Development and validation of the Legitimate Monitoring and Control Questionnaire (LMCQ)

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DEVELOPMENT AND VALIDATION OF THE LEGITIMATE MONITORING AND CONTROL QUESTIONNAIRE (LMCQ)

In this paper we present the multidimensional Legitimate Monitoring and Control Questionnaire (LMCQ) that is based on social exchange and institutional theory. Our motivation was to develop and validate a widely applicable leadership inventory that accounts for comparable criterion variance as transformational leadership. Whereas transformational leadership scales emphasize charismatic or visionary behavior, the basis for the LMCQ is the belief that perceptions of control legitimacy are essential and lead to high quality social exchange relationships between supervisors and subordinates. To build the dimensions comprising the LMCQ an exploratory study (study 1, 38 respondents) was conducted to investigate which kinds of socio-emotional benefits actually drive subordinates' perceptions of control legitimacy. The interview data were used to compile an initial item pool that was reduced as a subsequent step (study 2, 494 respondents). Lastly, the resulting measurement instrument representing six dimensions of legitimacy-enhancing supervisory behavior was validated (study 3, 936 respondents).

Keywords: Social Exchanges, Institutional Theory, Trust, Commitment, Validation

1. INTRODUCTION

The benchmark approach to assess supervisory behavior are transformational leadership inventories such as Podsakoff, MacKenzie and Bommer's (1996) TLI that focus on exemplary, visionary and charismatic behavior of supervisors. However, as transformational leadership puts its focus on promotion-oriented supervisory behavior (Podsakoff et al., 1996), the necessity for supervisors to exercise effective control over their employees is not included and current research argues for a more flexible view on adapting specific leadership styles, where there is not one right way, but a variety of different leadership styles that can coexist in varying degrees in the same individual supervisor (Doucet, Fredette, Sima & Tremblay, 2015; Bass & Riggio, 2006). The exercise of control, however, has always been considered as a core dimension of supervisory behavior (Fayol, 1930) and is still central in many jobs. This paper is based on the idea that there is a merit in constructing a measure for legitimacy-enhancing supervisory control behavior as the most effective supervisors connect high level of transformational and transactional leadership with control legitimacy (Doucet et al., 2015; Avolio, 1999; Bass & Riggio, 2006; Bass, Avolio, Jung, & Berson, 2003). As a result, the concept of control legitimacy should not replace current theories of leadership, but has to been seen as a fruitful addition to the established approaches. In 2005, British and American companies were reported to be making increased use of performance monitoring technologies such as location-sensing GPS wristlets (e.g. Foster, 2005). Recently, numerous companies have repeatedly been accused of excessive control practices (e.g. Rawlinson, 2013) and have relied on comparable justification strategies: Fashion retailer Peacocks claimed that employee morale actually increased as a result of the use of GPS wristlets as teams found it easier to do their job (Hencke, 2005). Tesco denied having a suspicious intention but also said that the monitoring technology would actually enhance their employees'

competence (Roberts, 2005); and the online food retailer Ocado argued that it would involve their employees in the execution of the control system by letting them choose between different control devices, which would drive the acceptance of these systems (Pandya, 2005). While these companies used similar arguments to legitimize their control activities, one central question arises: Do the employees working for these organizations actually perceive the control systems as legitimate?

The answer to this question is key to predict employee reactions and attributes: Control systems that are exercised in an inappropriate way are rejected by subordinates and have negative effects on employee attributes (Ferrin, Bligh, & Kohles, 2007; Sitkin & George, 2005) while subordinates who consider the control behavior of their supervisor as legitimate accept that behavior and perceive a high quality, trustful social exchange relationship with their supervisor (Bijlsma-Frankema & Costa, 2010; McNall & Roch, 2009; Stanton, 2000; Weibel et al., forthcoming). The importance of control legitimacy and its apparent neglect by established leadership inventories has been our motivation for constructing the Legitimate Monitoring and Control Questionnaire (LMCQ). Throughout this paper, we will show that the dimensions of the LMCQ are theoretically and empirically distinct from each TLI dimension and explain additional variance in a range of outcome variables. Hence, our central research contribution is to develop and validate a novel multidimensional leadership questionnaire that has a clear focus on the supervisor's striving for control legitimacy and thus covers aspects of supervisory behavior neglected by research so far.

One central reason why transformational leadership inventories neglect the matter of supervisory control is their focus on leader attributes. However, this focus is also one of their major shortcomings. Many studies argue that whether a supervisor actually engages in

transformational leadership is essentially dependent upon personality (Church & Waclawski, 1998; Judge & Bono, 2000; Peterson, Walumbwa, Byron, & Myrowitz, 2008; Ross & Offermann, 1997). Hence, not every supervisor is predisposed to be a transformational leader. So the development of the LMCQ has to be seen in addition to the existing TLI literature with a focus on the necessities and challenges of regular control activities. Our central contribution is to propose the LMCQ as a leadership inventory that appears to be more hands-on and applicable to a broader range of supervisors compared to the TLI. We demonstrate in this paper that the LMCQ not only accounts for additional variance in outcome variables but also explains proportions of variance in these variables comparable to the proportions explained by other instruments. This implies that by engaging in legitimate control activities along the dimensions described in the LMCQ supervisors not predisposed to be transformational leaders may be perceived by their subordinates as equally effective as supervisors who are so predisposed.

2. THEORETICAL BACKGROUND

2.1. Social Exchange Theory

Social exchange theory investigates the exchange of socio-emotional benefits between two or more interaction partners. These interactions are interdependent and complementary (Molm, 1994; Cropanzano & Mitchell, 2005) as the interaction partners are expected to behave in line with the norm of reciprocity (Gouldner, 1960): When one party supplies her/his interaction partner with a benefit, she/he expects this interaction partner to respond in kind (Gergen, 1969). If this norm of reciprocity is fulfilled, the exchange relationship between the interaction partners thrives (Cropanzano & Mitchell, 2005). In that case, the partners develop mutual trust (Fulmer & Gelfand, 2012) and show high levels of commitment (Cropanzano & Mitchell, 2005). A defining

characteristic of social exchange is the exchange of socio-emotional benefits as compared to economic or quasi-economic benefits (Clark & Mills, 1979). In the supervisor-subordinate relationship, such socio-emotional benefits may take the form of giving constructive and timely feedback to the subordinate, leaving the subordinate autonomy or involving the subordinate into decision-making processes. Subordinates value these socio-emotional benefits because they regard them as symbols of a high-quality relationship with their supervisor (Blau, 1964). As we will discuss in the following, the concept supervisory control legitimacy captures the above mentioned socio-emotional benefits during the process of exercising control.

2.2. Control Legitimacy

Following current research in the field (De Jong, Bijlsma-Frankema & Cardinal, 2014; Kirsch, Ko & Haney, 2010; Loughri, Tosi, 2008) we define supervisory control behavior as 'any process by which managers direct attention, motivate, and encourage organizational members to act in desired ways' (Cardinal, 2001, p. 22). In line with that definition, performance monitoring is one essential element of supervisors control. However, supervisory control also captures many other behaviors such as giving instructions or articulating and enforcing guidelines. Most of the current research on this matter has taken a narrow agency theoretic, rational choice view (Eisenhardt, 1989). These studies assume that control choices are mainly driven by efficiency and effectivity concerns, and focus on managerial actions while neglecting employees' reactions (Bijlsma-Frankema & Costa, 2010). These reactions are addressed by bureaucracy studies as a second major approach to understanding control. In line with the critical management tradition (Delbridge, 2010; Jermier, 1998), these studies concentrate on the negative, distrust-signaling facets of organizational control (Bijlsma-Frankema & Costa, 2010). Rational choice and bureaucracy studies both adapt a closed-system approach (Scott, 1987) in which factors outside

of the organization such as cultural norms are not regarded. Contrary to such approaches, institutional theory, as an open-system approach, argues that organizations need to behave in a way matching their embedded institutional environment (Jaffee, 2001). Regarding control, organizations have to adapt mechanisms that are considered as legitimate within the socio-cultural environment they operate in (Bijlsma-Frankema & Costa, 2010; Meyer & Rowan, 1977). We define legitimacy as a 'generalized perception or assumption that the actions of an entity are desirable, proper or appropriate within some socially constructed system of norms, values and definitions' (Suchman, 1995, p. 574). More specifically, a supervisor's control behavior is regarded as legitimate by subordinates if they think it has a valid purpose, enhances their effectiveness and is appropriate (Ashforth, 1989). Following the work of Bijlsma-Frankema and Costa (2010) we argue in this paper that the success of organizational control activities depends on the legitimacy perceptions of those being controlled: If subordinates consider a control behavior to be legitimate, they will accept it and will perceive a high quality social exchange relationship with their supervisor (Chalykoff & Kochan, 1989; McNall & Roch, 2009; Niehoff & Moorman, 1993; Stanton, 2000). In the following we outline which factors are associated with the concept of control legitimacy.

