Performance: Confirming, refining, and refuting theories

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Performance is a central concept in management because it is consistently a critical outcome of interest across levels of analysis and subfields. For example, organizational behavior and human resource management focus on individual performance, and strategic management centers on firm performance. Given the centrality of this construct, it is unsurprising that more than 200 theories of performance have been proposed. We used the CORE model of performance (i.e., Performance $[P]$ = Capacity $[C]$ + Opportunity $[O]$ + Relevant Exchanges $[RE]$) *to offer specific suggestions to confirm, refine, and refute performance theories at the individual and firm levels of analysis. Specifically, we recommend conducting six types of studies: (a) constructive reproducibility studies, (b) literal and constructive replication studies, (c) generalizability studies, (d) tests of competing theories, (d) empirical explorations of theoretical assumptions underlying existing theories, and (e) tests of previously published untested theories or theoretical models. We hope our article will help the management field improve the understanding of one of its most central constructs, not by creating new theories that seemingly offer "novel contributions." Instead, we suggest improving our understanding of performance more meaningfully by confirming, refining, and refuting already existing performance theories.*

Keywords: *Dynamic capabilities; performance assessment/Management; goal setting; resource-based view*

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Performance is a central construct in management because it is of interest across levels of analysis and subfields (Aguinis, 2023). For example, organizational behavior and human resource management focus on individual performance (e.g., Hendricks, Call & Campbell, 2023; Van Iddekinge, Aguinis, Mackey & DeOrtentiis, 2018). On the other hand, strategic management centers on firm performance (e.g., Benischke, Bhaskarabhatla & Singh, 2023; Palm, Kraft & Kammerlander, 2023). Across these diverse subfields, performance consistently emerges as a critical outcome. In other words, performance is the dependent variable aimed to be predicted in many research studies across management subfields ranging from micro (i.e., organizational behavior and human resource management) to macro (e.g., strategy, organization theory, entrepreneurship).

Our article aims to help improve our understanding of performance by offering suggestions on confirming, refining, and refuting already existing performance theories rather than creating new theories that seemingly offer "novel contributions." To do so, we use the CORE model of performance (Marshall, Aguinis & Beltran, 2024) to suggest six types of studies: (a) constructive reproducibility studies, (b) literal and constructive replication studies, (c) generalizability studies, (d) tests of competing theories, (d) empirical explorations of theoretical assumptions underlying existing theories, and (e) tests of previously published untested theories or theoretical models.

The CORE model of performance

Marshall et al. (2024) reviewed the individual and firm performance literature. They used a method known as meta-theoretical construct analysis to facilitate the integration of different theoretical perspectives. To create a comprehensive and representative literature sample, they identified the top 10 journals within six management-related SCImago research categories: Applied Psychology, Business and International Management, Management of Technology and Innovation, Organizational Behavior and Human Resource Management, Public Administration, and Strategy and Management. Using Web of Science (WoS), searching for articles containing the term "performance" in these journals yielded 15,535 articles from 1946 to 2022, representing 44 unique journals.

Manual keyword clustering was impractical because of the vast number of articles (nearly 16,000) and keywords (over 20,000). Therefore, Marshall et al. used computer-aided review techniques to create networks based on the frequency of keyword co-occurrence. These clusters primarily grouped keywords by the analysis level and found that research on performance was fragmented across different levels of analysis. A keyword-in-context (KWIC) search for "theory" in each journal abstract identified the performance-related theories.

Reviewing the theories, Marshall et al. noticed that many focused either on within-entity or between-entity processes. They also observed that most theories could be classified as firm- or individual-level theories. Thus, to evaluate and integrate the theories, they established coding criteria based on two dimensions: whether the theory primarily focused on the individual or firm level and whether the theory focused primarily on intra-agent or inter-agent processes. The final coded sample consisted of 239 performance-related theories.

Resulting model

Meta-theory is an overarching framework encompassing more narrowly focused theories that share a similar essence. Similarly, *meta-theoretical constructs* are systematically derived

from independent theories based on predefined criteria and qualitative interpretation. In naming these constructs, Marshall et al. aimed to capture their meaning abstractly, akin to naming factors in exploratory factor analysis. For instance, if a common word, such as "role" or "structure," was prominently represented in a cluster, they named it accordingly. As shown in Figure 1, this process allowed for the identification and refinement of *six meta-theoretical constructs*: Firm-level (a) capabilities, (b) structures, and (c) transactions; and individual-level (d) knowledge, skills, abilities, and other characteristics (KSAOs), (e) roles, and (f) relationships. Figure 1 also includes word clouds within each meta-theoretical construct to indicate which theories were referenced most frequently in the review. Moreover, Marshall et al. noted that the meta-theoretical constructs are isomorphic across levels, which resulted in the CORE model of performance applicable at the individual and firm levels of analysis: *Performance* (P) = *Capacity* (C) + *Opportunity* (O) + *Relevant Exchanges* (RE).

