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Using Stretch Goals for Idea Generation Among Employees: One Size Does Not Fit All!

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Abstract. This study explores heterogeneity in the efficacy of stretch goals for engaging employees in innovation, as stretch goals may both boost norm-breaking creativity and hamper fruitful ideation by overwhelming employees. Through a multilevel perspective, we demonstrate that stretch goals motivate more capable employees (successful, experienced, senior) to submit useful innovative ideas by combining the motivation of stretch goals with these employees' ability to discern fruitful from futile ideas. Other employees, meanwhile, may "spin their wheels" and submit lower-quality ideas based on their inability to apply useful knowledge. Empirically, we leverage idea generation data from a Fortune 500 firm. We contribute to stretch goals research by demonstrating both the intended and the unintended consequences that shape employee behavior and to the innovation literature by articulating when stretch goals can and cannot motivate valuable innovation from employees.

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Keywords: employee innovation • idea generation • motivation • stretch goal • hierarchy

Introduction

The generation of novel and useful ideas has been recognized as a key driver of organizational innovation and growth, and firms increasingly use the creative potential of their employees to innovate (Burgelman 1991, Amabile 1996, Ahuja and Lampert 2001, Baumann and Stieglitz 2014). Although firms often rely on dedicated research and development (R&D) teams to generate new ideas for innovation, frontline employees are increasingly involved in filling the front end of the innovation pipeline (Foss et al. 2013, Van den Ende et al. 2014). Customer-facing employees play a boundary-spanning role, occupying a privileged position from which to collect firsthand knowledge about customers and markets (Schneider and Bowen 1993, Malhotra et al. 2020). Firms have therefore designed various innovation management programs and idea contests to internally crowdsource innovative ideas for new products or services (Deichmann and Stam 2015, Deichmann and Jensen 2018). However, actively accessing and digesting potentially useful knowledge take time and mental resources away from fulfilling primary responsibilities. Employees therefore experience inherent constraints when asked to generate ideas for novel business opportunities because innovation is often neither part of their skillsets nor of their main roles (Jasmand et al. 2012, Rapp et al. 2017, Malhotra et al. 2020).

As managers seek to help employees navigate the tensions between their day-to-day roles and the organization's innovation needs, they may use specific goals to shift employee attention toward innovation (Locke and Latham 2002, Bandura and Locke 2003). In particular, setting stretch goals may encourage employees challenge core assumptions and deploy new skills to perform tasks beyond their main responsibilities (Hamel and Prahalad 1993, Sitkin et al. 2011). Because of their extreme difficulty and novelty, stretch goals have an unknown objective probability of attainment and are seemingly impossible to achieve in light of current capabilities (Sitkin et al. 2011). They may lead to superior performance by disrupting complacency, promoting new ways of thinking, and instilling persistence when confronted with constraints (Thompson et al. 1997, Kerr and Landauer 2004, Shinkle 2012).[1] Importantly, however, scholars have identified negative consequences of stretch goals (Ordóñez et al. 2009, Sitkin et al. 2011, Pina e Cunha et al. 2017). For instance, stretch goals can lead to unethical behavior, intensify

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conflicts, and reduce motivation (Ordóñez et al. 2009, Zhang and Jia 2013). This tension signals the need for a deeper understanding about the conditions under which stretch goals may lead to intended or unintended consequences (Gary et al. 2017, Sitkin et al. 2017). We build a multilevel theoretical framework about how stretch goals for idea generation affect the ability and motivation of employees to navigate this tension and generate useful new business opportunities. Using administrative data within a Fortune 500 firm, we offer three core findings that advance insights about both employee involvement in innovation and the usefulness of stretch goals.

First, building on insights from research on goal setting (Locke and Latham 2013) as well as idea generation and innovation (Scott and Bruc 1994, Baumann and Stieglitz 2014, Deichmann and Jensen 2018), we separate the effect of a unit's stretch goal into participation (does an employee engage at all) and engagement (how much does an employee engage) for employees in idea generation. Although scholars have alluded to motivational effects of goals that challenge employees (Locke and Latham 1990, Amabile and Conti 1999), prior literature is rather unclear about whether stretch goals bring about an actual change in employee behavior or simply deepen engagement among those who already participate in idea generation. Importantly, our findings highlight that stretch goals are particularly important in encouraging previously uninvolved employees to start generating ideas and to participate in innovation processes beyond their main responsibilities, and therefore, they can be an important motivational technique for firms to change the behavior of employees.