2.3. Factors Influencing Perceptions of Legitimacy

Research has proposed a range of factors enhancing control legitimacy: Control along with plausible explanations (Suchman, 1995), the involvement of employees in the design and execution of control (Weibel, 2010), the prevention of antisocial, deviant behavior through the exercise of control (Schnedler & Vadovic, 2011), the delegation of control (Suchman, 1995), control through contingent rewards and contingent punishment (Hinkin & Schriesheim, 1994) and control that allows for equity and reciprocity (Raven, Schwarzwald, & Koslowsky, 1998).

Bijlsma-Frankema and Costa (2010) grouped these factors into four overarching categories: Control activities that are perceived by subordinates as 1) justice-enhancement, 2) autonomy-enhancement, 3) identification-enhancement, and 4) competence-enhancement. Furthermore, Weibel (2010) suggested that perceptions of an intention as being suspicious undermine the intrinsic motivation of those being controlled. Hence, 5) the absence of such suspicion enhances the perceived legitimacy of control.

First, control activities that affect perceptions of organizational justice positively may be regarded as legitimate (Bijlsma-Frankema & Costa, 2010). Colquitt (2001) distinguishes between distributive justice (fair distribution of rewards), procedural justice (fair procedures) and interactional justice (fair treatment of employees). Research by Niehoff and Moorman (1993) shows that control activities may promote the perceived distributive and procedural justice of the reward allocation process if supervisors use these activities, for example, to get more accurate information. Second, any form of control behavior that leaves employees enough autonomy can boost intrinsic motivation (Spreitzer, 1995; Williams & Deci, 1996) and increase perceptions of legitimacy (Bijlsma-Frankema & Costa, 2010). Third, supervisory control behavior may appeal to the fundamental human need for affiliation (Ashforth & Mael, 1989). If supervisors involve their subordinates in the development and execution of the control mechanisms, subordinates identify with their supervisor more easily (Locke & Schweiger, 1979) and accept the control behavior (Adler & Borys, 1996). Fourth, supervisory control activities can promote subordinates' competences: Larson and Callahan (1990) argue that control indicates to employees the respective relevance of tasks, which may enhance employee task performance. Furthermore, control in the form of competence-enhancing feedback increases subordinates' intrinsic motivation (Higgins, Hartley, & Skelton, 2002; Weibel, 2010). Lastly, the absence of a

suspicious intention on the side of the supervisor signals to the employee that the supervisor holds a benevolent attitude, which should boost the degree of perceived legitimacy (Falk & Kosfeld, 2006; Weibel, 2010).

In social-exchange theoretical terms, the underlying dimensions of control legitimacy can also be understood as socio-emotional benefits. A high degree of perceived control legitimacy is therefore manifested in a high quality social exchange relationship between supervisor and subordinate with high levels of subordinate's trust, commitment and job satisfaction (Cropanzano & Mitchell, 2005). In the following we distinguish control legitimacy from transformational and transactional leadership as the two most common descriptions of supervisory behavior.

2.4. Differentiating Control Legitimacy from Leadership

Based on previous research we conclude that both transformational and transactional leadership cover distinct supervisory behaviors from those explained so far. Furthermore, in conclusion to current research we argue that the best leaders would be simultaneously transformational and transactional (Doucet et al., 2015; Avolio, 1999; Bass & Riggio, 2006). Transformational leadership focuses on promotion-oriented behavioral strategies (Hamstra, Sassenberg, Van Yperen, & Wisse, 2014), such as providing an ideal-focused vision of the future, communicating with optimism (Berson, Shamir, Avolio, & Popper, 2001) or giving followers the freedom to develop themselves (Bass, 1985). At the heart of this leadership style is confidence in the subordinates' competence to fulfill the supervisor's expectations (House, 1997) rather than the need for controlling them. This is why transformational leadership avoids any specific reference to control activities. Compared to that, transactional leadership has its focus on prevention and emphasizes clear rules of transaction and the necessity of control to check followers' adherence to these rules (Bass, 1985; Engel & Worden, 2003; House, 1971). Despite

this connection to control issues, transactional leadership falls short of accounting for the concept of control legitimacy. While it just refers to the general relevance of control activities, the perceived legitimacy of these activities in the eyes of those being monitored and controlled appears to be taken for granted. However, drawing from institutional theoretical research on organizational control (Ferrin et al., 2007; Sitkin & George, 2005), the essential question in predicting employee attributes is not whether a supervisor engages in control activities, but whether subordinates actually perceive these control activities as legitimate (Bijlsma-Frankema & Costa, 2010; Stanton, 2000; Weibel, 2010). Hence, with the development of the LMCQ we shift the attention from the description of transactional leader behaviors to the question of how these behaviors are actually perceived. We consider this as an important move to further develop the theoretical sphere of transactional leadership.

In line with that, we conclude there is merit in constructing a measure for legitimacy-enhancing supervisory control behavior. We argue that the most effective supervisors display high levels of both transformational / transactional leadership and control legitimacy (Doucet et al., 2015; Avolio, 1999; Bass & Riggio, 2006; Bass, Avolio, Jung, & Berson, 2003), hence, the concept of control legitimacy should not replace the concept of leadership, but should be seen as an addition to the established approaches. However, not every supervisor may be predisposed to transformational leadership, for example because of her/his personality (Judge & Bono, 2000). Accordingly, the questionnaire developed in this paper describes a range of supervisory behavior that for some supervisors may complement their transformational leadership behavior and for others may be an alternative path to a high quality social exchange relationship with their subordinates. In summary, the LMCQ is an additional tool.

3. SCALE DEVELOPMENT AND VALIDATION

The development and validation of the LMCQ is in line with established practices (Hinkin, 1998; Nunnally, 1978) and replicates the procedures undertaken by Kinicki, Jacobsen, Peterson and Prussia (2013) in their validation of the Performance Behavior Questionnaire. We conducted three independent studies: Study 1 is an exploratory interview study used to generate the initial item pool. Study 2 reduces that item pool through exploratory factor analysis and reviews initial reliability statistics. Finally, study 3 assesses the convergent, discriminatory and incremental validity of the resulting questionnaire.

4. STUDY 1: ITEM DEVELOPMENT

We conducted semi-structured interviews using the critical-incident technique (Schluter, Seaton, & Chaboyer, 2008) with 38 respondents working in the field-service sales department of three mid-sized German companies who were all doing the same type of job. To ensure further comparability, the companies were similar in regards to size, industry and channel of product distribution. We chose this setting, because control is particular relevant in field-service sales contexts: The sales employees act as representatives of their organization but supervisors have only limited interaction with them as subordinates spend most of their time working independently outside the office at the clients' business. This renders effective supervisory control behavior mandatory (Morgan & Inks, 2001; Spiro, Stanton, & Rich, 2008).

We asked the respondents to describe an instance of a supervisory control they found particularly noteworthy in terms of either a particularly high or low degree of control or in terms of either particularly positive or negative perceptions of this control situation. We gathered 118 descriptions of legitimate (94) or illegitimate (24) instances of supervisory control activities

together with detailed information as to why these control activities were actually perceived in that way by the respondents.