Capacity is the ability or power to do, experience, or understand something and subsumes the meta-theoretical constructs Capabilities (i.e., firm level) and KSAOs (i.e., individual

Figure 1
The CORE performance model. *Performance* (P) = *Capacity* (C) + *Opportunity* (O) + *Relevant Exchanges* (RE).
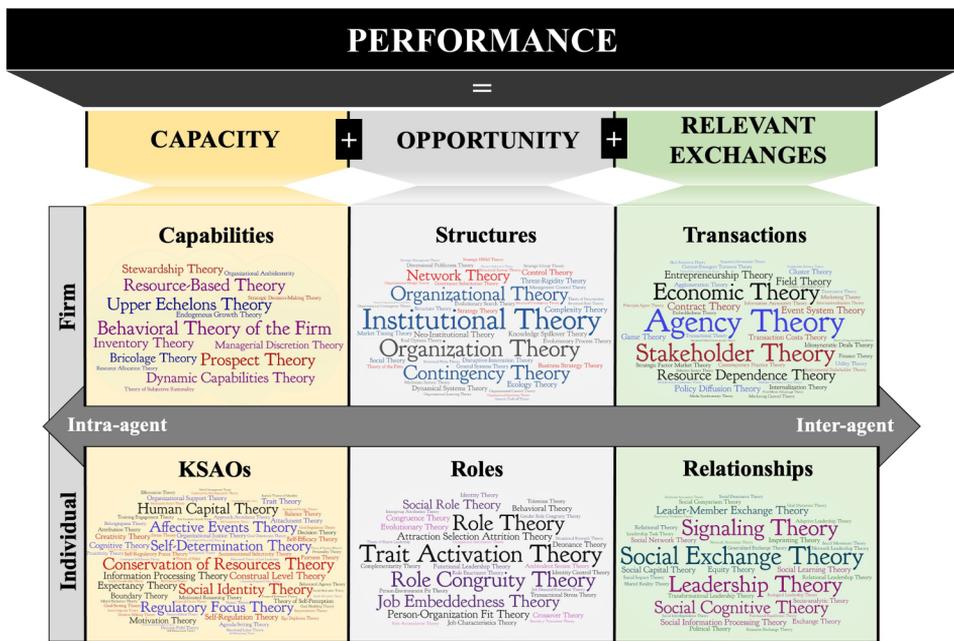
Note. This figure is original but based on the literature review by Marshall, Aguinis and Beltran (2024). Theory font size is based on their frequency, as uncovered by Marshall et al.'s literature review. Capacity: the ability or power to do, experience, or understand something (subsuming Capabilities and KSAOs). Opportunity: Circumstances that make doing something possible (subsuming Structures and Roles). Relevant Exchanges: Interactions or communications directly related to a specific situation (subsuming Transactions and Relationships). KSAOs: Knowledge, skills, abilities, and other characteristics

level). Opportunity refers to the circumstances that make it possible to do something and subsumes the meta-theoretical constructs Structures (i.e., firm level) and Roles (i.e., individual level). Finally, Relevant Exchanges are the interactions or communications directly related to a specific situation and subsume the meta-theoretical constructs of Transactions (i.e., firm level) and Relationships (i.e., individual level).

Firm-level meta-theoretical constructs. As shown in Figure 1, the meta-theoretical constructs at the firm level encompass capabilities, structures, and transactions. Firm-level capabilities refer to the unique resources, skills, and competencies that individuals (collectively) or organizations possess, allowing them to excel in specific tasks or objectives. For instance, capabilities might encompass cutting-edge technology, a highly skilled workforce, or efficient supply chain management. Structures pertain to the formal organization, hierarchy, and arrangement of responsibilities within an organization and the broader environmental configurations in which individuals (collectively) operate (e.g., hierarchical, team-based, matrix-based, or flat organizational designs). Transactions signify the dynamic interactions, exchanges, and relationships that occur both within and between collectives and firms (e.g., supply chain interactions, customer relationships, or strategic partnerships).

Individual-level meta-theoretical constructs. The meta-theoretical constructs at the individual level include KSAOs, roles, and relationships. KSAOs represent each individual's knowledge, skills, abilities, and other characteristics. Examples include an individual's expertise in programming languages (knowledge), proficiency in public speaking (skills), analytical thinking (abilities), and personal characteristics such as adaptability and creativity (other characteristics). Roles define individuals' specific functions, responsibilities, and expectations (e.g., being a team leader, project manager, or customer service representative). Relationships refer to the connections, interactions, and associations between individuals (e.g., leader-member relationships, mentoring relationships, and coworker networks).

Isomorphism across levels. As mentioned earlier and shown in Figure 1, the CORE model emerged from isomorphic constructs across individual and firm-level meta-theoretical constructs: (a) KSAOs and firm-level capabilities as *Capacity*, (b) roles and structures as *Opportunity*, and (c) relationships and transactions as *Relevant Exchanges*. While individual KSAOs represent employee competencies, firm-level capabilities encompass the collective competencies of the organization. Individual roles are tied to an employee's position in the company's hierarchy, while firm-level structures establish a broader hierarchy. Additionally, individual roles specify employees' responsibilities and tasks, just as firm-level structures decide how roles are distributed across different organizational levels and functions. Lastly, individual relationships and firm-level transactions both involve interactions aimed at specific objectives. Employees collaborate and communicate within an organization to fulfill job responsibilities and achieve common goals. Firm transactions occur when companies exchange goods, services, or resources to meet their needs or goals.

In sum, The CORE model presented in Figure 1 synthesizes the six meta-theoretical constructs used across more than 200 individual and firm performance theories. So, this model shows the "ingredients" of the existing theories. Next, we offer a research agenda that uses the CORE model as a backdrop to advance theory.

