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organizational performance:
an empirical examination
with U.S. and Brazilian
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ABSTRACT

The literature has drifted towards a polarized view of managers as either individuals concerned with mitigating self-interest (e.g. agency and organizational politics theories) or individuals who actively motivate and engage team members in the pursuit of common organizational goals (e.g. shared cognition and justice theories). Using a survey sample of 419 U.S. and Brazilian managers, we propose and find instead that managers exhibit complex attitudes and behaviors that do not reflect a single perspective of human behavior in the workplace. Managers who perceive self-interest to be common are not necessarily less concerned with other issues unrelated to self-interest (e.g. fairness and adequate treatment for team members). Managers also appear to adopt behaviors that blend recommendations consistent with multiple theories. For instance, we find that managers who are concerned with justice not only emphasize practices to foster justice, but also practices that directly follow from agency theory (such as performance evaluation and incentives); and the joint emphasis in those practices appear to positively influence organizational performance. By outlining the predictions of distinct theories and exploring their possible interactions, our study contributes with a more complete picture of the interplay between managerial attitudes, managerial behavior and performance.

Key words

Self-interest, opportunism, agency theory, organizational politics, shared mental models,
justice

INTRODUCTION

In the pursuit of explaining the relation between managerial practices and the performance of organizations, scholars have made diverse assumptions regarding managers' interpersonal attitudes and the influence of such attitudes on their behavior in the workplace. Some scholars, emphasizing the hazards of shirking (e.g. agency theory: Jensen and Meckling, 1976; Lazear, 2000) and self-serving political behavior (Ferris *et al.*, 1989; Milgrom and Roberts, 1990), depict managers as individuals who perceive or anticipate potential self-interest by their subordinates; based on these beliefs, managers then act by imposing formal governance mechanisms such as incentives, supervision, and organizational rules. Other scholars contend that this view of managers is a "narrow one" (Donaldson, 1990: 372); these scholars then propose alternative theories of managerial behavior which either reject or dispense with the assumption of self-interest (e.g. Conner and Prahalad, 1996; Davis *et al.*, 1997; Donaldson, 2008; Frey and Jegen, 2001). In these views, managers would be better off motivating team members through diverse actions such as the communication of common goals and the establishment of procedures that are perceived as fair (Folger, 1986; Korsgaard *et al.*, 1995; Levesque *et al.*, 2001; Mesquita and Brush, 2008). As Ghoshal and Moran (1996: 38) put it, managers concerned with opportunism "will be distracted from the business of generating the collective energy of their organization and focusing it on the task of running a business."

We submit that the received portrait of managers as either opportunism-controllers or active-motivators does not pay justice to the much more complex set of attitudes and behaviors that can be found in actual organizations. It is not clear whether managers really follow a single perspective on human behavior or instead attempt at combining managerial practices that they perceive to be performance-enhancing. Also, because managers interact with their subordinates in myriad ways and instances, there is room for multiple perceptions

depending on the particular context in which parties are interacting (Lewicki *et al.*, 1998).¹ Lastly, from a practical standpoint, if the discipline of strategic management is to be of any service to managers regarding how particular practices lead to advantages in the marketplace, one needs to examine in a broader sense how attitudes and their consequential behaviors influence the ability of the firm to meet or exceed established goals (Gottschalg and Zollo, 2007).

We contribute to this debate by jointly analyzing alternative theories of managerial attitudes and behavior, and the performance implications of their prescriptions for managerial action. We present hypotheses based on theories that view managers' actions as an attempt to address self-interest on the part of their subordinates (e.g. agency theory), and theories that identify sources of concern, other than self-interested behavior, that may emerge in intraorganizational interactions (e.g. justice theory). We then admit the possibility of mixed attitudes and behaviors by discussing how managers may engage in behaviors that are consistent with perceptions of *both* self-interest *and* other problems not strictly related to self-interest. For instance, we model how managers who strive for a fair treatment for the subordinates may also emphasize performance evaluation and reward schemes (behaviors that typically follow from agency theory) as a way to establish clear goals at the outset, provide useful feedback for team members, and praise those who excelled.

We test our hypotheses using a survey with 419 managers from the United States and Brazil, working in distinct industries and functions. Because distinct cultural traits (Hofstede, 1997) and various task characteristics in the work environment (Hackman and Wageman, 1995) should influence perceptions of how people behave, collecting data from two distinct

¹ Consider, as an illustration, the story reported by Ellis (2008) about how John L. Weinberg, former senior partner of Goldman Sachs and considered a person of "affable manner" (p. 297) who inspired "trust and affection" (p. 193), reacted to an event when Eric Dobkin, responsible for stock underwriting, closed an important deal with the British government in the 1980s. As Ellis writes: "Weinberg called Dobkin: 'Congratulations, Eric. You've just won the largest and most important privatization in history. This is very good news. We're all very proud of you and what you've done—so far.' Then, in the typical Goldman Sachs manner, his tone hardened: 'Eric, don't screw this one up. Don't make *any* mistakes. We'll all be watching you—and counting on you to do everything just the right way'" (p. 355).

countries and from managers involved in diverse functions allows us to increase the range of attitudes and behaviors that can be observed in practice. Although we examine how responses vary across those two subsamples, our goal is neither to propose nor test hypotheses related to country-specific effects.

Our study makes inroads into the psychological foundations of strategy in two ways. First, we describe and assess empirically the diverse range of attitudes that managers may develop in the workplace, and how these attitudes explain managerial behavior. Our results indicate that managers exhibit complex patterns of attitudes and behaviors which cannot be explained by a single theoretical perspective. Second, we expand current research on managerial attitudes by grounding these attitudes in particular managerial paradigms, showing how the substantive content of attitudes can affect organizational performance. More specifically, our study unveils paths through which managerial assessments of their subordinates affect the actions that they emphasize in their day to day work lives, and how these actions lead to outcomes that exceed or not managers' initial expectations. Therefore, we contribute to the evolving literature that attempts to examine sources of competitive advantage emanating from distinct managerial attitudes and behaviors (e.g. Barney and Hansen, 1994; Gottschalg and Zollo, 2007; Nickerson and Zenger, 2008).

In the next session, we present key alternative theories of managerial attitudes and behaviors—based on the assumption of self-interest (agency and organizational politics) and not based on that assumption (shared cognition and interactional justice)—, discuss their possible associations, and outline their implications for organizational performance. We then describe the results of an international study carried out to test these hypotheses, with particular emphasis on how distinct managerial perspectives jointly contribute to explain organizational behaviors and performance. We conclude by outlining our contributions for theory and practice.

THEORETICAL FRAMEWORK

In order to model managerial attitudes and behaviors and how they associate with organizational performance, we leverage theory elements that are based on distinct behavioral assumptions regarding the self-interestedness nature of human action. Some theories rest on the assumption that individuals try to maximize their own gains—“personal wealth, status, leisure and the like” (Donaldson, 1990: 371)—even at the expense of others in the organization. Williamson (1985) even proposes an extreme form of self-interested behavior, which he terms opportunism or “self-interest seeking with guile” (p. 47). Other theories dispense with this assumption and identify alternative sources of conflict even when actors do not necessarily try to maximize their own gains and are instead concerned with other issues (e.g., actors may value fairness in social interactions). We thus present predictions from each theory based on the following logic: depending on managers’ propensity to evaluate others in the organization as self-interested or not—i.e., managers’ *attitudes* towards the self-interestedness of others—they are likely to emphasize distinct managerial actions to address the source of conflict and increase organizational performance—i.e., they are likely to *behave* in ways that are consistent with their attitudes (e.g. Eagly and Chaiken, 1993).

We do not imply that attitudes towards self-interestedness are the sole determinants of managerial action; other contextual or normative forces may also induce managers to act in particular ways (e.g. Fishbein and Ajzen, 1980). However, we do propose that each theory, resting on specific assumptions about human behavior, will generate distinct patterns of managerial action. Also, our modeling of distinct theoretical elements is not intended to be exhaustive; instead, we try to build upon existing core debates in the literature (as briefly outlined in the introduction) and exploit possible associations between such contending elements involving different assumptions about human behavior. In Figure 1, we graphically

represent our overall model, depicting how alternative managerial attitudes lead to specific forms of behaviors, which in turn, impact performance.

<<Figure 1 around here>>

The level of analysis in our theoretical discussion is the *organizational unit*, which we define here as the group of organizational members reporting to a certain manager.² Our adopting this more fine-grained definition of “organization”—not necessarily the firm *as a whole*—is warranted, given that the practices emphasized by managers may be more effectively circumscribed to the group of people who reports to them. Thus, the unit should be the level at which the effects of managerial attitudes and behaviors are most salient. For the same reason, the organizational unit is also the unit of accrual when evaluating performance; thus, we consider the performance of the unit instead of the performance of the firm as a whole. Our conceptualization of performance is general: a high-performance unit is an organizational entity whose results (however defined or measured) are above managers’ initial expectations (e.g. Barney, 2002).³ Notice that our definition of performance is tied to the perception of the manager of the unit; for simplicity, we do not discuss whether managers themselves are aligned or not with the objectives of the larger organization, if any, to which the organizational unit belongs.