4.1. Coding Procedure

The coding procedure is a critical step in warranting the content validity of the developed items (Hinkin, 1998). We applied a multi-step approach to avoid conceptual inconsistencies within the process of coding. First, an initial coding scheme was developed based on existing research on control legitimacy (e.g. Bijlsma-Frankema & Costa, 2010; Stanton, 2000; Weibel, 2010). One of the authors coded approximately 20% of the interview data with this initial scheme. Based on this coding, the scheme was modified in coordination with another author (Strauss & Corbin, 1990). A graduate research assistant then coded all transcripts with this modified scheme. The research assistant met with one of the authors regularly to discuss occurring problems in the coding process. Once all transcripts had been coded, the resulting data set was used to develop a final coding scheme: Categories that had some overlap resulting in ambiguity were merged or deleted. A memo was then written for each category containing operational definitions, coding rules and sample interview quotes. A control incident was coded as legitimate if the respondent appears to agree with at least one of the three facets of control legitimacy definition by Ashforth (1989): control as having a valid purpose, control as enhancing employees' effectiveness and control as being perceived as appropriate. As last step, we provided two additional research assistants with the coding memo, asking them to match codes with their corresponding definition (MacKenzie, Podsakoff, & Fetter, 1991). The level of agreement reached 87%, which is higher than Hinkin's (1995) minimum recommendation of 75%. Cohen's kappa (Cohen, 1960) was .72 which is above Landis and Koch's (1977) threshold of .70 for interrater reliability and represents a good level of agreement (Fleiss & Cohen, 1973). We also

achieved fulfillment of each of the nine recommendations for credible critical-incident technique data articulated by Butterfield, Borgen, Amundson, and Maglio (2005).

4.2. Item Development

The item development process was a combination of deductive and inductive procedures as the factors were informed by prior theoretical work while the formulation of each item was based on empirical data so that each factor was both theoretically valid and empirically grounded (Giles & Mossholder, 1990; Hinkin, 1998; Kinicki et al., 2013; MacKenzie, Podsakoff, & Fetter, 1991). 601 distinct interview codes were first filtered to exclude those statements that only applied to a very narrow context and to merge those codes that had sufficient overlap in order to transfer specific statements into generalizable items (Hinkin, 1995). The remaining 157 codes were then used to develop 61 distinct items for five scales that describe different facets of legitimacy-enhancing control behavior and 10 items that refer to the overall level of perceived control legitimacy.

5. STUDY 2: ITEM REDUCTION AND REFINEMENT

Study 2 was intended to reduce the number of items of each scale to a manageable length as well as to inspect the factor structure of our instrument and to check initial reliability levels. Exploratory factor analysis is the appropriate method for these initial steps in the validation process (DeVellis, 2012; Gerbing & Hamilton, 1996).

5.1. Sample and Procedure

Data were collected through XING.com, the leading business-oriented social networking service in Germany. This enabled us to collect data in the field instead of relying on student settings, as frequently occurs in scale development studies (e.g. Neider & Schriesheim, 2011;

Sprott, Czellar, & Spangenberg, 2009). User profiles were screened within different regional and professional groups to sample data across a variety of industries and geographic locations. The questionnaire was sent to 1904 users of which 494 answered all questions, yielding a response rate of 25.9%, which is above comparable studies (Flores, Zheng, Rau, & Thomas, 2012; Vickery, Calantone, & Dröge, 1999). This results in a robust respondent-per-item-ratio of greater than 7 (Velicer & Fava, 1998) and exceeds conventional recommendations for sample size in exploratory factor analysis (DeVellis, 2012). Of our respondents, 38.7% were female, most held at least an undergraduate degree (77.9%), the average age was 34.9 years, their average tenure in the organization was 5.6 years and the majority of the respondents (60.3%) work less than three years for their current supervisor (3-6 years: 29.2%; 7-10 years: 5.6%; ≥ 10 years: 3.3%).

5.2. Measures and Analysis

The respondents were asked to indicate their agreement with each of the 61 statements derived in study 1. We used a five-point Likert-type scale anchored with 1 = strongly disagree, 2 = disagree, 3 = neither disagree nor agree, 4 = agree, 5 = strongly agree and relied on a principal axis factoring procedure with oblique rotation (Conway & Huffcutt, 2003) as we assumed the underlying factors of control legitimacy to correlate with each other (Nunnally, 1978). Items were deleted based on four criteria:

- The item did not load on any factor with a factor weight of at least .30 (Brown, 2006; Kinicki et al., 2013).

- The item had a cross-loading of .30 or higher with one or more additional factors (Hair, 2010; Janssens, 2008).

- The item loaded on a theoretically different factor than intended (Flores, Zheng, Rau, & Thomas, 2012; Hinkin, 1998; Kinicki et al., 2013)

- The corresponding factor consisted of only one or two items (Tims, Bakker, & Derks, 2012; van Dyne, Graham, & Dienesch, 1994; Velicer & Fava, 1998).

As a last step, coefficient alpha was computed for each factor and a cut-off value of .70 as initial reliability level was agreed on (DeVellis, 2012; Nunnally, 1978).

5.3. Results and Discussion

Insert Table 1: EFA solution

As Table 1 shows, exploratory factor analysis reduced the number of items to 29, of which 24 items represent six distinct dimensions of legitimacy-enhancing control behavior (the LMCQ) and 5 items refer to the overall perception of control legitimacy. Hence, one additional dimension emerged as justice-enhancement split up into two dimensions: one more related to distributive justice (i.e., does the supervisor use his/her control behavior to evaluate the employee in a fair manner?) and one dimension more related to procedural justice (i.e., does the supervisor monitor and control all his/her subordinates in a consistent manner?). This is in line with research on organizational justice that has shown that this construct actually consists of more than one dimension (Colquitt, 2001). Of the 42 items that did not survive the exploratory factor analysis, 17 items were excluded because they did not have a factor weight of at least .30, 5 items were deleted because of cross-loadings larger than .30, 16 items were dropped because of theoretical reasons and 4 items were excluded because the corresponding factor consisted of less than three items. Cronbach alpha for each construct ranged from .77 to .88. This clearly exceeds the minimum requirements for scale reliability in early stages of the validation process (Nunnally, 1978).

6. STUDY 3: VALIDATION

Before validating the LMCQ, we pre-tested the scales on 45 respondents. Based on item-level reliability statistics, the wording of two items was slightly changed to increase their relatedness to their theoretical factors. Further, one additional item was added to the procedural justice-enhancement scale so that each scale consisted of at least four items. A second pre-test with 39 respondents showed that these minor adaptions improved the reliability of the scales substantially. Therefore, we proceeded with this 25-item version of the LMCQ to investigating its convergent, discriminant, and incremental validity. In the following we derive the respective hypotheses and explain our analytic procedures.

6.1. Hypotheses Development

Convergence. The conceptualization of the LMCQ has been informed by prior institutional theoretical work on control legitimacy identifying certain factors that should enhance perceptions of legitimacy. Therefore, the first requirement for the convergent validity of the LMCQ is that each of its dimensions is actually related to the overall perception of control legitimacy.

Hypothesis 1: All dimensions of the LMCQ are substantially and positively related to the overall perception of control legitimacy.

Our motivation for constructing the LMCQ was to propose an instrument that is able to predict a range of beneficial employee attributes as manifestations of a high quality social exchange relationship between supervisor and subordinates. In social-exchange theoretical terms, control legitimacy can be understood as a specific aggregate of socio-emotional benefits that are exchanged between supervisor and subordinate (Blau, 1964). The successful exchange of these

benefits translates into a high quality supervisor-subordinate relationship (Cropanzano & Mitchell, 2005). Such a relationship is manifested in high levels of subordinates' trust and commitment towards their supervisor (Cropanzano & Mitchell, 2005; Fulmer & Gelfand, 2012). Additionally, subordinates who experience a high-quality relationship with their supervisor can be expected to hold higher levels of job motivation and satisfaction as well as a reduced intention to leave their organization (Cropanzano & Mitchell, 2005). This is summarized in the second hypothesis:

Hypothesis 2: Control legitimacy converges with reliance- and disclosure-based trust towards the supervisor, affective commitment towards the supervisor, intention to quit, job motivation and job satisfaction.

The degree of convergent validity can also be examined through the relationship of the LMCQ with existing leadership scales. The transformational and transactional leadership scales of the TLI all describe positive supervisory behaviors in terms of articulating a vision, providing an appropriate role model, providing individualized support or fair contingent rewards. Existing research has shown that these leader behaviors enhance subordinates' trust, commitment, satisfaction and motivation and reduce their intention to quit (e.g. DeGroot et al., 2000; Wang et al., 2011). Likewise, the six dimensions of the LMCQ describe perceptions of positive supervisory behaviors that are supposed to have positive effects on these outcome variables. Even though the TLI and the LMCQ put their focus on different aspects of supervisory behavior they can be expected to converge to a certain extent:

Hypothesis 3: All dimensions of the LMCQ are positively and substantially related to the seven dimensions of transactional and transformational leadership behavior included in the TLI.

