Department of Social and Organizational Psychology

Mind the Gap: A warped approach to LMX agreement

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Abstract

Leader member exchange (LMX) has been a widely researched topic in leadership literature. Despite the amount of research done there have been few articles addressing the agreement levels of LMX perceptions. This investigation examined the influence of dispositional affect and trust as moderators of the relation between LMX agreement and Job Attitudes (i.e. job satisfaction, organizational commitment. A partial least squares structural equation model was used to analyze these moderations over a sample of 70 subordinates and leadersThe findings indicate that dispositional affect and trust do moderate the aforementioned relation in non-linear patterns, and highlight the importance of exploring LMX agreement.

Key words: LMX Agreement, Self-other ratings, Moderation, Structural Equation Modeling

Resumo

As trocas entre líderes e membros (LMX) têm sido um tópico bastante abordado na literatura em liderança. Apesar do volume the investigações feitas, têm existido poucos artigos a abordar os níveis de concordância das percepções de LMX. Esta investigação examinou a influência de fatores de disposição afetiva e de confiança como moderadores da relação entre a concordância de LMX e atitudes organizacionais (i.e. satisfação com o trabalho, compromisso organizacional) Um modelo de equação estrutural de *partial least squares* foi utilizado para analisar estas moderações sobre uma amostra de 70 subordinados e chefias. Os resultados indicam que a disposição afetiva e a confiança moderam a relação previamente mencionada em padrões não-lineares, e sublinham a importância de explorar a concordância de LMX mais profundamente.

Palavras chave: LMX Agreement, Self-other ratings, Moderation, Structural Equation Modeling

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Acronyms List

Affective Commitment – AC

Human Resources – HR

Leader-Member Exchange - LMX

Normative Commitment – NC

Positive Affect – PA

Negative Affect – NA

Partial Least Squares – PLS

Structural Equation Modeling – SEM

Small and Medium sized Enterprises – SMEs

Vertical Dyad Linkage – VDL

1. Literature Review

It is an understatement to say that leadership is a complex phenomenon. While the first steps into outlining an integrative model of leader traits, behaviors, and effectiveness are relatively recent (e.g. DeRue, Nahrgang, Wellman & Humphrey, 2011), there is still more to consider and discover on the subject of leadership. Scholars today still struggle to comprehend in full detail how the different elements comprising leadership are connected, and so it is not unexpected to see that numerous leadership theories have poped-up throughout the years to explain the multitude of processes behind leadership (Dinh, et al., 2014). Despite all, scholars across several fields of study agree that leaders play an influential role within an organization as determinants of that organization's success, change, and culture (Antonakis & House, 2014; Eisenbach, Watson, & Pillai, 1999; Judge, Piccolo, & Ilies, 2004; Kaiser, Hogan & Craig, 2008; Mintzberg, 1989; Nadler & Tushman, 1994; Ogbonna & Harris, 2000), mostly through (but not limited to) interaction with their subordinates, having a strong impact on their attitudes and behaviors (e.g. job satisfaction, commitment, job performance, turnover thoughts and intentions, organizational citizenship behaviors, empowerment) (Chen, Kirkman, Kanfer, Allen, & Rosen, 2007; Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012; Ilies, Nahrgang, & Morgeson, 2007; Gernster & Day, 1997). Consequently they are able to influence organizational performance at a macro level, which has been taken as the usual assumption followed by leadership theories (Ilies et al., 2007). Therefore, it is understandable that leaders are urged to learn how they can influence their followers in order to achieve organizational goals, as well as improving the performance and quality of life at work of their subordinates. Without such knowledge, an incorrect and inadequate form of leadership will negatively affect an organization, their followers, and themselves. Padilla, Hogan & Kaiser's (2007) toxic triangle model demonstrates how, in the worst conditions, leaders that engage in destructive behavior (e.g.

unethical behavior, coercion, power abuse) end up harming others, themselves and the organization. With such impact on an organization, it is without surprise that currently a staggering amount of research exists on the subject of leadership, with multiple theories emerging during the past century (e.g. Neo-charismatic theories, Social Exchange/Relational theories, Trait/Dispositional theories, Leadership and Information Processing theories) as comprehensively revised by Dinh et al. (2014).

Of those theories, the Leader-Member exchange (LMX) ranks as one of the most studied across literature (the 3rd most studied according to Dinh et al., 2014), evidencing its significance as a relevant topic of investigation. Originally stemming from the Vertical-Dyad-Linkage Theory (VDL) by Danserau, Graen, & Haga (1975), LMX theory follows the premise that throughout time, leaders establish separate dyadic relations, or exchanges, with each of their followers, instead of using the same style of leadership for all of them (Densereau et al., 1975; Gernster & Day, 1997; Graen & Uhl-Bien, 1995), with each leader-member dyad assuming varying levels of quality in their relations. Relations that are high in quality are characterized by mutual respect, loyalty, affect, and contribution, whereas relations that are low in quality are solely based upon as per definition on each element's contract, with no exchange outside the contractual boundaries (Dienesch & Liden, 1986; Liden & Maslyn, 1998). High quality LMX is greatly beneficial to organizations, as it contributes to a number of different outcomes numerous meta-analyses have referred to: reduced turnover intentions, turnover rates, role ambiguity, role conflict and, increased job performance, general job satisfaction, organizational commitment (affective and normative), organizational justice perceptions (procedural and distributive), job climate, and innovation (Dulebohn et al. 2012; Gerstner & Day, 1997; Ilies et al., 2007; Uhl-Bien, Graen, & Scandura, 2000).

The path of the LMX theory extends itself over nearly half a century and, while it has undergone several changes from the time of its conception (Gernster & Day, 1997; Graen & Uhl-Bien, 1995), its main "unit of analysis has remained unchanged" (Gernster & Day, 1997, p.827). Initially, the VDL theory highlighted relations between different leader-member dyads within a work unit (Danserau et al., 1975). This was unique amongst leadership theories as it diverged from the current view by then that defended the existence of an average leadership style (Dinh, et al., 2014; Dulebohn et al. 2012; Gernster & Day, 1997). As the relational domain became the focal point of investigation, the nomenclature changed from VDL theory to Leader-Member Exchange theory (Graen & Uhl-Bien, 1995), and the dyad became the unit of analysis. At the time this was odd, because it displaced the leader from the center of leadership processes with LMX theory being one of the first to include the follower within those processes as well (Schyns & Day, 2010).

Since then, the concept of Leader-Member Exchange has been tested in various ways. For example, several researchers have focused the antecedents and consequences of LMX (see Dulebohn et al. 2012 for a review). The process of development and maintenance of LMX has also been researched, with numerous longitudinal studies conducted on the process of LMX over time (e.g. Bauer & Green, 1996; Graen & Uhl-Bien, 1991, 1995; Nahrgang, Morgeson, & Ilies, 2009). Most of the initial body of literature comprising LMX development models were grounded in role theory (e.g. Graen & Uhl-Bien, 1991, 1995), stating that it's comprised of "developmental processes which allow people to outgrow their formal role specifications of both tasks and relationships over time" (Graen & Uhl-Bien, 1991, p.26). Since then, most research has moved to accommodate social exchange processes as a part of LMX development (Dulebohn et al., 2012; Graen & Uhl-Bien, 1995; Ilies et al., 2007). Social exchange theory is commonly referenced as a mechanism that operates within other theories (Cropanzano & Mitchell, 2005; Emerson, 1976), and in the case of LMX, this

means that high quality LMX is reliant on a sequence of reciprocal and rewarding behavior processes, or social transactions (Densereau et al., 1975; Graen & Uhl-Bien, 1995; Nahrgang et al., 2009; Uhl-Bien et al., 2000).

In the last decade, LMX literature began to examine LMX as a potential moderator or mediator of job performance (Avolio, Walumbwa, & Weber, 2009). For example, Piccolo, Bardes, Mayer & Judge (2008) investigated how LMX can influence the relation between justice (procedural and interpersonal) and felt obligation, organizational citizenship, and withdrawal, concluding that employee responses to justice are positively influenced by the quality of LMX. Recently Zhang, Tsingan & Zhang (2013) reported that LMX has a mediating effect on the relationship between role stressors (e.g. role conflict, role ambiguity) and job attitudes (e.g. job satisfaction, turnover intentions).

Although LMX has become a widely accepted and used theory and one of the most important in the field of organizational literature, it isn't devoid of criticism. For example, some authors have argued that as LMX research overlooks the social context in which leadership occurs (Avolio et al., 2009, p.434). Some have pointed out that the bulk of LMX literature consists of cross-sectional studies, and studies with measurements from a single source (e.g. subordinate) (Dulebohn et al., 2012; Markham, Yammarino, Murry, & Palanski, 2010). Finally, authors have called for research including both leader and member measurements because of low leader-member agreement of LMX (e.g. Cogliser, Schriesheim, Scandura, & Gardner, 2009; Gernster and Day, 1997; Graen & Uhl-Bien, 1995; Schyns & Day, 2010; Sin, Nahrgang, & Morgeson, 2009). Poor Measurement validity and perceptual differences between leaders and members, due to the likelyhood of leaders and subordinates percieving their exchange differently, have been accounted as possible explanations for low LMX agreement (Avolio et al., 2009; Schriesheim, Castro, & Cogliser, 1999; Sin et al., 2009; Zhou & Schriesheim, 2009).

Altogether, leadership has deserved such an attention from both scholars and practitioners alike because it is a potential "game-changer", in the evermore unpredictable organizational environment, as even the slightest edge can favorably tip the balance. LMX is one theory that stands out as a topic of great interest, because its focus on the relational aspect of leadership is unique amongst leadership theories (Dulebohn et al., 2012; Graen & Uhl-Bien, 1995; Schyns & Day, 2010).

Despite such interest some puzzle pieces remain missing. Most research has been conducted focusing on one-sided perceptions of LMX quality (mainly subordinates' perceptions and outcomes), albeit theory clearly states it revolves around the dyadic relation. Few are the cases where two-sided perceptions are concomitantly considered (Zhou & Schriesheim, 2009), and even fewer have considered the resulting implications of different levels of LMX agreement (e.g. Cogliser et al., 2009; Markham et al., 2010). Also, the reduced number of LMX agreement studies has resulted in different ways of looking at the same phenomenon with little theoretical consistency (Schyns & Day, 2010). Thus, literature is largely asymmetric ans this has left a highly understudied and ignored gap in the area of LMX (Cogliser et al., 2009; Paglis & Green, 2002; Schyns & Day, 2010; Zhou & Schriesheim, 2009). Because most studies focus the followers' perception of LMX, they lack the required understanding about the leader perceptions of LMX, as there is no assurance that leaders and followers share the same view upon their relation (Schyns & Day, 2010). The existing studies regarding LMX agreement have yielded important results that are important for LMX literature such as differing levels of performance, satisfaction, commitment, shared values (e.g. Cogliser et al., 2009; Markham et al., 2010).

