

**Servant Leadership: A Meta-Analytic Examination of Incremental Predictive Validity,
Moderation and Mediation**

Keywords: Servant leadership, meta-analysis, performance, organizational citizenship, trust in leader, leader-member exchange, procedural justice.

Abstract

Research suggests that when leaders, as servant leaders, focus on their followers' needs, this can have a positive effect on organizational functioning. Yet results are inconsistent in establishing the strength of the relationships, limiting understanding of the theoretical impact and practical reach of the servant leadership (SL) construct. Using a quantitative meta-analysis based on 130 independent studies, the current research provides evidence that SL has incremental predictive validity over transformational, authentic, and ethical leadership. Further, the link between SL and a range of individual- and team-level behavioral outcomes can be partially explained by trust in the leader, procedural justice and leader-member exchange. The paper also explores moderators to better establish SL's criterion-related validity and to clarify the magnitude of effects across boundary conditions, such as research design, national culture, and industry.

Practitioner Points

- SL has predictive validity over other leadership approaches, and therefore organizations would benefit by developing their current leaders into SLs.
- Organizations should aim to select SLs into influential positions: training programs and selection profiles and processes would need to be aligned and developed to capture attitudes and behaviors associated with SL inside and outside the organization.
- SLs should seek to create a culture that positively promotes the development of trust, fairness and high-quality leader-follower relationships, as these conditions collectively enable the effects of SL to be transmitted onto desirable follower outcomes.

In an era when corporate scandals have become increasingly rife, organizational leaders are striving to act more responsibly to re-build trust with followers (Pless, Maak, & Waldman, 2012). Consequently, there is a growing appetite for more moral and ethical styles of leadership (Lemoine, Hartnell, & Leroy, 2019), with an emerging and increasingly influential form being that of servant leadership (SL). SL explicitly captures the dimensions of personal integrity and social responsibility, rarely seen in more traditional and positive leadership constructs (Ehrhart, 2004); leading to an upsurge of research testing the criterion-related and incremental predictive validity of SL (e.g., Chan & Mak, 2014; van Dierendonck, Stam, Boersma, de Windt, & Alkema, 2014). Recently, Eva, Robin, Sendjaya, van Dierendonck, and Liden, (2018) conducted a systematic review of the literature, consolidating what we know about SL in a comprehensive nomological network and proposing a detailed future research agenda based on considerable gaps in the literature. We draw upon several of these gaps below and discuss how the current paper seeks to address them.

Firstly, a longstanding debate regarding the conceptual overlap and potential redundancy of the SL construct with related leadership constructs (e.g., transformational, ethical, authentic: Antonakis, Ashkanasy, & Dasborough, 2009; Banks, McCauley, Gardner, & Guler, 2016) continues to plague the literature (Lemoine et al., 2019). Indeed, findings from a recent meta-analysis on leadership behaviors (Banks, Gooty, Ross, Williams & Harrington, 2018) suggest large correlations between SL and transformational leadership (TL) ($r = .52; k = 5$), as well as other morally-based leadership approaches, namely authentic leadership (AL; e.g., Avolio & Gardner, 2005; $r = .60; k = 1$) and ethical leadership (EL; e.g., Brown, Treviño & Harrison, 2005; $r = .81; k = 1$), although it should be noted that these results were based on very few (often single) studies. Furthermore, while Hoch, Bommer, Dulebohn, and Wu (2018) did find meta-analytic evidence of the incremental predictive validity of SL over TL, its incremental predictive validity over AL and EL is yet to be

empirically established. Eva et al. (2018) have since called for “researchers to use more robust methods to test [servant leadership’s] incremental or predictive validity over existing leadership theories” (p. 4). Using meta-analysis, this paper aims to provide much-needed evidence for the empirical distinctiveness of SL, assessing its relative value for predicting a range of work outcomes over the aforementioned leadership styles.

Secondly, it remains unclear exactly how SL elicits positive outcomes. While research has posited various processes to explain these effects (e.g., Chan & Mak, 2013; Newman, Schwarz, Cooper, & Sendjaya, 2017; Yoshida, Sendjaya, Hirst, & Cooper, 2014), such explanations have typically been derived from differing, often competing theoretical frameworks (e.g., social exchange theory, Blau, 1964; social learning theory; Bandura, 1986; social identity theory, Tajfel, 1978), leaving it unclear as to which offers the most consistent explanation. Indeed, in the nomological network presented by Eva et al. (2018), 35 different mediators in four different categories (employee and job-centred; leader-centred; team-centred; climate and organization-centred) were identified as demonstrating significant indirect effects in previous research, suggesting that despite the proliferation of studies on SL, we are still no clearer on establishing which theoretical pathway(s) explain the effects. A more parsimonious model, proposed by van Dierendonck (2011), concentrated on two major pathways through which SL is argued to influence follower, performance and organizational outcomes, namely *high-quality leader-follower relationships (LMX)*, and *psychological climate* (i.e., trust and fairness). In this paper, we therefore test these alternate pathways to uncover which, if any, provides the strongest explanation for understanding the psychological processes that underlie the SL-performance relationship, thus beginning to clarify the nomological network of SL, rather than simply adding more mediators to an already over inclusive framework. Testing this model also directly addresses calls to incorporate competing mediators in the same model as a means of building a more accurate

understanding of the influence of SL (Antonakis et al., 2010; Eva et al., 2018). As Leavitt, Mitchell and Peterson (2010) point out, despite the potential utility in doing so, meta-analyses are rarely used to compare alternative theories.

Thirdly, while many existing studies demonstrate the association between SL and follower outcomes (see Eva et al., 2018), the strength of the effects reported varies greatly, with some reporting relatively strong correlations (e.g., Ling, Lin & Wu, 2016), and others suggesting far weaker relationships (e.g., Neubert, Hunter & Tolentino, 2016), limiting our understanding of SL. Relatedly, there have been recent calls for future research to more clearly establish the boundary conditions of SL (Donia, Raja, Panaccio, & Wang, 2016; Liden, Panaccio, Meuser, Hu, & Wayne, 2014), particularly through the lens of alternative theoretical perspectives that go beyond those typically applied, namely social-based theories (Eva et al., 2018). In direct response to Eva et al. (2018), we use insights from situational strength theory (Meyer, Dalal, & Bonaccio, 2009; Meyer, Dalal, & Hermida, 2010) to more clearly establish SL's criterion-related validity and clarify the magnitude of effects across various boundary conditions. Indeed, the consistency and generalizability of findings on SL in various contexts, including different cultures (i.e., vertical-collectivistic *versus* horizontal-individualistic), industries (i.e., high *versus* low industry-capital intensive), and research designs (e.g., self-rated *versus* externally-rated performance), are yet to be comprehensively assessed (van Dierendonck, 2011). To address these research objectives, we present the largest meta-analysis of SL conducted to date. Given the imperative for more sophisticated research designs on SL (Eva et al., 2018), meta-analysis enabled us to test complex models incorporating multiple moderators and mediators that would be difficult, if not impossible, to test in single studies (Schmidt, 2010).

Theoretical Foundations and Hypothesis Development

SL theory is based on the fundamental premise that servant leaders are primarily driven by empathy, altruism, and a sense of community stewardship (Chiniara & Bentein, 2016; Greenleaf, 1977), with this ethical imperative driving their deep and unwavering commitment to follower growth, empowerment and well-being (Liden, Wayne, Zhao, & Henderson, 2008). The premise of SL theory is that by first enabling the fulfilment of followers' personal ambitions, the achievement of long-term organizational objectives will follow. While the literature has struggled to reach a consensus on the precise definition and measurement of SL (e.g., Newman et al., 2017; VanMeter, Chonko, Grisaffe, & Goad, 2016), we adopt the definition recently advanced by Eva et al. (2018), who argue that "Servant leadership is an (1) other-oriented approach to leadership (2) manifested through one-on-one prioritizing of follower individual needs and interests, (3) and outward reorienting of their concern for self towards concern for other within the organization and the larger community" (p. 4). This definition captures the essence of SL through three key features; motive (other-oriented), mode (focus on follower growth) and mindset (concern for the wider community). It is also argued to afford a degree of flexibility for reflecting the different and multiple understandings of SL that exist (Eva et al., 2018). As SL theory emphasizes a leader's "moral responsibility is not only to the success of the organization, but also to his or her subordinates, the organization's customers, and other organizational stakeholders" (Ehrhart, 2004, p. 68), Lemoine and colleagues (2019), argue that SL's distinctive focus is on serving multiple stakeholders.

Main Effects of Servant Leadership

SL has been shown to relate to various performance-related outcomes. Thus, for the present study, we take a multi-dimensional view of workplace performance. At the individual level, we focus on five specific dimensions: task performance; OCBs; counterproductive behavior (CPB); creativity; and employee voice. At the team level, we explore team

performance and OCBs. Thus, building upon Hoch et al.'s (2018) and Banks et al.'s (2018) meta-analyses, which focused on in-role job performance and OCBs, we examine a wider variety of work-related behaviors at different levels of analysis in order to better understand the practical reach of the SL construct.

Firstly, we expect SL to be positively associated with individual and team performance. Research has demonstrated that SLs display a strong developmental orientation, provide timely feedback and support skill development (Chen et al., 2015). This improves followers' task performance by enhancing their abilities to meet objectives and perform as required (Chen et al., 2015; Hu & Liden, 2011). SLs have also been shown to influence team performance by affirming team strengths and potential and providing collective developmental support (Hu & Liden, 2011). Further, SLs promote the welfare of others by conveying support to individual group members, minimizing relationship conflicts, and nurturing the broader potential of individual members and a sense of community within the work group (Schaubroeck et al., 2011).

Hypothesis 1: *SL is positively related to individual task performance (H1a), and team performance (H1b).*

Secondly, SL theory posits that, as leaders encourage higher levels of moral reasoning in followers (Graham, 1991), and act in ways that prioritize follower needs over self-interest, subordinates experience an increased sense of empowerment, growth and well-being (Panaccio, Henderson, Liden, Wayne, & Cao, 2015) and reciprocate with heightened OCBs (Liden, Wayne, Liao, & Meuser, 2014). At the team level, SLs develop collective trust in the leader, which can also be enhanced by the way that the servant leader empowers the group and provides support designed to assist the team meet its goals. When team members feel that the leader can be trusted, members respond not only by performing well as a collective, but also engage in discretionary behaviors (Liden, Wayne, Meuser, Hu, Wu, & Liao, 2015).

Hypothesis 2: *SL is positively related to individual OCB (H2a), and team OCB (H2b).*

Third, we focus on CPB. CPB comprises a collection of voluntary behaviors that detract from organizational objectives (such as unruliness, theft or aggression) and ultimately harm organizational well-being (Rotundo & Sackett, 2002). SLs are role models for behavioral integrity and authenticity (Panaccio et al., 2015), so CPB is likely to be mitigated in the presence of SL. Conversely, those low in SL are more likely to be perceived as selfish and ego-centric, putting their own needs above others, meaning that CPB is likely to increase. To date, research has focused mainly on the effects of SL on individual-level CPB.