Despite this general association between TLI and LMCQ, we expect that the LMCQ is more closely related to transactional than to transformational leadership. The concept of transformational leadership overlaps with promotion-oriented behavioral strategies such as stimulating new ways of working and facilitating change (Bass & Steidlmeier, 1999; Shamir, House, & Arthur, 1993; Sosik & Dionne, 1997). Central to this approach is the confidence in the subordinates' competence rather than the necessity to monitor and control them (Ehrhart & Klein, 2001). Compared to that, transactional leadership focuses more on preserving the status quo (Oke, Munshi, & Walumbwa, 2009) with a collection of prevention-oriented behavioral strategies such as contingent rewards based on actual performance that is monitored by the supervisor (Yukl, 1998). Thus, transactional leadership is more closely related to the LMCQ than is transformational leadership:

Hypothesis 4: The LMCQ is more strongly related to transactional than to transformational leadership.

Discriminance. One further step in validating the LMCQ scale is to assess for discriminant validity. We followed the recommendations of current literature in the field of scale development and compared our scale to a theoretical dissimilar construct (Kinicki et al., 2013; Rönkkö and Ylitalo 2011; Lindell and Whitney, 2001). As we predicted significant associations between the LMCQ scale and both, transformational and transactional leadership, we used a specific dimension (stretching) of Kashdan and colleagues' (2009) Curiosity and Exploration Inventory as a variable that is theoretically unrelated to the other substantive variables of this study (Rönkkö and Ylitalo 2011; Lindell and Whitney, 2001, Richardson et al., 2009, Hair et al., 2013). This scale (labelled "Stretching") measures the extent to which individuals describe themselves as motivated to seek out knowledge and new experiences. Whereas the LMCQ is

intended to measure the respondents' perceptions of their supervisor, the Curiosity and

Exploration Inventory II refers to the respondents' self-image. Therefore, the constructs should

have no substantial empirical relation with each other. Furthermore, we hypothesize that even

though the LMCQ and the TLI converge to a certain degree, each dimension of the LMCQ is still

empirically distinct from each dimension of the TLI:

Hypothesis 5: All LMCQ dimensions are not substantially related to stretching and are

distinct from the TLI dimensions.

Incremental validity. Our motivation for developing the LMCQ was to propose an

instrument that takes into account the necessity of regular control situations and appeals to all

kinds of supervisors who strive to enhance their perceived legitimacy. In that regard it is distinct

from existing instruments that, rather, emphasize the necessity for supervisors to be visionary or

charismatic. As the LMCQ and the TLI cover different aspects of supervisory behavior, we

assume that the LMCQ is able to explain additional variance in a range of outcome variables that

are manifestations of high quality social exchange relationships:

Hypothesis 6: LMCQ accounts for incremental criterion variance in reliance- and

disclosure-based trust towards the supervisor, affective commitment towards the supervisor,

intention to quit, job motivation and job satisfaction.

6.2. Method

Sample and procedure. In this study 936 respondents were again recruited through

XING.com through the identical procedure as described in study 2 (response rate: 28.9%). They

completed a questionnaire containing LMCQ, TLI, Stretching and a number of employee

outcome variables. Of the respondents, 45.7% were female, the largest age group was those aged

between 26 and 35 (46.7%) and 73.1% had worked with their supervisors for less than one year. Most (71.7%) of the respondents held at least an undergraduate degree and 69.5% had a full-time open-ended job contract. Our sample covers a range of sectors with services (24.4%), manufacturing (15%) and information (15%) representing the largest groups of respondents. Of the supervisors evaluated in the survey 27% were lower-level managers (e.g. team leaders), 41% middle-level managers (e.g. business unit managers) and 32% upper-level managers (e.g. executives).

6.2.1. Measures

LMCQ. We used the 25-item inventory developed through exploratory factor analysis and subsequent pre-tests. Coefficient alphas for the six dimensions of legitimacy-enhancing control behavior ranged from .82 to .90 (see Table 3).

Control legitimacy. We included both the 5-item scale developed in this paper as well as the original 3-item scale developed by Ashforth (1989) to measure perceptions of overall control legitimacy. Coefficient alphas were .87 and .81 respectively.

Transactional and transformational leadership. These leadership behaviors were assessed with Podsakoff and colleagues' (1996) 26-item Transformational Leadership Inventory. Coefficient alphas for the six transformational leadership behaviors ranged from .71 to .91. For contingent rewards, the transactional leadership dimension, coefficient alpha was .89.

Stretching. To check the discriminant validity of the LMCQ the 4-item stretching dimension of Kashdan and colleagues' (2009) Curiosity and Exploration Inventory-II was included. This instrument assesses the degree to which individuals consider themselves as motivated to seek out knowledge and new experiences. Coefficient alpha was .76.

Outcomes. We included six employee outcome variables, of which three have a strong

association with the supervisor himself/herself: Reliance- and disclosure-based trust were

measured with the 10-item Behavioral Trust Inventory developed by Gillespie (2003) and

affective commitment towards the supervisor was measured with the six-item scale developed by

Vandenberghe, Bentein, and Stinglhamber (2004). Coefficient alphas were .91, .88 and .93

respectively. Trust and commitment were chosen as they are traditionally considered as the two

most relevant manifestations of high quality social-exchange relationships (Cropanzano &

Mitchell, 2005; Fulmer & Gelfand, 2012). The other three outcome variables are less related to

the supervisor but concern the subordinates' broader work experience: Intention to quit was

measured with a 3-item instrument based on Vandenberghe et al. (2004) with coefficient alpha of

.93. Job motivation and job satisfaction were assessed with single-item questions (Nagy, 2002;

Wanous, Reichers, & Hudy, 1997). Whereas all the other constructs in the survey were assessed

with the same 5-point Likert scale as in study 2, job motivation was assessed on a scale from 0 to

100% (Thielgen, Krumm, & Hertel, 2014) and job satisfaction was measured with Kunin's (1955)

7-point face scale. Intention to quit, job satisfaction and motivation have also frequently been

studied as outcomes of social-exchange relationships (Cropanzano & Mitchell, 2005).

6.2.2. Analytic Procedure

We began with assessing the LMCQ's basic psychometric properties. First, the

dimensionality of the questionnaire was investigated with confirmatory factor analysis in AMOS

Graphics. More specifically, a baseline model that treated the six scales of the LMCQ as

independent dimensions was compared to a single-factor model that loaded all items on a single

factor and to 15 alternative models that forced the items of one factor to load on one respective

other factor. As Table 2 shows, model 3 for example constrained the dimensions of competence-

enhancement and identification-enhancement to be equal. The same was done with each possible combination of the six dimensions of the LMCQ. Model fit was assessed with the comparative fit index (CFI, Bentler, 1990), the incremental fit index (IFI, Bollen, 1989), the normed fit index (NFI, Bentler & Bonett, 1980) and the root mean square error of approximation (RMSEA, Browne & Cudeck, 1992). To compare the different models with each other, the difference in chi-squares was assessed and tested for statistical significance. In addition, we checked the covariation explained, factor weights and average variance extracted by each factor for the model with the best-fit indices.

Second, we checked the LMCQ's convergent validity based on zero-order correlations. We followed Kinicki et al. (2013) and categorized the correlations in terms of Cohen's (1988) designation of small (smaller than .29), medium (between .30 and .49) and large correlations (greater than .50). To test H1 we examined the correlations between the LMCQ and the two scales that measure overall perceptions of control legitimacy. For H2, we checked the correlations between the latter two scales and the six outcome variables. For H3, we turned to the correlations between the LMCQ and the TLI scales. Finally for H4, we used Fisher's z-transformation (Fisher, 1915) of the zero-order correlations and tested the difference between the respective correlations for statistical significance.

To test H5 and hence check discriminant validity, zero-order correlations of the LMCQ with the stretching scale were examined. We also checked whether the six dimensions of the LMCQ were actually distinct from the seven dimensions of the TLI by running seven sets of latent variable models: For each of the seven dimensions of the TLI a baseline model was formulated that supposed the six dimensions of the LMCQ dimensions and one respective TLI dimension to be independent. This model was then compared to six alternative models that forced

the items of each of the six LMCQ dimensions to load on one of the TLI dimensions. Again, the

difference between the constrained and the unconstrained models was evaluated by inspecting the

difference in chi-squares.