Theories based on the assumption of self-interest

Agency

Agency theory focuses on settings where a “principal”—the owner of a company, the manager of a division, the supervisor of a team, etc.—is concerned with avoiding that “agents”—i.e. subordinates—engage in a series of undesirable behaviors such as shirking, accommodation, and lack of attention to certain aspects of the task (e.g., service quality). The

² For instance, if the focal manager is responsible for a bank branch, then the organizational unit is the bank branch itself; if the manager is responsible for the sales of a particular product, then the unit is the group of sales representatives that respond to the manager; if the manager is the CEO, then the unit is the company as a whole.

³ As an example, a group of salespeople who sell 300 product units per month may be considered of high performance if the sales manager’s initial expectations of potential sales was, say, 100 units.

underlying assumption is that agents' self-interest is misaligned with the principal's objectives (Jensen and Meckling, 1976). Thus, if the set of behaviors valued by the principal impose costs to the agents, then—absent appropriate organizational mechanisms—the latter will tend to exert suboptimal effort (Gibbons, 1998; Holmstrom and Milgrom, 1991), thereby dampening the performance of the organization.

Given their evaluation of agents' self-interestedness, managers' rational behavioral response, according to agency theory, will be to emphasize supervision, adopt performance-contingent compensation contracts, or both (McLean Parks and Conlon, 1995). Direct supervision of agents' behavior, however, may be costly and even unfeasible when managers' cannot directly observe what their subordinates are doing all the time and in all tasks performed (Brickley and Dark, 1987). In this case, managers may craft incentive contracts that compensate the subordinate according to some observable performance indicator; such contingent compensation may involve, for instance, a monetary bonus conditional on certain individual and/or group-based targets (Knez and Simester, 2001; Lazear, 2000), as well as promotion schemes that are conditional on the individual's past performance within the organizational unit (Brickley *et al.*, 2002). As a consequence of these managerial actions, agents' self-interest will become, to some extent, more aligned with the overall objectives of the organizational unit; their rational response will be to engage in behaviors that are valued by their managers. Therefore:

Hypothesis 1. (a) Managers who perceive agency problems as common will emphasize solving agency problems in their unit (e.g. direct supervision and/or performance-contingent compensation contracts); (b) as a consequence of this increased emphasis to solving agency problems, the performance of the unit will increase.

Organizational politics

Organizational politics involves social interactions through which individuals or groups of individuals attempt to influence others and affect the process of decision-making. Although some authors consider politics as a natural process characterizing the dynamics of organizations (e.g. Pfeffer, 1978), other authors adopt a more negative view by considering politics as a mechanism through which groups of individuals seek and defend their self-interest. Thus, politics can encompass “a variety of different types of opportunistic behavior” (Ferris *et al.*, 1989: 143) or, more specifically, contexts where people “band together into small groups and are inattentive, perhaps even destructive, to the needs of others” (Cropanzano *et al.*, 1997: 159). Faced with such negative social interactions, some individuals will reduce their willingness to contribute to the organization and even depart (Ferris *et al.*, 1989; Gandz and Murray, 1980), while others will excessively waste time and effort to influence decisions for their own benefit instead of engaging in other actions that could otherwise increase the performance of the organizational unit as a whole (Milgrom and Roberts, 1990).

Managers who perceive their personnel as politics-oriented and anticipate potential dysfunctional consequences are likely to respond in a variety of different ways. They may simply diagnose the existing “clusters of interest” in organizations (Pfeffer, 1992: 340) and attempt at reconciling conflicting demands (Witt *et al.*, 2000). Managers may also establish rules and procedures so as to avoid excessive influence efforts; e.g., clear financial rules for the approval and funding of internal projects (Milgrom and Roberts, 1990). As managers emphasize actions that help curb the extent to which factions within the organizational unit can succeed in seeking self-serving decisions, they are more likely to attain performance that is more consistent with their initial expectations. Thus:

Hypothesis 2. (a) Managers who perceive politics as common will emphasize dealing with politicking among their team members (e.g. reconciling conflicting demands,

establishing rules etc.); (b) as a consequence of this increased emphasis to dealing with politicking, the performance of the unit will increase.

Theories not based on the assumption of self-interest

Shared cognition (mental models)

While the former two approaches begin from an assumption of divergence of interests among organizational members, team cognition approaches have tended to emphasize how well functioning organizations capitalize on information sharing and collaborative dynamics. According to the team cognition approach (e.g. Cannon-Bowers *et al.*, 1995), each member of an organizational unit must develop working mental representations of the job, its important features, and its requisites for high performance. In this context, team members may genuinely diverge on the relevant aspects of the job that should lead to high performance, even when they share the same desired outcomes for the organization. Consider, for instance, a team of salespeople who all agree that sales are unsatisfactorily low, but disagree on how to change the situation. Some individuals may believe that increasing sales will require heavy advertising efforts, while others may argue that it will be necessary instead to aggressively lower the price of the product. Differently from agency or organizational politics theories, in this case the source of conflict has to do with distinct cognitive representations of the task—specifically, how particular actions map onto performance—instead of opposing self-interests (Amason, 1996; Jehn, 1997).

Perceiving such cognitive divergences, managers will need to foster what the literature has termed “shared mental models” (Cannon-Bowers and Salas, 2001): unit members will need to develop accurate team-level conceptions of a given situation, understand the processes involved in improving organizational performance, and develop an accurate prediction of future events and appropriate behaviors within the workplace (Klimoski and Mohammed, 1994; Weick and Roberts, 1993). Shared mental models allow anticipation of others’ actions

and needs through shared knowledge, which improves coordination (Mathieu *et al.*, 2000; Mohammed and Dumville, 2001) and leads to superior team performance (Waller *et al.*, 2004). Consequently, managers who are concerned with the coordination of ideas and opinions in the team are more likely to emphasize a series of practices such as committees for the collective discussion of strategies (Jones, 2001), articulation of distinct points of view to build consensus (Nickerson and Zenger, 2004), mutual understanding of the roles and responsibilities of team members (Levesque *et al.*, 2001), and so on. Therefore:

Hypothesis 3. (a) Managers who perceive misalignment in mental models as common will emphasize creating shared mental models in their unit (e.g. establishing committees for discussion, fostering consensus etc.); (b) as a consequence of this increased emphasis to creating shared mental models, the performance of the unit will increase.

Interactional justice

While constructing shared mental models is important for the cognitive alignment of unit members, it leaves unaddressed the interpersonal link between members, a link which has been shown to be significant in organizational functioning (e.g. Graen and Uhl-Bien, 1995). A large literature has been devoted to studying, in particular, how team members perceive outcomes and processes in the organizational to be fair or just. While some scholars emphasize how individuals respond to inequity in compensation and effort across members (Adams, 1965; Deutsch, 1985), we are particularly interested here in how managers develop distinct employee exchange relationships that build trust (Dienesch and Liden, 1986) and affect key emotional processes between leaders and subordinates (Bauer and Green, 1996). Such behaviors send signals to employees that they are being treated with dignity and respect, as well as being informed of managerial decisions (Colquitt *et al.*, 2001). These are important motivational factors which are grouped in the literature as “interactional justice” (Bies and

Moag, 1986), the lack of which causes a sense of injustice (Folger, 1984) with regards to superiors.⁴ Individuals may value just treatment even in cases where organizational outcomes are not perfectly aligned their self-interest. For instance, members' resentment towards lower individual compensation may be ameliorated if managers express concern about the situation and justify the resulting outcome (Folger, 1986).

Whether organizational policies are seen as fair depends to a large extent on whether those policies are transmitted in interpersonally sensitive and respectful ways (Bies and Shapiro, 1988). Because such perceptions of fairness are important antecedents for performance (Colquitt *et al.*, 2001), managers who perceive affective responses to be commonplace should foster fairness in social interactions with team members to augment the performance of their units. Managers could, for instance, actively take into consideration suggestions by team members and justify why certain decisions were made (Korsgaard *et al.*, 1995), publicly recognize individuals who devoted high effort to organizational tasks (Brown and Leigh, 1996), express concern about the personal life of members and deal with stress (Graen and Scandura, 1987), among other actions that are expected to build a sense of justice. Thus:

Hypothesis 4. (a) Managers who perceive affective responses as common will emphasize creating a sense of interactional justice in their unit (e.g. justifying why decisions were made, expressing concern about members etc.); (b) as a consequence of this emphasis to fostering interactional justice, the performance of the unit will increase.