A research agenda for advancing our understanding of performance: Six types of studies

We offer recommendations on six types of studies. For each type, we provide specific illustrations to show, not just tell, the usefulness of the CORE model to improve our understanding of performance by confirming, refining, and refuting already existing theories. As a preview, Table 1 summarizes the material that follows.

In describing the six types of studies, we paid particular attention to (a) key performance theories that have been tested only partially and which elements of the theory still need to be tested; (b) highly cited articles proposing conceptual models that have not been tested; (c) highly cited empirical articles testing a theory (but that did not test underlying mechanisms-mediators or boundary conditions-moderators); (d) how competing theories could be tested; and (e) highly cited empirical studies based on data collected several decades ago in a work context that is different from today.

Constructive reproducibility studies

Following the terminology used by Kraimer, Martin, Schulze and Seibert (2023), a reproducibility study is a new study in which the same data used in a previously published article are reanalyzed to test the same hypotheses. Moreover, a "constructive reproducibility study evaluates the importance of a flaw in the handling or analysis of data" (Köhler & Cortina, 2023, p. 80), targeting concerns about possible problems in the analytical approach (Cortina, Köhler & Aulisi, 2023). *Dependent* constructive reproducibility studies are those in which the same researchers reanalyze the data using different data handling or analytic techniques (Köhler & Cortina, 2021). *Independent* constructive reproducibility studies are those in which other researchers analyze the same data set using different data handling or analytic techniques.

Independent constructive reproducibility studies focus on various aspects, including inaccurate or inadequate results, researcher competence, researcher malfeasance, and the accuracy of data analytic details (Cortina et al., 2023). Surprisingly, despite the potential for valuable contributions through such studies, Cortina et al.'s (2023) review only identified six instances of this type of research. This scarcity suggests significant opportunities for management scholars to revisit existing research to perform independent constructive reproducibility studies. Notably, Data Colada (datacolada.org) stands out as an example of this approach, as they have utilized independent constructive reproducibility in several high-profile cases relating to possible researcher malfeasance and inaccuracy in reporting data analytic details.

Recent advances in machine learning provide useful tools for qualitative researchers to engage in dependent reproducibility studies (cf. Aguinis & Solarino, 2019). The tools could be used at different phases of the research process to assist the qualitative research process. Specifically, in the initial analysis phase, researchers could use topic modeling (Schmiedel, Müller & vom Brocke, 2019) to assess whether the machine identifies the same themes (i.e., topics) as the researchers initially coded. In this case, the machine might identify themes that could be explored through traditional approaches such as grounded theory and thematic analysis. Later in the analysis, researchers could use supervised machine learning (Miric, Jia & Huang, 2023) to assess the extent to which the human-

Table 1

Six types of empirical studies and illustrations aimed at confirming, refining, and refuting theories guided by the CORE model of performance

Type of Empirical Study	Illustrations
Constructive reproducibility studies: Use the same data used in a previously published article to test the same hypotheses	• *Resource Dependence Theory:* A reproducibility study of Xia, Zhu and Cai's (2023) research would involve using identical datasets and analytical methods to reproduce the analysis of how team governance duration affects carbon emission intensity, specifically verifying the inverted U-shaped pattern identified. This reproducibility effort could extend to examining the moderating effects of team size and gender diversity and the mediating role of low-carbon innovation, thus reinforcing the study's conclusions and contributing to the knowledge of sustainable corporate practices. • *Leader Emergence:* With the public availability of data from studies like MacLaren et al. (2020) on leader emergence in leaderless groups, reproducibility studies can reproduce and also extend their research by reoperationalizing variables to test the robustness of original findings and uncover new insights. Specifically, researchers could investigate the impact of speech content on leader emergence and total speaking time by introducing new predictor variables to see if the initial results remain consistent.
Literal and constructive replication studies: Collect new data to test the same hypotheses tested in previously published research	• *Human Capital Theory:* A literal replication of Rohling's (1986) study on human capital theory using the Wiles test would involve an exact re-creation of the original study's methodology and conditions, including utilizing the same Wiles test to replicate the findings. To address potential concerns about the original study's sample size and improve generalizability, the replication might involve drawing participants from a broader or different demographic, with any observed differences in outcomes helping to identify the influence of sampling error or other subtle discrepancies from the initial study. • *Agency Theory:* In a constructive replication of Eisenhardt's (1985) study on agency theory and control strategies, researchers could expand the investigation by including stores from multiple shopping centers across varied geographic areas to enhance the diversity and representation of the retail environment. Additionally, by diversifying sample locations and incorporating new control variables like regional consumer behaviors and specific store types, the replication would offer a deeper understanding of applying agency theory across different retail contexts. • *Affective Events Theory (AET):* A constructive replication of Dasborough's (2006) qualitative study on the impact of leader behaviors on employee emotions and performance, through the lens of AET, could involve collecting new qualitative data or employing novel machine-learning techniques to replicate the original findings. This replication would specifically focus on how workplace events and the emotional reactions they elicit—ranging from enthusiasm to anger and considering emotional intensity—contribute to variations in employee performance, thereby offering a fresh perspective on the dynamics of emotion in the workplace.