Much of the empirical evidence has shown that the levels of agreement of LMX between followers and leaders are underwhelming, with multiple studies of LMX correlations being low to moderate (Schyns & Day, 2010). Gernster and Day (1997) found a mild

average sample correlation of 0.29 (0.37 when corrected for measurement error. Paglis and Green (2002) reported a correlation of 0.19. Recently, Sin et al. (2009) explored the level of LMX agreement between leader and follower views of LMX, reporting a correlation of 0.37. This has a substantial impact on LMX measures. If human resources (HR) practitioners act upon the assumption that the subordinates' ratings of LMX are synonym of equal leader LMX ratings, they risk overlooking potential situations of disagreement (Cogliser et al., 2009). Hence the importance of understanding LMX agreement and its underlying processes. It is also important to establish a theoretically consistent framework to conceptualize LMX agreement.

By itself, the concept of agreement is fairly established in organizational literature. Numerous articles have adopted the approach originally proposed by (Yammarino & Atwater, 1997), who claimed that self-other rating agreement conceptualization can be applied to any construct or dimension that is relevant for human resources managers (e.g. leadership behaviors, job analysis ratings). Their model included four categories of self-other rating agreement: two levels of agreement (in-agreement/good, in-agreement/poor) and two levels of disagreement (over-estimator, under-estimator). Despite some criticism against the use of agreement in performance measurements, Atwater, Ostroff, Yammarino, and Fleenor (1998) found relevant evidence to support agreement. They argued in favor of conceptualizing and measuring agreement (in the form of self-other ratings) when assessing organizational outcomes (e.g. leader ratings of performance). In adition, they explained that it's important to explore aditional outcomes (e.g perception based outcomes), in an effort to comprehend the relevance of agreement in other areas. Based on Yammarino and Atwater's (1997) original model of self-other agreement ratings, Cogliser et al. (2009) have proposed their own model of LMX agreement, by fitting leader and follower perceptions of LMX onto four categories as well. That is, two levels of LMX agreement (LMX in-agreement/good,

LMX in-agreement/poor) and two levels of disagreement (leader over-estimation, leader under-estimation. This theoretical perspective on LMX agreement was also suggested by Sin et al. (2009).

However, some might argue that a problem may arise with the use of a self-other rating framework.

According to Fleenor, Smither, Atwater, Braddy, & Sturm (2010) extensive review on LMX, there is a yet to be solved issue in measuring self-other agreement which has been elusive in most of the cases. Psychological background to sustain this measure stems either from Leon Festinger's social comparison theory or from Gordon Allport's self-insight approach. Both have its merits but anchor in contrasting views of which psychological processes preside agreement judgment. Kwan et al. (2004) proposal of an integrative componential approach is a viable solution but, possibly due to greater data collection complexity, it is yet to be fully tested within empirical LMX research as very few papers have been considering it under this topic. A possible pragmatic solution lies in adopting both social comparison and self-insight approaches thus translating it in its respective data collection procedures. Although this may look like a methodologically inconsistency, it may help cushioning biases both due to overestimation or underestimation (e.g leniency bias).

In light of this problem, this investigation hopes to answer a few important questions: Are there any factors that may change the outcomes of LMX agreement? Do these factors influence agreement or disagreement as well? This study's objectives are split into two main objectives and it attempts to examine the previous questions in order to further investigate this "grey area" that is LMX agreement.

The first main objective is discussing and testing Cogliser et al's (2009) model of LMX Agreement, job performance, job satisfaction, and organizational commitment. Based on theoretical arguments this investigation suggests a slightly different outline to the authors'

model by conceptualizing organizational commitment as defined per Meyer & Allen (1991) and focusing only job satisfaction and organizational commitment. It also attempts to test the model by following a methodology that combines the views of social comparison theory and self-insight theory. Also agreement will not be defined into four categories defined by a median split. While a categorical system based on a median split offers a quick way of accessing different levels of balance between constructs, it carries a few issues such as loss of effect size and power, measurement reliability, disregard nonlinear relations, and the loss of the continuous nature of agreement balance (Bobko & Schwartz, 1984; MacCallum, Zhang, Preacher, & Rucker, 2002). Options must be made to use a statistical alternative that better fits this particular case. The chosen statistical treatment for agreement was the metric formula proposed by Bobko and Schwartz (1984) as seen in Figure 1. This formula retains the continuous nature of balance while providing the necessary insight towards agreement (for an in-depth explanation see Bobko & Schwartz, 1984). The obtained results will also be compared with disagreement scores, which will be assessed through score difference. While the use of difference scores has been criticized special thought was taken when considering the use of difference scores (Chin, Junglas, Schwarz, & Sundie, 2014; Edwards, 2001). The reason for these scores is to assess the direction of disagreement alone and not as a pure measure of agreement.

Figure 1 – Integrating Metric Formula Bobko & Schwartz (1984):

$$Integration = [(k-1) - |X - Y|] \times \left[\frac{(X+Y)}{2}\right]$$

The second main objective is to expand the literature on LMX Agreement, by picking up where Cogliser et al. (2009) left. Essentially, this investigation aims to offer a better understanding of the phenomenon that is LMX Agreement, and also to learn if social and

affective context can influence the existing relation between LMX agreement and job attitudes. Specifically, trust in leadership and personal affect are introduced in the LMX agreement model as contextual moderators, with the purpose of discovering the how agreement can be influenced. The reasons for this choice of moderating variables are presented in the following section.

1.1 Trust

Trust has been a topic of interest in leadership literature for quite a long time. Researchers from multiple academic fields have devoted their efforts to better understand the process of trust although that has also sparked some confusion regarding the way of conceptualizing trust (Collquitt, Scott, & LePine, 2007; Dirks & Ferrin, 2002). Regardless, one of the most widely accepted definitions of trust was proposed by Mayer, Davis and Schoorman (1995): "the willingness of a party to be vulnerable to the actions of another based on the expectation that the other will perform a particular action" (p. 712). Rousseau, Sitkin, Burt, and Camerer (1998) have also proposed a similar definition: "trust is a psychological state comprinsing the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another (p. 395).

Situations like this can be easily identified in organizational context (e.g. trust in leader, trust in teammates, trust in organization). For example, managers and supervisors stand hierarchically higher than their subordinates, therefore possessing greater authority over them. Because of that, their intentions, decisions and behavior can influence a number of subordinate related factors (e.g. promotions, workload, layoffs, etc). Subordinates are aware of the lack of control they have over their own situation, and so they willingly take actions while holding to the expectation that their leaders will act in a specific way.

The attention dedicated to trust in an organizational context is not surprising, especially given the numerous associations with various behavioral (e.g. performance, organizational citizenship behaviors) and attitudinal outcomes (e.g. job satisfaction, organizational commitment) which make trust a central element to organizations (Fulmer & Gelfand, 2012). Trust was rapidly included within multiple leadership theories (Brower, Schoorman, & Tan, 2000; Collquitt et al., 2007; Dirks & Ferrin, 2002, Scandura & Pellegrini, 2008). LMX is one of such theories. One of the primary concepts of LMX is that trust is a component of relationship-based leadership that is present on high quality LMX (Graen & Uhl-Bien, 1995).

However, this notion was challenged by later findings (Scandura & Pellegrini, 2008). As is turns out, trust may be susceptible to economical transactions that happen during high quality social exchange (e.g. high LMX relation) (Cropanzano & Mitchell, 2005; Uhl-Bien, 2007). This finding is quite important as it reinforces the idea of separation between trust and LMX, one that authors have called for (e.g. Dirks & Ferrin, 2002). This encourages the exploration of new theoretical paths regarding LMX and trust.

For example, in the last decade, the referent of trust (i.e. receiver of trust) has been receiving increasing attention, for its impact on trust outcomes and relations. For example, the study by Dirks (2000) (cited by Dirks & Ferrin, 2002) found that team performance varied according to the referent of trust. Notably, when the leader was the referent of trust (as opposed to the teammates) there was a significant effect on team performance. This has already been proposed in LMX literature, one notable example is the integration a referent of trust with LMX processes by focusing the leader as a referent of trust (Brower et al., 2000). Since LMX agreement is theoretically different than LMX itself (convergence of perceptions of quality vs quality of interation), trust in leader might assume a different role. Trust in leader might moderate a relationship between an interaction partner's actions and the trustee's responses by influencing one's interpretation of said actions (Dirks & Ferrin, 2001).

In other words, trust in leader might affect the relation between LMX and the atittudinal and performance outcomes.

The use of trust as a moderating factor isn't new to organizational and psychology literature (Rousseau et al., 1998), and while it being rather unique to LMX literature. Poon, Salleh, and Senik (2007) found propensity to trust negatively to moderate the relationship between perceived organizational support and job satisfaction by being stronger among employees with lower propensity to trust. Farndale, Hope-Hailey, and Kelliher (2011) found that trust in the organization moderated the relation between high commitment work practices and employee commitment.

Regarding LMX agreement however, very little is still known. The present investigation will examine trust as a moderator of LMX agreement and job attitudes.

1.2 Dispositional Affect

The term affect is very common in LMX literature, as it is considered a sub-dimension of LMX and an indicator of quality of LMX (Graen & Uhl-Bien, 1995; Liden & Maslyn, 1998). While this definition is probably the most predominantly well-known amongst LMX investigators, it refers to a construct that differs from dispositional affect.

Dispositional affect refers to stable feelings, positive or negative, experienced by an individual. Positive affect (PA) refers to the tendency of individuals towards positive moods such as well-being and cheerfulness, while negative affect (NA) refers to individual inclination towards stressed, negative self-views (Barsade & Gibson, 2007). Throughout leadership and organizational investigation, dispositional affect has always managed to stay relevant in-between different leadership theories, as it is intertwined, along with emotions and moods, with several leadership processes, and leader and follower outcomes (Gooty, Connelly, Griffith, & Gupta, 2010). One of the most well known manifestations of

dispositional affect is strongly ties with the negativity bias. Literature focusing people's tendency to focus negative effects has been well documented (Ito, Larsen, Smith, & Cacioppo, 1998; Peeters & Czapinski, 1990). As such, it is scholars dealing with dispositional affect often focus this aspect. Notably, Cogliser et al. (2009) have suggested that negative affectivity may have an impact in LMX agreement ratings.

Dispositional affect literature has also tackled the issue of self-other ratings the role of affect. Namely, Judge (1993) proposed that individuals with a generally positive disposition are more likely better at identifying sources of dissatisfaction. This roughly translates into more accurate ratings of job satisfaction by individuals with higher PA. On the other hand, Judge also suggested that individuals with a generally negative disposition could be unsusceptible to changes in conditions that can be favorable, or not, to job satisfaction. This means individuals with high NA may not evaluate their job satisfaction inaccurately, by missing on information that would otherwise improve the quality of their ratings.

Therefore, it is reasonable to assume the influence of dispositional affect not only on the quality and outcomes of LMX, but of LMX agreement. Regarding the former, Hochwarter (2005) measured the moderating effects of dispositional affect on the relation between LMX and Job Tension. According to their findings, the moderated relationship was non linear, showing that for High NA, Job tension was at its highest when LMX quality was moderate. They recommended testing non-linear propositions for LMX and other work outcomes. Given their results one could ponder the existence of a similar phenomenon will occur with LMX Agreement and its outcomes. In a recent review, a collection of as possible moderators of self-other rating quality also included mood states as possible moderators of inter-rater quality (Fleenor, Smither, Atwater, Braddy, & Sturm, 2010).