Mixed attitudes and behaviors

⁴ There has been some debate in the literature as to whether interactional justice should be considered distinct from *procedural* justice (e.g. Bies, 2005). In Colquitt *et al.*'s (2001) review, they found that interactional variables such as fair treatment and informing employees added variance over and above procedural justice. Because we are interested in how managers treat their subordinates in a broader sense, we focus on the interactional justice construct.

The theories discussed before predict distinct attitude-behavior relations based on a common idea: to increase organizational performance, managers will emphasize actions that are consistent with their assumptions about the intent of organizational members. Indeed, the literature examining the behavioral foundations of managerial action has often portrayed two types of managers: individuals who believe that self-interest is pervasive and act accordingly, and individuals who are more concerned with motivation and team engagement (e.g. Davis *et al.*, 1997; Frey and Oberholzer-Gee, 1997; Ghoshal, 2005; Sundaramurthy and Lewis, 2003). Some even propose that managerial behaviors intended to mitigate self-interest will actually signal distrust and further beget self-interest. As originally advanced by Strickland (1958), individuals may become less motivated to pursue organizational goals if they perceive the existence of external controls that are crafted to suppress defection (Deci and Ryan, 1985; Fehr and Gächter, 2000; Frey and Jegen, 2001). Thus, the logic goes, managers who engage in actions that will inspire trust and motivate team members towards achieving collective goals should outperform other managers who simply try to curtail self-interest (Donaldson, 2008; Osterloh and Frey, 2000).

We posit that such polarized view of managers deserves careful revision, because in practice managers may engage in a *mixed*, complex set of actions that do not simply follow the tenets of a single perspective on human behavior. In particular, we posit that attitudes related to self-interest may influence behaviors not necessarily related to self-interest, and that attitudes not related to self-interest may affect behaviors not devised to address self-interest. In other words, we expect cross associations between the attitudes and behaviors emanating from distinct theories. Although several effects can be outlined along these lines, we focus on four major possibilities that can receive theoretical underpinning.

We first examine the interplay between agency and justice. Managers who perceive a concern for justice in the organizational unit may also engage in agency-related actions that

allow them to better deal with affective responses. Suppose, for instance, that a manager would like to provide team members with useful feedback regarding their individual performance. If managers, at the outset, establish reasonable goals and clear criteria to evaluate and compensate individual performance—behaviors that typically follow from agency theory—then it should become easier for these managers to judge whether team members met initial performance expectations or not, and whether their actions should be corrected or praised (through monetary rewards or otherwise). This argument is reminiscent of recent discussions in the literature regarding how explicit contracts can facilitate the development of relationships by creating procedures through which parties compare actual performance to initial expectations and mutually adjust if necessary (Mayer and Argyres, 2004; Poppo and Zenger, 2002). In addition, if managers closely monitor team members, the observability of their actions will increase (Brickley *et al.*, 2002), thereby allowing managers to identify those who need to be publicly recognized, and those who deserve more careful attention and coaching. Thus:

Hypothesis 5. Managers who perceive affective responses as common will also emphasize in their unit actions that are consistent with solving agency problems.

In the same vein, we posit that agency-oriented managers are also likely to engage in justice-related behaviors. Our logic is that managers may anticipate that actions devised to curb self-interest will also create negative responses which may require extra managerial effort. Suppose, for instance, that an aggressive bonus scheme is introduced in the organizational unit. Given that individuals tend to have inflated perceptions of their own contribution to the organization (Nickerson and Zenger, 2008; Zenger, 1992), managers should expect complaints by those whose compensation is significantly below others. To avoid negative downstream consequences (e.g. departure or sabotage), managers may invest considerable effort to justify decisions and “frame” the differential compensation scheme as a

mechanism to reward those who excel instead of a procedure to punish particular members (e.g. Luft, 1994). Therefore:

Hypothesis 6. Managers who perceive agency problems as common will also emphasize in their unit actions that are consistent with creating a sense of interactional justice.

The second set of interactions we examine involves theories related to organizational politics and shared cognition. Because organizational politics may be related to the formation of interpersonal factions based on shared beliefs and identities (e.g. Ashforth and Mael, 1989), we submit that managers who view creating shared mental models as important should also stress dealing with organizational politics. Distinct factions in the organizational unit with diverging interests should also leave room for political-oriented behavior whereby subordinates try to influence managers towards their specific goals, even when they genuinely think that these goals are aligned with the interests of the organization as a whole. Thus, managers who are sensitive to shared cognition problems should also respond by adopting behaviors consistent with dealing with politicking, such as listening to distinct factions, creating rules and procedures to approve certain projects, and so on. Our logic leads to:

Hypothesis 7. Managers who perceive misalignment in mental models as common also emphasize in their unit actions that are consistent with dealing with politicking.

Lastly, we expect that managers who perceive self-interested politicking to be prevalent are also more likely to adopt behaviors consistent with creating shared mental models. To deal with self-interested factions, managers can try to show that achieving high organizational performance will require concerted actions and interests; i.e., they can try to align the “preferences” of alternative factions by creating shared understanding of common organizational goals (Vredenburg and Maurer, 1984). For instance, recent work has shown how strategic planning has changed from a tool to devise long-term actions to a mechanism

whereby distinct groups jointly discuss actions amalgamated by a common “vision” (e.g. Grant, 2003). If clear goals are communicated and understood, then managers can economize on their efforts to handle politicking. Hence, we arrive at:

Hypothesis 8. Managers who perceive politics as common will also emphasize in their unit actions consistent with creating shared mental models.

DATA AND METHODS

Sample and procedure

We test our proposed hypotheses using a sample of 419 executives who recently acquired their MBA degree or are currently enrolled in executive MBA programs offered by either one of two business schools, located respectively in Brazil and the United States. Because we are interested in managerial behaviors towards subordinates, we selected only executives who currently supervise the work of others (e.g. a sales manager, the head of the finance department etc.). The average manager in our sample is 35.4 years old, being that their ages range from 21 to 67 years. We have a roughly equal distribution across gender (59% were male) and nationality (59% were US respondents).

Our sample includes managers from both Brazil and the United States in order to increase the heterogeneity of our data. Data source heterogeneity is an important factor in hypothesis testing, because of the improved variance in the relevant variables to be explained. This improvement arises from the diversity in cultural attitudes and behaviors (Hofstede, 1997; O'Keefe and O'Keefe, 2004). For the same reasons, we sampled across industries and organizations, rather than selecting a single organizational or industry focus.⁵

Measures

⁵ As stated earlier, we do not intend to propose nor test hypotheses related to country-specific effects. Our data are part of a larger cross-national project and, hence, we leave a detailed analysis of possible national and cultural differences to a future study. We do, however, report some possible differences across subsamples in the “results and discussion” section.

We developed an initial questionnaire based on the four theoretical categories described in our model. This initial questionnaire was originally developed in English, then translated and back translated into Portuguese. This translation was performed by three people who are intimately familiar with both languages, being that two are native speakers of Portuguese and one is a native speaker of English. We conducted an initial exploratory factor analysis with the resulting sample. We selected items loading highly on the first factor of each subscale for the final version of the questionnaire. Except where noted, all the following measures arise from 1-7 Likert-type scales.

Organizational performance

We gauge performance with a 3-item measure. For this measure, we asked managers to rate the degree to which the performance of their units over the last three years (a) met their initial expectations, (b) fared well against similar units in other organizations, and (c) satisfied their general performance expectations. This scale shows high reliability, as measured by its corresponding Chronbach's α ($\alpha = 0.80$).

While some have questioned the accuracy of self-ratings of performance (e.g. Anderson *et al.*, 1984), suggesting that raters may inflate self-ratings, meta-analytic results have shown that this only tends to be the case in reward contexts (Mabe and West, 1982). These results, along with other empirical findings (e.g. Farh and Werbel, 1986), suggest that self-bias is apparent when rewards are at stake but not necessarily in research contexts. In addition, several studies have empirically demonstrated that when raters know their results will be checked against other raters, self-biases disappear (Bauman and Dent, 1982; Farh and Werbel, 1986; Mabe and West, 1982). For this reason, and also to guard against common method bias (e.g. Podsakoff *et al.*, 2003), we additionally asked respondents to provide us with the name and contact of two of their subordinates. We then checked a subsample of respondents' answers against two other unit members in their organizations (in a total of 96

colleagues), who were interviewed by telephone after the initial data collection. Inter-rater agreement, as indexed by the average deviation ($AD_{Md(j)}$) (Burke and Dunlap, 2002; Burke *et al.*, 1999), is well below the cutoff criteria of 1 suggested in Burke & Dunlap (2002), with $AD_{Md(j)} = .26$, indicating strong inter rater agreement. We are thus confident in the validity of our measures, for the purposes of our study.