Hypothesis 3: *SL is negatively related to individual CPB.*

The altruistic tendencies of SLs have also been shown to have a positive impact on employee creativity (Neubert, Kacmar, Carlson, Chonko, & Roberts, 2008; Yoshida et al., 2014). SL is argued to create a climate of trust and psychological safety (Schaubroeck et al., 2011) where followers are inspired to take risks and develop new, more innovative ways of working (Kark & Carmeli, 2009). Again, studies investigating the effects of SL on creativity have largely focused on the individual level.

Hypothesis 4: *SL is positively related to individual creativity.*

Finally, we expect SL to be associated with individual voice. Voice refers to behaviors through which employees proactively make recommendations and express concerns (Van Dyne & Lepine, 1998). Relatively few studies have explored the role of SL in predicting employee voice. Those that have theorize that leaders persuade followers to believe that they have skills, knowledge and abilities to improve work situations and meet personal and others' needs and growth (Duan, Kwan, & Ling, 2014).

Hypothesis 5: *SL is positively related to individual voice.*

Servant Leadership and Follower Behavior: Moderating Variables

The varied settings of the primary studies on SL suggest that a more nuanced understanding of the differences in individual and contextual settings is warranted (Liden et al., 2014). As Donia et al. (2016, p. 724) note, SL “may not be equally effective across contexts”, yet “few studies have considered boundary conditions which may enhance or buffer SL’s impact on employee outcomes”. Similarly, Eva et al. (2018, p. 14) note that only a limited number of studies have examined moderating factors that influence the effects of SL, and that future research needs to break the traditional theoretical lens that has confined understanding of the construct to date. We address this call by examining three moderators concerning contextual (national culture, industry-capital intensity) and personal (follower organizational tenure) factors.

The first moderator focuses on the cultural context of the primary studies. Eva et al. (2018) proposed situational strength theory (Meyer et al., 2009) as a fruitful perspective for addressing concerns regarding the lack of context captured in current SL research (Eva et al., 2018; Mumford & Fried, 2014). From the perspective of situational strength theory (Meyer et al., 2010), national culture is a key macro-level influence that could amplify the effects of SL in lower power distance contexts, such as the United States, where the SL construct was developed (Eva et al., 2018). Drawing on House, Javidan, Hanges, and Dorfman’s (2002) notion of culturally-endorsed implicit leadership theory, scholars argue that cultural aspects are associated with SL effects (Donia et al., 2016; Liden et al., 2014; van Dierendonck, 2011). Here we use the Hofstede cultural dimensions to examine national cultural dimensions based on the geographic locations where samples were drawn (Hofstede 2001). We focus on two aspects of national culture that are incorporated in Hofstede’s cultural model; power distance and individualism. Research has demonstrated that individualism–collectivism and power distance are the strongest predictors of a range of outcomes at the societal level (e.g., Taras, Kirkman, & Steel, 2010). Further, these two dimensions of national culture are also

most strongly associated with examinations of cross-cultural leadership (e.g., Ng, Koh, Ang, Kennedy, & Chan, 2011).

Individualism-collectivism relates to how a person views her- or himself in relation to the collective, whereas power distance describes the extent to which individuals accept social stratification and unequal distributions of power in society (Hofstede, 2001). In high power distance cultures, one is expected to hold greater respect for authority figures such as leaders and elders; clear hierarchal systems and large differences in power are expected and accepted, and employees are more accustomed to authoritative leadership styles. By contrast, in low power distance cultures, people are less obedient to authority and are more likely to regard themselves as independent of and equal in status to others (Rockstuhl, Dulebohn, Ang, & Shore, 2012). The behavioral norms of low power distance cultures should thus be more compatible with SL due to the value placed on equality between leaders and followers and the opportunity for leaders to demonstrate humility and development of followers; both essential elements of SL (Hale & Fields, 2007).

With regards to individual-collectivism, its moderating effect on SL is harder to predict. In cultures with higher levels of collectivism, individuals are integrated into strong cohesive groups in which group goals often supersede individual goals (e.g., House et al., 2002). In contrast, individualist cultures tend to prioritize self and focus on enhancing their self-esteem. Thus, the emphasis of SL to build community among followers could have particular relevance in collectivist cultures. However, collectivistic individuals are also likely to have invested time and effort into developing relationships with other individuals in the organization, such as co-workers and subordinates. Therefore, in collectivist cultures not only is the leader less likely to play a dominant role in meeting employees' needs in the workplace (e.g., Panaccio et al., 2015), the distinction between in-groups and out-groups that collectivism reinforces is also likely to be at odds with the requirement of servant leaders to

build relationships with co-workers and subordinates (Hale & Fields, 2007). Conversely, an individualist culture is likely to facilitate leadership with stronger focus on followers' individual growth and well-being, thus reflecting the core nature of SL. Indeed, a cross-cultural study examining SL in the US and Ghana confirmed that respondents from the US experienced SL behaviors significantly more than their Ghanaian counterparts, arguably due to the high levels of collectivism and high power distance that characterize Ghanaian cultural norms (Hale & Fields, 2007). Similarly, in a comparative study of SL, Pekerti and Sendjaya (2010) found that while SL was perceived to be culturally universal, specific attributes of the SL construct held differential importance across cultures. More specifically, the individualistic low power distance orientation of Australians was associated with a more consistent and direct display of SL behaviors related to the authentic self, as compared to the collectivistic high power distance orientation of Indonesians.

Hypothesis 6: It is expected that SL has a stronger relationship with individual-level task performance (H6a), OCB (H6b), CPB (H6c), creativity (H6d), voice (H6e) and team-level performance (H6f) and OCB (H6g) in low power distance individualistic cultures compared to high power distance collectivistic cultures.

A second macro-level influence that Meyer et al. (2010) highlight as having a moderating influence on leader-follower relationships pertains to occupational characteristics. Building on this, Eva et al. (2018) contend that the positive effects of SL could be partially contingent on the type of organization and industry within which leaders are operating. To explore this, we examine industry-capital intensity as an industrial-level moderator, which is a measure of the relative investment in fixed assets in an industry (Guthrie & Datta, 2008). SL researchers have noted the role of industrial context as an important future research direction (Anderson & Sun, 2017; Hunter et al., 2013; Liden et al., 2014). High-capital-intensity industries include manufacturing, shipbuilding and air transport because of the

greater constraints imposed on employee performance by the degree of production technology or task structure (Terpstra & Rozell, 1993). Low-capital-intensity industries include service industries (labor-intensive), where the human element is the key to organizational effectiveness (Terpstra & Rozell, 1993). We argue that SL will be most effective in low-capital-intensive industries where human capital is more emphasized: it is likely that leaders need to interact more frequently with followers in order to understand their needs, provide support and empowerment (Donia et al., 2016; van Dierendonck, 2011).

Hypothesis 7: Industry capital intensity moderates the relationship between SL and individual-level task performance (H7a) and OCB (H7b). It is expected that SL has a stronger, positive relationship with task performance and OCB in low capital-intensive industries compared to in high capital-intensive industries.

Finally, we focus on followers' organizational tenure as a third moderator. Employee organizational tenure has been found to directly link to work-related needs, attitudes and behaviors (Huang, Shi, Zhang, & Cheung, 2006) and reactions towards management practices (Ashforth & Saks, 2000), as well as being a key moderator. Wright and Bonett (2002) found in a meta-analysis that the correlation between organizational commitment and job performance is greatest with new employees and decays exponentially over time. Huang et al. (2006) also found that participative leadership increases short-tenure employee job performance and organizational commitment. We, therefore, propose that the effect of SL on follower performance will be stronger for employees with lower tenure for two reasons. First, shorter-tenured employees may have a higher need for SL; leaders may create better career development prospects for such employees by taking a more active role in encouraging and supporting their needs for personal development. Second, based upon human capital theory (Becker, 1985), longer tenure is likely to be associated with greater job performance; conversely, longer-tenured employees may be less receptive to, SL, because their tenure is

likely to be accompanied by increases in declarative and procedural knowledge, thus weakening the positive effect of SL on performance.

Hypothesis 8: *Follower organizational tenure moderates the relationship between SL and individual-level task performance (H8a), OCB (H8b), CPB (H8c), creativity (H8d), voice (H8e) and team-level performance (H8f) and OCB (H8g). It is expected that SL has a stronger, positive relationship with task performance and OCB for shorter-tenured followers than for longer-tenured followers.*

Relative Predictive Validity of Servant Leadership

SL has been consistently subjected to critical comparisons with other, more established leadership theories (van Dierendonck, 2011). While, Hoch et al. (2018) provided meta-analytic support for the incremental predictive validity of SL over TL: analysis showed that SL explained important incremental variance in employee OCBs, but little in job performance. However, the meta-analysis was narrowly focused, comparing the effects of SL with TL only, and focused on a limited set of performance outcomes – job performance and OCB. Thus, it is unclear whether SL predicts other forms of employee behavior (i.e., CPB, creativity and voice) over other leadership styles (i.e., EL and AL).

SL is argued to be conceptually distinct from other major leadership theories primarily due to the emphasis placed on ethics and behavioral integrity (Ehrhart, 2004; Hu & Liden, 2011). In attempting to establish SL as a unique and influential leadership style, most research has examined its relation to TL – both styles emphasize individual growth and development (Bass, 1985). However, a key point of conceptual departure concerns the focus of the leader's goal (Parolini, Patterson, & Winston, 2009). While TLs are primarily concerned with advancing organizational objectives (Bass, 2000), SLs ultimately aim to serve their followers and the needs of the wider community above all else (Graham, 1991), potentially at the expense of their own needs and organization's interests. This unconditional

concern for follower growth conceptually distinguishes SL from TL. In turn, followers engage in appropriate performance-related behaviors, not through coercion or obligation, but because they genuinely believe in the guiding principles of the SL and view them as a role model (Liden et al., 2014). This may explain the incremental predictive validity that SL has demonstrated over TL in recent studies (Liden et al., 2008; Peterson, Galvin & Lange, 2012). Here we further explore the incremental predictive validity of SL over TL, exploring a wider range of follower outcomes.

Hypothesis 9: *SL predicts individual-level task performance (H9a), OCB (H9b), CPB (H9c), creativity (H9d), voice (H9e), and team-level performance (H9f), and OCB (H9g) over TL.*

SL also has many conceptual overlaps with emerging forms of positive leadership that emphasize ethical and moral behavior (authentic, spiritual and ethical) and those that emphasize putting followers first (empowering and self-sacrificing). However, far less is known about the distinctiveness of SL against these newer forms of leadership. Based on the availability of studies to date, the current research focuses specifically on the incremental predictive validity of SL over AL and EL. These leadership approaches are commonly aggregated to reflect a morally-based perspective on leadership (Dinh, Lord, Gardner, Meuser, Liden, & Hu, 2014; Lemoine et al., 2019) and have therefore been argued to generate homogenous and potentially redundant findings. However, Lemoine et al. (2019) note that meaningful differences can be derived based on each definition, with SL emphasising the need to benefit multiple stakeholders, AL emphasizing self-awareness and internal consistency, and EL emphasising the importance of complying the normative standards.

