willingness to fill out our questionnaire, their immediate supervisors were then contacted and invited to join the survey. Survey goals were explained to all participants as an investigation of the subordinates' work behaviours, performance, and life adaptation.² To assure the two questionnaires could be matched, a colour note with the appropriate subordinate's name was attached to each supervisor's questionnaire to inform the supervisor which person to respond about. To ensure the confidentiality of responses, both supervisor and subordinate questionnaires were returned directly to the researchers.

²The questionnaires also contain measures related with life adaptation. These measures are not included in this study.

Of the 273 dyad questionnaires distributed, 249 subordinate questionnaires and 219 supervisor questionnaires were returned, representing a response rate of 91.2% and 80.2%, respectively. Eliminating questionnaires that could not be matched and those with missing data produced a final sample of 184 supervisor-subordinate dyads.

Of the subordinate sample, 92.3% were women, with an average age of 32.56 and average organizational tenure of 6.72 years. The final supervisor sample was 148 (some supervisors had provided information for two subordinates), 23.65% were women, with an average age of 45.83 and average organizational tenure of 8.06 years.

Measures

This study used two approaches to measure constructs. The quality of LMX and overall performance were measured with existing scales from the literature. In contrast, job definition, in-role behaviour, and extra-role behaviour were measured with a custom scale constructed for this study.

Work behaviour scale development

In order to capture the administrative assistants' work activities, this study engaged in a multi-stage process recommended by Hinkin (1998) to develop a context-specific scale. First, we conducted a broad job analysis with the help of six administrative assistants from various colleges. They were asked to list all activities or tasks related to the workplace, whether formally required or not. Activities not performed during office hours were also listed. This resulted in more than 100 activities. In order to reduce the length of the questionnaire, all activities were grouped into categories based on content similarity. The grouping process was performed independently by the first author, one senior administrative assistant, and two graduate students who had part-time work experience as administrative assistants. The grouping resulted in an average inter-rater reliability of .66. Further arrangement resulted in 29 categories, each with a representative behavioural statement. These statements comprised the work behaviour scale. Sample items included 'promotion and preparation of student recruitment activities' and 'maintenance and updating of internet information'.

Following the method adopted by Morrison (1994), supervisors and subordinates were both asked to classify all categories of activities as in-role or extra-role. Pre-testing suggested that some respondents found it difficult to classify these activities on a dichotomous scale, so we added an option for 'uncertain'. Furthermore, subordinates were asked to indicate the frequency of each item on a five-point scale ranging from 0 (never engaged in) to 4 (a routine task) in order to measure their in-role behaviours and extra-role behaviours.

Leader-member exchange

To measure LMX, we used a seven-item, five-point Likert scale recommended by Graen and Uhl-Bien (1995). This scale was assessed by subordinates. Originally constructed in English, this scale was translated into Chinese by the first author, and checked by a bilingual speaker to insure literal correspondence. Sample items included, 'How well does your leader understand your job problems and needs?' and 'How well does your supervisor recognize your potential?' The coefficient alpha for this scale was .84.

Relative job breadth and congruence on job content

To estimate the enlargement and congruence effects on job definition, we measured the relative breadth of job definition and the congruence on job content, and operationalized them by ratios. The relative job breadth represents whether a subordinate defines the job more broadly than his/her supervisor does. Within the overall 29 activity categories, the number of in-role categories defined by a subordinate and the number of in-role categories defined by his/her supervisor were calculated. The former number was then divided by the latter number. The higher the ratio, the more broadly a subordinate defines the job scope than his/her supervisor does. That is, a subordinate is more likely to treat tasks as in-role, even though some tasks are regarded as extra-role by his/her supervisor.

The congruence on job content represents the degree to which a subordinate defines his/her job congruently with his/her supervisor. Within the overall 29 activity categories, the number of categories defined congruently by both the supervisor and subordinate in every dyad was calculated. The number of congruence was divided by 29. The higher the ratio, the more congruently the subordinate defines the job content with his/her supervisor.