To summarize, one can assume dispositional affect may have a moderating role between LMX agreement and job attitudes. Considering people's negative focus, perceived

similarity and attribution errors, it may have a strong impact in shifting attitudinal responses in relation to different levels of LMX agreement, as bias processes interfere with the quality of LMX agreement outcomes. As such, affect is included as a moderator in the present investigation's model.

1.3 Satisfaction and Commitment

Industrial and organizational psychologists have paid a lot of attention to job satisfaction. Undeniably, the most frequently studied link is the relationship between job satisfaction and job performance, and although it has been fiercely debated, it correlates comparably well with other strong correlates of job performance (Judge, Thoresen, Bono, & Patton, 2001). (facets)

Similarly, organizational Commitment has also been the target of countless investigations. Human resources scholars and professionals have devoted a particular attention to HR practices involving employee commitment (i.e. high performance work systems, high commitment management) as a way of reducing turnover and absenteeism (Guest, 1997; Ramsay, Scholarios, & Harley, 2000). Indeed, organizational commitment plays a powerful role in shaping the intentions of employees. Meyer & Allen (1991) proposed a three way conceptualization of organizational commitment: normative, affective and continuance. Normative commitment (NC) is organizational commitment in the shape of feelings of obligation to stay in an organization. Affective commitment (AC) is organizational commitment in terms of affective attachment towards an organization. Lastly, Continuance Commitment ir organizational commitment as a need to stay within an organization.

These outcomes are popular topics of study in LMX literature. Support for in favor of positive relations between these two variables and LMX has been consistently found

throughout LMX literature, and even for LMX agreement (Cogliser et al., 2009, Dulebohn et al., 2012; Gernster & Day, 1997). For example a multicultural study which included samples from north american and portuguese organizations found support for the relation between LMX and affective commitment (Eisenberger, et al., 2010).

These outcomes are expected, as LMX theory predicts them. Specifically, high quality LMX relations are characterized by mutual liking, respect, reciprocity and obligation (Graen & Uhl-Bien, 1995). These aspects have consequences for job satisfaction and organizational commitment. Consistently with psychological contrac theory, as the LMX relationship evolves into a high quality one, job expectations are met, which in turn leads to positive attitudes (e.g. job satisfaction, organizational commitment) (Millward & Hopkins, 1998, McDonald & Makin, 2001). On the other hand, failure to met these expectations leads to dissatisfaction, mistrust and other negative attitudes and behaviors (Rosseau, 1995; cited by Cogliser et al., 2009).

Scholars have been divided regarding the relationship between commitment and satisfaction. There has been conflicting research regarding the causality behind job satisfaction and organizational commitment (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). That is, while some authors defend organizational commitment as an outcome of job satisfaction, others contest that argument saying those outcomes run parallel to each other. As such, satisfaction was intentionally kept as the same level as organizational commitment following the steps of Cogliser et al. (2009). Due to the scarcity of literature surrounding LMX agreement, organizational commitment and satisfaction were chosen as theoretically relevant outcome variables of LMX agreement because: they are important job outcomes commonly associated with positive LMX relations; they have been found to manifest themselves differently, depending on the level of LMX agreement.

1.4 Model Summary

Based on the previously considered theoretical arguments, the following hypothesis were proposed:

LMX agreement

The first set of hypothesis is consistent with the results obtained by Cogliser et al. (2009). Basically, LMX agreement will be positively related to the attitudinal outcomes for leaders and subordinates: overall job satisfaction, normative organizational commitment, and affective organizational commitment. In turn, LMX disagreement will also be positively related to subordinate outcomes, but negatively related to leader outcomes[1]. As it is expected that follower LMX underestimation, and therefore leader overestimation, will have a positive effect on leader outcomes.

Hypothesis 1A: High LMX agreement will lead to higher levels of leader and subordinate outcomes while low LMX agreement will lead to lower levels of leader and subordinate outcomes.

Hypothesis 1B: High LMX disagreement (Follower overestimation) will lead to higher levels of subordinate outcomes, while low LMX disagreement (follower underestimation) will lead to higher leader outcomes.

Positive and Negative Affect

According to Watson, Hubbard, and Wiese (2000) since affectivity is subjective in nature, rather than a visible trait, self-other ratings are weaker, being instead guided by perceptions of similarity between raters and the degree of acquaintanceship. As such it might

[1] This will happen due to disagreement being treated as a difference between subordinate scores and leader scores, where higher leader scores lead to negative values.

be difficult to explore self-other ratings of affect, and therefore only the effects of subordinate dispositional affect will be explored.

Since individuals with a generally positive disposition are better readers of dissatisfaction sources, I expect PA to moderate the relation between LMX agreement and subordinate job satisfaction, by making it stronger for individuals with higher PA. This is also expected for LMX disagreement as higher values of disagreement represent follower over-estimation, where subordinate outcomes will be higher. On the other hand, negative affectivity may turn individuals "numb" to positive (or negative) sources of job satisfaction. Regarding LMX agreement, it is likely that the phenomenon will present itself in the same manner, and LMX will lose predictive power of job satisfaction, for individuals with higher NA.

Hypothesis 2A: The relation between LMX agreement and subordinate outcomes (particularly job satisfaction and affective commitment) is moderated by the level of PA: the relation will be increasingly stronger for individuals with greater PA and weaker for individuals with lower PA.

Hypothesis 2B: The relation between LMX disagreement and subordinate outcomes (particularly job satisfaction and affective commitment) is moderated by the level of PA: the relation will be increasingly stronger for individuals with greater PA and weaker for individuals with lower PA.

Hypothesis 3A: The relation between LMX agreement and subordinate outcomes (particularly job satisfaction and affective commitment) is moderated by the level of NA: the relation will be increasingly weaker for individuals with greater NA and stronger for individuals with lower NA.

Hypothesis 3B: The relation between LMX disagreement and subordinate outcomes (particularly job satisfaction and affective commitment) is moderated by the level of NA: the

relation will be increasingly weaker for individuals with greater NA and stronger for individuals with lower NA.

Trust

Since trust can possibly moderate the responses to the perceptions of LMX, it is likely that it will improve the outcomes of LMX agreement, while balancing them for disagreement. For example, the high satisfaction and commitment experienced exclusively during subordinate overestimation of LMX, might become slightly more apparent when followers underestimate LMX.

Hypothesis 4A: The relation between LMX agreement and leader/subordinate outcomes is moderated by the level of leader/subordinate trust: the relation will be respectively weaker for leaders/subordinates with greater trust and stronger for leaders/subordinates with lower leader/subordinate trust.

Hypothesis 4B: The relation between LMX disagreement and leader/subordinate outcomes is moderated by the level of leader/subordinate trust: the relation will be respectively weaker for leaders/subordinates with greater leader/subordinate trust and respectively stronger for leaders/subordinates with lower leader/subordinate trust.

Full Agreement/Disagreement

Despite the major advancements to LMX agreement literature brought by Cogliser et al. (2009), I believe their original intention was to assess how LMX Agreement also translates into agreement upon job performance, job satisfaction and commitment. As such, I attempted to follow those intentions by hoping to study precisely that. With this in mind the following hypothesis were defined:

Hypothesis 5A: High LMX agreement will lead to higher levels of job satisfaction and organizational commitment (AC and NC). While Low LMX agreement will lead to lower levels of job satisfaction and organizational commitment (AC and NC).

Hypothesis 5B: High LMX disagreement (follower overestimation) will lead to higher levels of job satisfaction and organizational commitment (AC and NC). While Low LMX disagreement (follower underestimation) will lead to lower levels of job satisfaction and organizational commitment (AC and NC).

These hypotheses are outlined in *Figure 2* and *Figure 4*. They represent the three structural models to be tested (once per respective number of moderating factors).

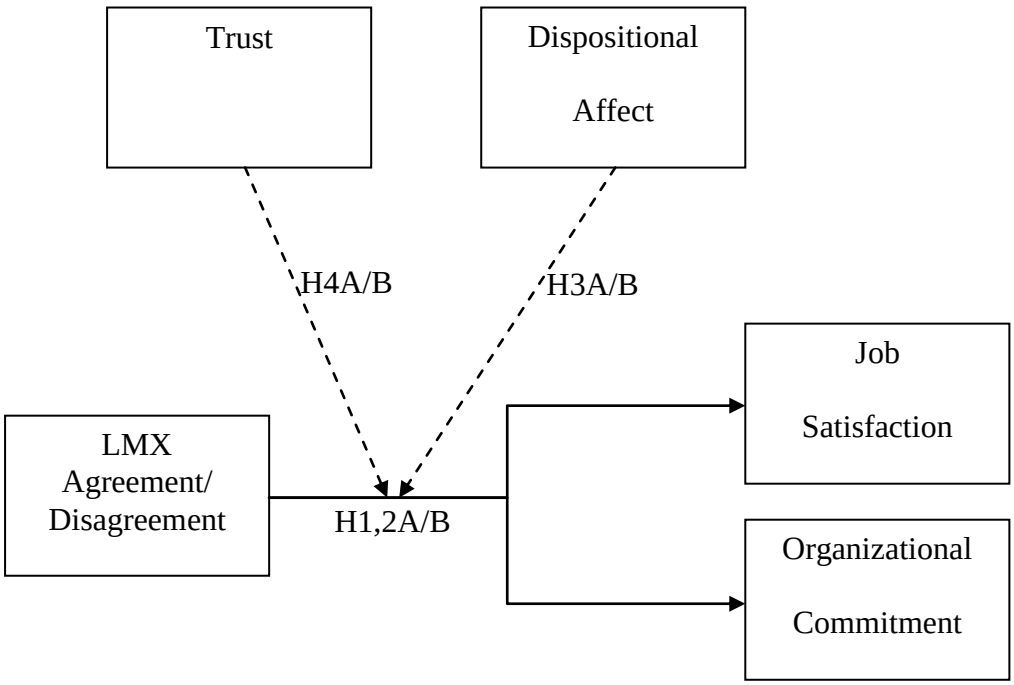


Figure 2 – LMX agreement and attitudinal outcomes moderated by trust and dispositional affect

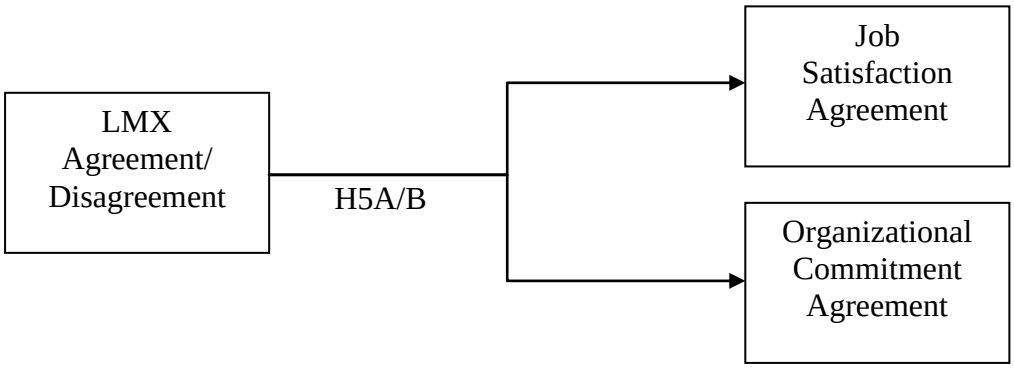


Figure 3 – LMX agreement and attitudinal agreement

2. Method

2.1 Participants

Over 130 employees (including leaders and subordinates) from several small and medium sized (SMEs) enterprises responded to an online questionnaire. This questionnaire had two approaches to the self-other rating method. For the first approach, questionnaires were administered to leader-member dyads, with leaders and members responding to their adequate version, mimicking the method used by Cogliser et al. (2009). By this approach, a total of 43 responses (from both leaders and followers) were obtained (79,63% response rate). For the second, questionnaires were solely administered to subordinates who evaluated themselves and their respective leaders. A total of 51 subordinate responses were obtained (67,1% response rate).