Second, we integrate research on the paradoxical nature of stretch goals (Sitkin et al. 2011, 2017; Pina e Cunha et al. 2017) with insights suggesting that they lead to higher performance variance among individuals (Gary et al. 2017) to explore the types of employees for whom stretch goals are particularly useful in encouraging the generation of useful ideas. Although scholars have suggested that stretch goals may be more effective when accommodated by structural arrangements, slack resources, and justice climates at the organizational level (Thompson et al. 1997; Sitkin et al. 2011, 2017; Zhang and Jia 2013), the role of individual differences in explaining observed variance in the outcomes of stretch goals has been ignored (Shinkle 2012). We extend existing research by focusing on how a unit's stretch goal regarding idea generation leads to intended and unintended consequences based on individual characteristics through the distinction between fruitful (adopted) and futile (rejected) ideas. We theorize that individual attributes correlated with an employee's ability to discern good ideas from bad ones (i.e., prior success, organizational tenure, and hierarchical position) affect the relationship between stretching the goal and the extent to which individual employees generate valuable ideas. Our theorizing and associated findings help us move beyond earlier assertions that stretch goals are universally effective among employees within the same context and show how their impact depends on individual attributes.

Third, by focusing on the use of stretch goals to encourage employee innovation, we contribute to the broader literature on the involvement of employees in organizational innovation. Recent research has focused on the selection process used to evaluate employee-suggested ideas (Reitzig and Sorenson 2013, Criscuolo et al. 2017, Keum and See 2017), recognizing the importance of biases in selection processes. We extend this literature by focusing on the potential role of goal setting in internal crowdsourcing (Malhotra et al. 2020) and showing how goals may further enhance the ability and intrinsic motivation of employees to generate novel and useful ideas. Although customer and process knowledge is a potentially valuable ingredient in the innovation process, encouraging a wider pool of employees whose core job is different from translating that knowledge into valuable product ideas is a difficult challenge for organizations to face. Our study shows that, under some circumstances, stretch goals may particularly encourage such engagement among employees and may effectively capture organizational knowledge and shape idea generation behaviors.

Theory and Hypotheses

Stretch Goals and Employees' Idea Generation Behaviors

The generation of novel and useful ideas for products and services is a cornerstone of organizational innovation (Amabile 1996, Gilson and Shalley 2004). To have a consistent flow of novel and useful ideas, organizations frequently leverage the expertise and insights of employees (Luttgens et al. 2014). In particular, scholars have recognized customer-facing employees as an important source of innovation, as integrating information from customers with other sources within the firm can lead to highly original ideas (Baer and Frese 2003, Cooper et al. 2004, Malhotra et al. 2020). As examples, Singapore Airlines encourages idea generation from employees across departments such as ground and inflight services (Heracleous et al. 2004), and Starbucks' first ice cream coffee drink (Frappuccino) originated as an idea from one of their employees (Aufreiter et al. 2000).

To encourage employees, firms have adopted tactics ranging from voluntary suggestion boxes and informal innovation teams to more formal and structured goals and activities around employee innovation (Deichmann and Stam 2015). Involving a wider pool of employees in the innovation process, however, requires them to invest

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time and mental resources beyond their core job (Hansen and Birkinshaw 2007, Roper et al. 2008). To be successful, employees must understand the underlying reasons for customer comments and complaints, hear information about competitors' market activities, and identify deeper patterns about the nature of customer demand. By allocating scarce attention to assimilating and interpreting customer information, employees have fewer resources available for their daily job routines (Hartline and Ferrell 1996), which may discourage employees from investing in innovation despite organizational priorities. To provide clear expectations, firms have used goal setting to ensure that sufficient attention and resources are dedicated to idea generation.

Research on goal setting suggests significant effects on persistence and performance when goals are specific and challenging (Locke and Latham 2013). Consistent with these findings, scholars noticed that organizations have moved away from routine adjustments to their targets and adopted stretch goals to motivate employees to deliver high performance (Collins and Porras 1994, Thompson et al. 1997, Takeuchi et al. 2008). For instance, Southwest Airlines reduced operating expenses by more than 25% by setting the stretch objective of the 10-minute turnaround (the total time each airplane is at the terminal) (Freiberg and Freiberg 1996). Although many people thought this impossible, employees created a new process inspired by observing race car pit crews to achieve the goal. Wal-Mart is another example. In 1990, Sam Walton, the founder of Wal-Mart, set a stretch goal to increase the sales volume per square foot by 60% over 10 years (Collins and Porras 2000). Because of an inventive way of working, Wal-Mart became the world's largest retailer within a decade. These anecdotes show that even though stretch goals are applied in familiar domains to make significant progress in existing outcomes, they require an innovative approach to be achieved.

These examples help define important characteristics of stretch goals within organizations. Although any challenging goal may heighten expectations, stretch goals have "an objective probability of attainment that may be unknown but are seemingly impossible given current capabilities" (Sitkin et al. 2011, p. 547). In this sense, earlier studies have highlighted two ways in which stretch goals differ from more ordinary (difficult, nonstretch) goals. First, stretch goals involve *extremely difficult* and radical expectations that render them seemingly unattainable given current capabilities and performance. Second, meeting stretch goals involves *extreme novelty*, which means that even when familiar tasks are involved, no known paths for achieving the targets are available and new ways of thinking and working are necessary (Sitkin et al. 2011, 2017). Although each dimension may imply the other, difficulty and novelty stress different aspects of stretch goals because the former refers to a specified outcome, whereas the latter concerns the knowledge about the means of achieving it (Zhang and Jia 2013). This suggests an important refinement to the definition of stretch goals based on the requirements to succeed in the face of stretch goals—success must require both significant effort and significant novelty. As a result, it is likely that stretch goals may be inherently similar irrespective of whether they are used as extreme operational goals on familiar tasks (e.g., Southwest and gate turnaround) or involve product or service innovation (e.g., Starbucks and the Frappuccino). Although we focus on the latter type of stretch goals in the current paper, given that both types of stretch goals entail both effort and innovation, we expect that there will be commonalities across types of stretch goals.