In-role behaviour and extra-role behaviour

We believe that a task judged by supervisors as in-role or extra-role is more relevant to supervisory ratings of employee performance than that judged by subordinates themselves. Hence, we took the supervisor's perspective to determine whether the subordinate's task was in-role or extra-role. To calculate how many in-role behaviours (or extra-role behaviours) supervisors may perceive, two steps were conducted: (1) the task categories defined by supervisors as in-role (or extra-role) were identified and (2) the work frequency of every in-role task category (or extra-role task category) rated by subordinates was summed up.³ The activities judged as uncertain were dropped from further analyses.⁴

Performance rating

This study used a four-item scale developed by Farh and Cheng (1997) to assess a subordinate's overall performance. This scale was completed by supervisors in order to minimize the problem of common method variance. Items were measured with a seven-point Likert scale. A sample item included, 'The assistant makes a significant contribution to the overall performance of our work unit.' In the present study, the coefficient alpha of this scale was .96.

Analysis

To test the hypothesized model, a two-stage process was conducted: (1) testing the measurement model and (2) testing the structural model (Anderson & Gerbing,

³ To measure the levels of in-role (or extra-role) behaviours, past researchers have usually averaged the frequencies of in-role (or extra-role) behaviour items (e.g. Morrison & Phelps, 1999). In the current study, each participant's number of in-role (or extra-role) behaviour items varied, so we did not average the frequencies of all in-role (or extra-role) task categories but summed them instead. A similar approach has been adopted in several studies to estimate the amount of an individual's specific behaviours (e.g. Finkelstein, 2006; Finkelstein & Brannick, 2007).

⁴ We have adopted two approaches to estimate the in-role behaviours and extra-role behaviours. First, we dropped uncertain activities from further analyses, assuring those activities would not become noise in our statistics. The second approach was to retain uncertain activities, and split them equally into in-role and extra-role activities, thus the employee's workload would not be underestimated. The findings from these two approaches were quite similar in terms of hypothesis testing. To avoid redundancy, we reported the findings based on the first approach.

1988). All analyses were undertaken using structural equation modelling (SEM) with maximum likelihood estimation. In the first stage, confirmatory factor analyses (CFAs) were performed to evaluate construct validity. In the second stage, the hypothesized relationships among constructs were tested using path analysis in structural equation modelling. In this analysis, multiple indicators were combined to single scale values for each latent construct (Netemeyer, Johnston, & Burton, 1990; Williams & Hazer, 1986). To adjust for measurement error in the scale values, the path from the latent construct to the manifest variable was set equal to the square root of the scale reliability, and the error variances were set equal to the variance of the scale value multiplied by 1.0 minus the reliability (Hayduk, 1987; Williams & Hazer, 1986). In addition, we compared the proposed model with three alternative nested models to evaluate model adequacy.

In order to estimate the enlargement effect and congruence effect, the definition ratios for high-quality and low-quality LMX relationships were also analysed. Although the comparison for these two types of relationships was not included in any of the hypotheses, these results proved helpful in interpreting our findings.

Results

Confirmatory factor analyses

We conducted a CFA to examine the construct validity of the six core constructs in this study, including LMX, relative job breadth, congruence on job content, in-role behaviour, extra-role behaviour, and performance rating. Results of the CFA indicated an acceptable model-to-data fit ($\chi^2(77) = 142.83$, GFI = .90, NFI = .90, CFI = .95, RMSEA = .07). All of the factor loadings were highly significant ($p < .01$), providing evidence for convergent validity. Within our hypothesized model, four constructs (including relative job breadth, congruence on job content, in-role behaviour, and extra-role behaviour) were derived from the same work behaviour scale, so we examined alternative models to confirm distinctiveness. As shown in Table 1, the fit indices for the six-factor model were superior to those for the five-factor model 1 ($\Delta\chi^2 = 37.77$, $p < .01$), the five-factor model 2 ($\Delta\chi^2 = 21.12$, $p < .01$), the four-factor model ($\Delta\chi^2 = 40.08$, $p < .01$), the three-factor model ($\Delta\chi^2 = 84.23$, $p < .01$), and the one-factor model ($\Delta\chi^2 = 621.52$, $p < .01$). These results provided evidence for the discriminant validity among these core constructs.

Hypothesis tests

Table 2 presents the correlations and reliabilities of the exogenous and endogenous variables in the structural equation model. We also examined the effects of demographic variables, including age, gender, and organizational tenure, all of which had no obvious impact on our findings and thus were not included as control variables.