Managerial attitudes

To measure agency-oriented attitudes ($M = 4.22$, $SD = 1.08$, $\alpha = 0.61$) we gauge managers' perceptions of the tendency for individuals to shirk in the absence of evaluation, monitoring and discipline (see the Appendix). When it comes to politically-oriented attitudes ($M = 4.27$, $SD = 1.09$, $\alpha = 0.66$) we gauge managers' perceptions of faction-formation and favoritism seeking. Shared cognition attitudes ($M = 4.47$, $SD = 1.17$, $\alpha = 0.71$) are composed of perceptions of the importance of communication and information sharing in the unit. Finally, justice perceptions ($M = 5.02$, $SD = 1.28$, $\alpha = 0.74$) involve perceiving the importance of justifying managerial decisions, giving employees the feeling of inclusion and voice within the organization.

Managerial behavior

We measure agency, political, shared cognition, and justice behaviors by gauging the extent to which managers prioritize activities and policies respectively associated with such conduct. As such, agency related behaviors ($M = 4.84$, $SD = 1.21$, $\alpha = 0.79$) refer to actions involving performance evaluation and incentives based rewards and punishments (see the Appendix). The original agency behavior scale also includes "monitoring". We decided to drop this item because of its low loading on the general factor. Given the centrality of monitoring behaviors to agency theory, however (e.g. McLean Parks and Conlon, 1995), we decided to include two separate measures of agency behavior in our model. One measure includes a single items, assessment of the degree to which managers monitor employees. The

other measure assesses the degree to which managers devise metrics, incentives, and evaluation mechanisms towards subordinates (for this latter scale, $M = 3.83$, $SD = 1.57$). Political behaviors ($M = 4.16$, $SD = 1.34$, $\alpha = .74$) involve managing group differences and “diplomacy” between groups. Behaviors oriented towards creating shared mental models ($M = 4.94$, $SD = 1.28$, $\alpha = 0.87$) measure attempts to establish common beliefs and procedures, and communicating general managerial goals. Justice behaviors ($M = 5.01$, $SD = 1.29$, $\alpha = 0.85$) involve dealing with individual concerns, justifying organizational decisions, and establishing a climate of cordiality. Readers can find details for the wording of individual items in the Appendix.⁶

Control variables

Because the relationships between attitudes, behaviors, and performance is complex and can be affected by various task characteristics in the work environment outside of the individual differences (Hackman and Wageman, 1995), and because we had sampled from across a wide range of varying work contexts, we included several control variables to improve the validity of our results. We controlled for various aspects of the organizational environment that may affect managerial action by asking to what extent the managers’ organizational units exhibited (a) task complexity (i.e. multifaceted tasks that require a great deal of coordination), (b) mutual dependence among organizational members, (c) strong

⁶ In addition to measuring behaviors as described in the above paragraph, we also analyze the extent to which managers prioritized some forms of behavior over others by estimating the total number of hours spent per week engaged in each type of activity. Because breaking down weekly behaviors into specific actions may have seemed too cumbersome to respondents, in the questionnaire we grouped activities by theoretical category (agency, political, shared cognition and justice), and asked respondents how many hours they spent on each category as a group. Given that multi-item measures are preferable to single items in terms of predictive validity (e.g. Churchill, 1979) and recommended in structural equation models (e.g. Anderson and Gerbing, 1988), and because hour-based scales are characterized by negative non-independence (Kenny *et al.*, 2002), an ipsative feature that makes factor analysis problematic (Cornwell and Dunlap, 1994), we use the multi item priority scale in our analysis, rather than the hourly scale. However, we use the hourly estimates as checks on the predictive validity of the behavioral scales described above. In other words, an emphasis on one or the other type of behavioral priority should result in increased hours spent on that group of activities. This is true in all cases. Agency behaviors related to evaluation and incentives, as well as monitoring-specific agency behaviors, are significantly correlated with hours spent in related activities ($r = 0.33$, $p < 0.01$ for the general measure, $r = 0.38$, $p < 0.01$ for the monitoring measure). The same is true for political behaviors ($r = 0.15$, $p < .01$), shared mental model behaviors ($r = 0.19$, $p < 0.01$), and interactional justice behaviors ($r = 0.18$, $p < .01$).

personal friendship bonds, and (d) active implementation of new technologies. Several of these aspects may confound hypothesized relationships in our model. For example, jobs requiring high levels of interdependence may require heightened effort towards creating shared mental models (Waller *et al.*, 2004) regardless of managerial attitudes about such efforts. Also, jobs in which there is a high degree of complexity may invoke heightened justice concerns and treatment with dignity as a heuristic processes when one is not sure about individual contributions or outcomes (van den Bos, 2001). We also include a control for the size of the company (number of employees); larger organizations may have deeper pockets than smaller ones regarding investing in necessary resources associated with high performance and may exhibit distinct patterns of interpersonal interaction (e.g. Zenger and Lazzarini, 2004). In addition, we include a measure of the “leniency” of managers towards their subordinates, which gauges the level of performance that they would expect to be appropriate given a certain hypothetical situation (see the Appendix). This variable helps to control for possible differences across managers in their self-assessment of performance. For instance, some managers may declare to be highly satisfied with the performance of their unit mostly because they held more lenient expectations at the outset. Finally, we include a variable coding the country of origin of the respondent so as to control for country-specific heterogeneity; this variable is coded 1 and 2 if the respondent is from the U.S. and Brazil respectively.

Estimation method

We perform a structural equation analysis, which, by definition, is a hybrid of factor and path analysis. To implement the model, we follow the two-stage approach recommended by Anderson and Gerbing (1988). In the first stage, we use confirmatory factor analysis to test whether the variables selected to measure each construct show convergent validity (i.e., whether items are fairly correlated with one another) and discriminant validity (i.e., whether

variables across constructs clearly measure different constructs). Based on the measurement model found in this first stage, in the second stage we compute the path structural model.

RESULTS AND DISCUSSION

Overview of the data

Table 1 presents descriptive statistics and the correlation matrix involving the variables used in the study. It is worth noticing that, contrary to the current debate in the literature suggesting polar types of managers (e.g., those concerned and not concerned with opportunism), there is no negative association between managerial attitudes based on perceptions of self-interest and attitudes based on problems other than self-interest. Likewise, there is no negative association between managerial behaviors derived from perceptions of self-interest and behaviors unrelated to such perceptions. Rather, attitudes and behaviors were either independent or positively correlated. Thus, we interpret from our data that a manager who perceives agency problems to be common should not necessarily be less concerned with fairness and adequate treatment for team members. This suggests that managers who form strong attitudes about, and act accordingly with, the managerial paradigms laid forth above do not do so at the cost of ignoring other paradigms. In the structural model shown below, we test some key elements of such paradigmatic “cross-talk”.

<<Tables 1 through 3 around here>>

Measurement model

Tables 2 and 3 report results of our SEM analysis, based on our two-stage procedure. We follow Anderson and Gerbing’s (1988) formal analysis for convergent validity by computing *t*-tests for factor loadings. We keep indicators for which factor loadings are greater than twice their standard errors. All items included in our multi item measure surpass that level. We also assess discriminant validity. Here, we use chi-square difference tests for

constrained and unconstrained models. The constrained model sets the covariance between two constructs equal to one; a significantly lower chi-square value for the unconstrained model supports the discriminant validity criterion. All multi-item constructs exhibit satisfactory discriminant validity.

In Table 2 we present summary statistics for all models estimated in both stages as well as difference statistics for all tests of one model against another. As far as our test of the initial measurement model (model 1) is concerned, we look at chi-square and five other goodness-of-fit statistics: the goodness of fit index (GFI), the normed and the non-normed fit indices (NFI and NNFI), the comparative fit index (CFI), and the root mean square error of approximation (RMSEA). A commonly accepted rule of thumb is that the first 4 fit indices should be greater than 0.90 (Anderson and Gerbing, 1988).⁷ RMSEAs of 0.05 or less indicate good models. Probability levels on chi-square of 0.10 or higher are generally considered evidence of ideal models (Bentler, 1989). Because the chi-square statistic of model 1 is insignificant ($p < 0.11$), and because all goodness-of-fit indices are within the expected range, we conclude that this is a strong measurement model.