After the removal missing data[2], the remaining sample consisted of 70 eligible cases: 30 employee leader dyads from the first approach, and 40 employees from the second approach.

Overall, 71,4% of the leaders reported having between 24-35 years (28,6% had 35 to 44 years). Regarding leaders' level of education, 85,7% held graduate or master degrees, while 14,3% had a high school diploma.

On the other hand, 70,6% of the subordinates reported having between 24-35 years (16,7% had less than 25 years, 12,5% had 35 to 44 years). Subordinates had a high level of education as 91,7% of employees held graduate or master degrees, and only 4,2% had a bachelor degree and 4,2% had a high school diploma. The average job tenure was 4,73 years (with a relatively high Standard Deviation (SD) of 5,69 years), while having 2,73 years of tenure with their current supervisor (SD=3,27 years).

[2] Only for participants who did not respond to the majority of the questionnaire.

2.2 Measures

With the exception of the single item measure for job satisfaction, all items regarding the study's main variables were written as assertions, in order to allow the use of a Likert scale style of response, ranging from 1 (Totally disagree) to 5 (totally agree) for all measures (except PA and NA), and in turn easing the participants' job. The reduced versions of all possible measures were intentionally included, to keep the questionnaire short, and again easing the participants' task. Regarding translations, a double reverse translation for each item was conducted in order to assure an accurate translation into the Portuguese language (the only exception was the PANAS reduced version as this one had already been validated for the Portuguese population). This process was done according to the measure translating guidelines recommended by Brislin (1970) and taking the recommendations of Hulin (1987) into account. First, all English measures were translated into Portuguese by two independent persons, fluent in English. The resulting translations were in turn, reverse translated by two English native speakers, fluent in Portuguese. Finally, the two initial Portuguese translators, along with a third member serving as an unbiased member, debated on which translations to use.

Similarly to Cogliser et al. (2009), the use of a parallel versions of each measure was seen as the most appropriate way of measuring other ratings of LMX, Job Satisfaction, Organizational Commitment (normative and affective), and Trust. This however, was not necessary for Personal Affect, as these "traits" are less visible and more susceptible to perceived similarity bias (Judge, 1993). During the second data gathering, both subordinate and leader outcomes were measured. The latter were measured through a mirrored version of each measure as an alternative for other ratings. The alternate versions were designed following the recommendations by Schriesheim, Wu and Cooper (2011).

Leader-Member Exchange

In order to measure the follower perceptions of LMX, the questionnaire applied to them included the seven-item LMX measure (Scandura & Graen, 1984), with the revised 5-point scale anchors recommended by Graen & Uhl-Bien (1995). Item examples include: "How well does your leader recognize your potential?"; "How would you characterize your working relationship with your leader?" The leaders' perceptions of LMX were measured with the parallel version of the same scale (named SLMX) suggested by Graen & Uhl-Bien (1995). Item examples include: "How well do you recognize your followers' potential?"; "How would you characterize your working relationship with your followers?" During the second data collection, SLMX measure was applied to subordinates as well in a mirrored fashion. Item examples include: "How well do you recognize your leaders' potential?"; "How would your leader characterize your working relationship with you?"

Organizational Commitment

It is known that cultural values do relate differently against different NC measures, and concerns have been raised about the interpretation of findings related NC by Bergman (2006). The recent meta-analysis by Meyer et al. (2012) found that the six-item NC scale (Meyer, Allen, & Smith, 1993) shows stronger correlation that the eight item NC scale (Allen & Meyer, 1990). They argue that it may be so due to the revised six-item version's focus on felt obligation as a reciprocal cognitive response to received benefits, as opposed to the eight-item version's focus on socialization experiences. For that reason the six-item scale was deemed the most adequate measure, as it would allow a more accurate comparison between LMX and normative commitment as felt obligation.

The measures used to assess follower's NC and AC were the six-item scales for NC and AC (Meyer, Allen, & Smith, , 1993), with item responses scaling from 1=Strongly Disagree

to 5=Strongly Agree. Item examples include: “I do not feel any obligation to remain with my current employer”; I would feel guilty if I left my organization now”. In order to measure self-other ratings of organizational commitment supervisors rated the perceived NC and AC of their employees in the same way as LMX. Item examples include: “My subordinates do not feel any obligation to remain with my current employer”; “My subordinates would feel guilty if they left my organization now”. The same was applied to subordinates during the second approach. Item examples include: “My supervisor does not feel any obligation to remain with its current employer”; “My supervisor would feel guilty if he/she left my organization now”.

Satisfaction

A single-item measure (e.g. “How satisfied are you with your job in General?”) was used to measure employees’ levels of job satisfaction, to keep the questionnaire short, without sacrificing validity, as Wanous et al. (1997) argued. Following the self-other rating methodology, the supervisors’ version inquired on the perceived satisfaction level of their employees (“How satisfied are your employees with their job in General?”). Subordinates in the second approach completed the leader other-rating version (“How satisfied are your employees with their job in General?”).

Trust in leader

Trust will be measured with the scale utilized by Robinson and Rousseau (1994). The parallel version follows the same self-other rating premise that guides the LMX and SLMX scales. Also, in order to accurately translate the scales into the portuguese population, both scales were translated to Portuguese and in turn reverse-translated back to English again. All reverse keyed trust items, for both leaders and subordinates were reworded into positively

keyed items. This was intentionally made for the trust scale in order to have participants less intimidated by a negatively worded trust item. Item examples include: (subordinates) “My employer is open and upfront with me”; (leaders) “My subordinates think I treat them fairly”; (subordinate other-rating) “My leader think I treat him/her fairly”.

Dispositional Affect

Dispositional affect was measured with the Portuguese validated, reduced version of the PANAS inventory. This scale is comprised of ten items: five for positive affect (e.g. inspired, excited) and five for negative affect (e.g. guilty, nervous). As mentioned before this is the only measure to not follow the self-other rating method as it assumes a theoretically different stance that implies weaker or biased “other” evaluations that rely on deeper acquaintanceship between rater and rate (Judge, 1993). Participants would indicate how much they generally felt those affective states while working, on a scale ranging from 0 to 100.

Disagreement/Agreement

By subtracting the subordinate “self” ratings with leather “other” ratings, we’ll obtain measure of disagreement. It consists of a scale that ranges from maximum follower under-estimation to the maximum follower over estimation. Values closer to zero represent agreement, as identical self-other ratings will nullify each other when subtracted. However they do not provide any information regarding the intensity of the agreement, and whether it is high or low in-agreement. To assess agreement intensity a different formula will be used. The Bobko and Schwartz (1984) metric (Figure 1) provides an alternative to a categorical system based on median splits. These new scales were placed as predictor variables in the PLS.

Although there have been no validated measures of other ratings for most of the studied variables (e.g. one-item satisfaction, organizational commitment), the principles underlying LMX agreement measurement were applied to the other measures as it is believed to be a technically valid method of measuring self-other ratings. These versions were developed under the recommendations by Schriesheim et al. (2011).

Demographics and Proximity

The demographic variables that are measured are age, education, tenure with the organization, and tenure with the leader. Age was measured in intervals separated by 9 years that started from 25 years (e.g > 25; 25-34; 35-44;…). Tenure with the organization and with the leader were especially important given that LMX is tends to develop over time. Finally proximity was included as a control variable to establish how frequently the leaders and subordinates communicate with each other, and how intense is that communication. The purpose was to complement the tenure measure. The measure was originally developed Pearce & Gregersen (1991) (cited by Sin et al., 2009). Item examples include: "I work closely with others in doing my work"; "My supervisor works closely with me while I work."

2.3 Procedure

Several SMEs was contacted personally and by e-mail, inviting them to help with an ongoing university investigation. A written letter or an e-mail was sent, outlining the general purpose of the study, the university authorization, information regarding data confidentiality, and finally, the instructions on how to administer the survey questionnaires intended to match leader and subordinate data. All the applicable supervisor participants[3] were notified about the study beforehand by an e-mail from their administration, detailing how their participation

[3] Only low hierarchy supervisors were allowed to respond to the online survey, in order facilitate the leader-member matching process. Otherwise some supervisors would respond to both versions of the questionnaire and receiving more than one code (their supervisor code and employee code)

would be contributing to a university investigation regarding leadership and attitudes, and their own personal team matching code. The supervisors were instructed to forward their e-mail to their respective employees, as it contained the matching code. Each participant was only allowed to have one code. The e-mail also made explicit the voluntary nature of the participation, and confidentiality of all collected data and its use, as well as the university's authorization, and investigator contacts. For the sample requiring subordinate responses only, the instructions were simply to forward the questionnaires to every subordinate.

Excluding the leader-member matching code, all the information was also included in the opening statement of both versions of the online questionnaire as well. The opening statement also aimed to assure to every participant that information would be impossible to trace, as the collected data wouldn't be available or shared to anyone. The purpose for this was to reduce social desirability bias, fear of data tracking, and leniency bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). This was important for leaders as well, to reassure them that despite the data matching their responses would not be identifiable. Other methodological issues were addressed as well, notably the order in which participants respond (Sin et al., 2009). In order to avoid the higher levels of LMX agreement derived from response order, the instructions for the survey application reinforced the importance of having the codes and survey links were distributed to the employees, by their supervisors before responding to the questionnaire themselves. This would not allow the subordinates to know if their supervisors had already done so, and be influenced by that. Finally, at the end of the questionnaire participants were met with a closing sentence thanking them for their participation, and a space to leave any comments they desired.

2.4 Statistical Analysis

A Partial Least Squares (PLS) based structural equation modeling (SEM) program (WarpPLS 5.0) was used. According to various authors (Chin, 2010; Rainartz, Haenlein, & Henseler, 2009; Sarstedt, Ringle, & Hair, 2014; Vinzi, Chin, Henseler, & Wang, 2010) the PLS-SEM analysis is: well suited to investigations where the main focus is on prediction and theory development; capable of detecting nonlinear relations between variables; not as restrictive as other multivariate analysis, regarding minimal sample size and distributional assumptions (and therefore capable of delivering results with high statistical power). This is advantageous to this investigation due to the adequacy of the Integrative Metric (Bobko & Schwartz, 1984) for non-linear models and sample size and PLS-SEM models with moderations (Carte & Russel, 2003).