Our hypothesized model (Model 1) is shown in Figure 1. This model proposes that breadth and congruence of job definition both play mediating roles in the linkages between LMX and three outcome variables (including in-role behaviour, extra-role behaviour, and performance rating). Since LMX quality has been found to have direct and positive influences on in-role as well as extra-role performance (Hui, Law, & Chen, 1999), and to be positively related to performance rating (Gerstner & Day, 1997), it is possible that the impacts of job definition on outcome variables

Table 1. Results of the confirmatory factor analysis

Model	χ^2	df	$\Delta\chi^2$	GFI	NFI	CFI	RMSEA
Null model	1,487.84	105					.27
One-factor model	764.35	90	621.52**	.58	.49	.51	.20
Three-factor model	227.06	85	84.23**	.86	.85	.90	.10
Four-factor model	182.91	82	40.08**	.88	.88	.93	.08
Five-factor Model 1	180.60	80	37.77**	.88	.88	.93	.08
Five-factor Model 2	163.95	80	21.12**	.89	.89	.94	.08
Six-factor model (baseline model)	142.83	77		.90	.90	.95	.07

Note. In the six-factor model, six constructs were treated as six independent factors. In the five-factor model 1, relative job breadth and congruence on job content were combined into one factor. In the five-factor model 2, in-role behaviour and extra-role behaviour were combined into one factor. In the four-factor model, relative job breadth and congruence on job content were combined into one factor; in-role behaviour and extra-role behaviour were combined into another factor. In the three-factor model, relative job breadth, congruence on job content, in-role behaviour and extra-role behaviour were combined into one factor. In the one-factor model, all constructs were combined into one factor. ** $p < .01$.

would be weakened by the direct impacts of LMX on outcome variables. Therefore, we tested three alternative models (i.e. Model 2–4).

In Model 2, a direct path from LMX to in-role behaviour was added. Since employees in high-quality LMX relationships are granted greater responsibilities (Dienesch & Liden, 1986), no matter how they define jobs, they may need to spend more time on work activities (Rosse & Kraut, 1983). In Model 3, a direct path from LMX to extra-role behaviour was added, because employees in high-quality LMX relationships may exert extra effort to repay the supervisors' good treatment (Organ, 1990). In Model 4, a direct path from LMX to performance rating was added because LMX may affect performance judgments for reasons not emphasized by this study, such as competence (Liden & Graen, 1980), self-fulfilling prophecy (Gerstner & Day, 1997), and interpersonal attraction (Wayne & Ferris, 1990).

Table 3 reports the fit indices of these models as well as relevant chi-squared difference tests. Results showed that the chi-squared difference was not significant between Model 2 and Model 1 (the hypothesized model) ($\Delta\chi^2(1) = 0.00, p > .05$), nor between Model 3 and Model 1 ($\Delta\chi^2(1) = 2.59, p > .05$). The added paths were not

Table 2. Means, standard deviations, reliability, and correlations among latent variables

Variable	M	SD	1	2	3	4	5	6
1. LMX	3.65	0.56	(.84)					
2. Relative job breadth	0.99	0.32	.23**	–				
3. Congruence on job content	0.70	0.14	.22**	.07	–			
4. In-role behaviour	47.61	14.03	.08	–.09	.52**	–		
5. Extra-role behaviour	14.01	8.96	–.064	.47**	–.40**	–.29**	–	
6. Performance rating	6.23	0.82	.29**	.11	–.02	.03	.11	(.96)

Note. $N = 184$. Alpha coefficients are in parentheses.

** $p < .01$.

Table 3. Fit statistics for the hypothesized and alternative models

Model	χ^2	df	$\Delta\chi^2$	GFI	NFI	CFI	RMSEA
Model 1 (The hypothesized model)	20.10	7		.97	.90	.93	.10
Model 2	20.10	6	0.00	.97	.90	.93	.11
Model 3	17.51	6	2.59	.97	.91	.93	.10
Model 4 (The revised model)	4.15	6	15.95**	.99	.98	1.00	.00

Note. Model 1: The hypothesized model. Model 2: In comparison to the hypothesized model, the path from LMX to in-role behaviour was added. Model 3: In comparison to the hypothesized model, the path from LMX to extra-role behaviour was added. Model 4: In comparison to the hypothesized model, the path from LMX to performance rating was added.