Structural model

We therefore proceed to compute the path model. Our theoretical model (model 2) has a significant chi-square, which could be cause for concern. In such cases, Anderson and Gerbing (1988) argue that the chi-square test is frequently not valid in applied settings, and recommend that this statistic be treated as a general goodness of fit index, but not as a

⁷ GFI indicates the relative amount of variance and covariance jointly explained by the model. The NNFI (Bentler and Bonnett, 1980) is defined as “the percentage of observed-measure covariation explained by a given measurement or structural model ... that solely accounts for the observed measure variances” (Anderson and Gerbing, 1988: 421). NNFI is often viewed as a superior variation of the Bentler & Bonnett’s (1980) normed fit index (NFI) since it has been shown to be more robust in reflecting model fit regardless of sample size (Anderson and Gerbing, 1988; Bentler, 1989). Bentler’s (1989) CFI, is similar to the NNFI in that it provides an accurate assessment of fit regardless of sample size. The CFI tends to be more precise than the NNFI however in describing comparative model fit as it corrects for small sample size by subtracting the degrees of freedom from their corresponding χ^2 values (Bentler, 1989). RMSEA (root-mean-square error of approximation) incorporates both model complexity (expressed in the degrees of freedom) and sample size in the analysis, and is thus suggested for analyses relying on Maximum Likelihood (Browne and Cudeck, 1993) with smaller sample sizes.

statistical test in the strict sense. Many researchers use the informal criterion that the model may be acceptable if the chi-square value is less than twice the size of the degrees of freedom (Bentler, 1989). The fact that our model 2 chi-square of 251 is less than twice the degrees of freedom of 299 together with the fact that all other goodness of fit indices are within expected ranges (i.e. above 0.9, while RMSEA is below 0.05) indicates ours is a strong and acceptable theoretical model.

As a follow-up step, we examine modification indices resulting from Lagrangian multiplier tests (Bentler, 1989) to see if any unspecified paths could be added to improve model fit. Here, we find it necessary to add a path from F3 (“attitude towards shared mental models”) to F2 (“attitude towards politicking”), and another path from F8 (“emphasis towards creating shared mental models”) to F7 (“emphasis towards dealing with politicking”). Anderson & Gerbing (1988) recommend that the addition of paths should be done only to the extent that such additional paths are justified theoretically. As we discussed before, the multiple circumstances in which managers interact with their subordinates may several interactions between alternative attitudes and behaviors; thus, we believe that adding these additional paths is theoretically plausible. Lastly, we trim off insignificant parameters estimates to obtain a most constrained version of the theoretical model; based on the marginal significance cutoff of $p < 0.10$, and z -statistic of 1.645, we drop the paths between “country of origin” and “attitude towards agency”, “attitude towards politicking”, “emphasis towards solving agency problems (monitoring)”, “emphasis towards solving agency problems (evaluation and incentives)”, and “emphasis towards dealing with politicking”.

We also eliminate the control variables “size” and “leniency”, since they fail to provide significant results. On the other hand, we retain control variables “complexity”, “dependent”, “technology” and “strong personal bonds”, since these factors seem to affect performance. We also retain other paths involving these control variables which significantly

affect performance, even if they do not represent significant effects when associated with other variables.

As a result of the above mentioned changes, we specify our “best model” (model 3), as shown Figure 2. The chi-square statistic for model 3 is significant ($\chi^2 = 246.22$; $p > 0.01$), but represents a significant improvement from our theoretical model, model 2 ($\Delta\chi^2 = -5.32$; $p < 0.001$). We are also confident in model 3, given that our analysis of the other 5 fit indices indicates this to be a good model. Particularly, the first 4 fit indices are all above 0.9, whereas RMSEA is a mere 0.02. We thus accept model 3 as our “best model.”

<< Figure 2 around here >>

Attitude and behavior hypotheses

Hypothesis 1a establishes a positive association between attitude towards agency problems and efforts towards solving agency problems. As the reader may remember (see the section “data and methods”), we split hypothesis 1a the behavioral measure of agency into two parts, based on whether the manager is emphasizing “monitoring” or “performance evaluation and incentives.” Both associations are supported, and thus we conclude that hypothesis 1a is supported. The coefficients are positive (0.21 and 0.11 respectively) and statistically significant ($p < 0.001$ and 0.021 respectively). Regarding hypothesis 2a (attitude towards politicking positively associates with emphasis towards dealing with politicking), hypothesis 3a (attitude towards shared mental models positively associates with emphasis towards creating shared mental models), as well as hypothesis 4a (attitude towards justice positively associates with emphasis towards dealing with justice), they are all supported. The coefficients are all positive and statistically significant ($b = 0.16$; 0.1; 0.19 respectively, while $p < 0.001$; 0.05; 0.0001 respectively).

Behavior and performance hypotheses

Although we find support our proposed associations between attitudes and their corresponding behaviors, we find only partial support for our proposed associations between behaviors and organizational performance. Specifically, hypothesis 1b is only partially supported. Particularly, the association between “emphasis towards solving agency problems (monitoring)” and “performance” is—contrary to expected—negative and statistically significant ($b = -0.1$; $p < 0.072$). On the other hand, as expected, the association between “emphasis towards solving agency problems (evaluation and incentives)” is positively associated with “performance” ($b = 0.08$; $p < 0.1$).

Hypothesis 2b (emphasis towards dealing with politicking positively associates with performance) is not supported. As it can be seen in the theoretical model, the coefficient is positive, but not significant ($b = 0.01$; $p > 0.1$). We therefore drop this path from the “best model” (see Table 3). Hypothesis 3b (emphasis towards creating shared mental models positively associates with performance) is not supported either. As it can be seen in the theoretical model, the coefficient is not significantly different from zero ($b = 0.00$; $p > 0.1$). We therefore drop this path from the “best model” (see Table 3). Hypothesis 4b (emphasis towards dealing with justice positively associates with performance), in turn, is supported. The coefficient is positive and statistically significant ($b = 0.09$; $p < 0.084$).

Associations between alternative attitudes and behaviors

We obtain support for hypothesis 5. This hypothesis predicts a positive association between attitude towards justice and emphasis towards solving agency problems (both measured as “monitoring” and as “evaluation and incentives”). The coefficients are positive and statistically significant ($b = 0.14$ and 0.13 respectively; $p < 0.001$ in both cases). On the other hand, we obtain no support for the remaining hypotheses predicting other cross associations between alternative attitudes and behaviors. As it can be seen in Table 3, we drop these paths from the theoretical model in our pursuit for the “best model.”

In addition to the support for some of the theorized hypotheses above, we report here two effects that were added to the model (see our discussion of Lagrangian analysis, in the methods section above). We find that variable “attitude towards shared mental models” has a positive association with “attitude towards politicking.” The path is positive and statistically significant ($b = 0.22$; $p < 0.0001$). We also find that variable “emphasis towards creating shared mental models” positively associates with “emphasis towards dealing with politicking.” The path is positive and statistically significant ($b = 0.26$; $p < 0.0001$).

Controls

Regarding controls, we find that “country of origin” matters for whether managers have an attitude towards shared mental models and justice. In this regard, Brazilians tend to show a broader perception that shared mental models and justice are the norm among people in the workplace ($b = 0.1$ and 0.11 respectively; $p < 0.05$ and 0.06 respectively). We also find that country of origin matters for behaviors towards creating shared mental models and justice, being that U.S. managers have a larger tendency to work towards these ends vis-à-vis their Brazilian counterparts ($b = 0.12$ and 0.09 respectively; $p < 0.04$ and 0.05 respectively). It is interesting to note that, although Brazilian managers apparently perceive problems of shared cognition and justice to a greater extent than their U.S. counterparts, the latter apparently place more emphasis on the behaviors corresponding to these theoretical perspectives. Although, as discussed before, we find that attitudes tend to inspire their predicted corresponding behaviors, apparently there are other contextual, country-specific factors that may also affect behavior beyond attitudes per se (e.g. Fishbein and Ajzen, 1980). We, however, find that country of origin matters nothing when it comes both to attitude towards agency problems as well as behaviors towards dealing with agency problems (measured in both ways).

From our set of controls, we also conclude that teams dealing with more complex tasks tend to have higher performance. The path is positive and significant ($b = 0.19$; $p < 0.001$). “Complexity,” however does not affect any form of behavior in the firm. Although we are tempted to drop these paths from the set of behaviors in our model, Anderson & Gerbing (1988) recommend we retain these paths, as “complexity” has a significant correlation with another associated variable (i.e. “performance”). Whether team members depend on one another also seems to affect performance and distinct forms of behavior the same way as complexity does. The path coefficient of “dependent” to “performance” is positive and significant ($b = 0.11$; $p < 0.1$), although the paths to the various forms of behavior are not significant. The same types of effects occur for whether team members tend to form stronger friendship bonds. The path coefficient of “strong personal bonds” to “performance” is significantly positive ($b = 0.12$; $p < 0.004$), even if the paths to each form of behavior is not significant. Lastly, we find support for the role of “technology” (i.e. whether the organizational deals with new technologies) in explaining performance differences ($b = 0.11$; $p < 0.086$).