The Paradoxical Nature of Stretch Goals

Using stretch goals may alter employees' perception of their jobs and motivate them to think and act differently to generate novel and useful ideas (Locke and Latham 2006). Stretch goals push them outside their comfort zone and require them to think "out of the box," which allows for faster cycles of trial and error learning (Argyris 1985, Kerr and Landauer 2004). Despite theoretical assumptions and anecdotal evidence, there is limited empirical support for the performance benefits of stretch goals, and questions have arisen around whether stretch goals are always beneficial (Ordóñez et al. 2009). For instance, rather than helping employees move beyond their work routines, stretch goals may cause a sense of collective fear and helplessness among employees because of the high probability of failure (Sitkin 1992, Zhang and Jia 2013). Toyota's 2002 goal to obtain a 15% share of the global automotive market by 2010 overstretched the company's capabilities and resulted in quality problems. Consequently, the company suffered an 8.7% drop in U.S. sales from 2009 to 2010 (Russo and Zhao 2010). In addition to increased failures, Zhang and Jia (2013) found that stretch goals may also foster unethical behavior and intensify relationship conflicts. For instance, because cross-selling (i.e., getting customers to open multiple bank accounts, credit cards, and mortgages) was highly profitable for Wells Fargo, senior executives stretched the sales target to eight financial products sold per household or around five times the industry average in 2013. When confronted with such a target, employees resorted to unethical behaviors, which led to more than 3.5 million fraudulently opened accounts and more than $300 million in fines and lawsuit payments.

Scholars, therefore, have started highlighting important contingencies explaining when stretch goals may help or harm firms. Sitkin et al. (2011) suggested that stretch goals may only be effective within firms that have been successful or have uncommitted resources

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available for discretionary use. We extend this line of research by focusing on individual-level contingencies—for whom within the firm will stretch goals be supportive to affect desired behavior and performance? We make a series of important distinctions for how stretch goals may affect behavior—distinctions between participation and engagement, between fruitful and futile ideas, and between experienced and novice employees.

Baselines: Participation and Engagement, Fruitful and Futile

When a unit goal regarding idea generation gets stretched, we recognize that higher numbers of ideas submitted by an employee may emerge from one of two paths. First, by stretching a target regarding the generation of new ideas, a unit may foster participation by inviting those who have not previously been suggesting ideas. Because a unit stretch goal can "capture, shift, and refocus attention" of employees (Sitkin et al. 2011, p. 548), it may push employees to think beyond primary tasks (Roper et al. 2008) and encourage them to start using customer engagement to source valuable information about emergent needs and possible synergies (Rousseau 1997, Jasmand et al. 2012, Yu et al. 2013). As such, a unit's stretch goal may stimulate employees to uncover ways to deal with cognitive challenges and to transfer resources between fulfilling their daily jobs and idea generation. Second, setting a seemingly unattainable target regarding idea generation may also encourage employees to expand additional efforts and to engage more intensely in such behavior (Kerr and Landauer 2004). It may motivate employees to apply new approaches to fulfill the target, which may help them to become more efficient in the diagnosis of potential opportunities when identifying multiple ideas for new products or services. As such, within a unit with a more stretched idea generation goal, raised collective aspirations and a focused attention to relevant tasks are more likely to emerge among employees, which helps them to effectuate their ability to raise the number of ideas submitted (Sitkin et al. 2011). We suggest therefore that substantive changes in the behavior of employees can be accomplished when stretching a target about idea generation through both paths.

Hypothesis 1a. *The more a unit's idea generation goal is stretched, the more likely an individual employee in that unit participates in idea generation behaviors* (*i.e., submitting at least one idea*).

Hypothesis 1b. *The more a unit's idea generation goal is stretched, the more likely an individual employee in that unit engages in idea generation behaviors* (*i.e., submitting multiple ideas*).

Although using a stretch goal to stimulate idea generation may trigger employees to participate and engage in anticipated behaviors, such enhanced efforts may not always lead to useful outcomes (Gary et al. 2017). Ex ante discerning between fruitful (useful, beneficial) and futile (rejected, worthless) ideas is challenging in any innovation task, but we suggest two specific reasons for why employee response to a stretch goal will increase both fruitful and futile ideas suggested.

