

The interplay of servant leadership behaviors and Machiavellianism on perceived leader effectiveness: the role of team conflict management

Servant
leadership and
Machiavellian
traits

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Abstract

Purpose – This paper aims to examine the influence of the interplay between servant leadership behaviors and Machiavellianism on leader effectiveness.

Design/methodology/approach – Drawing on trait activation theory and motivation to lead theory, the authors hypothesize that the effect of servant leadership behaviors on perceived leadership effectiveness is manifested differently in teams with high-Machiavellian vs. low-Machiavellian leaders. In teams with low-Machiavellian leaders, servant leadership behaviors are expected to be associated with a cooperative way of handling team conflicts, which enhances employees' leader effectiveness ratings. In contrast, in teams with high-Machiavellian leaders, this mediation role vanishes due to the incongruency between Machiavellian traits and the cooperative context. The authors conducted a two-wave survey-based study and tested the hypotheses with a matched supervisor-employee sample from 310 employees and their leaders in 91 teams.

Findings – The results showed that servant leadership behaviors positively impact leadership effectiveness and that this effect takes place through cooperative team conflict management (TCM) without controlling for leaders' Machiavellian trait. Further analysis shows this mediation mechanism is only strong and significant in teams led by low-Machiavellian leaders, but not high-Machiavellian leaders.

Originality/value – To the authors' best knowledge, this is the first study that examines the interplay of servant leadership behaviors and Machiavellianism on perceived leader effectiveness.

Keywords Servant leadership, Leadership effectiveness, Team conflict management, Machiavellian

Paper type Research paper

Introduction

In today's dynamic socioeconomic environment, we have seen the adoption of different leadership styles in businesses, most notably to achieve high performance among subordinates in response to a constantly changing business environment (Jaiswal and Dhar, 2017). One leadership style of particular relevance is servant leadership which at its core puts the priority on the well-being of people in an organization. It also promotes strong trust in the idea that leaders by taking care of the people in the organization, will take care of

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the organization. The growing literature on servant leadership has confirmed its impact, relevance and positive influence on subordinates' needs (Eva *et al.*, 2019). One of the most intriguing challenges of servant leadership is the paradox incorporated in the term itself: "Serving and leading become almost exchangeable. Being a servant allows a person to lead; being a leader implies a person serves" (van Dierendonck, 2011, p. 1231). How one can simultaneously lead and serve is the underlying question and challenge. In particular, when it comes to perceived effectiveness, a strong balance may be needed between focusing on people and on the organization (van Dierendonck *et al.*, 2014). Most studies in the servant leadership literature, however, have placed greater emphasis on the servant part than the leader part (van Dierendonck, 2011), hereby limiting our understanding of leaders' values and behavior regarding influence skills and the use of power (Yukl, 2012).

Previous research has confirmed that perceived leadership effectiveness is associated with outcomes relevant for both the leaders themselves (e.g. promotions to elite leadership positions) and the organization as a whole (e.g. leadership styles most likely to be embraced and serve as models for other leaders) (Paustian-Underdahl *et al.*, 2014). To be viewed as an effective leader typically requires that the leader possesses influencing skills to get things done and pays attention to the needs of the people in an organization. These influencing skills are at their darkest when they fall into the category of Machiavellianism, which, at first glance, is antithetical to servant leadership.

However, as recently called for by leadership scholars (e.g. Cunha *et al.*, 2021; Pfeffer, 2021), it is important to ground leadership studies in organizational reality. Alvesson and Einola (2019) note that "making efforts to serve 'everybody' may call for extreme altruism, possibly rare among people in business" (page. 392). Although some argued that Machiavellianism is a redundant and irrelevant construct in leadership studies (McHoskey *et al.*, 1998), more research has demonstrated that studying Machiavellianism is important, especially when conducting leadership studies grounded in business realities and argued that there is more to lose than gain if Machiavellianism is not considered (e.g. Alvesson and Einola, 2019). In the meanwhile, besides the dark view of Machiavellianism that is widely recognized, some authors note the potential bright sides of leader's Machiavellian traits such as being highly adaptive and able to use a variety of leadership and influence tactics when navigating power dynamics in complex business organizations (Judge *et al.*, 2009). This view echoes Pfeffer's (1992, 2021) works on the role of power in leadership and organizations. Specifically, Pfeffer (2021) argued that the current leadership literature has emphasized too much on the dysfunctional side of the leader's personality traits (e.g. Machiavellianism), and called for leadership studies to give more consideration to the organizational reality and complexity and the role of power in leadership.

Indeed, Machiavellian leaders could calculatedly and manipulatively employ servant leadership behaviors to reach preferable leadership outcomes. Such a possible interplay reminds us of the motivation to lead (MTL) theory (see a meta-analytic review in Badura *et al.*, 2020). Machiavellianism, with its attention to manipulation to gain influence and power, is closely related to affective identity motivation, defined as individuals' "intrinsic interest in leading and seeing oneself as a leader" (Badura *et al.*, 2020, p. 332) manifested in strivings for power and influence to "enhance and protect differentiation" (p. 332). In contrast, servant leadership, with its other-oriented focus, is in line with the social normative motive that "entails a focus on one's responsibilities to others" (p. 332).