Authentic leaders are self-aware, showing openness and clarity regarding who they are, and consistently disclosing and acting in accordance with their personal values, beliefs,

motives and sentiments (Avolio & Gardner, 2005). AL is operationalized as focusing on a leader's authenticity in interactions with others and being true to their inner thoughts, while showing an open mind and the willingness to change. In relation to SL the most obvious overlap is with two characteristics: authenticity and humility. Both servant and authentic leaders are moral leaders who share characteristics such as integrity, honesty, and humility (van Dierendonck, 2011), but AL has a more explicit focus on authenticity per se. Regarding humility, only willingness to learn overlaps with SL; willingness to stand back and give room to others is missing (van Dierendonck, 2011). None of the other four SL characteristics are explicitly conceived as belonging to AL. In comparison to AL, SL emphasizes responsibility to society and stakeholders (Ehrhart, 2004; Walumbwa, Hartnell, & Oke, 2010). Research has shown that such self-sacrificing behavior engenders prosocial behavior (De Cremer, Mayer, Schouten, & Bardes, 2009), positive emotion and cooperation amongst followers (De Cremer, 2006), which is likely to translate into the work-related outcomes discussed earlier. AL, on the other hand, has a greater emphasis on ensuring that a leader's behavior is consistent with one's 'true self', which we argue will have less of an impact on follower outcomes.

Hypothesis 10: SL predicts followers' individual-level task performance (H10a), OCB (H10b), CPB (H10c), creativity (H10d), voice (H10e) and team-level performance (H10f) over AL.

Ethical leaders focus on the promotion of appropriate conduct through interpersonal relationships and personal actions in organizations (Brown et al., 2005). It is like SL in that both theories emphasize caring for people, integrity, trustworthiness, and serving the good of the whole (van Dierendonck & Nuijten, 2011). However, EL focuses on directive and normative behavior, while SL focuses on the developmental needs of followers. Unlike ethical leaders whose main concern is doing the right thing, SLs focus on doing what is in the

best interests of their organizational community, which, in turn, should engender a deeper level of trust and commitment amongst followers, manifesting in heightened outcomes above and beyond those accounted for by EL.

Hypothesis 11: *SL predicts followers' individual-level task performance (H11a), OCB (H11b), CPB (H11c), creativity (H11d), voice (H11e) and team-level performance (H11f) and OCB (H11g) over EL.*

Mediators of the Servant Leadership-Outcome Relationship at the Individual Level

Eva et al. (2018) highlighted that many mediators have been studied to explain the effects of SL. Their extensive list of 35 mediators demonstrates that significant attention has been paid to examining the indirect effects of SL. However, most studies assess single mediators only (e.g., Bouzari & Karatepe, 2017). Given the conceptual and empirical overlap between many of the mediators examined (e.g., trust and LMX), it is likely that there is a certain amount of redundancy between them. Further, single mediator designs make it impossible to assess which mediators are most important for particular outcomes (see Hughes, Lee, Tian, Newman, & Legood, 2018). Given the large number of mediators identified in Eva et al.'s (2018) review, we are not able to test a full model with all potential mediators tested together. Instead, we draw upon two alternative theoretical explanations posited by van Dierendonck (2011); high quality leader-follower relationships and psychological climate, and operationalize these pathways using three mediators that have been consistently examined in the literature (Avolio, Zhu, Koh & Bhatia, 2004; Eva et al., 2018; Schaubroeck et al., 2011): *procedural justice* and *trust in the leader* (capturing the psychological climate pathway), and *LMX* (capturing the leader-follower relationships pathway; van Dierendonck, 2011). Our key aim here is to provide a rare test of the relative effects of these alternative mechanisms and provide insight into which pathway offers the most empirically powerful explanation for the indirect effects of SL.

Servant Leadership and Procedural Justice. Fairness is particularly pertinent to SLs, given their ethical orientation and sensitivity towards follower needs (Mayer, Bardes, & Piccolo, 2008). A SLs concern for follower's growth and prosperity is instrumental for ensuring that rewards are distributed fairly amongst subordinates. Procedural justice captures the perceived fairness of the procedures that are used to determine outcomes (Thibaut & Walker, 1975), and procedural justice climate has been shown to mediate the relationship between SL and both individual and team-level outcomes (e.g., Ehrhart, 2004; Mayer et al., 2008). Accordingly, van Dierendonck (2011) proposes that fairness is a key dimension for creating a safe psychological climate through which SL engenders more favorable follower behavior. Procedural justice is a critical factor in predicting employee cooperative behavior (e.g., Konovsky, 2000), proactive behavior (e.g., Crawshaw, van Dick, & Brodbeck, 2012), and task performance (e.g., Aryee, Chen, & Budhwar, 2004). Overall, when employees feel they are fairly treated, they are more willing to accept leaders' decisions and facilitate organizational performance by ensuring that work-related objectives are achieved, and demonstrating performance-oriented behaviors such as OCB, voice and creativity (Organ, 1988; Naumann & Bennett, 2000; Rupp, Shao, Jones, & Liao, 2014).

Hypothesis 12: SL has a positive and significant indirect relationship with task performance (H12a), OCB (H12b), CPB (H12c), creativity (H12d), and voice (H12e) via procedural justice.

Servant Leadership and Trust in the Leader. The second mediator examined is trust in the leader, defined as willingness to be vulnerable based on a trustor's positive expectations about trustee actions and behaviors (Mayer, Davis & Schoorman, 1995). SLs build trust by prioritizing follower goals and desires over self-interest, demonstrating their focus on the greater good. In risky situations, followers feel that they can rely on their leader to prioritize their welfare over organizational objectives (Dirks & Ferrin, 2002). Leaders also

generate a climate where followers feel valued, listened to and invested in and reciprocate by showing trust in their leader. Trust in the leader has, therefore, been posited as a key mechanism for explaining the influence of SL on follower outcomes (Joseph & Winston, 2005; Schaubroeck et al., 2011), and is argued to create a safe psychological climate that explains the positive consequences of SL (van Dierendonck, 2011).

Hypothesis 13: *SL has a positive and significant indirect relationship with task performance (H13a), OCB (H13b), CPB (H13c), creativity (H13d), and voice (H13e) via trust in the leader.*

Servant Leadership and LMX. An alternative pathway for explaining the indirect effects of SL is the quality of the leader-follower relationship (van Dierendonck, 2011), or LMX (Brower, Schoorman & Tan, 2000). Research has drawn on social exchange theory to posit LMX as an important mediator of the SL-outcome relationship, based on the assumption that a key aspect of enacting SL is the development of high-quality relationships with followers (Ehrhart, 2004; Liden & Maslyn, 1998; van Dierendonck, 2011). SL has also been shown to predict follower behavior through LMX (Newman et al., 2017). Our analysis, therefore, tests the proposition that LMX is a key mediator through which SL influences outcomes.

Hypothesis 14: *SL has a positive and significant indirect relationship with task performance (H14a), OCB (H14b), CPB (H14c), creativity (H14d), and voice (H14e) via LMX*

Method

Literature Search, Study Inclusion and Coding

A thorough search was conducted in order to identify published and unpublished samples that examined the antecedents, correlates, and consequences of SL. To identify studies for our meta-analysis, we first searched for studies examining SL published from 1998 to the end of

2018. To ensure completeness, we used electronic databases, EBSCOHost, Emerald, ProQuest, PsycINFO and ScienceDirect, which collectively include a wide range of management and applied psychology journals. We included the search terms: *servant leadership*, *servant leader*, *service leadership*, *servant organization*, and *servant behavior*. This process yielded a total of 2,391 results including journal articles, dissertations, books, conference papers and proceedings, and working papers. In addition, we examined the reference lists from any relevant review articles and most recent papers (Banks et al., 2018; Eva et al., 2018; Hoch et al., 2018; Parris & Peachey, 2013; van Dierendonck, 2011). Finally, we searched for possible unpublished and in-press studies by sending e-mail solicitations to members of the Academy of Management OB listserv.

A study had to meet several criteria to be included in our final analysis. First, it had to include a zero-order correlation between follower-rated SL and an outcome, other leadership style (i.e., TL, AL, and EL) or mediator at the individual level. Second, it had to include the sample size used to arrive at the correlation. Third, the sample had to be independent from other studies; if a sample overlapped with another study, it was only included once. In total, 124 publications and 130 independent samples (several publications reported multiple samples) met these criteria. Appendix A details the individual studies used for each of the meta-analytic relationship examined.

The initial coding scheme was developed by the lead author on the basis of the extant SL literature. Using this initial coding scheme, two authors independently coded 15 randomly selected studies. The coding was discussed between the authors, and ensuing discrepancies and problems were resolved, resulting in a refined coding scheme. Based on this refined coding scheme, one of the authors coded all studies. The lead author randomly examined approximately 20% of the primary samples. The average inter-coder percentage of agreement across the study variables was 95%. Any discrepancies among the raters were discussed by

two coders until consensus was reached for the final coding. All discrepancies were resolved through discussion.

Meta-Analysis Procedure

We employed the commonly-used Hunter and Schmidt (2015) approach for our investigation. This involved generation of a random effects model accounting for sampling bias and measurement error. This was achieved through calculation of a sample-weighted mean correlation (r), and a sample-weighted mean correlation that was corrected for unreliability in independent and dependent variables. The latter correlation is referred to as the corrected population correlation (ρ). We also report the 95% confidence intervals (95% CI) of the sample-weighted mean correlation and the 95% credibility intervals (95% CV) of the corrected population correlation. The 95% CIs estimate variability in the sample-weighted mean correlation due to sampling error; credibility intervals estimate variability in the individual correlations across studies that can be explained by moderating variables (Whitener, 1990). If the 95% CIs do not include zero, we can say with 95% confidence that the sample-weighted mean correlation differs significantly from zero. Further, 95% CIs can be used to determine whether two sample-weighted mean correlations differ from each other: the two estimates can be considered statistically different when their 95% CIs confidence intervals are non-overlapping. When the 95% credibility intervals of the corrected population correlation are large, they indicate considerable variation across studies and suggest that moderators are likely to be in operation.

We examined moderators of SL using meta-regression. Specifically, we ran random-effects meta-regression to determine whether effect sizes were affected by various moderators. Meta-regression is able to determine whether there is a significant difference between studies according to different levels of either continuous or categorical moderators (Borenstein, Hedges, Higgins & Rothstein, 2009). These moderator analyses were conducted

using the meta-analytic software, Comprehensive Meta-Analysis (version 2.2.064, 2011). The categorical moderators we included in meta-regression were: rater (whether the outcome is self or other rated); time (whether the outcome is measured at the same time or later than servant leadership); capital intensity (whether the study is conducted in a high vs low capital intense industry); and scale (the scale used to measure servant leadership). These were all dummy coded, except for one instance where there were four categories for scale, which were coded 1, 2, 3 and 4 (see Table 3). The continuous moderators we included were tenure (the length of time an individual was working for their current organisation) and culture (power distance and individualism-collectivism). For culture we assigned culture scores ranging from 1 to 100 based on the three culture taxonomies obtained from Hofstede (2001). Each study was assigned a score for power distance and individualism ranging from 1 (representing very high collectivism and very low power distance) to 100 (indicating very high individualism and very high power distance). For example, the United States is very individualistic and has a score of 91. Spain has a score of 51, about the middle of the scale. China, with a much more collectivist culture, has a score of 20. We coded industry capital intensity based on whether the industry's cost involve substantial investment in physical or financial assets such as equipment, machinery, or other expensive capital assets. For example, industries that are considered to be high industry capital intensity typically include energy, telecommunications, and transportation industry, while industries that are considered to be low-medium industry capital intensity typically include service, education and hospitality industry.