First, large attainment discrepancies may undermine the commitment of employees toward a stretch goal if they believe it is seemingly unattainable (Hollenbeck and Klein 1987). The extreme difficulty, for instance, may dampen employee morale and encourages employees to focus attention on those aspects of the stretch goal that are more easily attainable (Sitkin 1992, Van den Bos and Lind 2002). In terms of idea generation, this may shift the focus of employees to the quantity instead of the quality of ideas submitted (Mezias et al. 2002) and may result in pushing many ideas "in the pipeline" in the hope that some of them are found useful (Pierce and Aguinis 2013). Second, setting a stretch goal regarding idea generation may result in more impulsive and less systematic information processing (Sitkin et al. 2011). Although stretch goals are generally beneficial for exploratory efforts and for getting employees out of their comfort zone, the extreme difficulty and the helplessness that employees may feel can lead to a focus on ideation based on external sources (e.g., copying from other industries or firms). Hence, employees have less capability to evaluate such ideas thoroughly and to suggest valuable new products and services that matches customer demands and firm priorities (Sitkin et al. 2011). This limits their ability to discern useful opportunities from useless ones in advance.

We thus argue that by being exposed to a stretched goal in a unit, individual employees generate more ideas about new business opportunities; however, motivational and cognitive challenges cause an increase in the submission of both fruitful and futile ideas. This is not necessarily a bad thing—firms must accept failures as the "cost" for being innovative. However, as we discuss, the generation of fruitful and futile ideas may be heterogeneous across different types of employees.

Hypothesis 2a. *The more a unit's idea generation goal is stretched, the more likely an individual employee in that unit generates fruitful ideas.*

Hypothesis 2b. *The more a unit's idea generation goal is stretched, the more likely an individual employee in that unit generates futile ideas.*

Moderators: Shaping the Effectiveness of Stretch Goals on Idea Generation Outcomes

Although using a stretch goal may lead to both fruitful and futile ideas, we identify three individual-level contingencies that may affect the ability of employees to enact such a goal more or less successfully in terms of

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generating and discerning between good and bad ideas: prior success, organizational tenure, and hierarchical position. Whereas prior success indicates whether an employee has been successful in generating one or more fruitful ideas in the past, organizational tenure refers to the length of his or her employment in the firm (Ng and Feldman 2010). Hierarchical position indicates the position an employee occupies within the hierarchy of the organization (Keum and See 2017). Each of these individual-level contingencies manifests through affective and cognitive processes (Keltner et al. 2003) to shape the ability and commitment of an employee to enact and transform a stretched goal into potentially useful ideas for new business opportunities.

Prior Success

Through previously generating one or more fruitful new business ideas, employees gain valuable experience in transforming expectations into desired outcomes. When individual employees have experienced success, a unit stretch goal will be perceived to be stimulating rather than stressful because prior success heightens expectations of future performance (Ryan and Deci 2000) and elicits general positive affect regarding the accomplishment of even more challenging goals (Bandura 1991, Lee and Farh 2004). It boosts the intrinsic motivation to pursue a stretched goal with greater persistence and heightened intensity because such individuals can use earlier success as a frame of reference when dealing with seemingly impossible goals (Levinthal and March 1993, Deichmann and Van Den Ende 2014). Employees who have had prior success are able to match this increased motivation from stretch goals with their more accurate understanding about the causal relationship between a useful idea and its antecedents (Denrell et al. 2004). This allows them to apply earlier templates and integrate their useful frontline knowledge to elicit the ideal response from stretch goals—increased motivation and creativity toward solving the problem. Thus, prior success allows them to generate more high-quality ideas.

Prior success may also help employees avoid creating less useful new ideas. When confronting more challenging goals, prior success shapes the ability and willingness of individuals to swiftly dedicate cognitive resources and to revert to successful approaches for identifying and assessing emergent opportunities. By comparison, employees who lack a successful reference may resort to more disorganized and ad hoc approaches when faced with a goal that is seemingly impossible (Sitkin et al. 2011, Jordan and Audia 2012), leading them to produce more low-quality ideas. Prior success may help employees reduce the number of futile ideas up front: for instance, by spotting potential incompatibilities between an idea and the organization's capabilities. As such, prior success may help employees to discriminate between valuable and less valuable ideas and to determine whether to redirect their attention in order to reduce needless effort on substantiating low-quality ideas. For less successful employees, a stretch goal is more likely to lead to erroneous paths because they may approach a seemingly unattainable target in a more defensible way through adopting prior approaches or resorting to quick fixes (Sitkin et al. 2017). Hence, we expect individuals who have already submitted one or more fruitful ideas in the past to generate less futile ideas compared with those individual employees who have not been successful so far.