Thus, the main aim of this paper is to enhance our insights into the interplay of the "light" of servant leadership behaviors with the "darkness" of Machiavellianism. Drawing upon trait and behavioral theories of leadership (DeRue *et al.*, 2011) and contingency theories of leadership (Fiedler and House, 1994), we question how the interplay of power-pursuing and manipulation-oriented traits (i.e. Machiavellianism) and other-oriented leadership behaviors (i.e. servant leadership) influences perceived leadership effectiveness. The underlying

question and paradox are how, if one possesses an internal concept of Machiavellianism but demonstrates servant leadership behaviors, the Machiavellian concept and servant leadership behaviors interact to influence perceived leadership effectiveness. Furthermore, drawing upon Trait Activation theory that holds “Machiavellianism is a trait that is associated with person \times environment interactions” (Jones and Mueller, 2022, p. 535), our theoretical model pays particular attention to the team context that is likely to be influenced and fostered by the leadership behaviors, and explores how a leader’s Machiavellian trait interacts with the team conflict handling context and together impacts employees’ perceived leadership effectiveness.

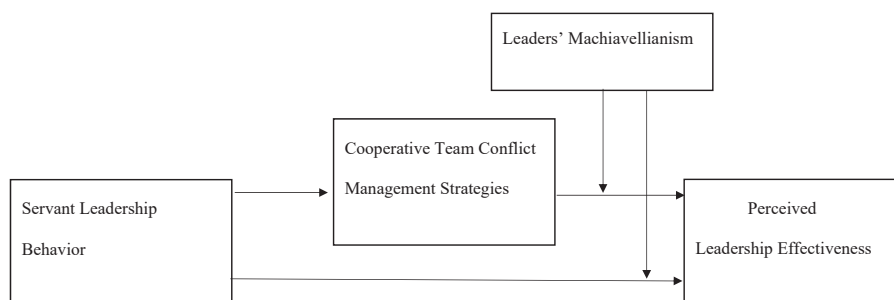
Conflicts in organizations are unavoidable. Leaders’ behaviors impact how conflicts in the workplace are handled (Saeed *et al.*, 2014). Leaders who exhibit servant leadership behaviors, with their orientation to develop followers’ competencies and enhance a knowledge-sharing team climate (Song *et al.*, 2015), influence a collaborative way of handling conflicts. Leaders’ Machiavellian traits, however, may interact with this conflict management context, given Machiavellism’s more competitive nature. Our study adopts an integrative approach to examine the interplay of Machiavellian traits and servant leadership behavior and how they influence leadership effectiveness using a process-based model.

Such an integrative consideration responds to recent calls for a more holistic understanding of leadership (Kearney *et al.*, 2019; Yukl, 2012). Our study joins attempts to examine the paradoxes in leadership literature, such as the interactive effects of visionary and empowering leadership (Kearney *et al.*, 2019) and the interplay of leader narcissism and humility (Zhang *et al.*, 2017), to develop a more holistic view of leadership. Organizational leaders work in a complex environment, highlighted by contradictory demands that are inherent to leader–follower relationships and embedded in the challenges in organizational and external business environments. Thus, it is imperative to acknowledge and understand the paradoxes inherent in leaders’ traits and behaviors and how they relate to perceived leader effectiveness.

The remainder of the paper will first describe servant leadership, the mediating role of the cooperative team conflict management (TCM) strategy for leadership effectiveness, and the moderating role of Machiavellianism. The full conceptual model can be found in Figure 1. We will then describe the sample, measures and methodologies and present the results. Finally, we will present our findings and discuss the theoretical and practical implications.

Theoretical background and hypotheses

Servant leadership has gained considerable attention in leadership research in the last two decades (for a review, see Eva *et al.*, 2019). The general idea behind this leadership style was introduced by Greenleaf (1970) in his seminal work *The Servant as Leader*. Since then, the



Source(s): Figure by authors

Figure 1.
Theoretical framework
of servant leadership,
Machiavellianism and
perceived leadership
effectiveness

theoretical and nomological network of servant leadership has further developed with advancement in its conceptual clarity, rigorous measures, and exploration of its antecedents, outcomes, moderators and mediators (Eva *et al.*, 2019). Depending on the conceptualization of the construct, servant leadership generally encompasses dimensions of empowerment, humility, providing direction, authenticity, interpersonal acceptance and stewardship (van Dierendonck, 2011). These features of servant leadership distinguish it from transformational leadership that emphasizes building enlightened values, beliefs and goals to influence and motivate followers (Stone *et al.*, 2004), and transactional leadership that focuses on reward-based social exchanges in directing and monitoring followers (Avolio *et al.*, 1999).

In a social and organizational context of vertical hierarchy in which individual “heroic” traits are viewed as leading factors driving performance outcomes, traditional leadership characteristics such as charisma were given considerable attention (Grabo *et al.*, 2017). As organizations have operated and competed in more dynamic, uncertain and unpredictable organizational environments, a hierarchical or “top-down” business approach has given way to a flatter, “bottom-up” strategy (Owens and Hekman, 2012). Servant leadership promotes and supports this “bottom-up” strategy (Sinek, 2014). The emphasis of servant leadership is, hereby, not to please followers but to develop followers, which gives employees a sense of belonging and enhances their perceived effectiveness of leadership. Furthermore, in the wake of corporate scandals attributed to leaders’ arrogance, sense of entitlement and self-importance, recent leadership research has specifically alluded to servant leadership characteristics such as humility and empowerment (Dust *et al.*, 2018) as critical for leader effectiveness. Previous research shows servant leadership is positively associated with strong trust in managers (Hoch *et al.*, 2018), positive work engagement, job satisfaction, organizational performance (Peterson *et al.*, 2012), employees’ organizational citizenship behavior and team performance (Lee *et al.*, 2020). These personal, team and organizational successes can be expected to go hand in hand with positive evaluations of leadership effectiveness. In particular, in terms of changes in the external environment that call for collaborative and empowering leadership behaviors, we can expect that followers will recognize the value of the empowering and humble behaviors of servant leaders and reciprocally evaluate servant leadership behaviors as being more effective. This leads to the first hypothesis:

- H1.* Servant leadership is positively associated with employees’ ratings of leadership effectiveness.