To complete incremental and mediational analysis, we used correlations from our meta-analysis, and correlations obtained from other recent meta-analyses (e.g., Hoch et al., 2018; Martin, Thomas, Guillaume, Lee, & Epitropaki, 2016). For some relationships (e.g., between procedural justice and employee voice), we did not have enough correlations within our sample and could not find previous meta-analytic estimates. In such cases, we conducted

a separate search of the literature to isolate relevant studies and coded the corrected correlations (see Table 5 and Appendix A for full details).

To explore SL's relative predictive validity, we conducted relative weights analyses, using Tonidandel and LeBreton's (2011) guidelines for understanding the relative associations that each leadership style had with the correlates. Furthermore, we conducted a series of hierarchical regressions using structural equation modeling to determine the variance explained in the criterion by TL, EL and AL, and then to assess the incremental variance explained by SL. The incremental variance was then assessed by the change in variance explained between these two, sequential, steps. Finally, we conducted mediation analysis, using Viswesvaran and Ones' (1995) meta-analytic structural equation modelling (MASEM) procedure. All path models were estimated using robust maximum likelihood estimation within Mplus (version 7). For our incremental and mediation analysis we used the harmonic mean (Viswesvaran & Ones, 1995) for the sample size. This was required because sample sizes varied across the various cells of the correlation matrices.

Results

Main Effects

Table 1 displays uncorrected and corrected correlations for the relationships of SL with each outcome variable. We interpret the magnitude of corrected population correlation as reported by Paterson, Harms, Steel and Credé (2016) based on their investigation of effect sizes from over 250 meta-analyses in the field of organizational behavior which found that the average corrected effect size was, $\rho = .28$. Thus, we interpret the magnitude of the true mean correlation estimates in reference to these estimates by Paterson et al. (2016) rather than the conventional benchmarks proposed by Cohen (1992), and accordingly we characterize our estimates as 'below-average', 'average', or 'above-average' in relation to Paterson et al.'s benchmark.

Support was found for Hypotheses 1-5, because significant, positive associations were found between SL and individual- and team-level behaviors. SL showed a slightly below-average size positive relationship with individual task performance ($\rho = .25$) and voice ($\rho = .25$). Conversely, an average-sized negative relationship was found between SL and CPB ($\rho = -.27$). SL demonstrated a significant above-average size positive relationship with OCB ($\rho = .39$) and creativity ($\rho = .40$). Finally, an above-average positive relationship was found between SL and both team-level performance ($\rho = .33$) and OCB ($\rho = .54$).

Notably, the relationship between SL and OCB was higher than the relationship with performance at both levels of analysis, although this was only significant at the individual level. These results suggest that SL is more important for some discretionary types of behavior than formal in-role performance requirements.

INSERT TABLE 1 ABOUT HERE

Moderation

Methodological Moderators. As the studies included varied in terms of the source from which they obtained performance ratings, including self-rated performance (common-source) and other-rated (leader-, customer-, or peer-rated), we assessed whether rating source impacted on the effect of SL. As shown in Table 2, the moderation analysis demonstrates that there were no significant differences in effect size according to rater source. Another design feature that was used by numerous studies in our analysis was time-separation. This involved collecting measures of SL at a different time to the criterion variables. Specifically, many studies included a time lag after measuring SL and measured the criterion variable several weeks or months afterwards (e.g., Neubert et al., 2016). As shown in Table 2, the moderation analysis demonstrates that the relationship between SL and individual-level performance is larger when both variables were measured at the same time. However, the same effect was

not found for either individual-level OCB or creativity which both had similar relationship with SL regardless of whether the study was cross-sectional or time separated. We also tested for the possibility of publication bias, comparing whether the effects of SL vary for published versus unpublished studies. Due to limited numbers of unpublished primary studies, we were only able to compare published and unpublished studies examining task performance and OCB at the individual level and team-level OCB. To explore this issue, we used Egger's regression and Rosenthal's N, which we computed using the meta-analytic software programme, Comprehensive Meta-Analysis (Borenstein et al., 2011). Egger's regression involves testing the asymmetry of a funnel plot to assess publication bias using a linear regression test (Egger, Smith, Schneider, & Minder, 1997). In this test, the intercept provides an assessment of asymmetry, with an intercept which is significantly different from 0 indicating bias. A negative intercept indicates that smaller studies are associated with bigger effects. One concern of publication bias is that some non-significant studies are missing from our analysis and that these studies, if included, would nullify the observed effect. Rosenthal (1991) provided a computation to determine the number of studies that would be required to nullify the effect. If this number is large, we can be confident that the treatment effect, while possibly inflated by the exclusion of some studies, is nevertheless not nil. Details of these analyses can be found in Appendix A. To summarise these analyses, we found no evidence of publication bias. With the exception, of team-level OCB, all of the Egger's regression were non-significant and the relatively high Rosenthal's N for team-OCB suggests that publication bias is not a concern.

Finally, we explored differential effects of various scales used to measure SL. SL is most frequently measured using scales developed by Liden et al. (2008), Ehrhart (2004), Barbuto and Wheeler (2006), and van Dierendonck and Nuijten (2011). As seen in Table 2, we found no significant difference in the relationships between SL and individual- or team-

level task performance or OCB as a function of the SL scale used. The only significant moderation effect we observed was that studies measuring servant leadership using Ehrhart's (2004) measures reported significantly larger effect sizes than those measuring SL using Liden's (2008) scale.

INSERT TABLE 2 ABOUT HERE

Contextual Moderators. Table 2 displays the moderation results for cultural and industrial context and employee tenure. Overall, we found little support for our moderation hypotheses. We respect to national culture, the only significant moderation effect found was in the relationship between SL and team-level performance; the relationship was larger in culture that were higher in power distance and collectivism. The only other moderation effect found was for tenure. Specifically, contrary to Hypothesis 8a and 8c, the relationship between SL and individual performance and CPB was larger as employee tenure increased. Finally, we found no evidence that capital intensity moderated the relationship between SL and any employee outcome.

Relative Weights Analysis and Incremental Variance. Hypotheses 9, 10 and 11 predicted that SL would have incremental predictive validity over TL, AL, and EL, respectively, in predicting individual- and team-level behavior. To explore the effect of SL compared to the other leadership styles, we first conducted a series of relative weights analyses (see Table 3). These analyses assessed the relative contribution of each leadership style on the outcome of interest. SL played a dominant role when it came to explain individual-level OCB (47.84%) and creativity (37.58), over TL, EL, and AL.

At team level, we found that, compared to TL and EL, SL explained a greater amount of the variance in team-level OCB (46.68%). Taken together, the results of the relative weights analysis suggest that SL is an especially strong predictor of individual- and team-level OCB and individual creativity.

INSERT TABLE 3 ABOUT HERE

Table 4 displays the results of our incremental predictive validity analysis and demonstrates support for most of our hypotheses. Specifically, in relation to individual-level task performance and OCB, SL shows strong incremental predictive validity over all the leadership styles (supporting Hypotheses 9a-b, 10a-b, 11a-b). SL explained an additional 41.7% and 39% of variance in individual-level task performance and OCB respectively. SL also explained an additional 35% of variance in team-level OCB compared to TL and EL supporting Hypotheses H9g and H11g. Furthermore, when included alongside the other leadership styles SL was the only significant predictor of employee creativity (supporting Hypotheses 9d, 10d, and 11d). Looking at Table 4, the only outcome for which SL did not show incremental predictive validity was CPB. In fact, the results demonstrated *positive* main effects of SL on CPB when it was included in regression analysis with the other leadership styles. This result may indicate a suppression effect: large correlations between the variables (particularly between leadership constructs) may artificially suppress the relationship observed in the path analysis.

INSERT TABLE 4 ABOUT HERE

Mediation

At the individual-level we explored the mediating role of procedural justice, LMX, and trust in the leader on the relationship between SL and outcomes (see Table 5 for correlation between SL and mediators). The results of these analyses are displayed in Figure 1

INSERT TABLE 5 ABOUT HERE

Our findings provided some support for the role of each of the three mediators. However, the indirect effects found varied as a function of the outcome variable. For task performance and creativity, significant and positive indirect effects were found for both LMX and trust in the leader. For OCB and voice, LMX and procedural justice demonstrated significant and positive indirect effects whereas the indirect effect through trust in the leader was negative. For CPB, trust in the leader and procedural justice mediated the effects of SL in the expected direction, with LMX having an indirect effect in a positive direction. Taken together, our mediation analysis highlights the important role played by each mediator explored: trust in the leader, LMX and procedural justice all played a role in explaining the effects of SL on follower behavior. Thus, we largely found support for Hypotheses 12, 13 and 14 (but not H12a, H12d, H13b, H13e or H14c). Interestingly, SL had a significant direct effect on OCB, creativity and voice, indicating partial mediation through procedural justice, LMX and trust in the leader.

INSERT FIGURE 1 ABOUT HERE

Discussion

SL represents a moral form of leadership that, alongside EL and AL has seen a surge of interest in recent years (Lemoine et al., 2019). Recently, meta-analytic investigation has provided some initial evidence for the utility of SL as a newer form of leadership that can provide a contribution to the leadership literature (Hoch et al., 2018). In the current study we address recent calls to further understand and develop the SL construct (Eva et al., 2018). Specifically, in conducting this meta-analysis our major aims were: 1) to establish the main effects of SL on a wide range of employee behaviors at the individual and team-level, thus extending previous meta-analytic findings; 2) to examine the incremental effect of SL over other moral-based leadership styles (EL and AL); 3) to test some key mediators of the effects

of SL in parallel to examine differential effects and potential redundancy; and 4) to examine moderators of the main effects in order to establish key boundary conditions of SL. With these aims in mind we now turn to the implications of our findings.

Firstly, we found strong evidence for the hypothesized main effects of SL across the outcome variables at both individual and team-level of analysis. These relationships were all significant, suggesting that SL has good criterion-related validity in relation to an array of workplace behaviors, above and beyond job performance and OCB examined in Hoch et al.'s (2018) meta-analysis. Our analysis is also based on substantially more studies: the relationships between SL and task performance and OCB were based on 26 and 39 primary studies, respectively, compared with 8 and 6 in Hoch et al. (2018). Finding meta-analytic support for such effects corroborates the influence of SL and verifies that this style of leadership goes beyond increasing followers' growth and well-being (Babakus, Yavas, & Ashill, 2010) and elicits performance-related behavior. Eva et al. (2018) also point to an over-reliance on self-report, single-time point studies within the SL field; suggesting this type of design limits the ability to interpret the findings from the literature. To test the robustness of the main effects found in our analysis, we explored the effect of the two most common practices employed to reduce common method bias (CMBs, see Podsakoff, MacKenzie, & Podsakoff, 2012). The first involves collecting SL and the criterion variable from different sources (i.e., the leader and follower). This multisource approach was used in many studies but did not significantly influence the main effects observed. The relationship between SL and follower outcomes was similar regardless of whether the outcome was self or other rated. The second widespread method used to reduce CMBs is the use of a time-separated design whereby the criterion variable is measured at a separate time (usually after) the independent variable (i.e., SL). We found evidence that measuring individual-level performance after SL did significantly reduce the magnitude of the association between the variables. The same

effect was not found for either creativity or OCB. It should be noted that the two methods discussed above are inadequate methods to fully deal with issues of endogeneity and CMBs (see Antonakis, Bendahan, Jacquart, & Lalive, 2010; Kammeyer-Mueller, Steel, & Rubenstein, 2010). As Eva et al. (2018) acknowledge, the issue of endogeneity within study design is not unique to the SL field, but we echo their call for future research to strengthen the survey design in SL research. This includes the use of experimental studies, longitudinal designs and instrumental variables (Antonakis et al., 2010; Hughes et al., 2018).