** $p < .01$.

significant either ($\beta = 0.00, p > .05$; $\beta = -0.10, p > .05$), indicating that job definition fully accounted for the relationships between LMX and the in-role and extra-role behaviours. While Model 1 fit the data well ($\chi^2(7) = 20.10$, GFI = .97, NFI = .90, CFI = .93, RMSEA = .10), Model 4 exhibited a better fit ($\chi^2(6) = 4.15$, GFI = .99, NFI = .98, CFI = 1.00, RMSEA = .00). Adding the direct path from LMX to performance rating significantly improved model fit statistics ($\Delta\chi^2(1) = 15.95, p < .01$), suggesting that this path should be included in the model. Because Model 4 exhibited the best fit statistics, the structural path estimates from this model were reported.

As seen in Figure 2, LMX was found to correlate with relative job breadth and congruence on job content ($\gamma = .25, p < .01$ and $\gamma = .23, p < .01$, respectively), confirming the existence of both enlargement and congruence effects. Therefore, Hypothesis 1a and 1b were supported. As far as job definition is concerned, the relative job breadth was negatively related to in-role behaviour ($\beta = -0.13, p < .05$), contrary to our prediction, but positively related to extra-role behaviour ($\beta = 0.50, p < .01$), consistent with our prediction. Thus, Hypothesis 2a was not supported, whereas Hypothesis 2b was supported. As expected, the congruence on job content was positively related to in-role behaviour ($\beta = 0.53, p < .01$), and negatively related to extra-role behaviour ($\beta = -0.43, p < .01$), providing support for Hypothesis 3a and 3b.

Moreover, while the path from extra-role behaviour to performance rating was positive and trended toward significance, it did not reach the traditional significance

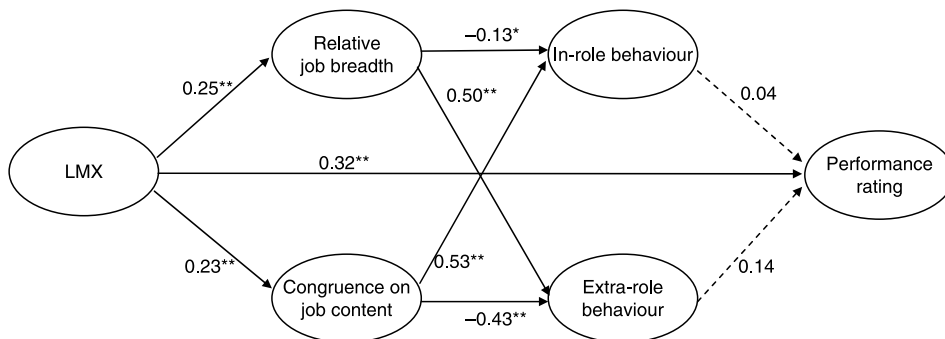


Figure 2. Path estimates of the revised model (Model 4). All path estimates are from the standardized solution. Dotted lines indicate non-significant paths. * $p < .05$; ** $p < .01$; two-tailed.

level of .05 ($\beta = 0.14$, $p = .06$, two-tailed test). The path from in-role behaviour to performance rating was not significant ($\beta = 0.04$, $p > .05$). Thus, the results did not support Hypothesis 4a and 4b. Although not specifically hypothesized, LMX was found to have a direct effect on performance rating ($r = .32$, $p < .01$), suggesting that LMX could influence performance rating through mechanisms other than the proposed mediators.

Definition ratio analyses

Table 4 presents the perceptual links between supervisor and subordinate, and lists the relevant statistics in the high-quality LMX sample (1 *SD* above mean), the low-quality LMX sample (1 *SD* below mean), and the total sample. The relative job breadth was 0.99 for the total sample, and the congruence on job content was 0.70.⁵ These statistics indicated that subordinates defined job breadth on par with their supervisors, but had moderate content dissimilarity with their supervisors. For the high-quality LMX sample, the relative job breadth was 1.07 and the congruence on job content was 0.72. For the low-quality LMX sample, the relative job breadth was 0.92 and the congruence on job content was 0.68. These results suggested that LMX played an important role in influencing employees' job definitions in terms of enlargement effect and congruence effect.