The mediating role of team conflict management strategies

Servant leadership builds a sense of social identity in its followers and promotes trust and fairness in the workplace (Lee *et al.*, 2020). Servant leaders’ commitment to helping followers grow entails a focus on cultivating a sense of community within the team (Yoshida *et al.*, 2014). We posit that such a commitment to building a sense of community has strong implications for the way team members deal with controversies, arguments, and different views among each other on the way work should be done and how to deal with conflicts. We propose that an essential mediating mechanism through which servant leadership behaviors exert influence is TCM strategies.

To understand conflict management strategies, previous studies have adopted the dual concern model, which posits that the drive underlying how people manage conflicts is a consideration of two motives: concern for the self and concern for the other party (Somech *et al.*, 2009). Similarly, the TCM theory was developed and extended by Tjosvold (1989) who integrated the TCM theory with the conflict resolution theory of cooperation and competition (Deutsch, 1973) and proposed that individuals’ chosen strategies of managing team conflicts

are driven by their perceptions of their own goals in relation to those of their counterparts. Based on these perceptions, when handling conflicts with other team members, individuals form cooperative or competitive intentions. The cooperative strategy involves concern for both oneself and others in conflict, while the competitive strategy involves a higher level of concern for oneself than for others.

Conflict resolution theory indicates that individuals who are concerned for others at a similar level as for themselves are more likely to choose the cooperative strategy when managing conflicts (Deutsch, 1973; Somech *et al.*, 2009). Given that servant leadership is directly linked to pursuing empowerment and using persuasion and listening to convince others, leaders who show servant leader behaviors are less likely to forcefully push their agenda through. Instead, they will adopt a cooperative conflict management strategy for themselves and will promote this strategy in their team. Social learning theory suggests that individuals learn by observing the behavior of others (Bandura, 1986). In teams led by servant leaders, team members individually and collectively observe that the leaders care for the growth and development of their people and emphasize humility. The more the cooperative strategy is modeled by leaders, the more likely it is that team members will consistently behave similarly. As such, servant leadership is more likely to encourage a climate in which conflicts are handled cooperatively, which, in turn, results in positive leader effectiveness ratings. This leads to the second hypothesis.

H2. Servant leadership behaviors are positively related to cooperative TCM within the team, which in turn enhances perceived leadership effectiveness.

The moderating role of leaders' Machiavellianism

The concept of Machiavellianism was introduced to the scholarly field by Christie and Geis (1970) who, in their collection of Machiavelli's original statements, described the personality traits of individuals who successfully manipulate the behavior of others. Leaders high on Machiavellianism (high-Machiavellianism) have a strong tendency to manipulate others and tend to initiate and control the structure of group interactions in a team setting. Extant studies show that Machiavellianism is closely related to leaders' effectiveness, and yet findings on the link have been mixed. Whereas some studies found that high-Machiavellianism were rated more positively than low-Machiavellianism in the degree of leadership displayed and the associated contributions to group performance (Kwak and Shim, 2017), others show that followers may perceive Machiavellian leaders as less sympathetic, less effective and abusive (e.g. den Hartog and Belschak, 2012).

Such inconsistent findings regarding the effect of Machiavellianism on leadership outcomes suggest that, in seeking to understand how Machiavellianism relates to followers' reactions, a specific leadership style adopted by Machiavellian leaders may provide a useful starting point. Servant leadership, as the name suggests, is a leadership philosophy in which the leader is strongly focused on the needs of their followers and encourages their growth. Machiavellianism, on the other hand, is a leadership theory that emphasizes the acquisition and maintenance of power through political skills and control, and in its extreme with manipulation and deceit. Studying the interplay between the two can help enhance our understanding of leadership effectiveness in organizational reality.

Machiavellian individuals may have cognitive and social skills that better enable them to evaluate a group's social and business context and manage the group's performance in a dynamic and unpredictable environment (Bereczkei, 2018). It may be that Machiavellianism itself leads to antisocial outcomes; however, when coupled with servant leadership behaviors, the negative effect of Machiavellianism is mitigated, and the impact of servant leadership behaviors on perceived leadership effectiveness can be more pronounced for Machiavellian leaders. The combination may allow for a synergy in which

leaders' complex social manipulation skills to build adaptive advantages for the group are interlinked with showing care toward followers. This may cause followers to rate these high Machiavellian leaders higher in leadership effectiveness than servant leaders who are low on Mach.

Furthermore, Machiavellianism is seen as a strategy of social conduct and involves using others as devices to pursue one's own goals (Wilson *et al.*, 1996). Recent social psychological studies have found Machiavellians to be successful by adapting to their social environment, pursuing long-term plans and in social dilemma games by monitoring their playmates' decisions (Bereczkei and Czibor, 2014). Combining a Machiavellian trait with servant leadership behavior may result in leaders using their manipulative skills and impression management abilities to attain high leadership effectiveness (Becker and O'Hair, 2007). Recent research has shown that ethical leader behaviors demonstrated by Machiavellian supervisors were seen as effective even when they are not genuine (Kwak and Shim, 2017). Indeed, because the others-promoting initiatives of Machiavellian leaders are less expected, they may need to engage in more others-serving behaviors than low-Machiavellian leaders to be endorsed as effective leaders. As such, for high-Machiavellian leaders, leadership effectiveness should be more contingent on the extent to which the leader engages in servant leadership behaviors. This analysis is congruent with research that shows the influence of self-sacrificing behaviors on leadership effectiveness is greater for less prototypical leaders (van Knippenberg and van Knippenberg, 2005) and that the positive effects of leader humility on leadership outcomes are more pronounced when leaders' narcissism is high (Zhang *et al.*, 2017). This leads to our third hypothesis,

- H3.* The relationship between servant leadership and perceived leadership effectiveness is stronger in teams with leaders high on Machiavellianism.