Our second aim concerned the pertinent issue of construct redundancy among leadership constructs. The large correlations between SL and TL ($\rho = .52$), AL ($\rho = .84$) and EL ($\rho = .82$), found in the current research, confirm the possibility of empirical redundancy. These large correlations are similar to those reported by Banks and colleagues (2018). However, in support of the conceptual distinction of SL, we found evidence for its relative predictive validity on all outcomes (with the exception of CPB), over and beyond TL, AL and EL, thus providing evidence for its unique practical value. SL had particularly strong incremental effects on individual-level performance and OCB as well as team-level OCB. Overall, our findings point to the importance of considering a wide range of employee outcomes when drawing conclusions on SL's utility. These findings are important to consider in relation to a recent review by Lemoine et al. (2019) who highlighted conceptual similarity amongst EL, AL and SL but also noted that "considering any of the three approaches to moral leadership as 'generically moral' obscures potentially important variance in both the constructs themselves and their correlates and oversimplifies much more complex phenomena" (Lemoine et al., 2019, p. 150). Our findings support this position by suggesting the incremental effects of SL in particular. However, the large correlations between leadership styles does point to a need for future research to disentangle commonalities among empirical measures of these moral forms of leadership (Lemoine et al., 2019). Relatedly,

most studies included in our review treat SL as an aggregate variable rather than examining the effects of the component dimensions. As a result, we were unable to examine the relative effects of the various dimensions theorized to make up SL (i.e., behaving ethically, creating value for the community, putting others first, helping others grow and succeed, emotional healing, empowering others, and conceptual skills; see Ehrhart, 2004; Liden et al., 2008). Future research should continue to examine the effects of these individual dimensions – particularly those that focus on benefiting multiple stakeholders which Lemoine and colleagues (2019) highlight as particularly unique to SL.

The third aim of our research was to establish which theoretical pathway posited by van Dierendonck (2011), psychological climate (comprising trust and fairness) or follower relationships (LMX), exhibits consistently stronger effects for explaining the link between SL and outcomes. Such an examination represents an important theoretical contribution, as empirical studies typically do not test multiple mediators of the effects of SL concurrently, leaving it unclear as to which theoretical lens best explains how SL translates into beneficial follower behavior. LMX was found to be the most consistent mediator for the effects of SL on all outcomes examined, showing significant indirect effects for all outcomes except CPB. This reinforces the notion that SL is crucial in the development of a high-quality leadership follower relationship (Newman et al., 2017; van Dierendonck, 2011) and aligns with studies highlighting a positive relationship between leadership styles and LMX (Wang, Law, Hackett, Wang and Chen, 2005). However, examining the indirect effect of SL through LMX is scant and thus, an important contribution of our study was to ascertain the extent to which LMX can be considered a key mediator of SL. However, we did not find the other pathways to be redundant, with both fairness (i.e., procedural justice), and trust in the leader also being significant mediators for different outcomes. In fact, trust in the leader demonstrated the largest indirect effects on both CPB and creativity. Overall, our mediation analyses are a first

step in trying to better understand the dominant mechanisms responsible for linking SL and follower outcomes. As Eva et al. (2018) highlight, individual studies have explored a multitude of mediators yet, these tend to be studied in isolation, with single mediator models limiting our understanding of the relative effects of these different pathways. In the current study we empirically tested van Dierendonck's (2011) theoretical model derived from social-exchange and organizational justice theories. However, given that other theoretical accounts and related mediators have begun to emerge (Eva et al., 2018), we suggest that further tests of competing mediators drawn from different theoretical perspectives are conducted in order to more clearly establish the nomological network of SL.

Our fourth and final aim was to examine boundary conditions of SL. Eva et al. (2018) proposed situational strength theory (Meyer et al., 2009) could be applied in order better understand when SL is more likely to influence followers. As SL was developed in the United States it can be argued that it is a style of leadership that is best suited to cultures where power distance between leaders and employees is low. However, contrary to this prediction, we found that for the most part SL was just as effective in high power distance cultures as it was in low power distance cultures. In other words, SL does not appear to be a more beneficial style in countries where power distance is low. In fact, our findings suggest that, if anything, the opposite is more likely as the relationship between SL and team-level performance was stronger in higher power distance cultures compared to lower power distance cultures. Interestingly, this moderation effect echoes findings from a recent meta-analysis examining empowering leadership which found stronger effects of empowering leadership on follower performance in vertical-collectivist cultures (Lee, Willis, & Tian, 2018). Overall, this finding suggests that power distance is not an obstacle to the use of SL. While we directly address calls to “understand the role national culture plays for servant leadership” (Eva et al., 2018, p. 15), there is a need to understand the role of national culture

not merely from a national level, but also from an intra-national level and/or individual level (Tsui, Nifadkar, & Ou, 2017; Gamble & Tian, 2015). While cross-cultural differences are of great interest, it is also important to recognize the presence of heterogeneity within countries. Future research should therefore further explore the role of national culture by measuring individual differences in various cultural aspects (i.e., power distance) as a moderator of the effects of SL.

Another suggestion made by Eva et al. (2018), was for future research to explore industrial characteristics as a moderator of the effects of SL. Indeed, we posited that SL would be more powerful in industrial settings where the human element is the key competitive advantage, and there are fewer constraints on employee job performance from automation and technology (i.e., low capital-intensity). However, we did not find evidence for moderating effect of industrial setting – SL was as effective in high capital-intensive as low-capital intensive industries. Thus, the industrial setting should not be considered a constraining factor for SL. Finally, we explored employee tenure as a moderator of the effects of SL. Contrary to our prediction, we found that the relationship between SL and individual-level task performance and CPB was larger for employees who had a longer rather than shorter organizational tenure. This effect can may be explained by the fact that employees who possess an array of attributes that enable them to be successful in an empowered environment will benefit most from this aspect of SL (e.g., Rapp, Ahearne, Mathieu, & Schillewaert, 2006). In other words, it may be the case that employees who have more work experience within an organization may be best able to harness the benefits of a leader who allows them to utilize this experience.

Additionally, the large number of studies included in our analysis also allowed for the testing of some important methodological moderating variables (time-lagged design, multi-source designs, and publication bias). Of particular interest is the significant finding

regarding the impact of time-lagged design on the effect of SL on individual performance. Despite the limitation of time-lagged design in establishing causality between leadership behaviors and outcomes, the significant finding provides much needed meta-analytic evidence to support the role of time in leadership studies (Castillo & Trinh, 2018). Taken together, our moderation analyses provide some evidence of differences across national culture and time-lagged design. We urge future researchers to continue to explore the boundary conditions of SL.

Strengths, Limitations and Future Research Directions

This meta-analysis has several strengths. In relation to incremental predictive validity, we included not only TL, but also AL and EL, thus extending previous meta-analyses (Banks et al., 2018; Hoch et al., 2018). Further, our mediation analysis tested multiple mediators concurrently, allowing us to explore the relative effects of theoretically distinct pathways. Again, this is not typical of similar meta-analyses, which have explored mediators of leadership constructs separately (Martin et al., 2016; Ng & Feldman, 2015).

Our analysis was constrained by the availability of primary studies. We were only able to test the relative predictive validity of SL in relation to TL, AL and EL. Future research is needed to determine whether SL also has incremental predictive over other leadership constructs such as empowering and self-sacrificing leadership, for example (van Dierendonck, 2011), as well as exploring alternative possible mediators such as self-regulatory focus (Neubert et al., 2008). A further limitation was that our analysis relied heavily on cross-sectional research designs. This is a limitation, particularly in relation to any proposed causal effects (Maxwell & Cole, 2007). It is imperative that future SL research focuses on the longitudinal effects: cross-lagged designs are needed to better understand the causal effects of SL – for example, it may be that LMX is an antecedent rather than a consequence of SL.

Finally, while we conducted a comprehensive search for relevant articles, any conclusions drawn about relationships for which we only had a few studies should be treated with a certain caution. For instance, we found only seven studies that examined the SL-voice relationship. When relatively few studies are available, it is harder to draw firm conclusions from the results, because such results may be heavily influenced by particularly strong or weak correlations. This limitation also indicates clear areas for future research by demonstrating which outcomes particularly require further investigation.

Practical Implications

This research has several practical implications for organizations. First, our results indicate that SL has predictive validity over other leadership approaches, and therefore organizations would benefit by developing their current leaders into SLs. Given the incremental validity evident in the current study, organizations should aim to select SLs into influential positions: training programs and selection profiles and processes would need to be aligned and developed to capture attitudes and behaviors associated with SL inside and outside the organization. The findings show that, as expected, SL drives positive behaviors. Training targeted at increasing leader perspective taking, moral standard and emotional intelligence, are all likely to be effective at developing and reinforcing leadership behaviors and, subsequently, follower positive behaviors.

Second, consistent with SL theory, our results also suggest that it would be advantageous to create or reinforce a culture that positively promotes the development of trust, fairness and high-quality leader-follower relationships: designing, structuring and organizing work and the work environment to enhance interdependency, facilitating relationship building, and promoting skills development can all be beneficial for building trust and leader-follower relationships.

Conclusion

SL as an approach to understanding leadership has attracted much empirical attention. Research suggests that this particular style of leadership can have a positive effect on organizational functioning. Our study strengthens this notion by providing evidence that SL has relative predictive validity over key leadership theories. It provides evidence that the link between SL and positive work behavior can be partially explained by trust in the leader, procedural justice, and LMX. We hope that this study stimulates further multivariate research related to SL, especially its boundary conditions and predictive validity over other leadership styles, which could be of significant value to academics and practitioners alike.