Discussion

This research explored job definition discrepancies between supervisors and subordinates, examining the antecedent role of LMX and outcomes of job definition. Results first showed that employees defined job breadth as broadly as their supervisors did, with moderate discrepancy on job content. Second, as expected, our findings revealed that LMX correlated positively with employees' relative job breadth and supervisor-subordinate definition congruence on job content, providing support for the coexistence of enlargement and congruence effects. Third, by examining the outcomes of job definition, we found that employee relative job breadth was positively related to extra-role behaviour, while congruence on job content was positively related to in-role behaviour. However, neither in-role nor extra-role behaviour was related to performance rating.

Theoretical implications

By demonstrating LMX is an important factor influencing job definition discrepancies, this study responds to prior scholars' calls for identifying antecedents that explain the extent of job definition agreement (Lam *et al.*, 1999; Morrison, 1994). Our findings suggest that there is variation in the perceptual discrepancy across supervisor-subordinate dyads, thus the perceptual discrepancy should not be treated as a universal but rather a contingent phenomenon. As LMX literature has contended, an effective

⁵ Relative job breadth is the ratio of subordinate's perceived job breadth to supervisor's perceived job breadth. Whereas the value larger than 1 means that a subordinate has a broader job definition than that of his/her supervisor, the value less than 1 means that a subordinate has a narrower job definition than that of his/her supervisor. Alternatively, the value of congruence on job content ranges from 0 to 1. Zero means a subordinate and his/her supervisors have no consensus about job content; 1 means that they have 100% consensus.

Table 4. Results of the definition ratio analyses

Job definition	High-quality LMX sample	Low-quality LMX sample	Total sample
Supervisor's definition			
In-role	18.55	18.73	18.63
Extra-role	9.64	9.61	9.63
Subordinate's definition			
In-role	19.91	17.30	18.43
Extra-role	8.35	9.74	8.91
The perceptual link between supervisor and subordinate			
In-role (supervisor)–in-role (subordinate)	15.37 (82.86%)	14.15 (75.55%)	14.76 (79.23%)
In-role (supervisor)–extra-role (subordinate)	2.70 (14.56%)	3.47 (18.53%)	3.08 (16.53%)
Extra-role (supervisor)–in-role (subordinate)	3.70 (38.38%)	2.93 (30.49%)	3.32 (34.48%)
Extra-role (supervisor)–extra-role (subordinate)	5.41 (56.12%)	5.71 (59.42%)	5.56 (57.74%)
Relative job breadth	1.07	0.92	0.99
Congruence on job content	0.72	0.68	0.70

Note. There are 29 working categories in this study. The numbers in this table represent the number of working categories defined as in-role or extra-role. When calculating the percentages, the number of in-role categories and the number of extra-role categories defined by supervisors were the denominators.

role-making process would be key to promote employees' extra efforts and achieve role consensus (Graen, 1976; Uhl-Bien *et al.*, 2000). The LMX quality not only induces positive affectivity such as loyalty and liking (Graen & Uhl-Bien, 1995), but is also verified by this study to play a role in adjusting employees' work cognitions toward supervisors' role expectations.

This study provides new results that are not entirely consistent with prior findings. While Lam *et al.* (1999) found that supervisors defined a given job more broadly than subordinates did, our study found that this situation only occurred in the low-quality LMX sample. In our whole sample, employees defined job breadth on par with their supervisors, and in the high-quality sample, employees even defined job breadth more broadly than did their supervisors. Lam *et al.* argued that supervisors are more concerned with being effective than their subordinates, thus it is thought to be to a manager's advantage to define job scope more broadly. If this argument is valid, it means that the subordinate sample in our study paid particular attention to their work unit (at the same level as that of their supervisors). Based on our hypothesis, the relatively broader job definition should be attributed to the higher quality of LMX in our sample. However, other characteristics in the sample may be relevant. Differences between our sample and that of Lam *et al.* include our higher ratio of females and our use of Taiwanese participants (a Chinese cultural setting). Sex and national culture have been proposed in the literature to relate to extra-role behaviours and job definitions. For example, Kidder and McLean Parks (2001) suggested that certain feminine traits (such as empathy and concern for others) may

encourage females to consider certain behaviours as in-role more often than males do. Blakely *et al.* (2005) indicated that Chinese employees are more collectivistic and higher in power-distance, and as a result are likely to subordinate themselves to a larger purpose and consequently define job scope more broadly. Thus, under the same level of LMX quality, females and employees from Eastern societies may have a broader job perception than that of males and Western employees. Future research may benefit from examining the moderating effects of gender and culture on the relationship between LMX and relative job breadth.