(continued)

Table 1 (continued)

Type of Empirical Study	Illustrations
Generalizability studies: Clarify existing theories' boundaries and expand their findings' relevance across diverse settings and populations	• *Goal-setting Theory:* A generalizability study of Latham and Locke's (1975) research on goal-setting theory would entail applying and testing the theory in varied occupational and cultural contexts, such as transitioning from the original logging crews to white-collar environments like software development teams. This study would explore whether the productivity benefits of setting precise goals hold across different work settings and tasks, thereby assessing and refining goal-setting theory's universal applicability and effectiveness. • *Resource-based Theory:* A generalizability study of Hsu and Ziedonis' (2013) research on the dual role of patents in entrepreneurial ventures would incorporate industry-specific conditions and geographic variations as potential moderators. By categorizing startups into different sectors and comparing them across various locations, from established hubs like Silicon Valley to emerging ecosystems, the generalizability study would assess how patents' impact on fundraising, competitive advantage, and value capture varies with competition levels, technology intensity, market dynamics, access to venture capital, regulatory environments, and cultural factors across diverse scenarios.
Tests of competing theories: Identify a central prediction that, if supported, would falsify one theory while supporting the other	• *Expectancy versus Self-determination Theory (SDT):* Expectancy theory and SDT have evolved into competing theories that make different predictions about individual behavior. In a scenario where these two theories would compete to explain individual performance, which would win? For example, if individuals value money (i.e., the expected outcome) and believe that their work will earn money, but the work requires social isolation and removes individual autonomy, will they engage in it or not? An experiment could empirically test this question to investigate which theory better explains the performance outcomes. • *Leader-member Exchange (LMX) versus Equity Theory:* LMX and equity theory underscore how relationships and perceptions of fairness impact performance, with LMX emphasizing leader-member relationships and equity theory highlighting the balance between contributions and rewards in relation to others. Thus, the question is, "Which theory would win in a scenario in which LMX and equity theory compete?" For example, in a team setting, where LMX relationships are differentiated among team members, and these differences are perceived to be inequitable, what is the effect on team performance? What is the effect on team cohesion? At the individual level, what is the effect on individual performance? What is the effect on individual satisfaction? In other words, which of the two theories can better predict performance? Which of the two theories is better able to predict subjective outcomes? • *Threat-Rigidity versus Approach-Avoidance Theory:* Threat-rigidity and approach-avoidance theories explain threat response. Threat-rigidity theory explains that organizations often centralize authority and retreat to known strategies during times of crisis. Approach-avoidance theory states that individuals approach positive or avoid negative stimuli based on their dispositional orientation toward threats. If an individual in the upper echelon of an organization (e.g., CEO) were to hold an approach orientation, how would the organization respond to a threat? According to threat-rigidity theory, the organization would attempt to escape the threat using proven strategies. According to

Table 1 (continued)

Type of Empirical Study	Illustrations
	approach-avoidance theory, however, the individual with the decision-making authority would be inclined to pursue new strategies to move beyond the threat. Thus, the question is, "During an organizational crisis, which theory would win between threat-rigidity theory and approach-avoidance theory?"
Empirical explorations of theoretical assumptions underlying existing theories: Test theoretical assumptions that are generally accepted as a given	• *Team-level Theories*: Many team performance studies are developed with an underlying assumption that the constructs of interest (e.g., cognition, climate perceptions, quality of exchanges) operate at the collective level of analysis. As many (most) of these constructs are measured at the individual level, empirical analysis is necessary to test whether the data operate at the team level, allowing the team-level theory to be used. Indexes to test these underlying assumptions can include within and between analysis (WABA), r_{wg}, and the intraclass correlation (ICC). • *Stakeholder Theory*: He and Chittoor (2023) explored the effect of corporate social responsibility (CSR) initiatives on firm performance, intertwining stakeholder theory with competitive strategies to determine when CSR leads to a competitive edge and improved financial results. Testing the underlying assumption of their study—namely, the connection between stakeholder theory, CSR actions, competitive strategies, and firm performance would be crucial for accurately understanding the interplay of stakeholder interests and strategic competitiveness.
Tests of previously published untested theories or theoretical models: Scrutinize untested theoretical frameworks	• *Model of Emotional Aspects of Workplace Relationships*: Lopez-Kidwell, Niven and Labianca (2018) presented a theoretical model focusing on the emotional aspects of workplace relationships. This model, which has yet to be empirically tested, could be explored using various research methods, including experiments, surveys, interviews, and longitudinal studies, to understand further the framework's applicability and accuracy in explaining the dynamics of workplace relationships. • *Knowledge-in-Practice Framework*: The knowledge-in-practice framework introduced by McIver, Lengnick-Hall, Lengnick-Hall and Ramachandran (2012) primarily focuses on understanding how knowledge is applied and utilized. Researchers can empirically test the proposed model by selecting a sample of organizations from various industries, collecting data on their knowledge practices, and assessing how well the framework's concepts align with their knowledge management strategies and outcomes. This could involve surveys, interviews, and analysis of organizational documents to measure variables related to knowledge characteristics, management strategies, and performance outcomes. Comparative case studies could help evaluate the framework's applicability and effectiveness in different contexts.

identified themes are captured throughout the entire corpus (i.e., qualitative data). In this case, researchers could use a subset of the data to train a machine learning model to differentiate among the researcher-identified themes and then test the probability that the themes appear in the remaining data subsets. From there, researchers could reengage in qualitative interpretation. Thus, using different data analytic strategies may unveil new insights or provide supporting evidence for the initial findings.