Hypothesis 3a. *For an employee with prior success, the positive relationship between a unit stretch goal and fruitful ideas is stronger than for those without such experience.*

Hypothesis 3b. *For an employee with prior success, the positive relationship between a unit stretch goal and futile ideas becomes weaker, compared with those without such experience.*

Organizational Tenure

Longer-tenured employees develop valuable organization-specific knowledge and experience over time, which enables them to create a deeper understanding about how their unit functions, what customers need, and what strategic priorities are important for the organization (Lahaie 2005, Dunham and Burt 2011, Harvey 2012). When confronted with a stretch goal, we therefore argue that they are more likely to generate ideas in ways that are better aligned with the realities of the organization's strategies and processes (Parker et al. 1997, Ng and Feldman 2010). Rather than utilizing more self-centered approaches, longer-tenured employees may capitalize on their relationships with others and rely on more complex mental models to build cause-effect understandings about the business, strategies, and the environment (Ng and Feldman 2010). When pursuing seemingly unattainable targets, such declarative knowledge helps longer-tenured individuals to engage more mindfully in absorbing new information (Sitkin et al. 2011), which enables them to generate new ideas by combining emergent insights about changing demands or new technologies with organization-specific knowledge (Steffens et al. 2014). We argue therefore that longer-tenured employees generate more fruitful ideas than shorter-tenured employees when pursuing a stretch goal (Salter et al. 2014).

In addition to possessing organizational-specific knowledge, prior studies have shown that organizational tenure correlates with organizational commitment (Cohen 1993, Wright and Bonett 2002) and intrinsic work motivation (Kuvaas 2006, North 2019). Because of having dealt with a variety of problems and demands over time, longer-tenured employees feel more confident to take on other tasks and to approach seemingly

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unattainable goals in ways to minimize disruptions (Tierney and Farmer 2002). When a goal gets stretched, we therefore expect that longer-tenured employees are more inclined to put the interests of the organization above their personal interests (Meyer and Allen 1991) and to be more persistent in weighing potential consequences of their ideas against desired performance standards (Sitkin et al. 2011, Gary et al. 2017). Although shorter-tenured employees may also be triggered to generate new ideas when confronting seemingly impossible targets, their impulsive and less systematic approaches to ideation reduce their ability to discern patterns and to discriminate between fruitful and futile ideas (Lawrence and Zyphur 2011, North 2019). Thus, although a stretch goal may trigger both junior and senior employees to participate and engage more in idea generation, we expect that longer-term employees generate less futile ideas compared with those who are shorter tenured.

Hypothesis 4a. *For an employee with a longer organizational tenure, the positive relationship between a unit stretch goal and fruitful ideas is stronger than for an employee with a shorter organizational tenure.*

Hypothesis 4b. *For an employee with a longer organizational tenure, the positive relationship between a unit stretch goal and futile ideas becomes weaker, compared with an employee with a shorter organizational tenure.*

Hierarchical Position

Higher-ranked individuals generally operate across several domains of the organization and are more involved in organizational decision making (Guinote 2007). As such, they have more opportunities to draw a "bigger picture" about the organization and to build on critical insights when identifying suitable areas for the application of new ideas for business opportunities (Smith and Trope 2006). Moreover, higher-ranked individuals feel more ownership and experience a heightened sense of control when engaging in challenging tasks (Croizet and Claire 1998). Compared with lower-ranked employees, we therefore argue that those occupying a higher position may approach extremely challenging goals with greater confidence and commitment and consequently, utilize their informational advantages to generate a higher number of fruitful ideas (Anderson and Galinsky 2006, Brinol et al. 2007). On the contrary, the ideation process of lower-ranked employees may be more narrowly focused and may lack the richness of combining knowledge sources and insights from various locations within the organization. We expect therefore that higher-ranked individuals generate more fruitful ideas than lower-ranked individuals when confronting a seemingly impossible target.

A senior hierarchical position (e.g., team lead, project manager, supervisor) also brings greater access to organizational resources (Galinsky et al. 2003). This means that compared with lower-ranked individuals, higher-ranked individuals may utilize such human and financial resources as a psychological buffer against potentially negative consequences of pursuing seemingly impossible goals (Sitkin et al. 2011). In this sense, they may be less susceptible to negative consequences of stretched goals and face fewer cognitive constraints in considering alternative ideas for new business opportunities (Fast and Chen 2009, Tost et al. 2013). Scholars, for instance, have argued that those individuals in position of hierarchy are less biased toward ideas generated and are in a better position to filter out useless ideas (Keum and See 2017). Given that the pursuit of seemingly impossible goals typically involves failures and complications, we expect higher-ranked individuals to generate less futile ideas compared with lower-ranked individuals (Guinote 2007). Because lower-ranked employees have more stringent access to organizational resources than higher-ranked individuals, they may confront a stretch goal with lower morale and are less likely to maintain commitment, and positive attitudes and behaviors when pursuing a stretch goal (Sitkin et al. 2011), which is detrimental to their judgmental accuracy about whether their ideas are useful or not for the organizations.