Lastly, to test H6 and hence for incremental validity, usefulness analysis was applied

(Darlington, 1990). Similar to Kinicki et al. (2013), we ran a number of hierarchical regressions

to check whether the LMCQ in fact explains additional criterion variance compared to

transactional and transformational leadership.

6.3. Results and Discussion

Basic psychometric properties and dimensionality. The confirmatory factor analysis

supported the hypothesized six-factor structure of the LMCQ (see Table 2). The baseline model

had a good fit with the data, χ^2 (260, N = 936) = 1429.96, p < .05; CFI = .92; IFI = .92; NFI =

.91; RMSEA = .07. All of these fit values exceed the conventional cut-off values of .90 for CFI,

IFI and NFI and .09 for RMSEA (e.g. Colquitt, 2001). In comparison, the single-factor model had

a poor fit. Likewise, all alternative models that loaded two dimensions of the LMCQ on a single

factor led to significant declines in fit. The difference in chi-squares between the baseline model

and each of the alternative models was also significant suggesting that the baseline model in fact

fit the data better than all other models (James, Mulaik, & Brett, 1982). Finally, it was decided to

exclude the two items with the lowest overall factor weight from the model to achieve a model as

parsimonious as possible. In addition, the error terms of the two reversed-coded items of

procedural justice-enhancement were correlated with each other as the wording of the two items

was very similar to each other but distinct from the wording of the remaining items of that factor.

The resulting 23 item modified six-factor model had a very good fit with the data χ^2 (214, N =

936) = 938.36, p < .05; CFI = .95; IFI = .95; NFI = .93; RMSEA = .06. The increase in model fit

compared to the hypothesized model was also statistically significant. Only the chi-square

statistic was significant; however this statistic is very sensitive to sample size (e.g. Maruyama,

1998). As the sample size in study 3 was particularly large, a significant chi-square value was

expectable. As the chi-squares to degrees of freedom ratio was close to the desirable value of 5

for large sample sizes (Jackson, Wall, Martin & Davids, 1993), the significant chi-square value

appears negligible. In addition, item level statistics for the revised model suggested that each

factor loading was significant (M = .79). Composite construct reliabilities (Netemeyer, Johnston,

& Burton, 1990) for this model were very satisfactory and ranged from .84 for procedural-justice-

enhancement to .90 for competence-enhancement, while the amount of variance accounted for by

each latent factor ranged from 57% to 70% (M = 64%). These results lend strong support to the

proposed psychometric character of the LMCQ as consisting in six independent and highly

reliable sub-scales. The Appendix contains this final 23-item version of the LMCQ.

Insert Table 2: Dimensionality

Convergence and discriminance. Table 3 shows the zero-order correlations between the

LMCQ dimensions and all the other constructs. In line with H1, all six scales of the LMCQ had

significant positive correlations with the overall perception of control legitimacy. For distributive

justice-enhancement, the correlation with Ashforth's (1989) 3-item scale was similar (r = .57) to

the correlation with the 5-item scale developed in this study. The remaining five dimensions had

stronger associations with Ashforth's (1989) scale (range = .33 to .67). Hence, the LMCQ

appears to be well connected to Ashforth's (1989) original conceptualization of control

legitimacy, so H1 is fully supported. Regarding H2, the correlations between the overall

perception of control legitimacy and the six outcome variables were significant and in the

direction predicted. Again, for each outcome, the associations with Ashforth's (1989) scale were

more substantial than with our conceptualization of control legitimacy. More specifically, for

Ashforth's scale each correlation with the outcome variables was either medium or large in size

and ranged from .32 (job motivation) to .60 (affective commitment), fully supporting H2.

As predicted by H3, most of the correlations between the LMCQ and the transformational

and transactional leadership scales were significant and medium or large in size with an average

correlation of .40 (p ≤. 01). However, contrary to our assumption, no dimension of the LMCQ

had substantial associations with one scale of the TLI that refers to the extent to which the

supervisor articulates that he or she has high performance expectations. While this clearly is

surprising, the reason may be less substantial than statistical as this scale had by far the lowest

reliability of all the scales in our study and did not correlate higher than .32 with any other

construct. Apart from this scale, all other correlations between LMCQ and TLI dimensions

ranged from .27 to .71. Hence, H3 is mainly supported. As predicted by H4, the aggregated

correlation of the LMCQ with transactional leadership was more substantial than the aggregated

correlation of the LMCQ with transformational leadership (r = .49 vs. r = .39), z (936) = 3.89, p ≤

.01.

In regard to the LMCQ's discriminant validity, the zero-order correlations depicted in

Table 3 support H5. Each dimension of the LMCQ had only very small or insignificant

associations with the stretching scale (range = .00 to .14). Results of the different confirmatory

factor analysises that were run to test the statistical independence of the LMCQ from

transactional and transformational leadership behavior suggest that each of the six LMCQ

dimensions is actually statistically distinct from each of the seven leadership scales included in

the TLI (see Table 4). All chi-square difference tests were highly significant (p ≤ .001).

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            Insert Table 3: Correlations
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         Insert Table 4: Discriminance with TLI
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Incremental validity. Results from usefulness analysis finally support the LMCQ's

predictive and incremental validity (see Table 5). Adding LMCQ in the second step to the

hierarchical regressions resulted in a significant increase in R^2 for reliance-based trust (.02-.13, p

< .001), disclosure-based trust (.05-.11, p < .001), affective commitment (.02-.15, p < .001),

intention to quit (.03-.09, p < .001), job satisfaction (.04-.08, p < .001) and job motivation (.03-

.05, p < .001). When LMCQ was entered into the hierarchical regressions first, the amount of

variance explained ranged from 32% to 57.5% for the supervisor-directed variables and from

18.2% to 26.3% for the more general outcome variables. The LMCQ increased the amount of

criterion variance explained for all six outcome variables compared to transactional leadership

and for two outcomes compared to transformational leadership, which is why H6 is also

supported.

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         Insert Table 5: Usefulness Analysis
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7. GENERAL DISCUSSION

Our motivation for this paper was to develop and validate a leadership questionnaire that

is theoretically and empirically distinct from transformational leadership. To do so, we focused

on the necessity of regular supervisory control that has been neglected by transformational leadership inventories. Building on prior institutional theoretical work (e.g. Sitkin & George, 2005), we placed the supervisor's striving for control legitimacy at the core of our approach. As the result of our research, we present a highly reliable 23-item questionnaire comprising six distinct dimensions of legitimacy-enhancing control behavior. These dimensions are justice-enhancement (procedural and distributive), autonomy-enhancement, identification-enhancement and competence-enhancement through the exercise of control as well as the absence of a suspicious intention. Through the course of three independent studies, the LMCQ demonstrated its content, convergent, discriminant and incremental validity. Regarding content validity, we assured high levels of intercoder reliability in the item development process. Also, exploratory and confirmatory factor analyses conducted in studies 2 and 3 demonstrated consistently high levels of internal consistency for the LMCQ's scales. Basically all the theoretically assumed relationships among the LMCQ, the TLI, perceptions of overall control legitimacy and related outcome variables could be established empirically, demonstrating high levels of convergent validity. Likewise, small and mainly insignificant correlations between the LMCQ and Stretching account for the scales' discriminant validity as do the latent variable models run to prove the LMCQ's distinctiveness from each TLI dimension. Finally, we showed that, compared to TLI, the LMCQ accounts for unique criterion variance in reliance- and disclosure-based trust, affective commitment towards the supervisor, intention to quit, job satisfaction and motivation. These findings support the social-exchange theoretical understanding of supervisory control legitimacy as an aggregate of socio-emotional benefits that are exchanged between supervisors and subordinates and translate into high quality social exchange relationships.

Based on these results, our central research contribution is the development and validation of a multidimensional leadership questionnaire that covers a range of relevant supervisory behavior neglected by transformational leadership. Our central practical contribution concerns one of the major shortcomings of transformational leadership, which is its focus on the leader's personality. For that reason transformational leadership might not be applicable to each supervisor (e.g. Peterson, Walumbwa, Byron, & Myrowitz, 2008). For these supervisors, the LMCQ appears as a viable alternative in order to be perceived as effective leaders by their subordinates, as the LMCQ not only explains additional criterion variance compared to the TLI but also accounts for comparable levels of variance in these outcome variables. We will now continue to discuss the theoretical implications of our approach in more detail.