A resampling method called Stable 3 (Kock, Stable P value calculation methods in PLS-SEM, 2014) was used for the calculation of the models' path coefficients, generating 100 subsamples for statistical analysis. This method is the software default option and it delivers the most precise *p*-values of any other resampling method regarding PLS-SEM tests (Kock, 2015). Scale reliability, validity and collinearity are calculated through composite reliability (CR), average variances extracted (AVEs) and variance inflation factor (VIF) respectively. CR delivers estimates of indicator reliability that are mildly higher than estimates obtained using Cronbach's alpha (Peterson & Kim, 2013). Typically estimate values should be greater than ,700. AVE coefficients are used in the assessment of discriminant validity. Typically the accepted indicator validity for reflective variables should be higher than ,500, while the variable correlations should never be higher than its square root AVE. Finally, the VIF coefficient is an indicator of collinearity. The WarpPLS software calculates overall collinearity (vertical between predictors and horizontal between predictor and criterion variable). Although values bellow 3,3 are recommended in order to assure no

multicollinearity and no common method bias, when dealing with path analyses it is recommended that VIFs remain lower than 5 (or 10 for a softer criterion) (Kock, 2015). The model fit indicators calculated by WaprPLS 5.0 are the Average Path Coefficient (APC), the Average R^2 (ARS), the Average Variance Inflation Factor (AVIF) and the Average Full Variance Inflation Factor. The recommended *p*-values for the APC and ARS should stay below ,05 and for the AVIF and AFVIF below 5 (Kock, 2015). Lastly, WarpPLS 5.0 reports path effect sizes through Cohen's (1988) f^2 coefficients[4]: values near 0,02 are considered weak, values near 0,15 are moderate, and values near (or above) 0,35 are strong (Cohen, 1988; cited by Kock, 2015).

3.Results

3.1 Latent Variables Coefficients and Correlations

Table I – Latent Variable Coefficients*Table I* indicates the number of items of each scale as well as CR, AVEs and Full VIF coefficients for the variables included in the present investigation. Any items whose loadings fell below ,500, or the respective *p*-value was higher than ,05, were removed. This happened for two items from the leader normative commitment measure and for one item from the leader affective commitment measure[5].

CR was high for all items (CR > ,800) meaning they have very good internal consistency. The items also have good discriminant validity (mean AVE = 61% ranging from 54% to 81%, disregarding satisfaction as they are single item measures). Full VIFs were all bellow the value of 5 meaning there are no multicollinearity problems or common method bias.

[4] Though similar to Cohen's f^2 coefficients, the effect sizes "are calculated as the absolute values of the individual contributions of the corresponding predictor latent variables towards the R^2 coefficients of the criterion latent variable in each latent variable block" (Kock, 2015).

[5] These items were later removed as well, when computing the variables for disagreement and agreement, in order to assure only the same scale items would enter the equations.

Table II shows all latent variable means, SDs and correlations. The correlation that stands out is most definitely the correlation between subordinate and leader LMX (r = ,661; p < ,001). Job Satisfaction (r = ,421; p > ,001), normative commitment (r = ,363; p < ,01), and trust (r = ,478; p < ,01) all correlated significantly with their leader counterpart. All other hand affective commitment had no correlation whatsoever with leader affective commitment (r = ,060; p > ,05). Generally, all subordinate measures correlate with each other. Positive affect has a negative correlation with negative affect (r = -,292; p < ,05). The leader measures also show significant correlations with each other as well. Age correlations are somewhat deceitful as age was measured in an intervallic manner. Job Tenure was highly correlated with tenure with leader (r = ,764; p < ,001), however the standard deviation for both was higher than their own mean ($SD_{\text{job tenure}}$ = 5,69; $SD_{\text{tenure w/ leader}}$ = 3,27) which implies a large sample variation of tenure years. Finally, subordinate proximity correlated significantly with all subordinate variables except trust, while leader proximity correlated somewhat significantly with subordinate LMX, Satisfaction, Trust, and also with leader LMX and trust. None of the indicator correlations were higher that the square root of the indicator AVEs and therefore there are no noticeable discriminant validity issues.

***Table I* – Latent Variable Coefficients**

Variable	**Items**	**CR**	**AVE**	**Full VIF**
Leader-Member Exchange (LMX)	7	,931	,661	3,915
Job Satisfaction (SS)	1	1,000	1,000	2,656
Normative Commitment (NC)	6	,887	,568	2,278
Affective Commitment (AC)	6	,876	,543	2,300
Trust (T)	7	,967	,807	3,919
Positive Affect (PA)	5	,939	,757	3,036
Negative Affect (NA)	5	,878	,592	1,337
Leader Leader-Member Exchange (SLMX)	7	,905	,579	3,284
Leader Job Satisfaction (SS)	1	1,000	1,000	1,564
Leader Normative Commitment (SNC)	4	,846	,580	1,476
Leader Affective Commitment (SAC)	5	,829	,501	1,842
Leader Trust (ST)	7	,894	,550	2,061

CR = composite reliability; AVE = average variances extracted; VIF = Variance Inflation Factor

Table II - Latent Variable Correlations

Variable	M	SD	1	2	3	4	5	6	7
1. LMX	3,68	,80	(,813)						
2. Satisfaction	3,49	1,02	,604***	(1,000)					
3. NC	3,02	,79	,479***	,426***	(,754)				
4. AC	3,32	,80	,491***	,415***	,620***	(,737)			
5. Trust	3,79	,87	,782***	,579***	,357**	,248*	(,899)		
6. Pos. Affect	68,81	22,13	,651***	,717***	,511***	,508***	,566***	(,870)	
7. Neg. Affect	12,17	15,69	-,227	-,147	,042	-,254*	-,159	-,292*	(,770)
8. Leader-LMX	3,98	,66	,651***	,482***	,367**	,298*	,661***	,388***	-,156
9. Leader Satisf.	3,73	,62	,318**	,421***	,116	,198	,374***	,260*	-,116
10. Leader NC	3,53	,77	,343**	,229***	,363**	,154	,432***	,287*	,088
11. Leader AC	3,55	,78	,481***	,381	,112	,060	,611***	,361**	-,160
12. Leader Trust	4,14	,53	,433***	,254*	,261*	,253*	,478***	,192	-,052
13. Age	2,12	,758	-,021	-,017	-,126	,030	-,176	-,185	,019
14. Education	3,44	,95	,076	,074	,023	-,027	,177	,122	,014
15. Job Tenure	4,73	5,69	-,010	-,044	,102	,136	-,156	-,040	-,115
16. Tenure w/ L.	2,73	3,27	-,100	-,042	,038	-,082	,188	-,056	-,092
17. Prox.	3,70	,83	,435***	,285*	,316**	,335**	,201	,189	,101
18. Leader Prox.	3,75	,74	,243*	,251*	,085	,073	,245*	,081	-,033

Square roots of average variances extracted (AVEs) shown on diagonal (within parenthesis)

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

8	9	10	11	12	13	14	15	16	17	18
(,761)										
,463***	(1,000)									
,391***	,295*	(,761)								
,468***	,424***	,337**	(,708)							
,690***	,300*	,280*	,264*	(,742)						
,009	-,010	-,272*	-,269*	,030	(1,000)					
,167	,060	,090	,078	,006	-,176	(1,000)				
-,109	,015	-,205	-,191	,013	,619***	-,231	(,1000)			
-,130	,002	-,114	-,135	-,181	,409***	-,053	,764***	(1,000)		
,181	,089	,022	,141	,088	,053	-,162	,101	,018	(,770)	
,494***	,157	-,033	,149	,450***	-,078	,056	-,135	-,135	,266	(,724)

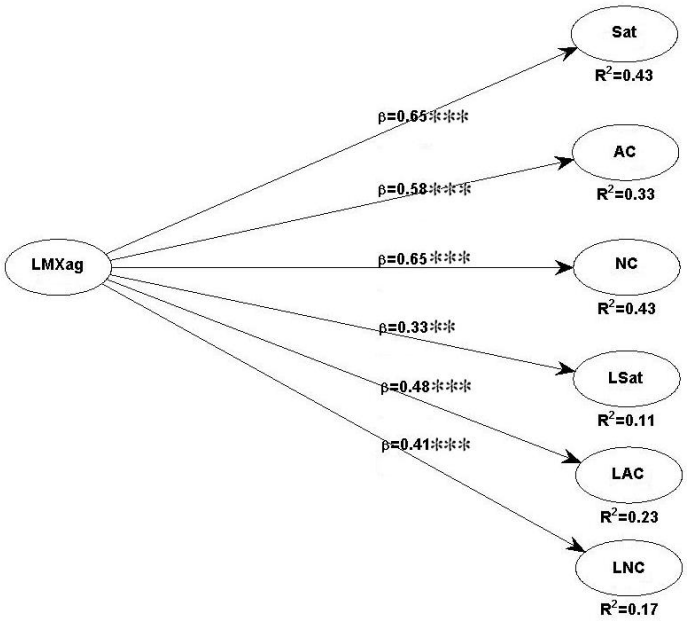
3.2 Structural Models

This section presents all of it results in conformity with the hypothesis' order. Each of the following sub-sections will include a brief explanation of the considered model, followed by the model fit indicators (APC, ARS and AVIF or AFVIF). Only the significant relations, and their respective beta coefficients (β), effect sizes (f^2) and the R^2 values, will be shown on the model figures and compared with the model's underlying hypothesis (barring any noteworthy exception). Regarding the Moderation models, the moderating factors will have an influence in the main relation when the corresponding path coefficient is significantly different from zero (Baron & Kenny, 1986).

3.2.1 LMX Agreement, job satisfaction, and organizational commitment

This is the first agreement model of the study and its purpose is to verify if it matches Cogliser et al.'s (2009) results regarding LMX agreement, in respect to subordinate outcomes of job satisfaction and organizational commitment. In this model *Figure 4* LMX agreement is placed as a predictor of both leader and subordinate outcomes. Regarding this model all the fit indicators are statistically significant and well into the accepted values, and therefore

indicators of good model fit (APC = ,517; p < ,001; ARS = ,282; p = ,003; AFVIF[6] = 1,814).



As we can see in

Figure 4, Hypothesis 1A (LMX agreement is expected to be positively correlated to every leader and subordinate outcome: $\beta \neq 0$) was verified. LMX agreement shows a positive correlation with all outcomes. The highest correlation is between subordinate job satisfaction (β = ,65; p < ,001; f^2 = ,43) and subordinate normative commitment (β = ,65; p < ,001; f^2 = ,43). LMX correlations with leader outcomes are generally lower but still significant: Leader Satisfaction (β = ,33; p = ,001; f^2 = ,11); Leader affective commitment (β = ,48; p < ,001; f^2 = ,23); Leader normative commitment (β = ,41; p < ,001; f^2 = ,17).

[6] Since there is only one predictor variable there is no AVIF indicator avaliable. Only the AFVIF could be reported.