Discussion

Our data are inconsistent with the received simplified depiction of managers as either exclusively expressing concern about self-interest or emphasizing organizational problems not related to self-interest. Rather, we find that the *same* manager may engage in behaviors that are consistent with perceptions of *both* self-interest *and* other problems not strictly related to self-interest. Possibly, the multiple ways in which managers interact with their subordinates leave room for distinct assessments of intentions depending on the particular context of the interaction (Lewicki *et al.*, 1998). For instance, in a team of salespeople, the sales manager may fear that, in a period of crisis, members may aggressively pursue price cuts at the expense of service profitability; at the same time, the manager may perceive that

members will positively respond to actions that elicit a sense of teamwork. The manager may then respond by simultaneously monitoring pricing decisions and engaging members in collective decisions about how to circumvent the crisis. Thus, managers who more likely perceive self-interest to be common in organizations should not necessarily be less perceptive of other problems unrelated to self-interest. Likewise, managers who more likely engage in behaviors consistent with curtailing self-interest should not necessarily be less engaged in behaviors which do not address self-interest.

Our data also indicate that alternative theories can equally explain organizational performance. For instance, a manager who believes that team members value interactional justice can increase performance by emphasizing a series of actions that promote justice; likewise, a manager who believes self-interest to be a problem can increase performance by emphasizing agency-oriented actions such as evaluation and incentives. It is worth noticing, however, that in our data monitoring shows a negative effect on performance. This result is consistent with discussions dating back to Strickland (1958), suggesting that direct supervision may backfire due to its potentially strong message of lack of trust in the workplace. Although we could not find significant performance effect for actions that emphasize dealing with politicking and creating shared mental models, our data indicate that managers have multiple ways to increase organizational performance based on distinct theoretical perspectives.

Furthermore, the data also reveal an interesting positive association between attitudes based on justice and behaviors emphasizing agency (specifically, performance evaluation and incentives). This result is consistent with our point that performance metrics and incentives can function as complementary mechanisms to foster justice. Namely, managers can use pre-specified objective goals to set clear expectations at the outset, and then use incentives to “reciprocate” those who met or exceeded expectations. It is also interesting to see that there is

an asymmetry in the data: managers who perceive agency problems to be common do not emphasize actions to promote justice (except, of course, if they also perceive justice to be important). Also, we do not find support for predicted interactions between other alternative theories (shared cognition and politics).

Overall, our study indicates stronger attitude-behavior-performance effects, as well as interactions, involving theories of agency and interactional justice; the other theories (politics and shared cognition) fail to receive broader support in our data (except for their predicted direct attitude-behavior paths). The added significant paths involving politics and shared cognition attitudes and behaviors (model 3), however, reveal some interplay between attitudes and behaviors involving those two theoretical perspectives: managers who tend to perceive political problems as relevant also tend to be concerned with shared cognition; and managers who emphasize dealing with politicking also emphasize creating shared mental models.

CONCLUDING REMARKS

Because managerial behaviors are expected to follow managers' psychological evaluation about the intent of team members, scholars have devoted increasing attention to various theories of how managers behave and how their actions impact organizational performance. Thus far, the literature has drifted towards a polarized view of managers as either individuals concerned with mitigating self-interest or individuals who actively motivate and engage team members in the pursuit of common organizational goals. Differently from this view, we find that managers exhibit complex attitudes and behaviors that do not reflect a single implicit theory of human behavior in the workplace. Respondents in our sample of U.S. and Brazilian managers appear to hold attitudes that are consistent with both opportunistic and non-opportunistic views of their subordinates. They also appear to adopt behaviors that blend recommendations consistent with multiple theories; for instance, we find

that managers who are concerned with justice not only emphasize practices to foster justice, but also practices that directly follow from agency theory (e.g. evaluation and incentives).

Our study therefore indicates that management theories based on distinct patterns of attitudes and behaviors can complement one another. More specifically, the current debate about whether managers are or should be concerned with self-interest is misleading because distinct theoretical views can potentially explain organizational performance and managers can develop mixed attitudes and behaviors based on distinct assumptions about human behavior. The multiple instances and events in which managers and their subordinates leave room for varying attitudes and behaviors that depart from distinct assumptions and affect organizational performance in varying ways. Thus, by carefully outlining the predictions of distinct theories and exploring their possible interactions, our study provides a broader and more complete picture of the relationship between managerial attitudes, managerial behavior and organizational performance. Furthermore, our study is able to explain heterogeneity in organizational performance—a focal issue in strategic management research (Barney, 2002)—building upon mechanisms that derive from heterogeneity in terms of attitudes and behaviors adopted by managers in their organizational units. Thus, we provide psychological underpinning to the study of how managers can create competitive advantage through internal organizational choices.

Admittedly, our study has some limitations, which can be addressed by future research. As we noted before, our selection of theories was limited, in a way that could allow us to describe particular managerial actions and their relationship with organizational performance. To be sure, several other theories could be outlined. For instance, one could also discuss how *distributive* (instead of interactional) justice could influence managerial action in the workplace, and how the concern with distributive justice could interact with other theoretical frameworks. Zenger (1992), for instance, discusses how perceptions of

potential inequity in pay can pose constraints on managers' use of performance-pay incentives.

In addition, the fact that our sample involves managers working in different functions and sectors has the advantage of increasing the range of behaviors and tasks to which our model can be applied, but has the downside that we had to rely on subjective evaluations of team performance. Although we took measures to reduce bias involved in such metrics, one could alternatively focus on a single sector or activity and then try to collect standardized data about performance. For instance, one could perform a survey with managers of bank branches and then use more objective metrics such as revenues per employee, growth in the number of accounts, and so on. Replicating our study in particular function- or industry-specific contexts would therefore allow for additional validation of the results reported here, even though with perhaps less generalizability.

Another important issue is that, given that we rely on cross-sectional data, we cannot precisely infer causality. Although we included several controls to avoid spurious causation, it would be desirable to adopt alternative research designs involving longitudinal data and laboratory experiments, so we can more directly verify the proposed notion that managerial attitudes (based or not on self-interest) lead to specific managerial actions which, in turn, should affect performance.

Relatedly, although we show that managers tend to use mixed theoretical perspectives towards their subordinates, we do not examine how *finely grained* such mixing may be. While our results suggest that, in general, managerial perspectives are complex, it may be that in any given situation or moment, managers use one or another more specific perspective. Because we do not focus on discrete situations, we show that the general profiles of managers are complex; however, their attitudes and behaviors at a given state or point in

time may be more focused. Future research should explore the level of generality at which our results hold.

Finally, although we treat country-specific heterogeneity in our data purely as post-hoc findings instead of hypothesized effects, we do make inroads into theoretical perspectives that apparently hold across countries. With a larger diversity of countries, one could strive for further generalization, while assessing how particular cultural traits affect managerial attitudes and influence organizational performance. In this sense, future research could not only theorize about the consequences of certain managerial attitudes, but also describe and explain how attitudes are shaped by the cultural and institutional environments surrounding managers and influencing the practices that they employ to create competitive advantage.

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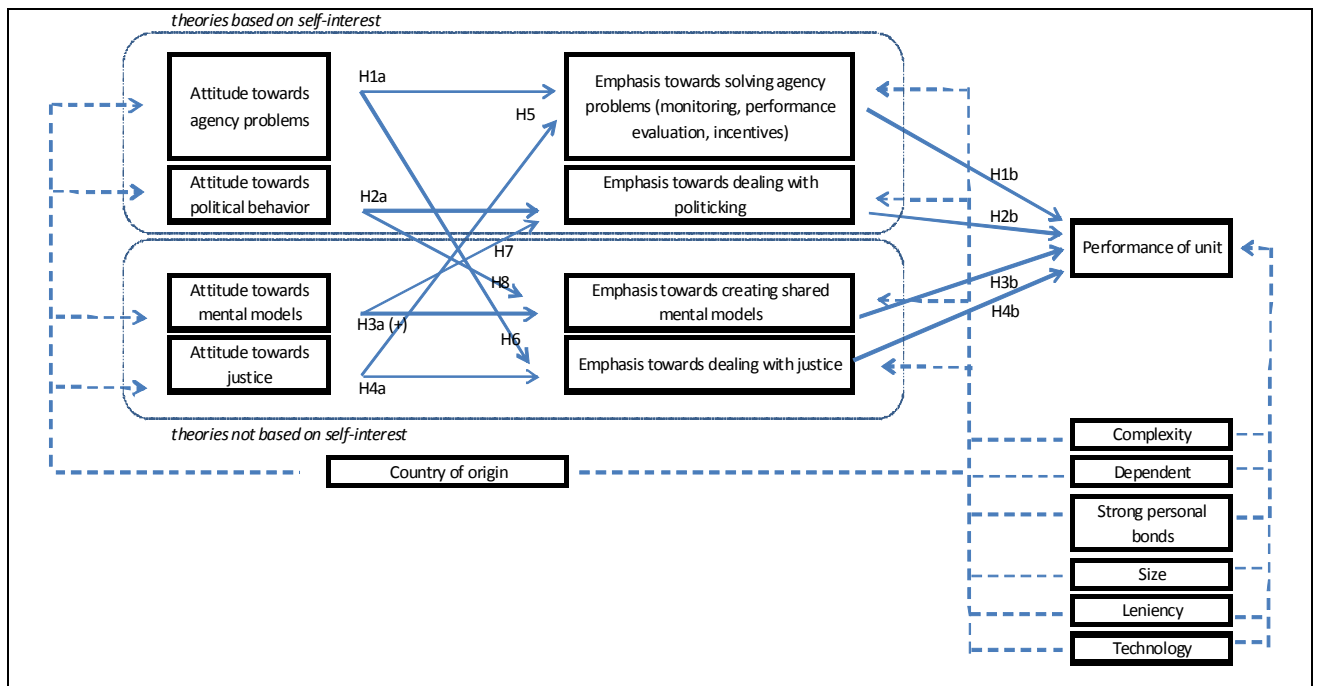