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RUNNING HEAD: SERVANT LEADERSHIP META-ANALYSIS

Table 1: *Meta-Analytic Results for the Relationship Between SL and Performance Outcomes at Individual and Team Level*

Variable	<i>k</i>	<i>N</i>	<i>r</i>	95% CI		ρ	SD_{ρ}	95% CV	
				Lower	Upper			Lower	Upper
Performance									
Individual-Level	26	7711	0.23	0.18	0.27	0.25	0.13	0.00	0.50
Team-level	11	1146	0.30	0.21	0.40	0.33	0.14	0.06	0.60
OCB									
Individual-Level	40	13418	0.34	0.29	0.39	0.39	0.18	0.04	0.74
Team-Level	10	1323	0.50	0.39	0.62	0.54	0.17	0.21	0.88
Counterproductive Performance									
Individual-Level	9	4186	-0.22	-0.36	-0.07	-0.27	0.24	-0.74	0.21
Creativity									
Individual-Level	16	5767	0.35	0.25	0.45	0.40	0.22	-0.04	0.83
Voice									
Individual-Level	7	1797	0.23	0.13	0.33	0.25	0.14	-0.02	0.52

Table 2: *Results of moderator analysis for the association between servant leadership and employee outcomes at the individual and team levels.*

RUNNING HEAD: SERVANT LEADERSHIP META-ANALYSIS

Variable	<i>k</i>	<i>N</i>	<i>r</i>	β	<i>s.d.</i>	95%- CILL	95%CI- UL	z- value	<i>p</i> - value	T ²	Moderator effect present?
Individual-Level Task Performance											
Self vs Other Rated	7	8036	.25	.06	.07	-.08	.19	.78	.42	.02	No
Same-time vs time-separated	26	6811	.24	.14	.05	.04	.24	2.74	.01	.01	Yes, larger effect sizes for variables measured at the same time
High vs low capital intensity	17	5437	.28	-.01	.07	-.15	.13	-.14	.89	.02	No
Tenure	13	3102	.22	.03	.01	.01	.05	2.65	.01	.01	Yes, the higher the tenure, the larger the effect size
Liden vs Ehrhart scale	21	9810	.23	.04	.06	-.08	.17	.70	.48	.02	No
Power distance	24	7179	.24	.00	.00	-.00	.00	.84	.40	.01	No
Individualism	24	7179	.24	.00	.00	-.00	.00	-1.12	.26	.01	No
Individual-Level OCB											
Self vs Other	41	13444	.32	.05	.06	-.07	.18	.86	.39	.04	No
Same-time vs time-separated	39	13304	.32	.05	.07	-.09	.18	.72	.47	.04	No
High vs low capital intensity	28	9032	.33	.04	.08	-.12	.20	.50	.62	.04	No
Tenure	18	5550	.31	-.01	.01	-.04	.02	-.61	.54	.04	No

RUNNING HEAD: SERVANT LEADERSHIP META-ANALYSIS

Scale used*	34	11981	.32	.01	.04	-.07	.08	.19	.85	.04	No
Power distance	36	12812	.32	-.00	.00	-.00	.00	-.04	.97	.04	No
Individualism	36	12812	.32	.00	.00	-.00	.00	.40	.69	.04	No
Individual-Level CPB											
Self vs other	9	4225	-.26	.02	.25	-.47	.50	.08	.94	.12	No
Tenure	5	3047	-.12	-.03	.01	-.06	-.00	-2.15	.03	.00	Yes, as tenure increases, the negative effect size increases
Power distance	7	2288	-.30	.01	.02	-.03	-.05	.56	.58	.17	No
Individualism	7	2288	-.30	.00	.00	-.01	.01	.10	.92	.21	No
Individual-Level Creativity											
Self vs other	15	5389	.29	.19	.12	-.05	.42	1.57	.12	.05	No
Same-time vs time-separated	15	5389	.29	.06	.14	-.22	.34	.42	.68	.05	No
Liden vs Ehrhart scale	11	4249	.33	-.23	.13	-.52	-.03	-2.22	.03	.04	Yes, larger effect sizes in studies using the Ehrhart scale
Tenure	8	3040	.25	-.03	.03	-.09	.02	-1.17	.24	.06	No
Power distance	15	5398	.33	.00	.00	-.01	.01	.14	.89	.05	No
Individualism	15	5398	.33	-.00	.00	-.00	.00	-.38	.71	.05	No
Individual-Level Voice											
Tenure	6	1718	.26	-.01	.02	-.06	.04	-.4	-.37	.04	No
Power distance	7	1797	.23	-.00	.00	-.01	.01	-.39	.70	.04	No

RUNNING HEAD: SERVANT LEADERSHIP META-ANALYSIS

Individualism	7	1797	.23	-.00	.00	-.01	.00	-.70	.49	.04	No
Team-Level Performance											
Liden vs Ehrhart scale	10	1044	.35	.13	.12	-.12	.36	1.05	.30	.02	No
Tenure	4	404	.47	.09	.18	-.26	.45	.52	.60	.04	No
Power distance	9	883	.34	.01	.00	.00	.01	2.76	.01	.01	Yes, as power distance increases, effect size increases
Individualism	9	883	.34	-.00	.00	-.01	-.00	2.04	.04	.02	Yes, as individualism increases, effect size decreases
Team-Level OCB											
Liden vs Ehrhart scale	9	971	.41	-.05	.16	-.36	.26	-.32	.74	.04	No
Tenure	5	620	.56	.01	.09	-.16	.19	.15	.87	.06	No
Power distance	9	1256	.47	.00	.00	-.00	.01	.95	.34	.06	No
Individualism	9	1256	.47	-.00	.00	-.01	.00	-.88	.38	.06	No

Table 3 *Relative Weights Analysis of Servant Leadership versus Transformational, Authentic, and Ethical Leadership*

Outcome	SL	Transformational	Authentic	Ethical
Individual-Level Task Performance	27.72	30.79	22.63	18.87
Individual-Level OCB	47.84	17.68	19.64	14.83
Individual-Level CPB	15.85	10.50	14.52	59.13
Individual-Level Creativity	37.58	13.05	25.26	24.10
Individual-Level Voice	20.94	38.81	27.93	12.32
Team-Level Performance	25.41	15.86	16.51	42.22
Team-level OCB	48.68	32.84	n/a	18.49

Table 4 *Incremental Predictive Validity*

Task Performance					
	N (Harmonic Mean)	β	SE	β	SE
TL	2142	.35**	.03	.55**	.03
AL		-.53**	.04	-.98**	.05
EL		.46**	.04	.16**	.04
SL				.66**	.04
		$R^2 = .14$		$R^2 = .24$ % R^2 change = 41.7%	
OCB					
	N (Harmonic Mean)	β	SE	β	SE
TL	2013	.07*	.03	.25**	.03
AL		.26**	.04	-.13*	.05
EL		.02	.04	-.24**	.04
SL				.56**	.04
		$R^2 = .11$		$R^2 = .18$ % R^2 change = 39%	
Creativity					
	N (Harmonic Mean)	β	SE	β	SE
TL	2095	-.04	.03	.05	.03
AL		.26**	.04	.07	.05
EL		.18**	.04	.05	.04
SL				.27**	.04
		$R^2 = .15$		$R^2 = .17$ % R^2 change = 12%	
Voice					
	N (Harmonic Mean)	β	SE	β	SE
TL	1858	.20**	.03	.26**	.04
AL		.33**	.04	.19**	.05
EL		-.21**	.04	-.30**	.05
SL				.20**	.05
		$R^2 = .11$		$R^2 = .12$ % R^2 change = 8%	
CPB					
	N (Harmonic Mean)	β	SE	β	SE
TL	1845	.03	.03	.08*	.03
AL		.46**	.04	.35**	.05
EL		-.86**	.03	-.94**	.04
SL				.16**	.04
		$R^2 = .27$		$R^2 = .27$ % R^2 change = 0%	
Team Performance					
	N (Harmonic Mean)	β	SE	β	SE
TL	684	.12*	.05	.22**	.06
AL		-.49**	.07	-.72**	.08
EL		.75**	.07	.60**	.07
SL				.33**	.07
		$R^2 = .22$		$R^2 = .25$ % R^2 change = 12%	
Team OCB					
	N (Harmonic Mean)	β	SE	β	SE
TL	836	.33**	.04	.40**	.04
EL		.20**	.04	-.37**	.06

SL		.64**	.05
	$R^2 = .24$	$R^2 = .37$	% R^2 change = 35%

RUNNING HEAD: SERVANT LEADERSHIP META-ANALYSIS

Table 5: *Meta-Analytic Correlation required for Incremental and Mediation Analysis*

Variable	<i>k</i>	<i>N</i>	<i>r</i>	95% CI		ρ	SD_{ρ}
				Lower	Upper		
Servant – Transformational Leadership	14	3867	0.45	0.40	0.51	0.52	0.11
Servant – LMX	14	4171	0.52	0.41	0.63	0.62	0.20
Servant – Authentic Leadership	5	2686	0.78	0.67	0.89	0.84	0.11
Servant – Ethical Leadership	4	3106	0.74	0.62	0.86	0.82	0.11
Servant – Procedural Justice	4	1736	0.35	0.15	0.55	0.43	0.22
Servant – Trust in the Leader	12	2884	0.57	0.49	0.65	0.67	0.14
Transformational – Performance ¹	74	18129	0.25	0.24	0.31	0.27	0.15
Transformational – OCB ¹	36	10768	0.23	0.20	0.35	0.28	0.22
Transformational – CPB ¹	10	2300	-0.21	-0.32	-0.15	-0.23	0.13
Transformational – Voice ²	13	6204	0.27	0.26	0.34	0.30	0.06
Transformational – Creativity	36	11984	0.25	0.19	0.31	0.28	0.19
Transformational – Team OCB	5	350	0.42	0.36	0.49	0.47	0.00
Transformational – Team Performance ³	34	2830	0.24	0.29	0.37	0.33	0.07
Transformational – Authentic ¹	10	2397	0.67	0.58	0.92	0.75	0.26
Transformational – Ethical ¹	20	3717	0.63	0.62	0.79	0.70	0.17
LMX – Procedural Justice ⁴	30	7211	0.48	0.48	0.61	0.55	0.17
LMX – Trust in the Leader ⁵	8	1217	0.55	0.45	0.66	0.65	0.19
LMX – Performance ⁵	134	31140	0.25	0.24	0.27	0.29	0.11
LMX – OCB ⁵	94	22362	0.29	0.26	0.31	0.33	0.14

RUNNING HEAD: SERVANT LEADERSHIP META-ANALYSIS

LMX – Creativity	19	5413	0.29	0.21	0.37	0.33	0.18
LMX – CPB ⁵	18	6230	-0.22	-0.28	-0.16	-0.25	0.18
LMX – Voice ²	18	4493	0.30	0.26	0.34	0.30	0.06
Procedural Justice – Trust in the Leader ⁶	8	1743	0.41	0.33	0.50	0.48	0.14
Procedural Justice – Performance ⁶	42	10075	0.17	0.12	0.21	0.20	0.17
Procedural Justice – OCB ⁶	46	10666	0.20	0.17	0.23	0.25	0.12
Procedural Justice – CPB ⁶	18	3488	-0.26	-0.32	-0.20	-0.32	0.11
Procedural Justice – Voice	5	1672	0.22	0.14	0.30	0.25	0.09
Procedural Justice – Creativity	4	910	0.19	0.10	0.29	0.21	0.07
Trust in the Leader – Performance ⁷	16	2495	0.22	0.17	0.27	0.26	0.09
Trust in the Leader – OCB ⁷	12	3002	0.22	0.19	0.26	0.27	0.12
Trust in the Leader – CPB ⁷	8	1357	-0.26	-0.31	-0.21	-0.32	0.09
Trust in the Leader – Voice ²	8	4896	0.13	0.05	0.25	0.15	0.13
Trust – Creativity	11	3351	0.33	0.22	0.43	0.37	0.19
Ethical – Authentic	3	462	0.77	0.56	0.98	0.85	0.15
Authentic – Performance ¹	8	2101	0.11	0.04	0.20	0.12	0.09
Authentic – OCB ¹	8	1256	0.29	0.19	0.47	0.33	0.19
Authentic – Creativity	10	2770	0.34	0.23	0.44	0.38	0.21
Authentic – Voice	4	1366	0.28	0.17	0.38	0.30	0.10
Authentic – CPB ¹	4	1175	-0.22	-0.35	-0.14	-0.25	0.08
Authentic – Team Performance	3	170	0.21	0.10	0.32	0.23	0.00
Ethical – Performance ¹	22	4904	0.22	0.21	0.29	0.25	0.06