Illustration #1: resource dependence theory. Resource dependence theory acknowledges the impact of external factors on organizational behavior and how, despite being constrained by their context, managers have the capacity to mitigate environmental uncertainty and reduce resource dependence through their actions (Hillman, Withers & Collins, 2009). Resource dependence theory highlights the importance of *Relevant Exchanges* within the CORE performance model by emphasizing how organizations rely on external resources to achieve their goals. These exchanges are deemed relevant because they directly impact the organization's ability to operate effectively and achieve its objectives. By managing these exchanges strategically, organizations can mitigate dependence on any single stakeholder group and enhance their overall performance.

A study conducted by Xia, Zhu and Cai (2023) examined how team governance duration influences carbon emission intensity, integrating resource dependency theory, group development theory, and social identity theory using data from Compustat, BoardEx, and The Carbon Disclosure Project. To conduct a reproducibility study, researchers could utilize the same datasets and analytical methods to verify the results. This would involve reproducing the analysis of the relationship between team governance duration and carbon emission intensity, confirming the observed inverted U-shaped pattern. Additionally, researchers could investigate whether factors like team size and gender diversity moderate this relationship and if low-carbon innovation serves as a mediator. By reproducing these analyses, researchers can validate the original findings, enhancing the credibility of the research and offering valuable insights for managerial decision-making and policy formulation related to corporate sustainability.

Illustration #2: leader emergence. MacLaren et al.'s (2020) study on leader emergence in leaderless groups, particularly focusing on the impact of speaking time, directly pertains to performance via leadership exchanges. This research aimed to identify factors that enable an individual to become a leader, a vital element of performance in organizational and social environments. This study aligns with the *Relevant Exchanges* component of the CORE performance model, emphasizing the importance of interactions in influencing outcomes.

Independent constructive reproducibility studies are more likely in quantitative studies for which data are increasingly published along with the manuscript. With publicly available data, researchers could reoperationalize variables to examine whether findings are robust to alternative operationalizations and whether new insights emerge from the analyses. MacLaren et al. (2020) studied leader emergence in leaderless groups and found that "speaking time retains a substantial effect on leader emergence even when controlling for a variety of other variables also known to correlate with leader emergence" (p. 10). MacLaren et al. (2020) made their data publicly available (https://orb.binghamton.edu/management_fac/2/) so a different group of researchers could first reproduce and also continue MacLaren

et al.'s research to investigate whether the content of the speech explained any additional variance in leader emergence beyond total speaking time. In other words, the study could be reproduced and then expanded by adding new predictor variables related to speech content to learn whether the results hold.

Literal and constructive replication studies

A replication study involves collecting new data to test the same hypotheses tested in previously published research (Kraimer et al., 2023). Moreover, a "replication is literal if it follows the same design and analysis plan as the original study" (Köhler & Cortina, 2023, p. 78). It involves meticulously repeating a previous study to faithfully reproduce the original research methods, procedures, and data collection techniques. The primary objective of literal replication is to assess the original findings' reliability and robustness by duplicating the research conditions. In contrast, a constructive replication study "provides a stronger test of the phenomenon of interest and allows researchers to determine the effect of research design characteristics on observed findings" (p. 79).

Illustration #1: human capital theory. Human capital theory suggests that firms derive economic benefits from investing in their employees, given that education and training enhance employees' skills and productivity, thereby serving as investments that contribute to the firm's performance and growth (Tan, 2014), which closely connects with *Capacity* in the CORE model. To conduct a literal replication study based on Rohling's (1986) examination of human capital theory using a Wiles test, researchers could begin by meticulously re-creating the original study's methods and conditions. A replication would entail precisely reproducing the research design, including using the Wiles test, while ensuring all other study aspects remain identical. If concerns arise about the original sample size's adequacy to address sampling error effectively, researchers conducting the literal replication could opt for a similar demographic but draw participants from a different or more extensive pool. This adjustment aims to enhance the study's robustness and generalizability. By maintaining the same conditions and using the Wiles test again, any observed variations in results between the original study and the replication could be attributed to factors like sampling error or unforeseen nuances in the original study.

Illustration #2: agency theory. Agency theory delves into the dynamics between organization principals (such as owners or shareholders) and agents (like managers or employees), emphasizing how performance can be shaped by harmonizing the interests and motivations of these groups using different agreements and mechanisms (Shapiro, 2005). This theory's connection to *Relevant Exchanges* lies in examining how the contractual relationships and incentives forged between principals and agents in an organization influence these exchanges and how optimizing these exchanges can synchronize the objectives of both sides to enhance overall performance.

To conduct a constructive replication study of Eisenhardt's (1985) research on agency theory as a determinant of control strategy, one approach would be to significantly expand the dataset by incorporating stores from shopping centers across diverse geographic regions. By doing so, the replication study ensures a broader representation of the retail

environment, moving beyond the confines of just one shopping center. This replication would enable researchers to examine whether the patterns and conclusions drawn from the localized sample hold in a more diverse and extensive context. Furthermore, a constructive replication study could involve reconsidering the study's design. Researchers might further diversify the sample locations and introduce additional control variables related to regional consumer behavior or specific store types. By incorporating these factors, the replication study would aim to provide a more comprehensive understanding of how agency theory influences control strategy across different retail settings.