Figure 1. Theoretical model

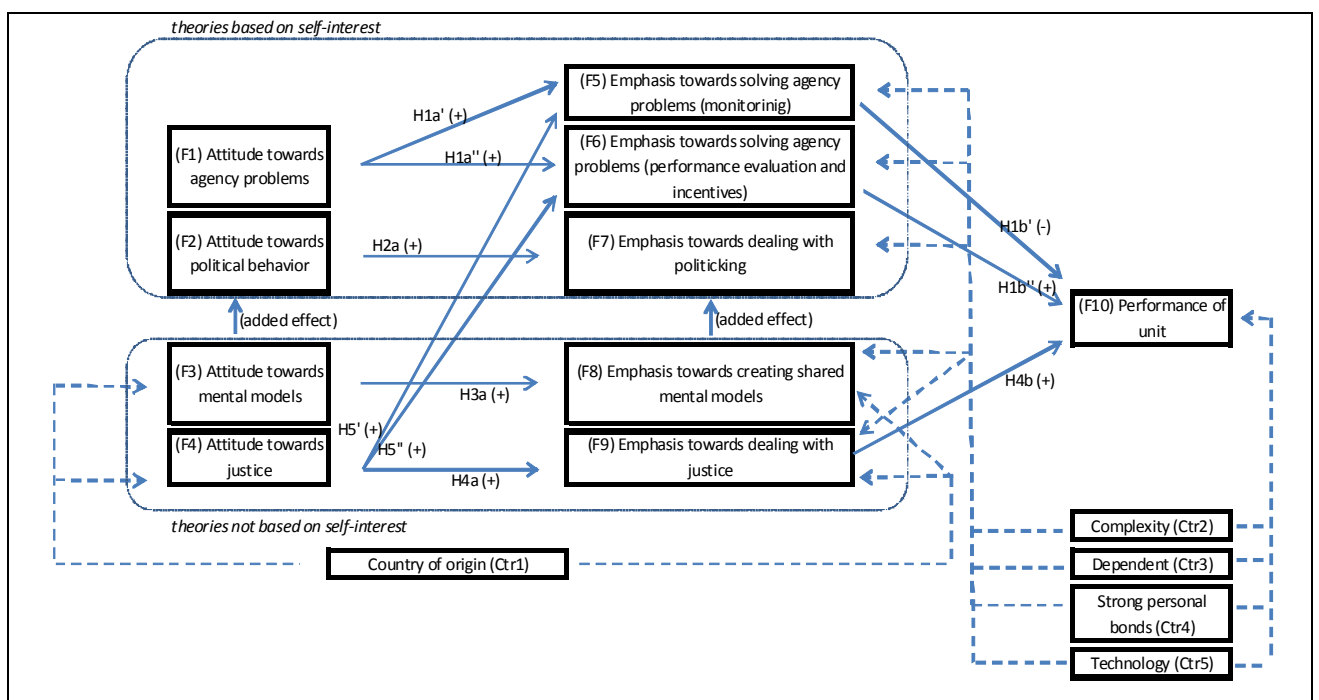


Figure 2. Best model

Table 1. Descriptive statistics

Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Performance	3.57	0.69	1.00														
2 Attitude towards agency	4.21	1.09	0.01	1.00													
3 Attitude towards politicking	4.27	1.09	-0.05	0.43**	1.00												
4 Attitude towards mental models	4.47	1.17	-0.09	0.28**	0.47**	1.00											
5 Attitude towards justice	5.02	1.28	-0.02	-0.01	0.07	0.01	1.00										
Emphasis towards agency (evaluation and incentives)	4.84	1.21	0.09†	0.11*	0.18**	0.04	0.36**	1.00									
7 Emphasis towards agency (monitoring)	3.83	1.57	-0.11†	0.31**	0.18**	0.14**	0.09	0.27**	1.00								
8 Emphasis towards politicking	4.16	1.34	-0.03	0.15**	0.19**	0.15**	0.16*	0.32**	0.24**	1.00							
9 Emphasis towards mental models	4.94	1.28	-0.02	0.00	0.03	0.00	0.17*	0.29**	0.21**	0.32**	1.00						
10 Emphasis towards justice	5.01	1.29	-0.02	-0.02	0.06	-0.01	0.22**	0.24**	0.19**	0.26**	0.45**	1.00					
11 Complexity	5.38	1.22	0.18*	-0.03	-0.03	0.03	-0.01	0.00	-0.09	0.00	0.01	0.01	1.00				
12 Dependent	5.24	1.54	0.11*	0.02	0.07	0.08	0.06	0.06	0.10†	0.06	0.03	0.05	0.32**	1.00			
13 Technology	4.36	1.84	0.11†	0.06	0.05	0.08	0.10†	0.02	-0.07	0.00	0.02	0.12*	0.23**	0.17**	1.00		
14 Size	17345	51222	-0.05	0.06	0.04	0.00	0.03	0.03	0.01	-0.04	0.01	-0.07	0.07	0.04	0.09†	1.00	
15 Leniency	NA	NA	0.02	0.03	0.04	0.03	0.05	0.02	0.01	0.02	0.03	0.05	0.04	0.03	0.05	0.02	1.00
16 Personal bonds	4.75	1.43	0.18*	0.01	0.02	-0.02	0.16*	0.12*	0.02	0.05	0.02	0.18*	0.12**	0.23**	0.15**	-0.09†	0.05

Note. ** p < 0.01 * p < 0.05 † p < 0.1. We do not report the mean and SD of variable "leniency" because it is based on two distinct scales with different measurement units.

Table 2. Goodness of fit indices for the structural equation model

Model Name	Chi-Sq	Df	Probability	GFI	NFI	NNFI	CFI	RMSEA
1 Measurement	183.4	317	0.112	0.93	0.94	0.96	0.980	0.01
2 Theoretical	249.44	298	>0.01	0.90	0.91	0.93	0.930	0.04
3 Best model	245.12	309	>0.01	0.93	0.94	0.95	0.975	0.02