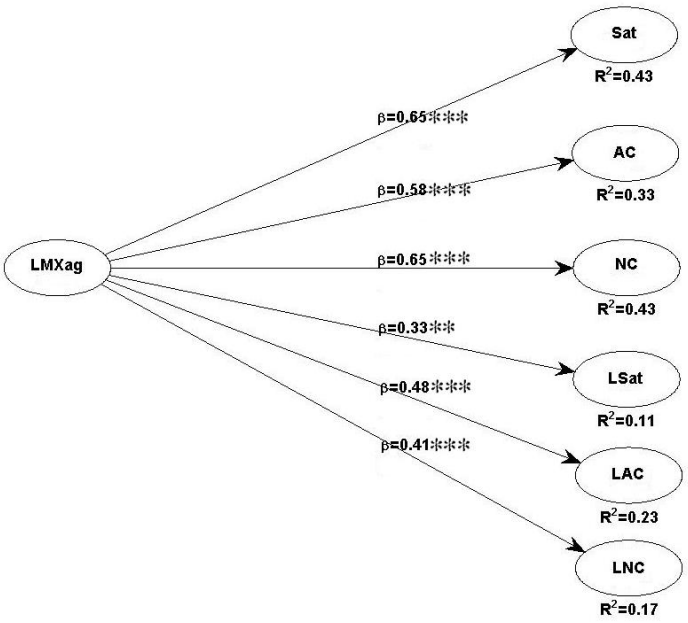


Figure 4 – LMX Agreement, job satisfaction, and organizational commitment model
Note. LMXag = LMX agreement; Sat = Satisfaction; AC = Subordinate Affective Commitment; NC = Subordinate Normative Commitment; LSat = Leader Satisfaction; LAC = Leader Affective Commitment; LNC = Leader Normative Commitment.
** $p < ,01$; *** $p < ,001$

3.2.2 LMX Disagreement, job satisfaction, and organizational commitment

This is the first disagreement model of the study and its purpose is to verify if it matches Cogliser et al.'s (2009) results regarding LMX disagreement, in respect to subordinate outcomes of job satisfaction and organizational commitment. In this model disagreement is placed as a predictor of both leader and subordinate outcomes. Unlike the previous model, not all fit indicators were as expected, which indicates LMX disagreement has a low predictive capabilities in general (APC = ,259; p = ,005; ARS = ,076; p = ,129; AFVIF = 1,577). As we can see in Figure 5, Hypothesis 1B (LMX disagreement is expected to be positively correlated to every subordinate outcome: $\beta \neq 0$) is only partially verified. LMX disagreement shows a positive and significant correlation with all subordinate outcomes as expected with moderate effect sizes: subordinate job satisfaction (β = ,36; p < ,001; f^2 = ,13), affective commitment (β = ,30; p = ,003; f^2 = ,09) and normative commitment

(β = ,31; p < ,002; f^2 = ,10). Interestingly, the only leader outcome with which LMX disagreement was positively correlated was leader normative commitment (β = ,32; p < ,002; f^2 = ,10) which seems to go against the predicted hypothesis. However upon further examination, the curved relation (*Figure 6*) between these variables clearly shows that the highest values are located at the negative extreme (i.e. follower under estimation) and also concentrated on the middle (agreement) which supports the hypothesis for leader normative commitment.

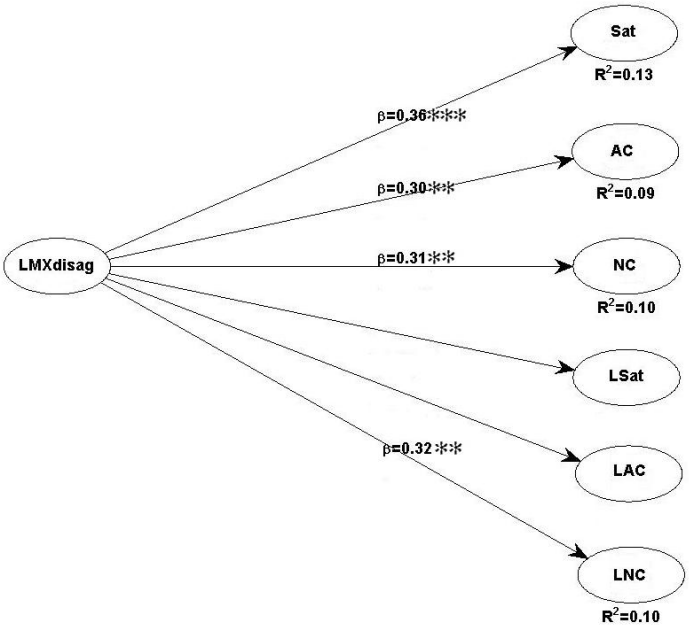


Figure 5 – LMX Disagreement, Job Satisfaction, and Organizational Commitment model
Note. LMXdisag = LMX disagreement; Sat = Satisfaction; AC = Subordinate Affective Commitment; NC = Subordinate Normative Commitment; LSat = Leader Satisfaction; LAC = Leader Affective Commitment; LNC = Leader Normative Commitment.
** p < ,01; *** p < ,001

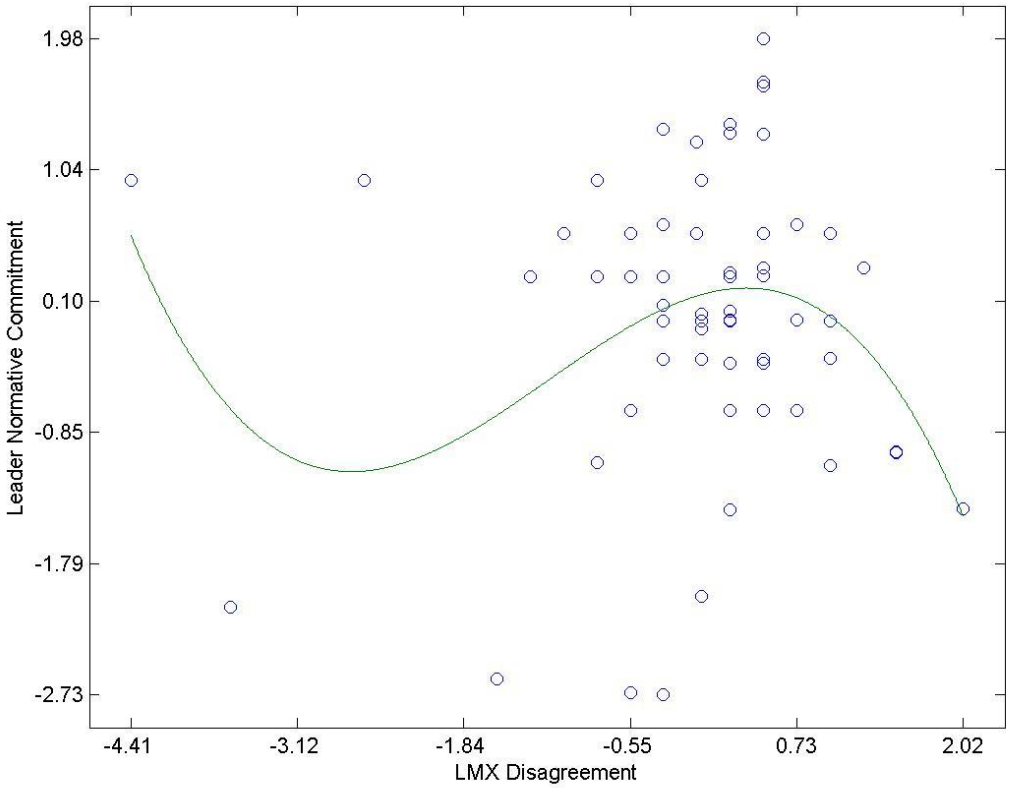


Figure 6 – *S*-shaped non-linear relationship between LMX disagreement and Leader Normative Commitment

Note. Standardized Values

3.2.3 Moderating effect: LMX agreement x Positive affect

This is the second agreement model of the study and its purpose is to assess the moderating influence of positive affect on subordinate outcomes exclusively. In this model positive affect is placed as moderating factor of the relation between LMX agreement and the subordinate outcomes. Regarding this model all the fit indicators were statistically significant, and therefore indicators of good model fit (APC = ,326; p < ,001; ARS = ,382; p < ,001; AVIF = 1,629). However, hypothesis 2A (Positive affect is expected to moderate the relation between LMX agreement and subordinate outcomes especially satisfaction and affective commitment: $\beta_{moderation} \neq 0$) is not verified, as none of the moderation beta scores were statistically significant.

3.2.4 Moderating effect: LMX disagreement x Positive affect

This is the second disagreement model of the study and its purpose is to assess the moderating influence of positive affect on subordinate outcomes exclusively. In this model positive affect is placed as moderating factor of the relation between LMX disagreement and the subordinate outcomes. Regarding this model the average VIF was slightly above the expected value of 5 indicating vertical collinearity (between predictor variables) (APC = ,396; $p < ,001$; ARS = ,328; $p < ,001$; AVIF = 5,536). Notably, subordinate affective and normative commitment were removed from the model as they were a "Simpson's paradox", as the path coefficients had a different sign than the variable correlations). According to Kock (2015), the possible explanations for this scenario include: high collinearity (vertical or horizontal); reversed direction of the relations; and the use of non-linear algorithms. Given that there are no theoretical arguments to support a reversed relation between LMX disagreement and organizational commitment and that the AVIF is above the expected threshold it is assumed that high predictor collinearity is responsible for this occurrence. With these results in mind, the moderation hypothesis 2B (Positive affect is expected to moderate the relation between LMX disagreement and subordinate outcomes especially satisfaction and affective commitment: $\beta_{moderation} \neq 0$) was rejected as the results were seen as statistically unreliable.

3.2.5 Moderating effect: LMX agreement x Negative affect

This is the third agreement model of the study and its purpose is to assess the moderating influence of negative affect on subordinate outcomes exclusively. In this model negative affect is placed as moderating factor of the relation between LMX agreement and the subordinate outcomes. Regarding this model all the fit indicators were as expected and statistically significant (APC = ,372; $p < ,001$; ARS = ,374; $p < ,001$; AVIF = 1,147). As we

can see in *Figure 2*, Hypothesis 3A (Negative affect is expected to moderate the relation between LMX agreement and subordinate outcomes especially satisfaction and affective commitment: - $\beta_{moderation} \neq 0$) is only partially verified, although in conformity with the strongest expected results. The only moderating effect of negative affect happened in the relation between LMX agreement and subordinate affective commitment (β = -,29; p < ,005; f^2 = ,12). This supports the negative moderation of high negative affect states. When this happened, LMX agreement explained 41% of the variance of affective commitment.. An overview of the moderated non-linear graph (*Figure 7*) shows clearly that for low negative affect levels there is a strong positive relation between LMX agreement and affective commitment. When negative affect states are higher, that relation becomes significantly weaker to the point where it becomes practically irrelevant.