Illustration #3: affective events theory. Considering the CORE performance model, Affective Events Theory (AET; Weiss & Cropanzano, 1996) primarily aligns with the *Capacity* component. AET's main focus is understanding the emotional dynamics within the workplace and how events and situations can trigger emotional responses and, ultimately, behavior and performance in individual employees (Ashkanasy & Dorris, 2017). AET recognizes that emotions are not isolated from the work process but are intertwined with it, shaping employees' capacity to perform effectively. By delving into the emotional aspects of work, AET provides valuable insights into how managing and harnessing emotions can impact an organization's overall performance and productivity.

For example, the qualitative study by Dasborough (2006) is an excellent candidate for a constructive replication study, where researchers can conduct a similar study but collect new qualitative data or use machine-learning techniques to replicate the results. Dasborough (2006) used AET to explore its connection to employee performance, with AET positing that workplace events trigger positive or negative emotions in employees. The study investigated how leader behaviors influence these emotions and affect employee performance. Positive emotions, like enthusiasm, enhance performance, while negative emotions, such as anger, can hinder it. This study also examined emotional intensity, suggesting that high-arousal emotions may disrupt performance more than low to medium-arousal ones.

Generalizability studies

"A generalizability study adds a substantive moderator to an existing model" (Köhler & Cortina, 2023, p. 78). These studies are crucial for refining theories by assessing their validity in different situations. They come in various forms, such as integrative studies that combine theories to make predictions, foundational studies that test theory assumptions, and investigations of new moderators. By conducting generalizability studies, researchers clarify the boundaries of existing theories and expand the relevance of their findings across diverse settings and populations.

Illustration #1: goal-setting theory. Established by Latham and Locke (1975) and further investigated by Locke, Chah, Harrison and Lustgarten (1989) and many others, goal-setting theory suggests that well-defined and challenging goals boost productivity for individuals and groups. The core idea is that setting clear goals improves performance by providing direction, focus, and motivation (Locke & Latham, 2002). This theory connects with the *Capacity* aspect of the CORE performance model, which considers the factors that affect individuals' capacity to perform. Testing goal-setting theory in diverse environments would allow

researchers to understand how different work settings (i.e., opportunities) influence the effectiveness of goal-setting in improving performance.

Conducting a generalizability study based on Latham and Locke's (1975) study, which focused on logging crews, can involve investigating how goal-setting theory fares in diverse occupational and cultural contexts. To achieve this, researchers could adapt the theory to a white-collar setting like software development teams and test whether setting precise goals enhances productivity in this context. Different occupations entail unique work environments and tasks, which may influence how individuals respond to goal-setting. By considering occupation type as a moderator variable, researchers can refine the applicability of goal-setting theory across diverse contexts.

Illustration #2: resource-based theory. Resource-based theory suggests that firms can gain a competitive advantage by utilizing valuable, rare resources that are difficult to imitate and not easily substituted (Wright & Ulrich, 2017). The resource-based theory relates to *Capacity* in the CORE model by emphasizing efficient resource allocation for improved performance because this component refers to an organization's ability to strategically and effectively use its resources to achieve goals.

Hsu and Ziedonis (2013) resource-based theory study investigated the dual role of patents as a resource of advantage in entrepreneurial ventures. Their study explored how patents can act as both isolating mechanisms in product markets and signaling devices in the resource market, particularly in early financing stages, and focused on the impact of patents on factors like attracting prominent investors, obtaining better financial terms, and enhancing value capture. A generalizability study can add two potential moderators. First, a study could examine industry-specific conditions by categorizing startups into sectors (e.g., technology, healthcare). This approach would assess how patents impact fundraising and competitive advantage differently based on factors like competition, technology intensity, and market dynamics within each industry. Second, geographic variations could be considered by comparing startups in various locations, such as established hubs like Silicon Valley and emerging ecosystems elsewhere. By exploring factors like local access to venture capital, regulatory differences, and cultural influences, a generalizability study can assess whether the role of patents remains consistent or varies across different geographic contexts. These moderators aim to provide a more precise and concise understanding of patents' influence on startup success across diverse scenarios.

Tests of competing theories

Kraimer et al. (2023) defined testing competing theories that predict the same phenomenon as "identifying a central prediction that, if supported, would falsify one theory while supporting the other" (p. 14). In other words, they involve developing a "horse race" between competing hypotheses to test which "wins" when the theories aim to explain the same phenomenon (e.g., Aguinis & Adams, 1998).

Illustration #1: expectancy versus self-determination theory. Expectancy theory connects to *Capacity* in the CORE model. It posits that motivation is shaped by individuals' belief in their ability to achieve desired outcomes and the value they attach to these outcomes. It also

emphasizes the impact of self-evaluated abilities and expected rewards on performance. It highlights that an individual's perception of their abilities and the anticipated results significantly influence their performance capacity (Schmidt, Beck & Gillespie, 2013). In addition, self-determination theory (SDT) is also primarily associated with *Capacity* because it highlights how fulfilling the need for intrinsic psychological needs (e.g., competence, autonomy, relatedness) bolsters motivation, while extrinsic goals do not (Schmidt et al., 2013). This suggests that individuals who see themselves as capable in their roles experience enhanced motivation, thus improving their performance capacity. They become more engaged and effective, linking perceived competence, a crucial part of SDT, to their capacity for performance.