Table 3. Path coefficients of hypothesized study variables

Path name	Path description		Theoretical model (model 2)	Best model (model 3)	
			Path	Path	Critical ratio
H1a'	PF1PF5	Attitude towards agency problems --> Emphasis towards solving agency problems (monitoring)	0.20	0.21	0.000
H1a''	PF1F6	Attitude towards agency problems --> Emphasis towards solving agency problems (evaluation, incentives)	0.11	0.11	0.021
H1b'	PF5F10	Emphasis towards solving agency problems (monitoring) --> Performance of unit	-0.09	-0.10	0.072
H1b''	PF6F10	Emphasis towards solving agency problems (evaluation, incentives) --> Performance of unit	0.08	0.08	0.099
H2a	PF2F7	Attitude towards politicking --> Emphasis towards dealing with Politicking	0.17	0.16	0.001
H2b	PF7F10	Emphasis towards dealing with politicking --> Performance of unit	0.01		0.727
H3a	PF3F8	Attitude towards shared mental models --> Emphasis towards creating shared mental models	0.10	0.10	0.050
H3b	PF8F10	Emphasis towards creating shared mental models --> Performance of unit	0.00		0.820
H4a	PF4F9	Attitude towards justice --> Emphasis towards dealing with justice	0.18	0.19	0.000
H4b	PF9F10	Emphasis towards dealing with justice --> Performance of unit	0.09	0.09	0.084
H5'	PF4F5	Attitude towards justice --> Emphasis towards solving agency problems (monitoring)	0.16	0.14	0.001
H5''	PF4F6	Attitude towards justice --> Emphasis towards solving agency problems (evaluation, incentives)	0.12	0.13	0.008
H6	PF1F9	Attitude towards agency problems --> Emphasis towards justice	-0.03		0.194
H7	PF3F7	Attitude towards shared mental models --> Emphasis towards dealing with politicking	0.05		0.141
H8	PF2F8	Attitude towards politicking --> Emphasis towards creating shared mental models	0.06		0.142
added effect	PF3F2	Attitude towards shared mental models --> Attitude towards politicking		0.22	0.000
added effect	PF8F7	Emphasis towards creating shared mental models --> Emphasis towards dealing with politicking		0.26	0.000
Control	PCTR1F1	Country of origin --> Attitude towards agency problems	0.02		0.278
Control	PCTR1F2	Country of origin --> Attitude towards politicking	0.06		0.134
Control	PCTR1F3	Country of origin --> Attitude towards shared mental models	0.10	0.10	0.050
Control	PCTR1F4	Country of origin --> Attitude towards justice	0.11	0.11	0.051
Control	PCTR1F5	Country of origin --> Emphasis towards solving agency problems (monitoring)	-0.05		0.181
Control	PCTR1F6	Country of origin --> Emphasis towards solving agency problems (evaluation, incentives)	0.05		0.178
Control	PCTR1F7	Country of origin --> Emphasis towards dealing with politicking	0.06		0.156
Control	PCTR1F8	Country of origin --> Emphasis towards creating shared mental models	-0.12	-0.12	0.043
Control	PCTR1F9	Country of origin --> Emphasis towards justice	-0.10	-0.09	0.059
Control	PCTR2F5	Complexity --> Emphasis towards solving agency problems (monitoring)	0.01	0.01	0.240
Control	PCTR2F6	Complexity --> Emphasis towards solving agency problems (evaluation, incentives)	0.03	0.03	0.200
Control	PCTR2F7	Complexity --> Emphasis towards dealing with politicking	0.02	0.02	0.480
Control	PCTR2F8	Complexity --> Emphasis towards creating shared mental models	0.02	0.03	0.510
Control	PCTR2F9	Complexity --> Emphasis towards justice	0.04	0.04	0.470
Control	PCTR2F10	Complexity --> Performance	0.19	0.20	0.000
Control	PCTR3F5	Dependent --> Emphasis towards solving agency problems (monitoring)	0.02	0.01	0.810
Control	PCTR3F6	Dependent --> Emphasis towards solving agency problems (evaluation, incentives)	0.03	0.03	0.650
Control	PCTR3F7	Dependent --> Emphasis towards dealing with politicking	0.01	0.02	0.712
Control	PCTR3F8	Dependent --> Emphasis towards creating shared mental models	0.02	0.01	0.856
Control	PCTR3F9	Dependent --> Emphasis towards justice	0.03	0.03	0.512
Control	PCTR3F10	Dependent --> Performance	0.11	0.10	0.071
Control	PCTR4F5	Personal bonds --> Emphasis towards solving agency problems (monitoring)	0.01	0.02	0.711
Control	PCTR4F6	Personal bonds --> Emphasis towards solving agency problems (evaluation, incentives)	0.03	0.04	0.420
Control	PCTR4F7	Personal bonds --> Emphasis towards dealing with politicking	0.02	0.01	0.782
Control	PCTR4F8	Personal bonds --> Emphasis towards creating shared mental models	0.05	0.00	0.921
Control	PCTR4F9	Personal bonds --> Emphasis towards justice	0.06	0.02	0.799
Control	PCTR4F10	Personal bonds --> Performance	0.15	0.12	0.004
Control	PCTR6F5	Size --> Emphasis towards solving agency problems (monitoring)	0.06		
Control	PCTR6F6	Size --> Emphasis towards solving agency problems (evaluation, incentives)	0.02		
Control	PCTR6F7	Size --> Emphasis towards dealing with Politicking	0.05		
Control	PCTR6F8	Size --> Emphasis towards creating shared mental models	0.01		
Control	PCTR6F9	Size --> Emphasis towards justice	0.06		
Control	PCTR6F10	Size --> Performance	0.00		
Control	PCTR5F5	Technology --> Emphasis towards solving agency problems (monitoring)	0.04	0.04	0.550
Control	PCTR5F6	Technology --> Emphasis towards solving agency problems (evaluation, incentives)	0.03	0.02	0.802
Control	PCTR5F7	Technology --> Emphasis towards dealing with politicking	0.04	0.03	0.716
Control	PCTR5F8	Technology --> Emphasis towards creating shared mental models	0.01	0.01	0.842
Control	PCTR5F9	Technology --> Emphasis towards justice	0.01	0.01	0.871
Control	PCTR5F10	Technology --> Performance	0.11	0.11	0.086
Control	PCTR7F5	Leniency --> Emphasis towards solving agency problems (monitoring)	0.02		
Control	PCTR7F6	Leniency --> Emphasis towards solving agency problems (evaluation, incentives)	0.04		
Control	PCTR7F7	Leniency --> Emphasis towards dealing with politicking	0.03		
Control	PCTR7F8	Leniency --> Emphasis towards creating shared mental models	0.01		
Control	PCTR7F9	Leniency --> Emphasis towards justice	0.06		
Control	PCTR7F10	Leniency --> Performance	0.00		

Note. † p<0.1; * p<0.05; ** p<0.001; *** p<0.001. Covariances were not included here, for parsimony (available from the authors upon request)

APPENDIX

Construct items and related survey questions

Attitudinal scales (perception of problem)

For each statement below, please indicate your level of agreement, in the 1-7 scale, regarding your perception of beliefs and attitudes of the people working in your unit.

Agency

- a. When they are not directly monitored, people devote little time and effort to their work related activities.
- b. People work better when they are held more strictly for the results of their work.
- c. People spend more time in activities where the outcomes of their effort are easily visible than in those where outcomes are less visible, regardless of the value of the activity to their organization.

Politicking

- a. People value being popular more than they value benefiting the organization as a whole
- b. People tend to form close-knit, exclusive groups
- c. People tend to overemphasize their own achievements and downplay the achievements of others in their organization

Shared mental models

- a. Although people have good intentions in general, they often disagree about the direction their organization should take
- b. People don't agree on how their organization should be managed in its daily activities
- c. People often seem like they are working for a variety of different goals

Interactional justice

- a. People may become sad if their contribution is not recognized by their superiors and their organization as a whole
- b. People need to feel that they are an important part of their organization
- c. People tend to perform better when they genuinely like their organization as a whole
- d. Happy workers perform better than unhappy ones

Behavioral scales (emphasis given to each action)

Please indicate the extent to which you prioritize the following activities in your day-to-day work schedule within your unit (1-7 scale, from "very low priority" to "very high priority").

Agency – performance evaluation and incentives

- a. Establishing performance metrics for your subordinates
- b. Evaluating the performance of your subordinates
- c. Establishing ways to incentivize good performance through rewards/punishments

Agency – monitoring

- a. Monitoring and supervising the day-by-day activities of your subordinates

Politicking

- a. Negotiating with groups and factions requesting favors and benefits
- b. Establishing clear rules and procedures to avoid power struggles
- c. Dealing with internal conflicts between groups over resources

Shared mental models

- a. Communicating what is expected of everybody and what is the overall objective of the unit or organization
- b. Trying to help people within the unit understand the importance of each other's work
- c. Getting points of view about ways to improve the unit
- d. Building consensus among people who genuinely want to contribute to the organization but have different viewpoints

Interactional justice

- a. Publicly recognizing the value of individuals and groups in the unit
- b. Building a culture of cordiality within the unit
- c. Trying to send signals of enthusiasm to encourage workers

Organizational performance

- a. The performance of my unit in the last three years has been: 1) Far below my expectations 2) Below my expectations 3) Equivalent to my expectations 4) Above my expectations 5) Far above my expectations
- b. The performance of my unit in the last three years has been 1) Much less than satisfactory 2) Less than satisfactory 3) Satisfactory 4) Higher than satisfactory 5) Much higher than satisfactory
- c. Compared to similar units in other organizations, my unit's performance in the last three years has been 1) Far below average 2) Below average 3) Average 4) Above average 5) Far above average

Control variables

Complexity (scale: 1-7)

Members of your unit perform tasks that involve either a large number of steps, high levels of coordination, or are multifaceted in nature (that is, they are comprised of several relevant performance attributes).

Dependent (scale: 1-7)

Members of your unit depend on each other to effectively perform their tasks

Personal friendship bonds (scale: 1-7)

Members of your unit maintain strong personal friendship bonds

Technology (scale: 1-7)

Your unit's work involves the rapid introduction of new technologies, products or services over time

Size

Approximately how many employees does your company have?

Leniency

Imagine the following situation and respond as if you were the Director of Sales in the company described: "A Sales Associate in your company has the job of selling as many units per month as possible. At the end of the year, you must evaluate his/her performance, based on his/her average monthly sales. Recently, individual monthly sales have been as low as 0 units, and as high as 200 units, with an average of 100 units."

a. How would you evaluate the goal of selling 100 units/month? (scale: 1-5) 1) It is too aggressive; goal could be much lower... 3) It is at a satisfactory level... 5) It is too easy; could be much higher.

b. What would be the goal that you, as Director of Sales, would recommend for your sales associates? (units per month).