Leaders' Machiavellian traits may also play an important role in the process model that involves cooperative TCM styles (H2) as a mechanism through which servant leadership behaviors influence perceived leadership effectiveness. Machiavellian leaders are good at competing with others but less likely to be cooperative (Paal and Bereczkei, 2007). Although several scholars noted that high Machs are able to be cooperative (e.g. Hawley, 2003), a general consensus in the literature is that Machiavellian trait tend to be associated with a competitive world view (e.g. Bereczkei, 2018). Drawing upon trait activation theory that suggests the interplay between the Machiavellian trait and the environment (Jones and Mueller, 2022), we hypothesize that the impact of a cooperative conflict management climate on leadership effectiveness differs for low and high-Machiavellian leaders. For low Machiavellian leaders, servant leadership behaviors would model a cooperative way of handling conflicts by respecting followers' interests, and thus, cooperative TCM would in turn lead to a higher level of perceived leadership effectiveness. In contrast, high-Machiavellian leaders tend to rely on manipulation tactics to influence followers' perception of their leadership effectiveness, but not through the conflict management styles that are derived from servant leadership behaviors. This is because cooperative strategy is more of a shared experience among followers whereas Machiavellianism is associated with a strong desire to maintain power and control in a relationship. The control and manipulation dictated by high-Machiavellian leaders would conflict with a cooperative conflict handling environment. Given this mismatch, team members would most likely judge a Machiavellian leader as less effective. This leads to the following hypothesis:

- H4.* The influence of cooperative TCM on employees' ratings of leadership effectiveness is weaker when team leaders are high versus low on Machiavellianism.

The theoretical framework summarizing the hypothesized relationships is presented in Figure 1.

Methods

Sample and procedure

We collected data from employees and leaders in a large insurance company. Online questionnaires were distributed to them in two waves, one month apart. Collecting data in two waves is a recommended approach and preferred practice in the literature for testing causal ordering effects (e.g. [Liang et al., 2012](#)). Employees working in teams and their team leaders were asked to complete separate surveys. At Stage 1, the employees were asked to respond to questions on servant leadership and TCM, while the team leaders were asked to provide answers to the questions on Machiavellianism. At Stage 2 (one month later), the employees were asked to rate their leaders' effectiveness. We then matched the employee IDs and the team leader IDs across the two stages. A total of 1,010 employees and 189 team leaders were asked to participate. Of these, 701 employees in 150 teams participated in the first round of the survey, of which 310 employees in 91 teams, with the same leaders, participated in the second stage of the survey. The final supervisor-employee matched sample included 310 employees in 91 teams across the two waves. In general, the two-stage matched data set was representative of the initial sample of 701 employees in terms of the participants' age (35.8 years in Stage 1 vs. 34.9 years in the matched sample), gender (72.3% female in Stage 1 vs. 71.9% female in the matched sample), and individual ratings of servant leadership (6.31 in Stage 1 vs. 6.21 in the matched sample). The differences were small and non-significant. All materials were originally drafted in English. They were translated into Chinese and validated through a double-translation process for use in China.

Measures

Servant leadership. This was measured by asking the employees to respond to the 14 items on the servant leadership scale for direct supervisors, which was developed by [Ehrhart \(2004\)](#). This scale reflects the core aspects of [Greenleaf's \(1977\)](#) conceptualization of servant leadership within a one-dimensional scale and is currently one of the most prominent operationalizations of servant leadership ([Lemoine et al., 2019](#)). According to a recent meta-analytical study on servant leadership scales in China, the most often used scale and a valid measure of servant leadership in the Chinese context is the scale developed by Ehrhart in 2004 ([McCune Stein et al., 2020](#)). A sample item was "my direct supervisor makes me feel like I work with him/her, not for him/her." Cronbach's Alpha was 0.95.

Team conflict management. Employees were asked to rate how team conflicts were managed using the 12-item TCM scale developed by [Somech et al. \(2009\)](#), including seven items on "cooperative strategy" and five items on "competitive strategy." Sample items included "Team members collaborate to come up with decisions acceptable to us" (cooperative strategy) and "Team members sometimes use their power to win in a competitive situation" (competitive strategy). The competitive strategy is included in the study as a control variable. A seven-point Likert scale was used to indicate answers ranging from "strongly disagree" to "strongly agree." Cronbach's alpha was 0.99 for the cooperative strategy and 0.88 for the competitive strategy.

Leadership effectiveness. Leaders' effectiveness was rated by employees using a three-item scale adapted from the leadership effectiveness scale in [De Hoogh et al. \(2005\)](#). Cronbach's alpha was 0.96.

Machiavellianism. Team leaders were asked to respond to the 16-item scale of Machiavellianism ([Dahling et al., 2009](#)) on a seven-point scale. Sample items included "I enjoy having control over others" and "People are only motivated by personal gain." Cronbach's alpha was 0.84.