There have been a limited number of studies examining outcomes of job definition. Those published studies tended to focus their attentions on investigating the effect on OCBs (e.g. Blakely *et al.*, 2005; Coyle-Shapiro *et al.*, 2004). Compared with prior research, the present study develops a more integral model through examination of direct and indirect outcomes of job definition, allowing a more complete understanding of the role of job definition in the LMX leadership process. Our findings revealed that the relative job breadth and congruence on job content are related to in-role and extra-role behaviours, suggesting that there are at least two kinds of cognitive mechanisms involved in the process from LMX to employee work outcomes.

Consistent with our prediction, we found relative job breadth had a positive relationship with extra-role behaviour, and congruence on job content had a negative relationship with extra-role behaviour. These findings support our contention that job definition discrepancies should be delineated into two types due to their different influences on behavioural outcomes. Interestingly, the findings also imply that these two effects (enlargement effect and congruence effect) of LMX on extra-role behaviour may turn out to neutralize each other.⁶ Although this contention might be the case, we suggest that two issues should be taken into consideration. First, the neutralization of these two effects may not occur in every specific supervisor-subordinate dyad. The relative magnitudes of enlargement effect and congruence effect may vary in different supervisor-subordinate dyads, even though these dyads have similarly high levels of LMX quality. For example, an employee may define more tasks as extra-role due to a relatively strong enlargement effect, while another employee may define fewer tasks as extra-role due to a relatively strong congruence effect. Second, the neutralization of these two effects would not occur when these two effects ultimately result in different behavioural patterns on the parts of the employees. As noted earlier, the enlargement effect may make employees actively take on more responsibilities while the congruence effect may make employees behave in line with managers' expectations. Thus, it is likely that an employee in a high-quality LMX relationship behaves differently than an employee in a low-quality LMX relationship even though they display similar levels of extra-role behaviours. That is, the two employees may have entirely different definitions about a specific task (e.g. one employee defines preparing tea or coffee as an in-role behaviour while another defines it as an extra-role behaviour), but on average they display similar levels of extra-role behaviours. If enlargement effect and congruence effect make employee behavioural patterns different, then it means that these two effects do not really neutralize each other when looking at specific behaviours.

⁶ That is, the positive impact due to enlargement effect and the negative impact due to congruence effect on extra-role behaviour may cancel each other out. Such a neutralization may explain why LMX is not statistically related to extra-role behaviour, as shown in Table 2.

Results of the present study showed that neither in-role behaviours nor extra-role behaviours had a significant relationship with performance rating, which might be attributed to specific job characteristics involved in the present research. A thorough appraisal of in-role behaviours usually contains multiple dimensions like effort, quality, job knowledge, and competence (Viswesvaran, Schmidt, & Ones, 2005), but this study only measured one dimension – an employee's amount of work (namely, the summation of in-role behavioural frequencies). For the job of administrative assistant, the primary role is to assist the supervisors and faculty in dealing with routine affairs or assigned tasks. An assistant's amount of in-role behaviours is usually determined by his/her supervisor's requirement. Increased requests from supervisors raise the expected in-role behaviours. Unlike a salesperson, an assistant's display of in-role behaviours may be less attributed to his/her effort and initiative, and thus, less valued by supervisors. With respect to the insignificant relationship between extra-role behaviours and performance rating, we may be able to attribute such a phenomenon to the reduction of behavioural distinctiveness for extra-role behaviours (Bommer *et al.*, 2007). An administrative assistant position is typically considered as a 'feminine' job (Drogosz & Levy, 1996). The majority of the administrative assistant respondents were indeed female and may have been expected to engage in certain extra-role behaviours in line with feminine stereotypes (Kidder & McLean Parks, 2001), such as ordering meals, preparing tea or coffee, and decorating and maintaining the office environment. Thus, the gender and occupational norm may reduce the distinctiveness of some extra-role behaviours. As Bommer *et al.* (2007) pointed out, in contexts where group-level extra-role behaviours are prevalent, individual displays of extra-role behaviours are less likely to be distinctive; consequently, employees' extra-role behaviours may have lower contributions to supervisors' performance ratings.