7.1. Theoretical Implications

Our study provides a number of theoretical implications. First, in regard to institutional theory, the validation of the LMCQ shows that the institutional theoretical core concept of legitimacy has particular relevance in supervisor-subordinate relationships. This adds to Suchman's (1995) observation that the "evaluation of leaders [in regard to their legitimacy] is rarer but nonetheless conceptually important" (p. 579) compared to the evaluation of overall organizational legitimacy. Throughout the paper we demonstrated that perceptions of supervisory control legitimacy have medium to strong effects on a range of variables that reflect a high quality social exchange relationship. This is in line with Sitkin and George's (2005) work on the importance of legitimized control processes. So far an empirical understanding of the antecedents of control legitimacy has been largely missing (Bijlsma-Frankema & Costa, 2010). Hence, our study makes an important contribution to the institutional theoretical literature. The LMCQ appears as a viable instrument that research may use in the future to provide new insights in the

role of interpersonal legitimacy. This may support research in institutional theory that has

recently developed a growing interest in micro-level facets of legitimacy (Creed, Hudson,

Okhuysen, & Smith-Crowe, 2014; Voronov, 2014).

Second, we consider our study as an important add-on to the field of organizational

control. So far, this literature has been dominated by studies relying on rational-choice and

critical management paradigms (Bijlsma-Frankema & Costa, 2010). For different reasons, these

approaches fall short of providing a comprehensive view on the issue of supervisory control:

Apart from few exceptions (e.g. Falk & Kosfeld, 2006), rational-choice studies neglect control

perceptions but concentrate on the exercise of control (e.g.Eisenhardt, 1985). On the other hand,

critical management studies appear to overemphasize the negative, distrust-signaling function of

control (for an overview: Delbridge, 2010). Through the development and validation of the

LMCQ we were able to reliably identify which factors render that dark side of control redundant

and lead to high levels of control acceptance. In addition, our approach demonstrates that the

perspective of those being controlled is at least as essential as the perspective of those exercising

control. Both aspects combined provide a more complete view on the matter of supervisory

control.

Third, the development and validation of the LMCQ appears as an important contribution

to leadership research. The transformational leadership paradigm is currently the dominant

approach to assess supervisory behavior and its effect on employee attributes. This approach puts

its focus on the leader's attributes. If the leader acts as a charismatic role model and provides a

compelling vision of the future, strong effects on employee outcomes can be achieved. However,

not every supervisor is predisposed to act in that way (e.g. Judge & Bono, 2000). Building on that

observation, it has been our motivation to develop an approach through which supervisors may be

perceived as equally effective compared to transformational leaders. The resulting LMCQ

appears to satisfy this condition and is thus a promising contribution to leadership research. Our

approach shifts the focus to the matter of control and its perception by subordinates. Even though

supervisory control appears to be neglected in the recent leadership literature (Sitkin, Cardinal, &

Bijlsma-Frankema, 2010), it remains an essential facet of the supervisor's daily job (Scott, 1987).

The six dimensions comprising the LMCQ offer clear advice on how the exercise of control

should be designed in order to enhance perceptions of legitimacy in the eyes of the subordinates.

In that regard, the LMCQ appears as a genuine way to effective supervision compared to the

rather abstract dimensions of charisma and vision comprising transformational leadership. We

will now show the specific practical implications of our concept.

7.2. Practical Implications

The LMCQ appears to be a highly reliable and valid tool that organizations should

integrate into the evaluation of their supervisory staff. As significant relationships could be

established with six outcome variables including job satisfaction, organizations should assess to

what extent their supervisors use control practices that employees actually perceive as legitimate.

The LMCQ can also be integrated into training sessions, so that supervisors learn which specific

control behaviors actually lead to higher levels of employees' trust, commitment, job satisfaction

and motivation. Lastly, supervisors should use the LMCQ in their daily work: While avoiding

conveying the impression of a suspicious intention, supervisors should apply control systems in a

consistent manner (procedural-justice-enhancement) and use the information to evaluate and

reward the employees in a fair manner (distributive-justice-enhancement). They should articulate

clearly in which way they grant their subordinates some level of independence despite the control

systems in place (autonomy-enhancement), involve the subordinates in the design and execution

of these control systems (identification-enhancement) and use the information gathered by the control systems to give them timely and constructive feedback (competence-enhancement). This should maximize the levels of perceived control legitimacy and enhance employee attributes. We will now continue with a discussion of the limitations of our paper and provide some avenues for future research.

7.3. Limitations and Future Research

Inevitably, this paper has a number of limitations. First, in all three studies we relied on single source data. However, that was mandatory given our interest in understanding how subordinates perceive control activities and to investigate how these perceptions affect the relationship with their supervisor (in terms of trust and commitment) as well as their general work experiences (in terms of intention to quit, job satisfaction and motivation). Nevertheless, this research design might have affected our results. Second, we relied on correlational data so that causal inferences cannot be drawn reliably. Third, most respondents in study 2 and 3 held at least an undergraduate degree so that our findings might be less applicable to employees with lower skill levels. Fourth, one further limitation of our paper is that we could not establish an alternative to Ashforth's (1989) short scale of control legitimacy, as all five dimensions of the LMCQ are more closely, or similar, connected to Ashforth's scale than to our self-developed conceptualization of control legitimacy. Nevertheless, the main purpose of this paper was to identify the sources of control legitimacy, as conceptualized by Bijlsma-Frankema and Costa (2010). Despite of the limitation that we could not establish a new general scale for control legitimacy, we provide a useful contribution to research by introducing reliable and valid scales for the measurement of Distributive-Justice-Enhancement, Procedural-Justice-Enhancement, Autonomy-Enhancement, Identification-Enhancement, Competence-Enhancement and No

Suspicious Intention. The measurement of these underlying factors of control legitimacy is important for further empirical research in field, with the aim of gaining a deeper understanding of supervisor control and the perception of this action by the subordinate. In a next step we invite future research to include personality inventories such as the Big-5 in their research design to get a more fine-grained view on which control behaviors are most effective for specific groups of employees. Furthermore, future research should address the topic of different characteristics of supervisor control as certain types of control mechanisms might be more harmful, if they are not legitimated. One starting point would be to differentiate between active and passive control. The concept of active control involves that the supervisor is giving orders and controls his/her subordinates in a proactive way. Passive control would mean that the supervisor acts in a reactive way, so he/she waits for weekly reports, milestones and recurrent evaluation meetings to control the subordinates. Also, an extension of the LMCQ to a 360-degree version appears promising to follow the call by Bijlsma-Frankema and Costa (2010) to explore "(in)congruence between managers and employees" (p. 413) regarding the level of control legitimacy. Finally, we invite future research to test the implicit assumption underlying our research, i.e. that the LMCQ is in fact more independent from the supervisor's predispositions than transformational leadership. The studies by Judge and Bono (e.g. 2000) may serve as a useful role model for this kind of research.

7.4.Conclusion

Although transformational leadership inventories are the accepted benchmark approach to assess supervisory behavior, that approach to leadership neglects the necessity for regular control activities by the supervisor. Furthermore, existing research shows that not every supervisor may be predisposed to engage in transformational leadership. Based on these thoughts, we developed

and validated a leadership questionnaire that addresses these shortcomings by placing the concept of control legitimacy at its core. The final 23-item version of the Legitimate Monitoring and Control Questionnaire (LMCQ) appears to be a highly reliable and valid measure of relevant supervisory behavior. In particular, it covers a theoretically and empirically distinct content compared to transformational leadership while accounting for additional variance in a range of outcome variables. We hope that in the future researchers and practicing managers alike will use the LMCQ to predict employee outcome variables and engage in control activities that are perceived as legitimate in the eyes of subordinates.