Methods

We conducted multilevel analyses (mixed models in SPSS) to test the hypotheses, given that the analysis involved variables at different levels. The independent variable (servant leadership),

mediators (TCM-cooperative) and dependent variable (leader effectiveness) were at the individual level, while the moderator (leaders' Machiavellianism) was at the group level. The ICC values of 0.154 for servant leadership, 0.075 for TCM-cooperative, and 0.129 for leadership effectiveness. These ICC values indicate that a cross-level analysis is more appropriate than aggregating the individuals' responses at the team level or handling the data only at the individual level. Followers' age, gender and leaders' gender and team competitive conflict management strategy were included as control variables. We then conducted a robust check to verify the moderated mediation results using the SPSS-based MLmed program (Hayes and Rockwood, 2020) to estimate the multilevel moderation and mediation effects simultaneously and reported estimates of the conditional direct and indirect effects.

Results

The correlation coefficients among perceived servant leadership, TCM strategies (cooperative and competitive), leadership effectiveness, leaders' Machiavellianism, followers' age, followers' gender and leaders' gender are presented in Table 1. As shown in the table, servant leadership behaviors are not significantly correlated with leaders' Machiavellian trait ($r = 0.01, p > 0.10$). This confirms our position that the values behind a leader's behavior and their actual behavior might differ and should be acknowledged as such.

We hypothesized that servant leadership was positively associated with higher ratings of leadership effectiveness via cooperative TCM strategies. We conducted a multilevel analysis to examine the relationship between servant leadership and leadership effectiveness. As shown in Table 2, Model 1 shows that servant leadership had an overall positive effect on leadership effectiveness ($B = 0.398, SE = 0.044, p < 0.01$), thereby supporting H1.

Variables	M	SD	1	2	3	4	5	6	7	8
1. Servant Leadership	6.31	0.96	(0.95)							
2. Team Conflict Management - Cooperative	6.49	0.94	0.33**	(0.97)						
3. Team Conflict Management - Competitive	5.09	0.99	0.20**	0.77**	(0.88)					
4. Leadership Effectiveness	6.46	0.84	0.48**	0.48**	0.30**	(0.96)				
5. Leaders' Machiavellianism	2.92	0.77	0.01	0.04	-0.01	0.06	(0.84)			
6. Followers' Age	34.86	6.08	-0.03	-0.14*	-0.07	-0.08	-0.10			
7. Followers' Gender (female = 1)	0.72	0.45	-0.04	0.01	-0.02	-0.09	-0.01	0.24**		
8. Leaders' Gender (female = 1)	0.56	0.50	-0.06	-0.02	-0.03	-0.01	0.06	0.08	0.03	

Note(s):

1. Scale reliabilities are reported on the diagonal. The reliability coefficients for servant leadership, team conflict management strategies, leadership effectiveness are calculated at the individual levels; the reliability coefficient for leaders' Machiavellianism is computed at the team level. Means and standard deviations for the leaders' gender and Machiavellianism are provided at the individual level. The means and standard deviations would be 0.56 (0.45) for leaders' gender and 2.84 (0.80) if computed at the team level. The correlation between these two team level variables when computed at the team level would be 0.03 ($p = 0.801$)

2. ** $p < 0.01$; * $p < 0.05$

Source(s): Table by authors

Table 1.
Means, standard
deviations, reliabilities,
and correlations

Parameter	Model 1			Model 1			Model 1			Model 4		
	Predicting leadership effectiveness			Predicting leadership effectiveness			Predicting leadership effectiveness			Predicting leadership effectiveness		
Estimates of fixed effects	b.	s.e.	p	b.	s.e.	P	b.	s.e.	P	b.	s.e.	p
Intercept	6.50**	0.097	0.000	-0.10	0.113	0.364	6.54**	0.090	0.000	6.57	0.087	0.000
Followers' Age	-0.01	0.007	0.341	-0.02**	0.009	0.009	0.00	0.006	0.880	0.00	0.006	0.607
Followers' Gender (f = 1)	-0.09	0.095	0.331	0.12	0.115	0.295	-0.14	0.088	0.116	-0.15	0.086	0.082
Leaders' Gender (f = 1)	0.05	0.096	0.598	0.03	0.109	0.272	0.04	0.090	0.692	0.01	0.085	0.849
Servant Leadership	0.40**	0.044	0.000	0.32**	0.053	0.000	0.29**	0.043	0.000	0.30**	0.042	0.000
TCM-Cooperative							0.41**	0.066	0.000	0.38**	0.065	0.000
TCM-Competitive							-0.10	0.060	0.088	-0.10	0.059	0.098
Leaders' Machiavellianism										0.05	0.055	0.330
Leaders' Machiavellianism*Servant Leadership										0.18**	0.057	0.002
Leaders' Machiavellianism*TCM Cooperative										-0.25**	0.088	0.005
Leaders' Machiavellianism*TCM Competitive										-0.03	0.072	0.723
<i>Estimates of covariance parameters</i>												
Residual	0.493**	0.047	0.000				0.412**	0.039	0.000	0.400	0.038	0.000
Intercept	0.052	0.034	0.128	0.742**	0.070	0.000	0.050	0.028	0.081	0.036	0.027	0.178
<i>Model of fit statistics</i>												
Schwarz's Bayesian (BIC)	716.346			830.352			671.134			666.682		
Akaike (AIC)	708.905			882.911			663.707			659.281		
Pseudo R-Square	0.293			0.175			0.410			0.431		
Note(s): 1. * $p < 0.05$ ** $p < 0.01$												
Source(s): Table by authors												

Table 2.
Results of mixed-model
analyses predicting
perceived leadership
effectiveness

As shown in Table 2, when TCM strategies were added to the regression in Model 3, the association between servant leadership and leadership effectiveness decreased but remained significant, whereas the coefficient of the cooperative TCM strategy was significant ($B = 0.409, SE = 0.066, p < 0.01$). Furthermore, as shown in Model 2, servant leadership was positively associated with the cooperative TCM strategy ($B = 0.324, SE = 0.053, p < 0.01$). Applying the mediation criteria, the result shows that cooperative TCM partially mediated the relationship between servant leadership and leader effectiveness. We computed the confidence intervals (CIs) using the Monte Carlo method (Preacher and Selig, 2012), with 20,000 repetitions to further examine the indirect effect of servant leadership via cooperative TCM strategies. The indirect relation from servant leadership to leadership effectiveness via cooperative TCM was significant (indirect effect = 0.090, 95% CI = [0.044, 0.144]), providing support for H2.