One strength of the present study involves the extent to which definition discrepancy can be estimated. Prior research often adopted OCB scales to investigate the issue of job definition (Lam *et al.*, 1999; Morrison, 1994). However, using OCB scales entails a limitation. Since any OCB scale only specifies a small portion of work behaviours, it is not a thorough description about a given job. In order to fully measure the degree of definition discrepancy, work behaviours other than OCBs should also be taken into consideration. Distinctive from prior research, the present study developed a new work behaviour scale to examine employees' and supervisors' job definitions. This scale is context-specific, specifically designed for the position of administrative assistant. While the adoption of this scale in other contexts may be restricted, this approach is helpful in delineating the complete picture of a specific job and can more precisely capture its breadth and content. Combining this scale with ratio analysis, we were able to estimate the extent of perceptual links between dyadic members and quantify the magnitudes of enlargement and congruence effects. While our SEM analysis has demonstrated the existence of both enlargement and congruence effects by examining the hypothesized relationships, the findings from the ratio analysis (Table 4) clearly demonstrated the magnitudes of these two effects, thus further confirming our theoretical contention and enhancing internal validity.

Practical implications

This study has two practical implications. First, given the findings of two types of definition discrepancies, we suggest that supervisors and subordinates pay more

attention to ensure role clarity. Our results revealed that while dyadic members generally have similar opinions on job breadth, they achieve only 70% consensus on job content, meaning that they have 30% discrepancy (Table 4). That is, even if employees define job breadth on par with their supervisors, perceptual divergence on job content still exists. For those supervisor-subordinate dyads with high-quality LMX relationships, they still exhibit a 28% discrepancy on job content. This implies that even in high-quality LMX relationships, subordinates may miss some in-role tasks or supervisors may impose extra-role behaviours as an expected part of subordinates' jobs. Such a perceptual gap may lead to undesirable work outcomes such as misunderstanding or psychological reactance in organizations (Lam *et al.*, 1999). Accordingly, managers should be aware of the frequent occurrence of job definition discrepancy and take more active actions to prevent or reduce it. Several constructive approaches have been suggested in previous research, such as clear job instruction and timely job feedback (Sawyer, 1992).

Second, by examining the effects of LMX on job definition, this study offers insights into the benefits of LMX in promoting responsibility taking and reducing perceptual inconsistency. As Schaubroeck *et al.* (1993) indicated, many role problems are caused by the failures to manage supervisor-subordinate relationships. Echoing their findings, our results suggest that management of LMX relationships would be an effective way to reshape employee job cognition. Therefore, managers should be aware that job definition discrepancy can not be totally attributed to employees' personal problems and should be sensitive to the impacts of their leadership on employees' job perceptions. We suggest that managers make more effort to develop quality relationships with their employees. Recommendations may include participating in training programs to improve supervisors' own leadership skills like listening and feedback skills (Graen, 1989; Wang *et al.*, 2005), as well as offering greater personal support and more opportunities in decision-making to employees (Vecchio & Brazil, 2007).

Limitations and future research

Three limitations in this study should be mentioned. First, as with all cross-sectional studies, we cannot rule out the possibility of reverse causality. Longitudinal and cross-lagged research designs, which measure the dynamic changes of LMX, job definition, in-role/extra-role behaviour, and performance rating, would provide more convincing evidence for the causal direction suggested in our model. Second, while the scope of work activities was reviewed by several administrative assistants, in the scale development process, the completeness of work activities was not endorsed by the assistants and their supervisors who participated in the present research. Future research using our scale or employing the same approach should ask each participant to assess the completeness of the work behaviour scale. Third, the sample composition in our study may be a threat to the generalizability of our findings. Previous literature has indicated that gender and national culture may be factors affecting extra-role behaviours and perceived job breadth (Blakely *et al.*, 2005; Kidder & McLean Parks, 2001). Constituted mainly of females and all Taiwanese, our subordinate sample may reveal a tendency to enlarge their job scopes and comply with the requests and expectations from supervisors.

To expand on the current findings of enlargement and congruence effects, future research may explore factors influencing the magnitudes of these two effects. We suggest that job type may be one potential variable that is worth investigating. In the

current study, administrative assistants were selected as research participants. For this position, job definition is moderately subjective and flexible, but not all jobs share the same characteristics. Some jobs are characterized by high autonomy and discretion, while others are characterized by strict regulation and supervision. Therefore, job type may play an important moderating role in the relationships between LMX and job definitions, thus strengthening or weakening enlargement and congruence effects.