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TABLES

Table 1

Solution of Exploratory Factor Analysis

	Ident	Control Legitimacy	Aut	PJ	DJ	No_Sus	Comp
I_1	.34						
I_2	.37						
I_3	.42						
I_4	.59						
L_1_r		.45					
L_2		.67					
L_3		.75					
L_4		.89					
L_5		.48					
A_1			.66				
A_2			.71				
A_3			.73				
A_4			.63				
PJ_1				.70			
PJ_2_r				.76			
PJ_3_r				.75			
DJ_1					.65		
DJ_2					.57		
DJ_3					.71		
DJ_4					.48		
S_1_r						.37	
S_2_r						.44	
S_3_r						.45	
S_4_r						.52	
C_1							.44
C_2							.40
C_3							.50
C_4							.64
C_5							.54
Alpha	.83	.82	.86	.80	.78	.77	.88

Note. Extraction method: principal axis factoring with oblique rotation; Ident = Identification-Enhancement; Aut = Autonomy-Enhancement; PJ = Procedural-Justice-Enhancement; DJ = Distributive-Justice-Enhancement; No_Sus = No Suspicious Intention Perceived on Side of Supervisor; Comp = Competence-Enhancement

Table 2

Indices for Nested Sequence of Measurement Models

Model		Chi2	Df	NFI	CFI	IFI	RMSEA	Chi2 Diff	Df diff
1	**Baseline Model Modified**	**938.36**	**214**	**.93**	**.95**	**.95**	**.06**		
2	Baseline Model	1429.96	260	.91	.92	.92	.07	491.61***	46
3	Equate Competence-Enhancement with Identity-Enhancement	2706.60	265	.82	.84	.84	.10	1,768.24***	51
4	Equate Competence-Enhancement with Autonomy-Enhancement	3405.04	265	.78	.79	.79	.11	2,466.69***	51
5	Equate Competence-Enhancement with Suspicious Intention	3178.20	265	.79	.81	.81	.11	2,239.85***	51
6	Equate Competence-Enhancement with PJ-Enhancement	2759.67	265	.82	.83	.83	.10	1,821.31***	51
7	Equate Competence-Enhancement with DJ-Enhancement	2379.29	265	.84	.86	.86	.09	1,440.93***	51
8	Equate Identity-Enhancement with Autonomy-Enhancement	2283.42	265	.85	.87	.87	.09	1,345.07***	51
9	Equate Identity-Enhancement with Susp. Intention	2665.46	265	.83	.84	.84	.10	1,727.10***	51
10	Equate Identity-Enhancement with PJ-Enhancement	2532.94	265	.83	.85	.85	.10	1,594.59***	51
11	Equate Identity-Enhancement with DJ-Enhancement	2915.29	265	.81	.82	.82	.10	1,976.94***	51
12	Equate Autonomy-Enhancement with Suspicious Intention	2661.48	265	.83	.84	.84	.10	1,723.13***	51
13	Equate Autonomy-Enhancement with PJ-Enhancement	3025.89	265	.80	.82	.82	.11	2,087.54***	51
14	Equate Autonomy-Enhancement with DJ-Enhancement	3196.10	265	.79	.80	.80	.11	2,257.74***	51
15	Equate Suspicious Intention with PJ-Enhancement	3126.41	265	.80	.81	.81	.11	2,188.05***	51
16	Equate Suspicious Intention with DJ-Enhancement	3232.41	265	.79	.80	.80	.11	2,294.06***	51
17	Equate PJ-Enhancement with DJ-Enhancement	2988.53	265	.80	.82	.82	.11	2,050.18***	51
18	Single Factor Model	7544.54	275	.51	.51	.51	.17	6,606.19***	61

Note. Modified model with two correlated error terms for PJ and without the two lowest loading items; PJ = procedural-justice-enhancement; DJ = distributive-justice-enhancement; Df = degrees of freedom; NFI = normed fit index (Bentler & Bonett, 1980); CFI = comparative fit index (Bentler, 1990); IFI = incremental fit index (Bollen, 1989); RMSEA = root mean square error of approximation (Browne & Cudeck, 1992); Chi2 Diff = difference in chi squares; Df diff = difference in degrees of freedom; *** = p < .001.

Table 3

Correlations among LMCQ Dimensions and Other Leadership Dimensions and Outcomes

		M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	DJ-Enhancement	3.18	1.17	.86																					
2	PJ-Enhancement	3.14	1.33	.24	.86																				
3	Autonomy-Enhancement	4.28	.92	.18	.26	.88																			
4	Identification-Enhancement	3.58	1.16	.31	.46	.62	.88																		
5	Competence-Enhancement	3.29	1.20	.53	.41	.35	.60	.90																	
6	Suspicious (r)	4.44	.92	.25	.31	.51	.52	.40	.82																
7	TLI_AV	3.05	1.13	**.41**	**.38**	**.35**	**.54**	**.64**	**.38**	.91															
8	TLI_CR	3.34	1.12	**.34**	**.42**	**.42**	**.64**	**.63**	**.46**	.64	.89														
9	TLI_FAG	3.30	1.14	**.39**	**.46**	**.37**	**.59**	**.64**	**.40**	.79	.66	.90													
10	TLI_HPE	3.59	1.03	**.14**	**.01**	**-.01**	**-.04**	**.17**	**-.02**	.32	.12	.22	.71												
11	TLI_IS	3.47	1.09	**.28**	**.43**	**.46**	**.71**	**.53**	**.51**	.53	.68	.62	-.12	.90											
12	TLI_ISN	2.83	.97	**.38**	**.27**	**.28**	**.47**	**.59**	**.29**	.71	.54	.58	.22	.47	.83										
13	TLI_PAM	3.13	1.09	**.37**	**.43**	**.39**	**.62**	**.63**	**.41**	.76	.65	.74	.17	.64	.62	.83									
14	Control Leg	3.13	1.18	**.57**	**.16**	**.21**	**.29**	**.48**	**.33**	.36	.32	.33	.10	.29	.39	.34	.87								
15	Control Leg (Ashforth)	3.31	1.14	**.57**	**.33**	**.40**	**.55**	**.67**	**.47**	.59	.58	.55	.12	.51	.57	.61	.69	.81							
16	Stretching	4.30	.74	*.01*	*.00*	*.14*	*.12*	*.05*	*.13*	.10	.08	.05	.13	.05	.04	.06	**.01**	**.04**	.76						
17	ACS	3.62	1.24	.38	.42	.43	.68	.65	.50	.73	.67	.69	.14	.70	.62	.79	**.35**	**.60**	.09	.93					
18	DB Trust	3.49	1.11	.18	.26	.38	.56	.37	.33	.42	.48	.44	.04	.52	.33	.47	**.18**	**.37**	.18	.56	.88				
19	RB Trust	3.63	1.11	.41	.40	.39	.60	.63	.44	.67	.63	.65	.16	.62	.59	.73	**.35**	**.59**	.03	.80	.52	.91			
20	Intent to Quit	2.39	1.43	-.23	-.29	-.35	-.42	-.39	-.38	-.42	-.40	-.43	-.03	-.43	-.32	-.42	**-.19**	**-.36**	.01	-.53	-.28	-.44	.93		
21	Motivation	75.0	22.4	.18	.20	.32	.37	.34	.32	.41	.38	.37	.19	.34	.33	.35	**.18**	**.32**	.13	.42	.33	.34	-.50	-	
22	Job Satisfaction	5.26	1.32	.21	.27	.39	.44	.42	.36	.48	.44	.47	.11	.42	.40	.45	**.24**	**.40**	.12	.55	.34	.43	-.62	.62	-

Note. N = 936; TLI_AV = articulating a vision; TLI_CR = contingent rewards; TLI_FAG = fostering acceptance of group goals; TLI_HPE = high performance expectations; TLI_IS = individualized support; TLI_ISN = intellectual stimulation; TLI_PAM = providing an appropriate model; Control Leg = Control Legitimacy; ACS = Affective Commitment Supervisor; DB Trust = disclosure-based trust; RB Trust = reliance-based trust; Values on the diagonal represent scale reliabilities. Correlations >.08 are significant at p < .05. Correlations >.1 are significant at p < .01. Correlations in bold represent values for convergent validity. Correlations in bold italic represent values of discriminant validity.