We then tested the moderating effect of Machiavellianism on the direct and indirect relationships between servant leadership and leadership effectiveness. As shown in Model 4, the interaction terms between Machiavellianism and servant leadership were positive and significant ($B = 0.177, SE = 0.057, p < 0.01$), showing that the direct effect of servant leadership varied as the leaders' Machiavellianism changed. Similarly, the interaction term between leaders' Machiavellianism and cooperative TCM was also statistically significant ($B = -0.247, SE = 0.088, p < 0.01$), showing that the relationship between cooperative TCM and leadership effectiveness varied across different levels of Machiavellianism. The negative sign of the interaction term coefficient indicates that the positive relationship between cooperative TCM and leadership effectiveness was smaller for high Mach. Thus, both H3 and H4 are supported.

As for the model fitness, following Nakagawa and Schielzeth (2013)'s suggestions for measuring model fitness in multi-level analysis, we use AIC and Pseudo R-square statistics to test model-fitting, shown in Table 2. The comparison of AIC statistics in the nested models shows that including the interaction terms in Model 4 improves the fit of the model, and the conditional Pseudo R-square in Model 4 has a value of 0.431, showing that 43.1% of the total variance in perceived leadership effectiveness can be explained through the fixed and random effects in the multiple-level model.

Added insights into both two-way interactions can be gained by Figures 2 and 3. Figure 2 shows that servant leadership is related to more perceived leader effectiveness and that this

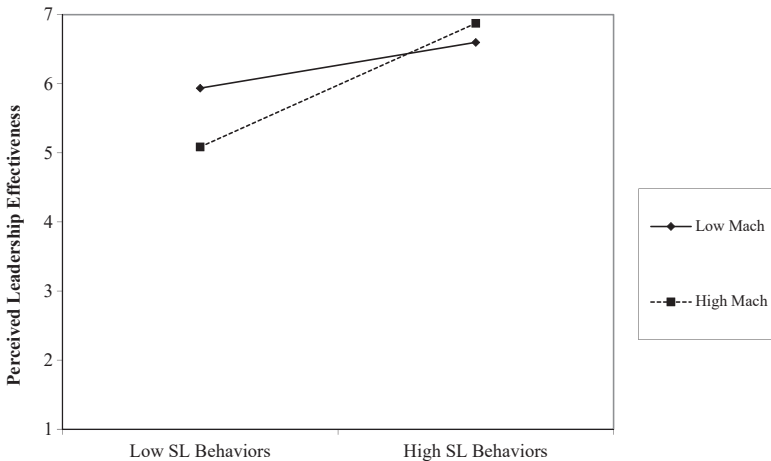
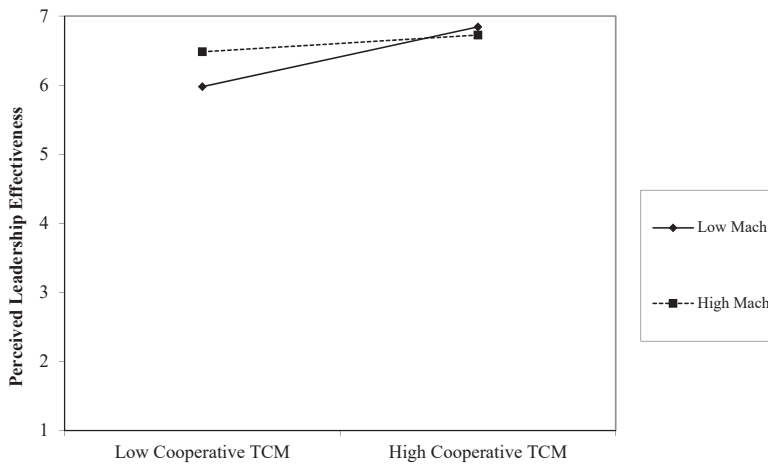


Figure 2. Two-way interaction of servant leadership and Machiavellianism on perceived leadership effectiveness

Source(s): Figure by authors



Source(s): Figure by authors

Servant leadership and Machiavellian traits

Figure 3. Two-way interaction of leader Machiavellianism and cooperative team conflict management strategies on perceived leadership effectiveness

influence is enhanced for leaders high on Machiavellianism. Figure 3, on the other hand, shows that the positive link between cooperative TCM and perceived leadership effectiveness only exists for leaders low on Machiavellianism.