Hypothesis 5a. *For an employee with a higher hierarchical position, the positive relationship between a unit stretch goal and fruitful ideas is stronger than for those with a lower hierarchical position.*

Hypothesis 5b. *For an employee with a higher hierarchical position, the positive relationship between a unit stretch goal and futile ideas is weaker, compared with those with a lower hierarchical position.*

Empirical Setting and Data Collection

To test our theory, we use unique multilevel, multisource data about the idea generation behavior of 10,655 frontline employees across 102 service units from a large firm in the communication technology and services industry. The rich and detailed data include a time-lagged survey, a large database of registered ideas for new business opportunities, and archival company data about frontline employees at the individual level. During the previous decade, digital transformation pushed the firm to search for new opportunities for growth and margin improvement. The firm had a process in place to solicit and evaluate new ideas suggested by employees, but heightened interest among senior management led to the implementation of stretch goals regarding idea generation at service units to encourage their employees to submit ideas. The core job of these employees was installing, maintaining, and upgrading telecommunications equipment for customers, and their

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long-lasting customer relationships provided them with unique and in-depth insights about what new products or services may create value.

This study utilizes three data sources. First, we accessed the firm's database covering all ideas generated and submitted regarding new business opportunities in 2015. In total, it covered 10,655 employees in 102 service units who were stretched by senior management to engage in the identification of new business opportunities. Employees with administrative duties and support staff who did not have contact with customers were not asked nor included in our study. Second, we distributed a survey to a random sample of 500 employees across the units in order to measure the stretchiness of the idea generation goals at their units. The number of surveys sent out was proportional to the size of each unit, with a minimum of 3 and a maximum of 15 surveys per unit. After several reminders, we received 380 completed responses from employees (ranging from 2 to 15 responses per unit) or 76% of our initial sample. The survey was management approved, which is why the response rate is relatively high. Third, we obtained information from the firm's human resource department and internally generated reports to measure our moderating and control variables. Because the stretch goal had a window of 12 months, we used responses about the stretch goal at the beginning of the year and obtained all the ideas registered for new business opportunities within the system during the 12 months after the survey was sent.

Measurement and Validation of Study Variables

Unit-Level *Stretch Goal*. Moving beyond using evidence from case studies or experimental settings in which participants manage a simulated organization (Gary et al. 2017), we collected primary data about a unit's stretch goal regarding idea generation in a business setting. Although we do not have a case-control setup, where some employees received stretch goals and others did not, we have variance in the level of "stretchiness" of the goals assigned across units. To assess whether the empirical context is suitable for measuring a unit's stretch goal and uncovering its effect on idea generation behaviors of its individual employees, we verified the appropriateness of our context and the data collection process in various ways.

First, in terms of face validity, earlier research has offered examples of stretch goals in their respective studies. For instance, Thompson et al. (1997) suggested that 3M stretched its target for innovation when mandating that 30% of sales should come from products that have been introduced in the last four years (from the amount of 25% of sales generated by products introduced within the past five years). Moreover, others made a distinction between a moderate and a stretch goal regarding cumulative net income in a hypothetical organization (Gary et al. 2017) and proposed that those groups confronted with a stretch goal had to obtain an income target that was about five times higher than those groups confronted with a moderate goal. In our empirical setting, the firm set unit-specific targets for the total revenue (in Euros) to be generated by the new business opportunities identified. As examples, one unit's target was increased by 150% from one year to the next (€1.2 million to €3 million), whereas another unit experienced a 90% increase (€0.8 million to €1.5 million). During interviews, one employee complained: "I cannot imagine getting even close to the [target]. This is just unrealistic." Another employee said: "[Target], seriously? I guess they have no idea of what it takes to deliver [target]." In another unit, an employee recognized the stretchiness of the target as well: "Obviously this is a lot beyond what we did before, not at all an easy target." Thus, employees clearly perceived these as stretch goals.

Second, we collected data about a unit's stretch goal through the survey responses of employees to the four items adopted from Zhang and Jia (2013) (mean = 3.70, standard deviation = 1.40, $\alpha = 0.86$). The specific items were "I find that the goal in my unit is too high"; "From the beginning, I think the work goal is too high to be achieved for my unit"; "Within the extant resource and condition, I don't think we can accomplish the goal for my unit"; and "According to the knowledge and expertise that I have, it's impossible for us to achieve this goal for my unit."

Third, before aggregating the individual responses of employees about their unit goal to the unit level, we examined whether sufficient agreement exists among unit members to justify the aggregation of the measures of stretch goal. To do so, we examined interrater agreement and the intraclass correlation coefficients (James et al. 1984, Bliese 2000). The average $r_{wg(j)}$ was 0.72 (median = 0.76), ICC(1) was 0.24, and ICC(2) was 0.58. These agreement scores were within acceptable ranges and legitimated the aggregation of individual responses within the same unit.

Individual-Level Ideas for New Business Opportunities. For measuring the number of submissions by each employee and whether those ideas were ultimately accepted for sale to customers, we relied on rich data from the firm's system that the firm used for registering and evaluating new business ideas. Ideas submitted to the system involved new features or new products and services that could meet customer needs and generate new revenue for the firm. First, we coded a binary variable *participation in idea generation behavior* that indicated whether a given employee registered at least one opportunity (coded as one, zero otherwise) during the 12-month period. Second, we measured *engagement in idea generation behavior* by counting the number of ideas an employee submitted during the 12-month period (for

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those that submitted at least one). Third, we measured the *number of fruitful ideas* submitted based on the number of ideas that were subsequently accepted and sold to customers. Fourth, we measured the *number of futile ideas* submitted based on the number of ideas that were ultimately rejected by the organization. Rejections were typically based on technical feasibility, (technical) misalignment with the firm's strategy, issues with implementation in the market (i.e., regulatory issues), or lack of demand.