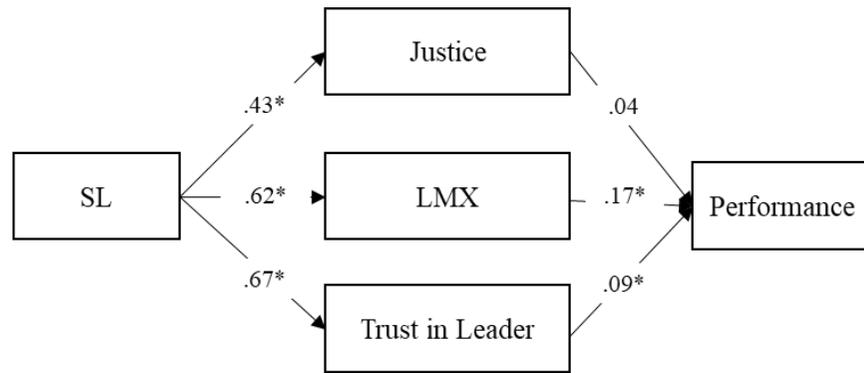
RUNNING HEAD: SERVANT LEADERSHIP META-ANALYSIS

Ethical – OCB ¹	22	5049	0.25	0.25	0.34	0.29	0.08
Ethical – CPB ¹	26	10889	-0.39	-0.53	-0.38	-0.45	0.21

Note. Unless stated, meta-analytic correlations were calculated by the authors. ¹ Hoch et al., 2018, 2011; ² Chamberlin, Newton, & Lepine, 2017; ³ Wang, Oh, Courtright, & Colbert, 2011; ⁴ Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012; ⁵ Martin, Guillaume, Thomas, Lee, & Epitropaki, 2016; ⁶ Colquitt, Conlon, Wesson, Porter, & Ng, 2013 ⁷ Colquitt, Scott, & Lepine, 2007

RUNNING HEAD: SERVANT LEADERSHIP META-ANALYSIS

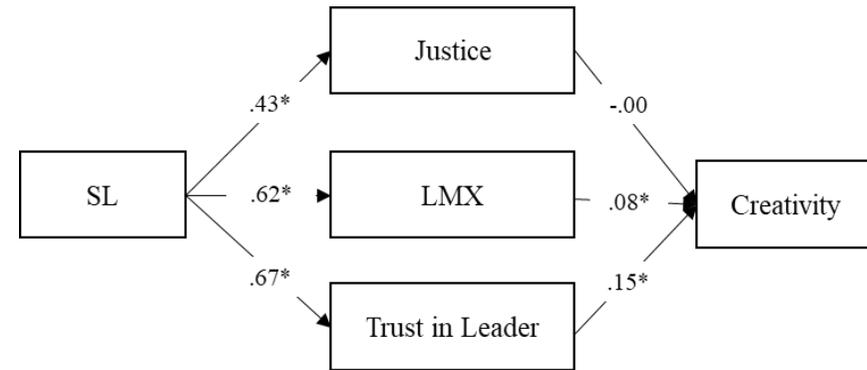
Figure 1: Models showing the direct and indirect effects of SL



Note: * $p < .05$

SL-Task Performance direct: .07

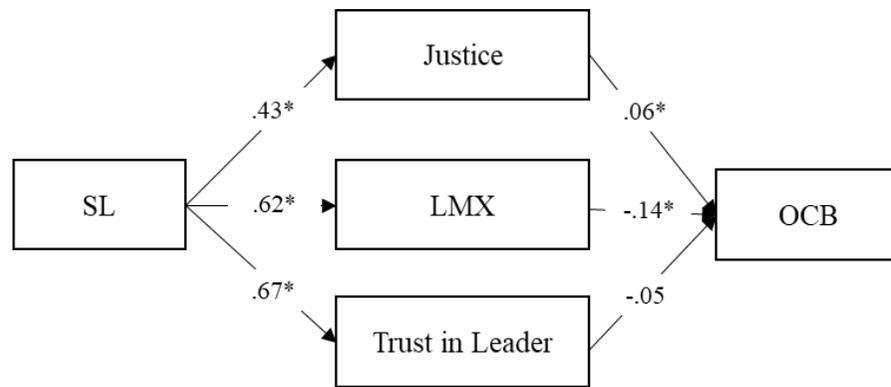
Indirect: .02 (Procedural justice), .10* (LMX), .06* (Trust in leader)



Note: * $p < .05$

SL-Creativity direct: .25*

Indirect: .00 (Procedural justice), .05* (LMX), .10* (Trust in leader)

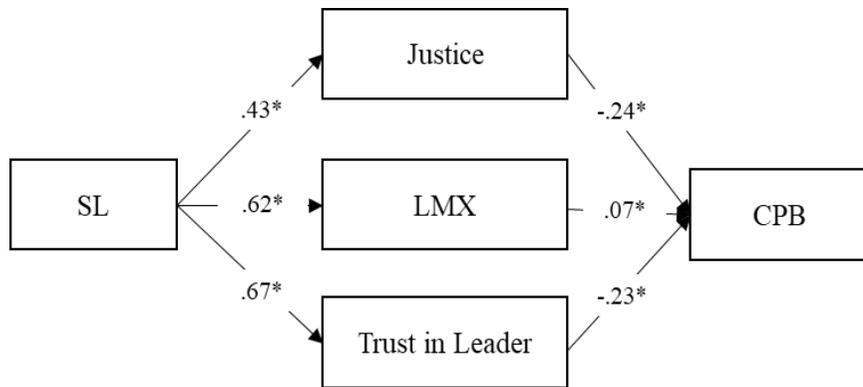


Note: * $p < .05$

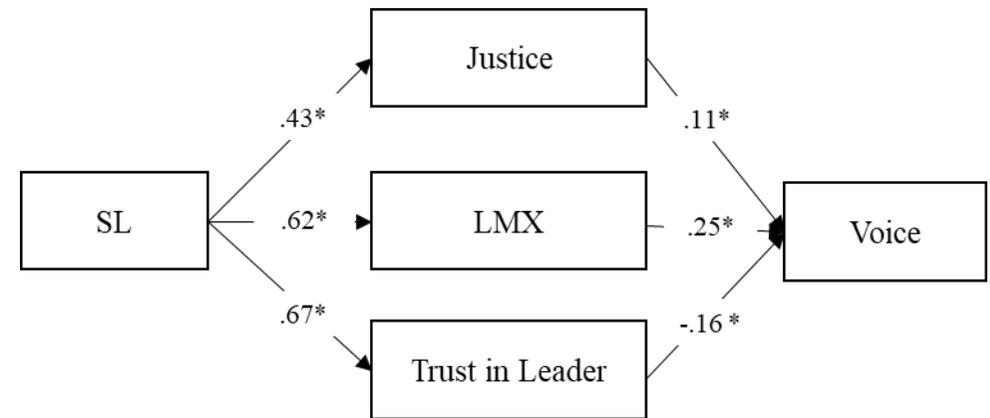
SL-OCB direct: .32*

Indirect: .03* (Procedural justice), .08* (LMX), -.04 (Trust in leader)

RUNNING HEAD: SERVANT LEADERSHIP META-ANALYSIS



Note: * $p < .05$
 SL-CPB direct: $-.05^*$
 Indirect: $-.10^*$ (Procedural justice), $.04^*$ (LMX), $-.16^*$ (Trust in leader)



Note: * $p < .05$
 SL-Voice direct: $.16^*$
 Indirect: $.05^*$ (Procedural justice), $.15^*$ (LMX), $-.11^*$ (Trust in leader)

SL = servant leadership; LMX = leader–member exchange; OCB = organizational citizenship behavior; CPB = counterproductive behavior
 * $p < .05$

APPENDIX

Appendix A – Results of Egger’s Regression and Rosenthal’s N as tests for publication bias

Meta-Analytic Relationship	Rosenthal's N	Egger's regression
SL – Individual Performance	N=2573	BO=0.62, 95% CI, 2-tailed=-2.32-3.57, t=0.44, df=24, 1-tailed p-value (preferred) =0.33, 2-tailed p-value=0.66
SL - Team performance	N= 321	BO=1.34, 95%CI=-4.49-7.17, t=0.52, df=9, p-value 1-tailed=0.31, p=value 2-tailed = 0.62
SL – Individual OCB	N=4184	BO=-3.31, 95%CI=-6.58--0.05, t=2.06, df=37, p-value 1-tailed=0.02, p=value 2-tailed = 0.5
SL – Team OCB	N=808	BO=-4.97, 95%CI=-9.76--0.18, t=2.39, df=8, p-value 1-tailed=0.02, p=value 2-tailed = 0.04
SL - CPB	N=567	BO=-2.40, 95%CI=-15.76-10.96, t=0.42, df=7, 1-tailed p-value=0.34, 2-tailed p-value=0.68
SL - Creativity	N=2473	BO=-6.73, 95%CI=-13.19--0.28, t=2.24, df=14, 1-tailed p-value=0.02, 2-tailed p-value=0.04
SL - Voice	N=202	BO=4.29, 95%CI=-4.9-13.46, t=1.20, df=5, 1-tailed p-value=0.14, 2-tailed p-value=0.29

Appendix B – Studies included for each meta-analytic relationship

Servant Leadership – Individual Performance		
Arain (2018)	Liden, Wayne, Zhao, & Henderson (2008)	Schwarz, Newman, Cooper, & Eva (2016)
Chen, Zhu, & Zhou (2015)	Ling, Lin, & Wu (2016)	Schwepker & Schultz (2015)
Chiniara & Bentein, (2016)	Liu & Shi (2018)	Siddiqi (2013)
Indartono, Chiou, & Chen (2010)	Lohrey (2016)	van Dierendonck & Nuijten (2011)
Jaramillo, Bande, & Varela (2015)	Neubert, Hunter & Tolentino (2016)	Wang, Xu, & Liu (2018)
Jaramillo, Grisaffe, Chonko, & Roberts (2009)	Neubert, Kacmar, Carlson, Chonko, & Roberts (2008)	Yang, Qian, & Liu (2018)
Lemoine (2015)	Otero-Neira, Varela-Neira, & Bande (2015)	Zehir, Akyuz, Eren, & Turhan (2013)
Karatepe, Ozturk, & Kim, (2019).	Overstreet, Hazen, Skipper, & Hanna (2014)	
Liden, Wayne, Meuser, Hu, Wu, & Liao (2015)	Saboe (2010)	
Servant Leadership – Individual OCB		
Amah (2018)	Jaramillo, Bande, Varela (2015)	Saboe (2010)
Bakar & McCann (2016)		Shim, Park, & Eom (2016)
Bambale, Shamsudin, & Subramaniam (2015)	Jaramillo, Grisaffe, Chonko, Roberts (2009)	Siddiqi (2013)
Bavik, Bavik, & Tang (2017)	Johnson (2016)	Trivers (2009)
Bobbio, van Dierendonck, & Manganeli (2012)	Liden, Wayne, Meuser, Hu, Wu, & Liao (2015)	Tuan (2017)
Bouzari & Karatepe (2017)	Liden, Wayne, Zhao, & Henderson (2008)	van Dierendonck & Nuijten (2011)
Brubaker, Bocarnea, Patterson, & Winston (2015)	Malingumu, Stouten, Euwema, & Babyegeya (2016)	Vondey (2010)
Chen, Zhu, & Zhou (2015)	Neubert, Hunter, & Tolentino (2016)	Walumbwa, Hartnell, & Oke (2010)