Among the multiple motivation theories in management and related fields, expectancy and self-determination theories compete in that both make different predictions about individual behavior. Expectancy theory predicts that individuals will work at a certain level if they a) value the expected outcome and b) expect their work to result in the expected outcome (Behling & Starke, 1973). SDT (Deci, Olafsen & Ryan, 2017) states that individuals have an inherent need for competence, autonomy, and relatedness. In a scenario where these two theories would compete to explain individual performance, which would win? For example, if individuals value money (i.e., the expected outcome) and believe that their work will earn money, but the work requires social isolation and removes individual autonomy, will they engage in it or not? An experiment could empirically test this question to investigate which theory better explains the performance outcomes.

Illustration #2: leader-member exchange (LMX) versus equity theory. LMX and equity theory provide distinct insights into performance. LMX centers on leaders fostering relationships with team members and influencing performance through enhanced support and motivation via higher-quality relationships (Martin, Thomas, Legood & Dello Russo, 2017). Equity theory focuses on how individuals form beliefs about the inputs they contribute to their employment and the outcomes they receive in return, including both tangible and intangible rewards (Aguinis, 2023; Latham & Pinder, 2005). When individuals perceive an imbalance, where their contributions do not match the rewards compared to others, it can negatively affect motivation and performance.

Both theories underscore how relationships and perceptions of fairness impact performance, with LMX emphasizing leader-member relationships and equity theory highlighting a balance between contributions and rewards in relation to others. Thus, both theories are closely linked to the *Relevant Exchanges* component of the CORE model. LMX highlights the exchange between leaders and members, where high-quality exchanges enhance performance through improved communication and support. In contrast, equity theory focuses on perceived fairness in exchanges of effort and rewards within a group.

Thus, the question is, "Which theory would win in a scenario in which LMX and equity theories compete?" For example, in a team setting, where LMX relationships are differentiated among team members, and these differences are perceived to be inequitable, what is the effect on team performance? What is the effect on team cohesion? At the individual level, what is the effect on individual performance? What is the effect on individual satisfaction? In other words, which of the two theories can better predict performance? Which of the two theories is better able to predict subjective outcomes?

Illustration #3: threat-rigidity versus approach-avoidance theory. Threat-rigidity theory is a multi-level theory directly related to *Opportunity* in the CORE model. Although multi-level (Staw, Sandelands & Dutton, 1981), threat-rigidity theory often explains macro-level phenomena related to firm performance (e.g., Greve, 2010; Shi, Connelly & Cirik, 2018). Threat-rigidity theory's general thesis is that, when faced with a threat, organizations will simplify communication channels, concentrate power and influence higher in the organizational hierarchy, and ultimately become less flexible in their business strategies, as the organization will rely upon proven strategies rather than explore new ones. As organizations concentrate power and influence higher in the organizational hierarchy in response to threats, it becomes important to understand how individuals in the upper echelons of the organization respond to them, as an individual's dispositional response to threats may have a trickle-down effect throughout the organization (Hambrick & Mason, 1984).

On the other hand, according to approach-avoidance motivation theory, which relates to the *Capacity* component of the CORE model, individuals hold dispositional preferences to avoid negative or approach positive stimuli (Elliot, 2006). During an organizational threat, an individual with an avoidance orientation would likely respond consistently with threat-rigidity theory, turning inward and retreating to known strategies rather than pursuing new strategies, as avoiding the unknown is a way to escape the threat. However, an individual with an approach orientation may seek new strategies, as individuals who hold an approach orientation are energized to move toward positive possibilities. Thus, because individuals hold different dispositions toward threats, threat-rigidity theory and approach-avoidance motivation theory may serve as competing theories during an organizational threat. For example, how would an organization respond to a threat if the CEO held an approach orientation? How would an organization respond to a threat if the top management team were disproportionately approach-oriented? Are organizations more rigid in their threat response when the CEO has an avoidance orientation? Does one theory hold more explanatory power than the other?

Empirical explorations of theoretical assumptions underlying existing theories

As theories take hold in the literature, so do their underlying assumptions. This is not necessarily problematic if the underlying assumptions have been empirically tested. However, when the underlying assumptions remain untested, theories may be built upon faulty foundations.

Illustration #1: team-level theories. Although team-level theories were not explicitly captured in the CORE performance model, they could also be improved and guided by it. For instance, team cognition theory would fall in the *Capacity* component, as it refers to the team's collective knowledge (Mohammed, Rico & Alipour, 2021). Team climate theory (Anderson & West, 1998) would fit into the *Opportunity* component, as "climate perceptions determine how individuals behave collectively by influencing their perceptions and feelings about certain aspects of their surrounding environment" (Tse, Dasborough & Ashkanasy, 2008, p. 199). In addition, team-member exchange theory, which refers to the quality of reciprocal exchanges among team members, would be an example of team-level *Relevant Exchanges* (Banks et al., 2014).