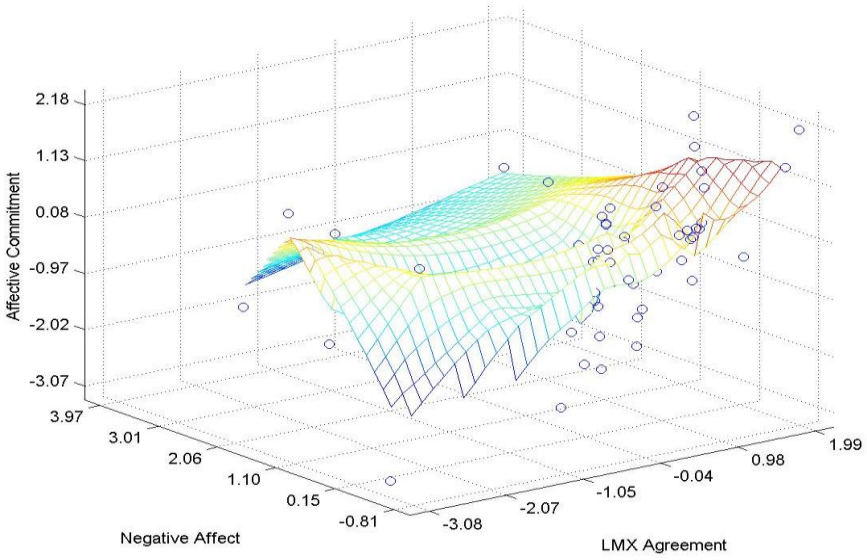


Figure 7 – Non-linear moderating effect of Negative affect on the relationship between LMX Agreement and Affective Commitment

Note. Standardized Values

3.2.6 Moderating effect: LMX disagreement x Negative affect

This is the third disagreement model of the study and its purpose is to assess the moderating influence of negative affect on subordinate outcomes exclusively. In this model negative affect is placed as moderating factor of the relation between LMX disagreement and the subordinate outcomes. Regarding this model all the fit indicators were as expected and statistically significant (APC = ,252; p = ,006; ARS = ,172; p = ,033; AVIF = 1,123). Hypothesis 3B (Negative affect is expected to moderate the relation between LMX disagreement and subordinate outcomes especially satisfaction and affective commitment: - $\beta_{moderation} \neq 0$) is partially supported. Results show that the only moderating effect of negative affect is statistically relevant to the relation between LMX disagreement and both affective and normative organizational commitment (respectively β = -,27; p = ,009; f^2 = ,0,11; β = -,24; p = ,017; f^2 = ,0,08). When this happened, LMX agreement explained 24% of the error variance for subordinate affective commitment and 18% for subordinate normative commitment. A brief overview of the NA moderated non-linear graph of the LMX disagreement - AC relation (*Figure 8*) shows how the positive relation between those variables is warped into a reversed U-shaped curve with the top values gathered near 0 LMX disagreement (i. e. closer to the original mean) as NA is higher. The NA moderated non-linear graph of the LMX disagreement - NC relation (*Figure 9*) shows how the positive relation between those variables is reversed with higher NA levels. Note that the highest levels of NC are located near 0 LMX disagreement (i. e. closer to the original mean), when NA is at its highest, possibly suggesting the same reversed U-shaped curve seen in the previous example but with a softer curve.

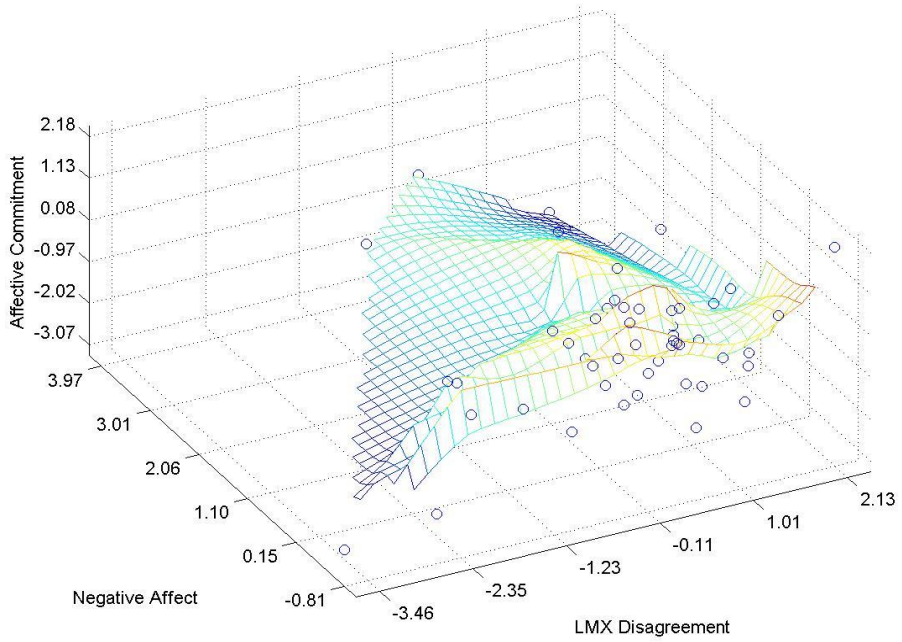


Figure 8 – Non-linear moderating effect of Negative affect on the relationship between LMX Disagreement and Affective Commitment

Note. Standardized Values

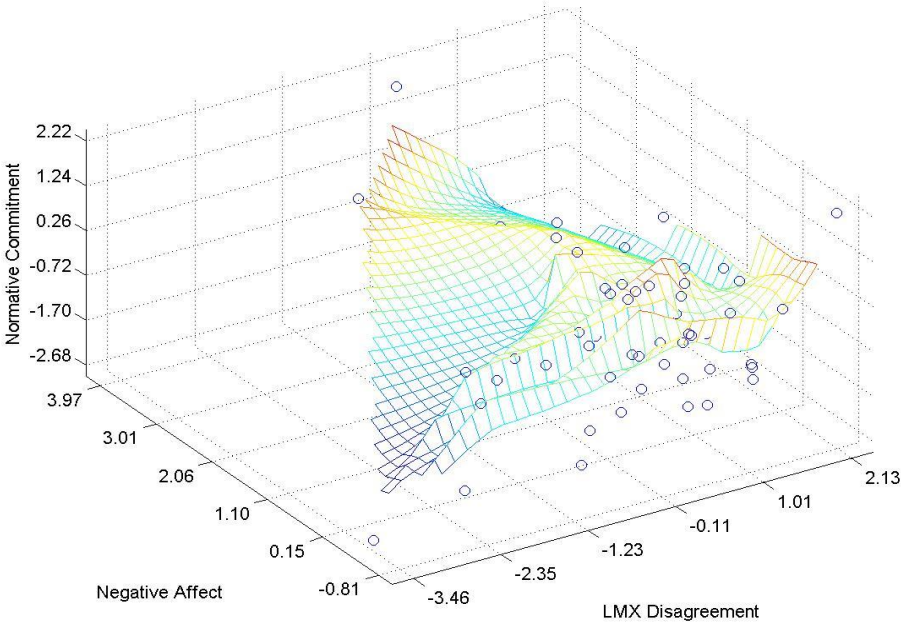


Figure 9 – Non-linear moderating effect of Negative affect on the relationship between LMX Disagreement and Normative Commitment

Note. Standardized Values

3.2.7 Moderating effect: LMX agreement x Trust and LMX agreement x Leader Trust

This is the fourth agreement model of the study and its purpose is to assess the moderating influence of leader and subordinate trust, respectively, on leader and subordinate outcomes. In this model trust is placed as moderating factor of the relation between LMX agreement and the subordinate outcomes, while leader trust is placed as a moderating factor of the relation between LMX agreement and the leader outcomes. There was a serious issue of high collinearity between subordinate trust and LMX agreement as the correlation between the two was very high (r = ,948; p = ,001). As such the moderating factor of subordinate trust (and subordinate outcomes) was removed from the model. The resulting model, only includes leader trust as the moderating factor of the leader outcomes. All model fit indicators were well within the acceptable ranges (APC = ,336; p < ,001; ARS = ,326; p < ,001; AVIF = 1,155). According to the obtained results, Hypothesis 4A (trust is expected to moderate the relation between LMX agreement and leader outcomes, having higher trust lead to a weaker relation and vice-versa) is partially supported. Results show a significant negative moderating effect of trust (i.e. reduces the intensity of the relations between LMX agreement and leader outcomes) for leader satisfaction (β = -,55; p < ,001; f^2 = ,0,33), affective commitment (β = -,34; p = ,001; f^2 = ,0,16) and normative commitment (β = -,36; p < ,001; f^2 = ,0,16). In these instances the percentage of error variance which LMX disagreement explained is, respectively, 37%, 32%, and 28%.

3.2.8 Moderating effect: LMX disagreement x Trust and LMX disagreement x Leader Trust

This is the fourth disagreement model of the study and its purpose is to assess the moderating influence of leader and subordinate trust, respectively, on leader and subordinate outcomes. In this model trust is placed as moderating factor of the relation between LMX disagreement and the subordinate outcomes, while leader trust is placed as a moderating factor of the relation between LMX disagreement and the leader outcomes. Based on the previous collinearity issues with trust and agreement, some degree of collinearity was expected. Unsurprisingly, there were vertical and lateral collinearity issues as indicated by the AFVIV = 7,065. The ARS was also higher than acceptable (ARS = 0,028; p = ,204). Upon examination of the path signs evidence was found of a "Simpson's paradox" for all outcome variables. Given the low ARS and high AFVIF, the hypothesis 4B (leader/subordinate trust is expected to moderate the relation between LMX disagreement and leader outcomes: $\beta_{moderation} \neq 0$) is completely rejected, as the high multicollinearity between the predictor and latent criterion variables interferes with the predictive capability of LMX disagreement

3.2.9 LMX agreement, Job Satisfaction agreement, and Organizational Commitment agreement

This is the fifth agreement model of the study and its purpose is to assess how well LMX agreement predicts other forms of agreement. In this model LMX agreement is placed as a predictor of job satisfaction agreement, affective commitment agreement and normative commitment agreement. Regarding this model all the fit indicators are statistically significant and well into the accepted values, and therefore indicators of good model fit (APC = ,664; *p*

< ,001; ARS = ,441; p < ,001; AFVIF[7] = 1,970). As we can see in *Figure 10* – LMX Agreement, Job Satisfaction Agreement, and Organizational Commitment Agreement model*Figure 10*, Hypothesis 5A (LMX agreement is expected to be positively correlated to job satisfaction agreement and organizational commitment agreement (AC and NC): $\beta \neq 0$) was verified. LMX agreement shows a positive correlation with all the agreement outcomes: Job satisfaction agreement (β = ,66; p < ,001; f^2 = ,44), AC agreement (β = ,68; p < ,001; f^2 = ,46), NC agreement (β = ,65; p < ,001; f^2 = ,42). In these relations LMX agreement (i.e. agreement intensity) predicts respectively, 44%, 46% and 42% of error variance (the value of the effect sizes).