RUNNING HEAD: SERVANT LEADERSHIP META-ANALYSIS

Chiniara & Bentein (2016)	Neubert, Kacmar, Carlson, Chonko, & Roberts (2008)	Wang, Xu, & Liu (2018)
Dixon (2013)	Newman, Schwarz, Cooper, & Sendjaya (2017)	Wu, Tse, Fu, Kwan, & Liu (2013)
Donia, Raja, Panaccio, & Wang (2016)	Ozyilmaz & Cicek (2015)	Zehir, Akyuz, Eren, & Turhan (2013)
Ehrhart (2004)	Panaccio, Henderson, Liden, Wayne, & Cao (2015)	Zou, Tian, & Liu (2015)
	Reese (2017)	Zhao, Liu, & Gao (2016)
Servant Leadership – Individual Creativity		
Liden, Wayne, Meuser, Hu, Wu, & Liao (2015)	Luo & Zheng (2018)	Sun (2016)
Jaiswal & Dhar (2015)	Malingumu, Stouten, Euwema, & Babyegeya (2016)	Topcu & Gurson (2015)
Jaramillo, Grisaffe, Chonko, & Roberts (2009)	Neubert, Hunter, & Tolentino (2016)	Williams jr, Randolph-Seng, Hayek, Haden, & Atinc (2017)
Karatepe, Ozturk, & Kim, (2019)	Neubert, Kacmar, Carlson, Chonko, & Roberts (2008)	Yang, Liu, & Gu (2017)
Krog & Govender (2015)	Panaccio, Henderson, Liden, Wayne, & Cao (2015)	Yoshida, Sendjaya, Hirst, & Cooper (2014)
Servant Leadership – Individual Counterproductive Performance		
Bobbio, van Dierendonck, & Manganeli (2012)	Mullins (2015)	Sendjaya, Eva, Butar, Robin, & Castles (2017)
Jaramillo, Bande, & Varela (2015)	Neubert, Kacmar, Carlson, Chonko, & Roberts (2008)	Saboe (2010)
Lapointe & Vandenberghe (2018)	Peng, Jien, & Lin (2016)	Verdorfer, Steinheider, & Burkus (2015)
Servant Leadership – Individual Voice		
Chughtai (2016)	Lapointe & Vandenberghe (2018)	Searle (2011)
Duan, Kwan, & Ling (2014)	Lemoine (2015)	Yan & Xiao (2016)
Henderson (2013)		

Servant Leadership – Team Performance		
Chiniara & Bentein (2018)	Kang (2015)	Schaubroeck, Lam, & Peng (2011)
Hu & Liden (2011)	Liden, Wayne, Liao, & Meuser (2014)	Sousa & van Dierendonck (2016)
Huang, Li, Qui, Yin, & Wan (2016)	Liden, Wayne, Meuser, Hu, Wu & Liao (2015)	Walumbwa, Muchiri, Misati, Wu, & Meiliani (2018)
Hunter, Neubert, Perry, Witt, Penney, & Weinberger (2013)	Peterson, Galvin, & Lange (2012)	
Servant Leadership – Team OCB		
Bakar & McCann (2016)	Hu & Liden (2011)	Linuesa-Langreo, Ruiz-Palomino, & Elche-Hortelano (2018)
Chiniara & Bentein (2018)	Hunter, Neubert, Perry, Witt, Penney, & Weinberger (2013)	Liden, Wayne, Meuser, Hu, Wu & Liao (2015)
Ehrhart (2004)	Kwak & Kim, (2015)	
Hu (2012)		
Servant Leadership – Transformational Leadership		
Barbuto & Wheeler (2006)	Panaccio, Henderson, Liden, Wayne, & Cao (2015)	van Dierendonck & Nuijten (2011)
Choudhary, Akhtar, & Zaheer (2013)	Peterson, Galvin, & Lange (2012)	van Dierendonck, Stam, Boersma, de Windt, & Alkema (2014)
Huang, Li, Qui, Yin, & Wan (2016)	Pipitvej (2014)	Washington (2007)
Liden, Wayne, Zhao, & Henderson (2008)	Schaubroeck, Lam & Peng (2011)	Winston & Fields (2015)
Long (2017)	Schneider & George (2011)	
Servant Leadership - LMX		
Amah (2015)	Hanse, Harlin, Jarebrant, Ulin, & Winkel (2016)	Panaccio, Henderson, Liden, Wayne, & Cao (2015)
Amah (2018)		

RUNNING HEAD: SERVANT LEADERSHIP META-ANALYSIS

Barbuto & Hayden (2011)	Liden, Wayne, Zhao & Henderson (2008)	Whisnant & Khasawneh (2014)
Barbuto & Wheeler (2006)	Luo & Zheng (2018)	Wu, Tse, Fu, Kwan, & Liu (2013)
Coggins & Bocarnea (2015)	Newman, Schwarz, Cooper, & Sendjaya (2017)	Zou, Tian, & Liu (2015)
Servant Leadership – Authentic Leadership		
Ling, Liu, & Wu (2017)	Politis (2013)	Mullins (2015)
Liu, He, Tang, & Liu (2014)	Ross-Grant (2016)	
Servant Leadership – Ethical Leadership		
van Dierendonck & Nuijten (2011)	Steinmann, Nubold, & Maier (2016)	Long (2017)
Mullins (2015)		
Servant Leadership - Procedural Justice		
Burton, Welty Peachey, & Wells (2017)	Shim, Park, & Eom (2016)	Walumbwa, Hartnell, & Oke (2010)
Peng, Jien, & Lin (2016)		
Servant Leadership – Trust in the Leader		
Chan & Mak (2014)	Krog & Govender (2015)	Schaubroeck, Lam, & Peng (2011)
Goh & Low (2013)	Lu, Zhang, & Jia (2018)	Shim, Park, & Eom (2016)
Jaramillo, Bande, Varela (2015)	Miao, Newman, Schwarz, & Xu (2014)	Sendjaya & Pekerti (2010)
Kashyap & Rangnekar (2016)	Rezaei, Salehi, Shafiei & Sabet (2012)	Whisnant & Khasawneh (2014)
Transformational Leadership – Creativity		
Akinlade (2014)	Gumusluoglu & Ilsev (2009)	Qu, Janssen, & Shi (2015)
Arendt (2009)	Henker (2013)	Rickards, Chen, & Moger (2001)
Bae, Song, Park, & Kim (2013)	Hirst, Van Dick, & Van Knippenberg (2009)	Si & Wei (2012)

RUNNING HEAD: SERVANT LEADERSHIP META-ANALYSIS

Carmeli, Sheaffer, Binyamin, Reiter-Palmon, & Shimoni (2014)	Jaussi & Dionne (2003)	Shin & Zhou (2003)
Chang & Teng (2017)	Jo, Lee, Lee, & Hahn (2015)	Sosik, Kahai, & Avolio (1999)
Charbonnier-Voirin, El Akremi, & Vandenberghe (2010)	Jyoti & Dev (2015)	Sun, Zhang, Qi, & Chen (2012)
Cheung & Wong (2011)	Kim & Lee (2011)	Tse & Chiu (2014)
Dong, Bartol, Zhang, & Li (2017)	Mittal & Dhar (2015)	Wang & Rode (2010)
Eisenbeiß & Boerner (2013)	Moss & Ritossa (2007)	Wang & Zhu (2011)
Ghafoor, Qureshi, Azeemi, & Hijazi (2011)	Li, Hao, & Begley (2015)	Wang, Tsai, & Tsai (2014)
Gilmore, Hu, Wei, Tetrick, & Zaccaro (2013)	Li, Lu, Yang, Qi, & Fu (2014)	Zhou & Pan (2015)
Gong, Huang, & Farh (2009)		
LMX – Creativity		
Aleksić, Mihelic, Cerne, & Skerlavaj (2017)	Liao, Liu, & Loi (2010)	Pan, Wu, Zhou, & Lou (2015)
Chughtai (2016)	Martinaityte & Sacramento (2013)	Tierney, Farmer, & Graen (1999)
Huang, Krasikova, & Liu (2016)	Meng, Tan, & Li (2017)	van Dyne, Jehn & Cummings (20,02)
Jiang & Yang (2015)	Muñoz-Doyague & Nieto (2012)	Volmer, Spurk, & Niessen (2012)
Joo (2007)	Naseer, Raja, Syed, Donia, & Darr (2016)	Xu, Zhao, Li, & Lin (2017)
Joo, Yang, & McLean (2014)	Pan, Sun, & Chow (2012)	Zhao, Kessel, & Kratzer (2014)
Lee, Scandura, Kim, Joshi & Lee (2012)		
Procedural Justice – Voice		

RUNNING HEAD: SERVANT LEADERSHIP META-ANALYSIS

Aryee, Walumbwa, Mondejar, & Chu (2017)	Song, Wu, Hao, Lu, Zhang, & Liu (2017)	Zhang, Lepine, Buckman, & Wei (2014)
Hsiung (2012)	Takeuchi, Chen, & Cheung (2012)	
Procedural Justice – Creativity		
Hannam & Narayan (2015)	Zhang, Lepine, Buckman, & Wei (2014)	Zhang, Long, & Zhang (2015)
Simmons (2011)		
Ethical Leadership – Authentic Leadership		
Nikolic (2015)	Riggio, Zhu, Maroosis, & Reina (2010)	Walumbwa, Avolio, Gardner, Wernsing, & Peterson, (2008)
Authentic Leadership - Creativity		
Černe, Jaklič, & Škerlavaj (2013)	Meng, Cheng, & Guo (2016)	Semedo, Coelho, & Ribeiro (2017)
Li, Lu, Yang, Qi, & Fu (2014)	Rego, Sousa, Marques, & Pina e Cunha (2012)	Xu, Zhao, Li, & Lin (2017)
Malik, Dhar, & Handa (2016)	Ribeiro, Duarte, & Filipe (2018)	
Ethical Leadership – Creativity		
Chen & Hou (2016)	Feng, Zhang, Liu, Zhang, & Han (2016)	Ma, Cheng, Ribbens, & Zhou (2013)
Chughtai (2016)	Gu, Tang, & Jiang (2015)	Mehmood (2016)
Dedahanov, Lee, Rhee, & Yoon (2016)	Javed, Khan, Bashir, & Arjoon (2017)	Wang, Tang, Naumann, & Yang (2017)
Duan, Liu, & Che (2018)	Javed, Rawwas, Khandai, Shahid, & Tayyeb (2018)	

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