As a robust check, we conducted a multilevel moderated mediation analysis using the MLmed approach (Hayes and Rockwood, 2020) to examine whether and the extent to which leaders' Machiavellianism moderated the direct and indirect relationships between servant leadership and leadership effectiveness. As shown in Table 3, the index of moderated mediation was significant (index = -0.046 , 95% CI = $[-0.081, -0.018]$). The indirect effects varied across high (+SD) and low (−SD) levels of leader Machiavellianism. At high (+SD) levels of Machiavellianism, the direct effect was significant ($B = 0.408$, 95% CI = $[0.268, 0.549]$), and the indirect effect via cooperative TCM was not significant ($B = 0.021$, 95% CI = $[-0.011, 0.059]$). Thus, cooperative TCM did not account for the effect of servant leadership on leadership effectiveness at high levels of Machiavellianism. In contrast, at low (−SD) levels of Machiavellianism, the total effect in this relationship could be fully explained by cooperative TCM, shown as a full mediation (indirect effect = 0.095 , 95% CI = $[0.047, 0.154]$; direct effect = 0.131 , 95% CI = $[-0.001, 0.263]$). These results confirm that the relative standing of individuals on the perception of cooperative TCM strategies mediated the relationship between the servant leadership perception on leadership effectiveness at low

	Machiavellianism	Indirect effect (via cooperative TCM)		Direct effect	
		Effect	95% CI	Effect	95% CI
Low Level of Leaders' Machiavellianism (−SD)	2.186	0.095	[0.047, 0.154]	0.131	[−0.001, 0.263]
Average Level of Leaders' Machiavellianism (mean)	2.938	0.069	[0.032, 0.138]	0.321	[0.239, 0.404]
High Level of Leaders' Machiavellianism (+SD)	3.578	0.021	[−0.011, 0.059]	0.408	[0.268, 0.549]

Source(s): Table by authors

Table 3. Conditional direct and indirect effects of servant leadership behaviors on perceived leadership effectiveness

levels of leader Machiavellianism. Accordingly, H3 and H4 were supported. Figure 4 shows the conditional direct and indirect effects of servant leadership on perceived leadership effectiveness at different levels of leaders' Machiavellianism. As leaders' Machiavellianism increases, the direct effect goes up while the indirect effect goes down.

In short, we have the following findings. First, managers who demonstrated more servant leadership behaviors were generally rated as more effective by their followers. Second, servant leadership tended to promote a general sense of a cooperative TCM strategy, which was associated with higher perceived leader effectiveness. Third, the direct relationship between servant leadership and a leader's effectiveness varied with the leader's Machiavellianism. Cooperative TCM strategies mediated the relationship between servant leadership and employees' perception of leadership effectiveness at low levels of leader Machiavellianism but did not play a role when leaders have a high Machiavellian trait.

Discussion

Our studies extend the servant leadership theory by providing additional insights into the relationship between servant leadership behaviors and leader effectiveness. We paid specific attention to both process and contingent factors, in particular teams' conflict management strategies and leaders' Machiavellianism. We confirmed the relationship between servant leadership and perceived leadership effectiveness, the moderating role of Machiavellianism on their direct relationship, and the contrasting roles that cooperative TCM plays at high and low levels of leaders' Machiavellianism. We find that for non-Machiavellian leaders, the cooperative conflict management style serves as the pathway through which servant leadership behaviors affect perceive leadership effectiveness. In contrast, for Machiavellian leaders, a cooperative conflict management style does not play a role. When leaders are low on Machiavellianism, cooperative team conflict management strategies serve as an important bridge between servant leadership behavior and perceived leadership effectiveness. The effect of cooperative TCM strategies fostered by servant leadership behaviors is

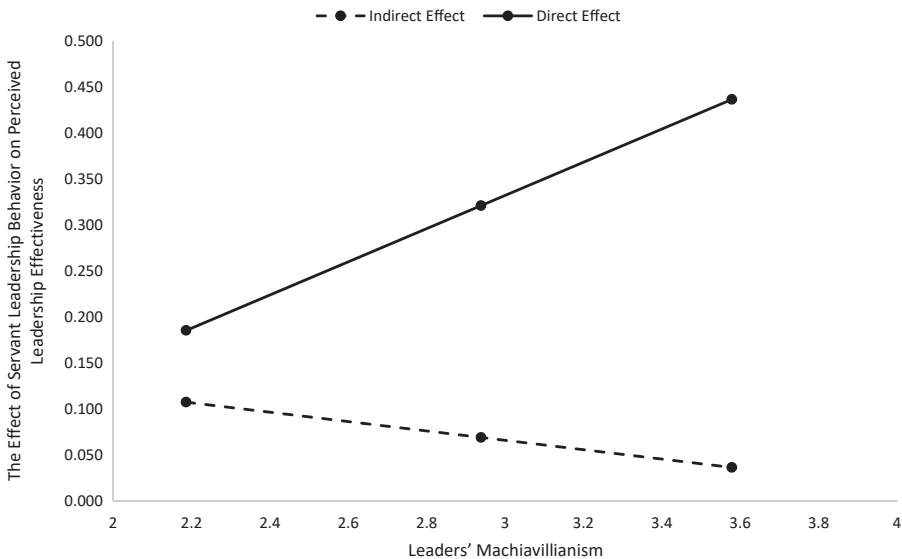


Figure 4. A visual representation of the conditional indirect and direct effects of servant leadership behavior on perceived leadership effectiveness

Source(s): Figure by authors

strengthened. In contrast, when leaders are high on Machiavellianism, even though servant leadership behaviors would still promote the use of cooperative conflict management strategies in the team, this context is contradictory to leaders' high Machiavellianism, leading to a non-significant role of TCM strategies. In the meanwhile, the direct effect of servant leadership behaviors on leadership effectiveness remains significant. We will explore the implications of these findings in this section.