Conclusion

Research has shown that an employee's relatively narrow and incongruent job definition with that of his or her immediate supervisor may lead to unfavourable work outcomes (Klieman *et al.*, 2000; Morrison, 1994). This means an important task for management is to encourage employees' role expansion and achieve definition consensus. This study highlights the importance of the effects of LMX on job definition discrepancy between supervisors and subordinates. Our findings suggest that through enlargement and congruence effects, LMX quality helps employees expand their job scopes and lessen the supervisor-subordinate discrepancy on job content. Thus, the present study offers insights into two aspects of job definition problems, and enriches the LMX literature from a job cognition perspective. Given our findings of the enlargement and congruence effects, researchers can further develop this research stream by exploring the magnitudes of these two effects in a variety of jobs as well as organizational contexts.

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Appendix A

Items of work behaviour scale

Table A1. Items of work behaviour scale, the supervisor's and subordinate's definition, and the frequency rating

Items	Supervisor's definition		Subordinate's definition		Frequency rating
	In-role (%)	Extra-role (%)	In-role (%)	Extra-role (%)	
1. Preparation of department meetings and handling of meeting documents	95.7	4.3	89.7	9.8	2.71
2. Coordination of department communications	79.3	19.0	80.4	12.5	2.77
3. Coordination of communications with other university administrative units	92.9	6.5	90.2	6.0	3.13
4. Handling of faculty-related documents	90.2	7.6	87.5	8.2	2.95
5. Promotion and preparation of student recruitment activities	72.3	23.4	71.2	19.6	1.96
6. Planning of conferences, research seminars, and similar activities	79.9	16.8	81.0	15.2	2.21
7. Maintenance and management of instructional materials	75.0	23.9	73.9	22.8	2.88
8. Management of computers and computer rooms	51.1	46.7	58.2	35.9	2.20
9. Maintenance of the office environment	87.5	10.3	83.7	13.6	3.14
10. Handling of auditing and submission of accounts and expenses	84.8	13.6	83.7	15.8	2.87
11. Announcement and notification of department activities	96.2	3.8	95.1	3.8	3.38
12. Handling of student academic affairs (entering the university, registration, course selection, leaving the university)	85.3	14.1	81.5	15.2	2.61
13. Assisting faculty in the preparation of instructional materials and information	27.2	70.1	28.8	64.1	1.53
14. Purchasing consumables and other supplies for department	84.8	13.6	79.9	17.4	2.52
15. Assisting with office work (ordering meals, plane tickets)	56.0	40.8	47.8	43.5	2.09
16. Invitations and decorations for banquets and meals	76.1	21.2	72.3	20.1	1.86
17. Acting as department contact person (e.g. contact equipment companies, materials publishers, school buses, and taxis)	78.8	19.0	66.3	27.7	2.14

Table A1. (Continued)

Items	Supervisor's definition		Subordinate's definition		Frequency rating
	In-role (%)	Extra-role (%)	In-role (%)	Extra-role (%)	
18. Assisting faculty in handling their private affairs	3.3	95.1	8.7	84.2	1.28
19. Acting as host for outside VIPs	70.1	28.8	77.2	14.7	2.09
20. Preparing and serving tea and coffee	53.3	42.4	66.3	27.7	2.12
21. Management and updating of faculty and student information	87.5	11.4	85.9	10.9	2.52
22. Assisting in handling faculty family member affairs	4.3	94.6	5.4	90.2	0.67
23. Maintenance and updating of internet information	64.7	33.2	61.4	31.0	1.84
24. Handling central purchasing affairs	67.9	27.7	56.5	35.3	1.65
25. Attending university and department vacation activities	36.4	54.3	47.8	40.8	1.53
26. Handling the mails	84.8	13.6	86.4	11.4	3.09
27. Assisting faculty in handling their private transportation problems (e.g. transporting them from place to place, borrowing vehicles)	3.3	91.8	6.5	88.6	0.67
28. Application for use of university dormitories	58.2	34.8	37.5	51.6	0.78
29. Advancing payment for department affairs and receiving reimbursement	16.8	79.9	31.5	53.3	1.75

Note. This scale is context-specific, specifically designed for the job of administrative assistants in a university setting.

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