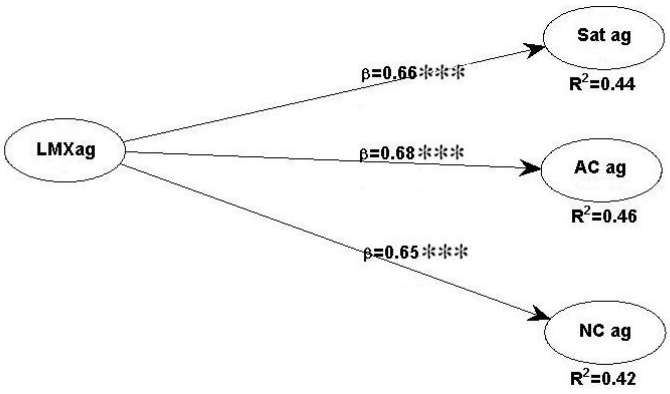


Figure 10 – LMX Agreement, Job Satisfaction Agreement, and Organizational Commitment Agreement model

Note. LMXag = LMX agreement; Sat ag = Job Satisfaction agreement; AC ag = Affective Commitment agreement; NC ag = Normative Commitment agreement.

*** p < ,001

3.2.10 LMX disagreement, Job Satisfaction disagreement, and Organizational Commitment disagreement

Lastly, this is the fifth disagreement model of the study and its purpose is to assess how well LMX disagreement predicts other forms of disagreement. In this model LMX disagreement is placed as a predictor of job satisfaction disagreement, affective commitment

[7] Since there is only one predictor variable there is no AVIF indicator avaliable. Only the AFVIF could be reported.

disagreement and normative commitment disagreement. Unlike what happened in the previous model (see 3.2.9) this model's fit indicators revealed lack of fit (APC = ,271; p = ,004; ARS = ,089; p = ,112; AFVIF[8] = 1,209). The main issue here is the predictive power of LMX disagreement. As it turns out, LMX disagreement only significantly predicted the levels of satisfaction disagreement (β = ,44; p < ,001; f^2 = ,20). Therefore hypothesis 5B (LMX disagreement is expected to be positively correlated to job satisfaction disagreement and organizational commitment disagreement (AC and NC): $\beta \neq 0$) was partially verified. Upon inspection of the graph (*Figure 11*) for the significant relation, it is possible to see that as there is a convergence in agreement (i.e. LMX disageeement near zero) the levels of satisfaction disagreement also come closer to zero (i.e. job satisfaction agreement).

[8] Since there is only one predictor variable there is no AVIF indicator avaliable. Only the AFVIF could be reported.

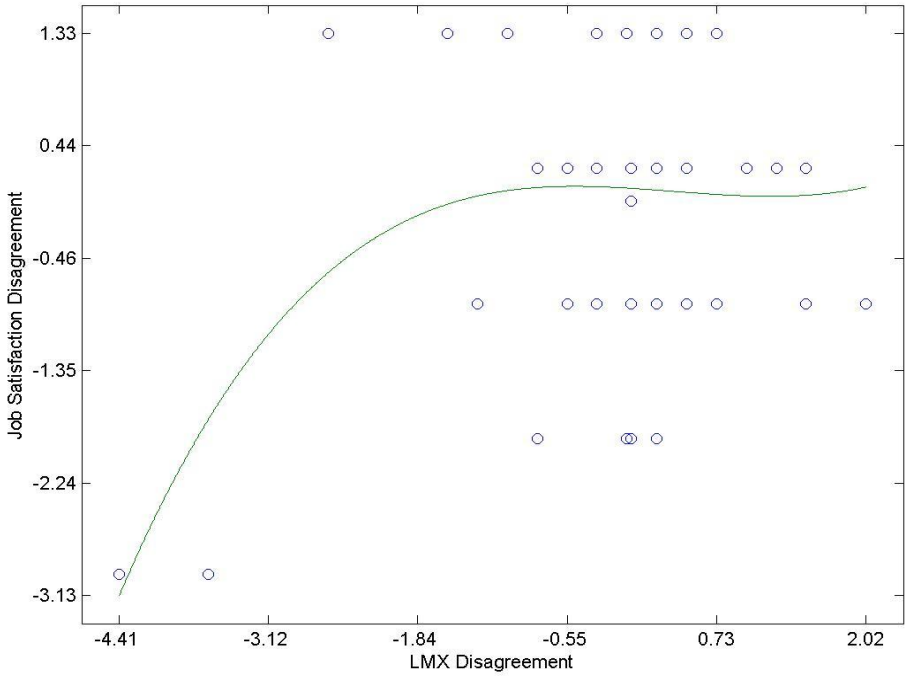


Figure 11 – J-curved relationship between LMX disagreement and Job Satisfaction Disagreement

Note. Standardized Values

4. Discussion

Literature regarding LMX agreement has been scarce. Rather, it has focused most of its attention on subordinate perceptions of LMX (Dulebonh et al., 2012). Hoping to remedy that discrepancy in literature, this investigation had two purposes: 1 – to assess the link between LMX agreement and job satisfaction and organizational commitment (Cogliser et al., 2009) through the use of different measures and statistical methods; 2 – to determine the moderating influence of trust and affect (relational and dispositional factors respectively) in the link between LMX agreement and job attitudes.

Despite the fact that not all hypotheses were accepted, the findings in this investigation help shed some light over LMX agreement. Most importantly, they show that the outcomes of agreement are significantly volatile and prone to change under different influences. An examination of the results and its theoretical implications follow.

4.1 LMX agreement and disagreement

Throughout LMX literature there has been extensive research on the outcomes of LMX, which include but are not limited to, job satisfaction and organizational commitment. More recently, one of the first studies to use LMX agreement as an independent variable was conducted (Cogliser et al., 2009).This investigation had two aims: to replicate a previously validated Model of LMX and to assess possible moderating effect of dispositional affectivity and trust.

Regarding the first objective, I conclude the results do support the hypothesis in general. This is a robust finding for LMX agreement literature as it: corroborates Cogliser et al.' (2009) results, and reinforces the need for more attention to the aspect of LMX

agreement. Another interesting finding is the relation between self-other rating patterns. As is turns outs: the levels of LMX agreement do predict other forms of job attitudes' agreement.

Regarding LMX disagreement, the hypothesis were partially verified. The subordinate overestimation pattern was evidenced in conformity with Cogliser et al. (2009) findings. In contrast the hypotheses regarding leader outcomes were rejected. It was expected that leaders' attitudes would manifest themselves in the same pattern as subordinate attitudes for both agreement and disagreement. Results show that while LMX agreement predicts leader outcomes, LMX disagreement does not. Instead, LMX disagreement positively predicts leader normative commitment alone.

One possible explanation for these results might lie in a basic principle of LMX theory. As opposed to an average style of leadership leaders behave differently between dyads or groups of dyads (Densereau, Graen, & Haga, 1975). While subordinates may experience different job attitudes when they perceive LMX as high as they represent on end of a dyad. Leaders on the other hand are frequently at the ends of several dyads. This may result in attitudinal responses that manifest themselves differently during scenarios of leader overestimation of LMX. Another explanation could be a self-other measure perceived similarity bias. This also explains the high correlation between subordinate and leader LMX. As mentioned before, assumed similarity is a information based bias that leads raters to evaluate others according to a degree of perceived similarity between them (Watson, Hubbard, & Wiese, 2000). It is extremely likely that this phenomenon occurred in the sample containing subordinate-only measures of "self-other" ratings, making it harder for subordinates to rate themselves differently from their leaders in terms of LMX.

This might be the reason why leader NC assumes an S-shaped pattern through the LMX disagreement scale (see *Figure 6*). Perhaps the predicted relation of higher leader NC during leader overestimation, would have been verified if it weren't for the concentration of data

around agreement and the results would manifest in the expected way. This draws attention to future methods of self-other ratings operationalizations as kwan et al. proposed.

4.2 Moderations

The second aim ofthe present investigation was to assess the influence of dispositional affect and trust (exclusively) in the relationship between LMX agreement and attitudinal outcomes. Regarding Dispositional affect, the confirmed hypothesis highlight a negativity bias. Truly, while none of the PA scores were significant in any scenario,NA had a significant moderating effect on more than one occasion. The relationship between LMX agreement and AC got weaker, as negative affectivity got higher. The relation between LMX disagreement and both NC and AC also got weaker as NA got higher. Notably, There was a shift from a positive relation to a U-shaped relation. This means That not only did NA impoverish the quality of AC ratings for agreement, it also suppressed those ratings when subordinates overestimated LMX.

It seems that the classical negativity bias had a particularly interesting effect in neutering the outcomes derived from follower overestimation of LMX. A less surprising result is the negative impact in LMX agreement ratings. As aforementioned, NA hurts individuals' perceptions, and attitudinal outcomes, and rating quality. The reason the link between LMX agreement and job satisfaction was not affected by NA dispositions might reflect a more importat issue. As suggested by Judge (1993), individuals with lower NA are worse raters of satisfaction as they tend to miss the true sources of satisfaction. The same author suggests that job satisfaction exists independently of affective dispositions for that matter. The fact that LMX agreement predicts satisfaction for low NA individuals means they are likely making evaluations of job satisfaction based on other informations as well, and not just LMX agreement.

Regarding the moderating role of trust, most hypotheses were not confirmed due to collinearity problems. However, trust did have a significant moderating role on leader outcomes, by reducing their relation with LMX agreement. Given the possibility of a similarity bias with the subordinate-only measures this finding is even more important. It could suggest that higher levels of trust dissipate the relation between LMX agreement and subordinate other ratings. In other words, the higher the rated (or believed) level of trust from the other person, the less significant the impact of LMX quality other ratings of leader attitudes. This ties up with the results regarding propensity to trust (Poon, Salleh, & Senik, 2007). It also falls into the arguments by Dirks and Ferrin (2001). Indeed, trust had a role in influenced the trustor's interpretations of leader LMX actions, but not their own actions.To summarize both dispositional affect and trust stood out when moderating the relations between LMX agreement and attitudinal outcomes. Overall these findings raise a red flag over LMX agreement. They suggest that this phenomenon's outcome configurations may assume different patterns under the influence of dispositional factors, perceptions, and contexts.

4.3 Limitations and Future Research

One of the most critical aspects of this investigation was the use of two self-other rating methods combined. While is an aproximation of Kwan et al. (2004) recommendations, it was still subjected to varied forms of bias. Future studies hoping to address LMX agreement should take care in how they operationalize self-other ratings and how they draw their conclusions.

Secondly, LMX was assessed from a unidimentional perspective and as such there were no opportunities to examine the contributions of each LMX dimension to LMX agreement outcomes, amongst others. LMX has been defined as a multidimentional construct (Liden &

Maslyn, 1998). The use of a multidimensional scale of LMX might yield important informations regarding which dimensions share the most agreement and how they correlate to different outcomes of LMX agreement, rather that exploring a unidimentional correlation.

Finally, The nature of LMX agreement should be assessed as well as it has not been explored enough although there are plenty of factors to explore as indicated by Fleenor et al. (2010).

4.4 Conclusion

To summarize, the results seen here clearly demonstrate that LMX agreement is a complex phenomenon. Its influence upon different outcomes varies different types of "context" moderators, whether it is intensified or nullified. Academics should feel optimistic as this is potentially rich area of research. Also they should not disregard the contributions of leader in LMX relations, and instead make a push in this direction.

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