Individual-Level *Prior Success*. We measured prior success of an employee in generating fruitful ideas for new business opportunities through a binary variable that was coded as one if the employee had registered at least one fruitful idea in the year previous to the study period (before stretch goals were implemented) and zero otherwise.

Individual-Level *Organizational Tenure*. We measured individual-level organizational tenure of an employee by counting the number of years the specific person had served at the firm.

Individual-Level *Hierarchical Position*. We measured hierarchical position of an employee by counting the number of layers below that individual in the hierarchy of the service unit. The higher the number of layers below, the higher the employee was ranked in the hierarchy.

Control Variables

We controlled for confounding variables at both the unit and individual levels. First, we controlled for unit-level market size and market growth because when employees operate within units serving larger and growing markets, they may perceive to have more options to generate ideas for new business opportunities. The measure for *market size* was the number of users of telecommunication networks. *Market growth* was measured by the rate of growth of the users of telecommunication networks. We controlled for unit size and unit service performance because earlier research has suggested that contextual aspects such as resource availability may affect the extent to which units may benefit from stretch goals (Sitkin et al. 2011). *Unit size* was, variance inflation factor, measured as the number of employees within the service unit. Moreover, we used information from internal corporate records to control for the capabilities and resources available in the unit. We included *unit service performance* by using an internally generated measure from the firm that shows the level of service delivery to customers based on service-level agreements. It captures the extent to which a unit addressed customer service requests satisfactorily and within the allocated contractual terms, including speed and customer satisfaction in delivering the requested service. Higher numbers denote higher levels of unit performance. Third, at the individual level, we included the main effects for all of our moderator variables (prior success, organizational tenure, and hierarchical position) and also controlled for *gender* (female was coded as one) because of the importance of controlling for past performance and possible association of these variables with creativity and our outcome variables (George and Zhou 2007).

Analytical Approach

As our data consist of individual employees who are nested within units, we used a multilevel technique to ensure the correct partitioning of variance across both levels. We estimated multilevel logistic regressions for participation (Hypothesis 1a) (mlogit in Stata) and multilevel negative binomial regressions for engagement (Hypothesis 1b) (mnbreg). To estimate models of fruitful and futile new business opportunities, we did not use separate equations because the two are likely to overlap, and this might lead to inefficient estimates of the coefficients and standard errors, with disturbances contemporaneously correlated across equations. To alleviate this concern, we estimated those models simultaneously with seemingly unrelated regressions technique (Zellner 1962, Liu 2002), an empirical technique that includes error covariances among the estimated equations and results in more efficient estimates of the coefficients and standard errors (Zellner 1962, Greene 2012). We used the multilevel gsem command with negative binomial link function in Stata for this purpose because the dependent variables for Hypotheses 1b–5b are all count variables. Although negative binomial and poison regressions have been used for nonnegative count dependent variables, the advantage of negative binomial is that it relaxes the assumptions related to mean equal to variance and the poison estimator's restriction on overdispersion (Cameron and Trivedi 1998, Wooldridge 2002; see also Jensen and Kim 2015).

Data Analysis and Results

Table 1 shows the descriptive statistics and correlations for all variables. Although some correlations are relatively high, tests for multicollinearity showed that they did not pose a threat to the interpretation of the results reported (all VIF values were below 1.8, and the mean VIF was 1.3). It is noteworthy that the numbers of fruitful and futile ideas were positively correlated, in line with the idea that the only way to get more good ideas is to accept more bad ideas, but at the individual level, the correlation is only 0.15. This importantly suggests that individuals may have some capability to distinguish useful ideas from less useful one.

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Table 1. Statistics and Correlations

	Mean	SD	1	2	3	4	5	6	7
Individual-level variables[a]									
1. *Participation in idea generation behavior*	0.35	0.47							
2. *Engagement in idea generation behavior*	0.93	2.24	0.56						
3. *Number of fruitful ideas*	0.37	1.37	0.36	0.72					
4. *Number of futile ideas*	0.56	1.57	0.48	0.79	0.15				
5. *Gender*	0.13	0.33	−0.02	−0.03	−0.01	−0.033			
6. *Prior success*	0.09	0.28	0.13	0.17	0.25	0.33	−0.02		
7. *Organizational tenure*	9.06	6.15	0.01	0.04	0.08	−0.01	−0.04	0.09	
8. *Hierarchical position*	2.68	0.90	−0.1	−0.07	−0.03	−0.08	−0.05	0.003	0.08
Unit-level variables[b]									
1. *Market growth*	2.04	8.04							
2. *Market size*	4.60	1.74	−0.14						
3. *Service performance*	76.75	2.72	0.09	0.33					
4. *Unit size*	559	1,710	−0.05	0.33	0.28				
5. *Stretch goal*	3.70	1.40	−0.15	−0.02	−0.006	−0.002			

Note. SD, standard deviation.
[a]$n = 10{,}655$, for all correlations above $|0.02|$; $p < 0.05$.
[b]$n = 102$, for all correlations above $|0.2|$; $p < 0.05$.