Many team performance studies are developed with an underlying assumption that the constructs of interest (e.g., cognition, climate perceptions, quality of exchanges) operate at the collective level of analysis. As many (most) of these constructs are measured at the individual level, empirical analysis is necessary to test whether the data also operate at the team level. Researchers may reach different conclusions about the appropriateness of a team-level variable based on the chosen analytic technique, so using and reporting multiple measures is necessary (Aguinis, 2025). For example, within and between analysis (i.e., WABA) tests whether the data operate as wholes (i.e., between team variation), parts (i.e., within team variation), equivocal (i.e., individual-level variation), or null (i.e., neither level). Another empirical test is within-group interrater agreement r_{wg}, which evaluates how much group members agree on the ratings of certain items, attributes, or subjects. A third index is the intraclass correlation ICC, used to assess the reliability of measurements or ratings by different observers measuring the same subjects. If all these measures indicate that the data operate at the team level of analysis, it would provide evidence to support the underlying theoretical assumptions.

Illustration #2: stakeholder theory. Stakeholder theory recognizes and addresses the needs and demands of both internal and external stakeholders. By adopting this approach, organizations can move beyond an exclusive and narrower focus on shareholders to a broader internal and external stakeholder focus, which enables them to be strategic, enhance value creation, and ensure long-term success and sustainability (Mahajan, Lim, Sareen, Kumar & Panwar, 2023). In the CORE performance model, stakeholder theory falls under the *Relevant Exchanges* component because it underscores the importance of the organization's ability to engage with stakeholders effectively.

He and Chittoor (2023) investigated how corporate social responsibility (CSR) initiatives impact firm performance by examining the interplay between stakeholder theory and competitive strategies. Their study used stakeholder theory to understand when socially responsible actions lead to competitive advantage and better financial outcomes. The underlying assumption pertains to the relationship between stakeholder theory, CSR initiatives, competitive strategies, and firm performance. Verifying the assumption in their framework ensures that researchers accurately capture the complexities of stakeholder dynamics and their interaction with competitive strategies, thereby enhancing the quality of research findings within the CORE model.

Tests of previously published untested theories or theoretical models

Per Köhler and Cortina (2023), tests of previously unexamined theories or models entail scrutinizing untested theoretical frameworks. We could select dozens, if not hundreds, of theories as illustrations because most theories proposed in management are never tested (Edwards, 2010).

Illustration #1: model of emotional aspects of workplace relationships. Workplace emotions derived from relationships have a significant impact on performance. Positive emotional connections enhance engagement, motivation, and job satisfaction while fostering teamwork, trust, and effective communication. Constructive emotion management aids conflict resolution and supports innovation in a positive work environment. Conversely, negative emotions, such as conflicts or bullying, lead to stress and hinder performance. These emotional

dynamics closely align with *Relevant Exchanges* in the CORE model, influencing interactions and cooperation among individuals and, consequently, impacting performance outcomes.

Lopez-Kidwell, Niven and Labianca (2018) presented a theoretical model focusing on the emotional aspects of workplace relationships. This model, which has yet to be empirically tested, could be explored using various research methods, including experiments, surveys, interviews, and longitudinal studies (Aguinis, 2025), to understand further the framework's applicability and accuracy in explaining the dynamics of workplace relationships. Experiments could be set up in controlled labs and virtual reality environments (Aguinis, 2025). The goal would be to actively modify the emotional dynamics within certain work relationships and observe the resulting changes. For example, specific interventions might be implemented to shift the immediate emotions in a relationship and study how this impacts the relationship's trajectory over time.

Illustration #2 knowledge-in-practice framework. Knowledge-in-practice primarily aligns with the *Capacity* component of the CORE model as it addresses how individuals and teams possess the capacity to utilize and apply knowledge effectively. It examines the different forms of knowledge (enacted information and tacit knowledge) and how they can be leveraged based on their characteristics.

The knowledge-in-practice framework introduced by McIver, Lengnick-Hall, Lengnick-Hall and Ramachandran (2012) primarily focuses on understanding how knowledge is applied and utilized. It emphasizes the nature of knowledge-in-practice, which can be enacted information (explicit, codified knowledge) or tacit knowledge (knowledge deeply rooted in an individual's experience and difficult to articulate). This framework is centered around the idea that organizations must align their management policies, human resource practices, and knowledge management strategies with knowledge-in-practice characteristics to enhance performance. It provides insights into how organizations can leverage different types of knowledge for competitive advantage.

Researchers can empirically test the proposed knowledge-in-practice framework introduced by McIver et al. (2012) by selecting a sample of organizations from various industries, collecting data on their knowledge practices, and assessing how well the framework's concepts align with their knowledge management strategies and outcomes. This could involve surveys, interviews, and analysis of organizational documents to measure variables related to knowledge characteristics, management strategies, and performance outcomes. Comparative case studies could also help evaluate the framework's applicability and effectiveness in different contexts.

Conclusions

Performance is one of the most central constructs in the entire management field—ranging from micro to macro. So, it is not surprising that thousands of published articles address performance. However, this proliferation of performance theories, partly fueled by journal policies that demand "novel theoretical contributions," ironically, has slowed theoretical progress. We hope our article will help the management field improve our understanding of one of its most central constructs. We believe this will not be accomplished by creating new theories that seemingly offer novel contributions. Instead, we argue that using the

CORE performance model as the backdrop will improve our understanding of performance more meaningfully by confirming, refining, and refuting existing performance theories. The studies we proposed, as summarized in Table 1, could be conducted in the context of doctoral education (Schwab, Aguinis, Bamberger, Hodgkinson, Shapiro, Starbuck & Tsui, 2023). Such an approach would help improve our understanding of one of the most central constructs across management subfields and train the next generation of scholars on how to conduct open and responsible research.

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