Table 4

Models Comparing Transformational, Transactional Leadership Dimensions with the LMCQ Dimensions

	Chi-square	DF	CSDT	
Dimensions with Articulating a Vision (TLI_AV)				
1. Baseline model	1,174.69	328		
2. Equate DJ-Enhancement with Articulating a Vision	2,502.83	390	1,328	***
3. Equate PJ-Enhancement with Articulating a Vision	2,301.71	390	1,127	***
4. Equate Autonomy-Enhancement with Articulating a Vision	3,146.64	390	1,972	***
5. Equate Identity-Enhancement with Articulating a Vision	2,679.68	334	1,505	***
6. Equate Competence-Enhancement with Articulating a Vision	2,354.85	334	1,180	***
7. Equate Suspicious with Articulating a Vision	2,673.66	390	1,499	***
Dimensions with Contingent Reward (TLI_CR)				
1. Baseline model	1,162.29	302		
2. Equate DJ-Enhancement with Contingent Reward	2,598.09	308	1,436	***
3. Equate PJ-Enhancement with Contingent Reward	2,179.21	308	1,017	***
4. Equate Autonomy-Enhancement with Contingent Reward	2,820.37	308	1,658	***
5. Equate Identity-Enhancement with Contingent Reward	2,026.19	308	864	***
6. Equate Competence-Enhancement with Contingent Reward	2,230.91	308	1,069	***
7. Equate Suspicious with Contingent Reward	2,451.59	308	1,289	***
Dimensions with Fostering Acceptance of Group Goals (TLI_FAG)				
1. Baseline model	1,046.21	302		
2. Equate DJ-Enhancement with Fostering Acceptance of Group Goals	2,358.96	308	1,313	***
3. Equate PJ-Enhancement with Fostering Acceptance of Group Goals	1,957.16	308	911	***
4. Equate Autonomy-Enhancement with Fostering Acceptance of Group Goals	2,894.59	308	1,848	***
5. Equate Identity-Enhancement with Fostering Acceptance of Group Goals	2,136.74	308	1,091	***
6. Equate Competence-Enhancement with Fostering Acceptance of Group Goals	2,067.52	308	1,021	***
7. Equate Suspicious with Fostering Acceptance of Group Goals	2,444.38	308	1,398	***
Dimensions with High Performance Expectations (TLI_HPE)				
1. Baseline model	1,087.04	277		
2. Equate DJ-Enhancement with High Performance Expectations	1664.908	283	578	***
3. Equate PJ-Enhancement with High Performance Expectations	1,705.82	283	619	***
4. Equate Autonomy-Enhancement with High Performance Expectations	1,699.71	283	613	***
5. Equate Identity-Enhancement with High Performance Expectations	1,692.17	283	605	***
6. Equate Competence-Enhancement with High Performance Expectations	1,658.95	283	572	***
7. Equate Suspicious with High Performance Expectations	1,702.85	283	616	***

Dimensions with Individualized Support (TLI_IS)

1. Baseline model	1,136	302		
2. Equate DJ-Enhancement with Individualized Support	2,724	308	1,589	***
3. Equate PJ-Enhancement with Individualized Support	2,115	308	980	***
4. Equate Autonomy-Enhancement with Individualized Support	2,612	308	1,476	***
5. Equate Identity-Enhancement with Individualized Support	1,755	308	619	***
6. Equate Competence-Enhancement with Individualized Support	2,702	308	1,567	***
7. Equate Suspicious with Individualized Support	2,283	308	1,147	***

Dimensions with Intellectual Stimulation (TLI_ISN)

1. Baseline model	1,031	277		
2. Equate DJ-Enhancement with Intellectual Stimulation	2,006	283	975	***
3. Equate PJ-Enhancement with Intellectual Stimulation	2,159	283	1,128	***
4. Equate Autonomy-Enhancement with Intellectual Stimulation	2,259	283	1,227	***
5. Equate Identity-Enhancement with Intellectual Stimulation	1,846	283	815	***
6. Equate Competence-Enhancement with Intellectual Stimulation	1,553	283	522	***
7. Equate Suspicious with Intellectual Stimulation	2,372	283	1,341	***

Dimensions with Providing an Appropriate Model (TLI_PAM)

1. Baseline model	1,037	329		
2. Equate DJ-Enhancement with Providing an Appropriate Model	2,294	335	1,257	***
3. Equate PJ-Enhancement with Providing an Appropriate Model	1,917	335	880	***
4. Equate Autonomy-Enhancement with Providing an Appropriate Model	2,479	335	1,441	***
5. Equate Identity-Enhancement with Providing an Appropriate Model	1,739	335	702	***
6. Equate Competence-Enhancement with Providing an Appropriate Model	1,720	335	683	***
7. Equate Suspicious with Providing an Appropriate Model	2,323	335	1,286	***

Note. DJ-Enhancement = distributive-justice-enhancement; PJ-Enhancement = procedural-justice-enhancement; Df = Degrees of Freedom; CSDT = Chi-Square Difference Test; *** = p < .001

Table 5:

Usefulness Analyses of the LMCQ Compared to Transformational and Transactional Leadership

Predictor	RB Trust R²	RB Trust Δ R²	DB Trust R²	DB Trust Δ R²	Commitment R²	Commitment Δ R²	Intention to Quit R²	Intention to Quit Δ R²	Satisfaction R²	Satisfaction Δ R²	Motivation R²	Motivation Δ R²
1st Ordering Step												
1. Transactional Leadership	.40		.23		.45		.16		.19		.15	
2. LMCQ		.13 ***		.11 ***		.15 ***		.09 ***		.08 ***		.05 ***
2nd Ordering Step												
1. LMCQ	.50		.32		.58		.24		.26		.18	
2. Transactional Leadership		.04 ***		.02 ***		.03 ***		.01 **		.01 ***		.02 ***
1st Ordering Step												
1. Transformational Leadership	.62		.31		.73		.24		.28		.21	
2. LMCQ		.02 ***		.06 ***		.02 ***		.04 ***		.04 ***		.04 ***
2nd Ordering Step												
1. LMCQ	.50		.32		.58		.24		.26		.18	
2. Transformational Leadership		.14 ***		.05 ***		.17 ***		.03 ***		.06		.06 ***
1st Ordering Step												
1. TAL & TFL combined	.62		.32		.73		.24		.28		.21	
2. LMCQ		.02 ***		.05 ***		.02 ***		.03 ***		.04 ***		.03 ***
2nd Ordering Step												
1. LMCQ	0.50		.32		.58		.24		.26		.18	
2. TAL & TFL combined		.14 ***		.05 ***		.17 ***		.03 ***		.06 ***		.06 ***

Note. N = 936; RB Trust = reliance-based trust; DB Trust = disclosure-based trust; LMCQ = legitimate monitoring and control questionnaire; TAL = transactional leadership; TFL = transformational leadership; ** = p <.01; *** = p < .001.

APPENDIX

Final List of Items for the LMCQ

Distributive-Justice-Enhancement

1. Due to controlling my work, my supervisor can evaluate my performance more precisely.

2. My supervisor is willing to evaluate my performance accurately by controlling my work.

3. Due to controlling my work, my supervisor is able to compare my performance with that of others.

4. By controlling my work, my supervisor collects information to evaluate my performance accurately.

Procedural-Justice-Enhancement

5. In regard to his/her control behavior, my supervisor treats all of my colleagues in the same way.

6. My supervisor always applies the same standards to his/her control behavior.

7. In regard to his/her control behavior, my supervisor treats me differently compared to my colleagues, who do the same work. (r)

8. Not all of my colleagues are controlled to the same extent by my supervisor. (r)

Autonomy-Enhancement

9. Despite the control by my supervisor I am flexible in regard to structuring my work.

10. Despite the control by my supervisor I can decide when to finish my assignments on my own.

11. Despite the control by my supervisor I am responsible for the ideal design of my work processes on my own.

12. Despite the control by my supervisor I have sufficient freedom at work.

Identification-Enhancement

13. When my supervisor detects problems due to controlling my work, he/she also listens to my view of the situation.

14. When I hold a different view on my supervisor's control behavior, he/she accepts this.

15. For his/her control behavior, my supervisor takes my personal style of working into account.

16. I can frankly address problems that arise due to my supervisor's control behavior.

Competence-Enhancement

17. My supervisor uses the control to give me feedback regarding my performance.

18. I consider my supervisor's control as constructive.

19. My supervisor uses the control to give me constructive feedback regarding my performance.

20. My supervisor uses the control to give me timely feedback regarding my performance.

No Suspicious Intention

21. I perceive the control by my supervisor as distrust. (r)

22. My supervisor controls my work because he/she considers my work habits to be poor. (r)

23. My supervisor controls my work because he/she considers my work ethics to be poor. (r)