Theoretical implications

Our studies introduced and confirmed a two-level process model that provided insights into the pathways through which servant leadership behaviors affect perceived leadership effectiveness. Previous literature has shown that servant leadership behaviors are related to fulfilling followers' psychological needs (van Dierendonck *et al.*, 2014) as well as fostering a knowledge-sharing climate (Song *et al.*, 2015) and a sense of psychological safety, fairness and trust in the work context (Yoshida *et al.*, 2014). Adding to this research stream, we find convincing evidence that servant leadership behaviors relate to followers' perception of leadership effectiveness. This builds on earlier research on the impacts of leadership styles such as transactional leadership and transformational leadership on perceived leadership effectiveness (Avolio *et al.*, 1999; van Dierendonck *et al.*, 2014). Extending this line of research, our findings suggest that servant leadership behaviors affect team dynamics, in particular how conflicts are handled within a team. Managers' servant leadership behaviors encourage teams to use cooperative TCM strategies, which, in turn, influence the extent to which followers view their leaders as effective. This study extends the current literature on servant leadership by considering how teams that experience servant leadership behaviors handle conflict as well as explaining why servant leaders are viewed as more effective (Eva *et al.*, 2019).

Our findings shed light on the paradox of "serving" others (servant leadership behaviors) and "seeking" self-interest (Machiavellianism) as two seemingly contrasting characteristics of leaders and how they interact to influence leader effectiveness. It should be noted here that analysis shows a lack of correlation between leaders-reported Machiavellian traits and followers-reported servant leadership behaviors demonstrated by their leaders, suggesting that it is probable for both high and low Machiavellian leaders to engage in servant leadership behaviors, which, however, may result in different outcomes. Also, the average rating of Machiavellian traits was at a low to medium level (mean = 2.92, SD = 0.77 on a seven-point scale). Even a leader who scored relatively high (e.g. 1 SD above the mean) was still low compared to the mid-point of the scale. Whether or not leaders rated themselves as relatively low or high on Machiavellianism was not related to their followers' perception of their servant leadership behaviors. We also found that relatively high-Machiavellian leaders who adopted servant leadership behaviors were perceived as more effective by their followers compared to low-Machiavellian leaders. This result confirms our expectation that individuals with Machiavellian traits may be encouraged to engage in more other-serving behaviors to be considered effective. Kwak and Shim (2017), for instance, found that Machiavellian leaders who show ethical leadership behaviors tend to be perceived as genuine by their followers and are associated with desirable employee work behaviors. In this regard, our analysis of the interplay between servant leadership behaviors and Machiavellian traits is in line with literature that aims at building a holistic view of leadership by recognizing the paradoxes in leaders' traits and behaviors (van Knippenberg and van Knippenberg, 2005; Zhang *et al.*, 2017).

Practical implications

From a practical perspective, Machiavellian leaders are unavoidable in the realities of business practices. Earlier research shows both high and low Machiavellian leaders can attain similar levels of career success (e.g. Pfeffer, 2021). Then, a practical question for

organizations is to what extent they could manage Machiavellian leaders to avoid undesirable behaviors and attain the better outcomes. Our study shows that Machiavellian leaders have the potential to achieve leadership effectiveness when engaging in servant leadership behaviors such as caring for followers' well-being. This finding has important practical implications.

On the one hand, organizations may design and implement servant leadership development programs to help leaders learn the components of servant leadership behaviors and communicate with leaders about the importance of engaging in these behaviors. Also, incorporating leadership behaviors in the performance evaluation of the leaders may help motivate leaders, especially Machiavellian leaders, to engage in servant leadership behaviors and consequently enhance their leadership effectiveness.

On the other hand, we find that the cooperative TCM style mediates the relationship between servant leadership behaviors and leadership effectiveness in teams with low-Machiavellian leaders but not high-Machiavellian leaders. Organizations with a strong focus on building a cooperative conflict management climate may need to be careful in choosing team leaders and, if possible, avoid appointing high-Machiavellian leaders to these teams.

Limitations and future research

Like most research, our study has limitations that warrant discussion. First, while our study collected data at two-time points (i.e. one month apart), it is still cross-sectional and uses self-report as the dependent variable. Some managers may respond in a socially desirable manner to Machiavellianism items and underestimate the extent to which they are Machiavellian. Future studies that collect data on Machiavellian traits from both leaders and followers would help shed light on this issue.

Second, the study was performed in China in Mandarin Chinese, and as such, the influence of culture cannot be ruled out. We took great care while translating the items to maintain their core meaning as best as possible. A recent servant leadership meta-analysis by [McCune Stein et al. \(2020\)](#) showed no significant differences in effect sizes between employees in China and Anglo-Saxon countries (the US, Canada, the UK and New Zealand) concerning a broad range of dependent variables such as job performance, creative behavior and job satisfaction. Therefore, we are confident that the results presented here, to some extent, can be generalized among these cultures. However, it is important to acknowledge that findings in this study are based on data from one country. Future researchers need to be aware that the results might be affected by the social and cultural contexts where the research was conducted.

Third, our study found that the cooperative TCM strategy provides a pathway that positively associates servant leadership behaviors with leader effectiveness. Even though the indirect effect decreased as leaders' Machiavellianism increased, the total effect of servant leadership behaviors on leader effectiveness remained significant and even increased. A lingering question, then, is which other mechanisms better explain the effects of servant leadership behaviors on leader effectiveness as leaders' Machiavellian traits increase. Future research is encouraged explore other mechanisms through which servant leadership behaviors impact leadership effectiveness.

In conclusion, our study shows the interrelationships of three intriguing areas: servant leadership behaviors, leaders' Machiavellianism and TCM skills. It confirms the importance of building contingent models for a holistic understanding of servant leadership behaviors.

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