Our hypotheses suggest that individual variance is explained by both unit-level and individual-level factors. We ensured that significant unit variance in individuals' outcome existed and estimated a null model in which each individual outcome was a linear function of three parameters: the grand mean of the population of individuals, the random effect because of individuals, and the random effect because of units. We found significant between-unit variation ($\tau_{00} = 0.21$, $p < 0.01$). ICC values indicated that about 10% of the variance in different outcome variables existed between units, which suggest a nested data structure that requires a multilevel rather than a single-level data analytic approach.

Table 2 shows the results for overall idea generation behaviors. Model 2 shows that stretch goals were positively and significantly associated with the likelihood that employees participated in idea generation by submitting at least one idea (Wald $\chi^2 = 6.9$, $p < 0.05$, odds ratio = 1.23). Consistent with Hypothesis 1a, our findings show that a one-level increase in the stretchiness of the unit goal (e.g., from the mean of 3.7 to 4.7, about 71% of a standard deviation) increases the probability that an employee submitted at least one new business idea by 23%. Model 4 tests Hypothesis 1b, predicting increased engagement among those submitting ideas. The results show a positive, marginally significant effect of a stretch goals on engagement ($p < 0.10$). The size of this effect is best interpreted by transforming the coefficient into an incidence rate ratio (IRR). The IRR is 1.078, suggesting that the expected number of suggested ideas increases by 7.8% on average when the unit goal was perceived to be stretched one additional level. As a robustness check (omitted to preserve space), we measured engagement with a simple dummy variable (one if submitting more than one idea and zero if only one idea). The results confirmed the marginally significant and positive relationship between stretch goals and engagement. The pattern of findings regarding Hypotheses 1a and 1b indicates that stretch goals primarily encourage more employees to participate in idea generation behaviors versus having them become more engaged in such behavior by submitting more than one idea, although both effects manifest in the data.

Table 3 tests Hypotheses 2a–5b by distinguishing between fruitful (Models 1–3) and futile (Models 4–6) new business opportunities. As shown in Model 2 and consistent with Hypothesis 2a, we see a positive relationship between stretch goals and the number of fruitful new business ideas ($p < 0.05$). The IRR of 1.098 suggests that the number of fruitful ideas increases by 9.8% on average when the unit goal was perceived to be one level more stretched. In Model 5, we found that stretch goals are also positively related to the number of futile ideas ($p < 0.05$), consistent with Hypothesis 2b. The IRR of 1.18 suggests that the expected number of futile ideas for new business opportunities increases by 11.8% on average when unit goals are stretched one level. Thus, stretch goals increase both fruitful and futile ideas.

Hypothesis 3a predicted that individual prior success positively moderates the relationship between a stretch goal and the number of fruitful ideas, whereas Hypothesis 3b predicts a negative moderating effect for the number of futile ideas. Model 3 shows a significant interaction effect ($p < 0.01$) for Hypothesis 3a. The IRR of this interaction coefficient, at the mean, is 1.23, suggesting that the effect of stretch goal on the number of fruitful ideas increases by 23% for employees with prior success. The interaction is plotted in Figure 1, which indicates that employees who had been successful in the past produced

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Table 2. Frontline Employees Idea Generation Behavior

	Participation in idea generation behavior		Engagement in idea generation behavior	
	Model 1	Model 2	Model 3	Model 4
Unit level				
Market growth	−0.009	−0.003	0.004	0.002
	(0.01)	(0.01)	(0.01)	(0.01)
Market size	−0.001	−0.004	−0.034	−0.035
	(0.05)	(0.05)	(0.02)	(0.02)
Service performance	−0.111***	−0.115***	−0.034*	−0.036*
	(0.03)	(0.03)	(0.01)	(0.01)
Unit size	0.00004	0.00005	0.00002	0.00002
	(0.00004)	(0.00004)	(0.00001)	(0.00001)
Stretch goal		0.214**		0.076^{+}
		(0.08)		(0.04)
Individual level				
Gender	−0.19***	−0.19**	−0.06	−0.06
	(0.06)	(0.06)	(0.04)	(0.04)
Prior success	0.92***	0.92***	0.40***	0.40***
	(0.07)	(0.07)	(0.04)	(0.04)
Organizational tenure	0.001	0.001	0.001	0.001
	(0.004)	(0.004)	(0.002)	(0.002)
Hierarchical position	−0.04	−0.03	0.01	0.02
	(0.04)	(0.03)	(0.02)	(0.02)
Cons	7.85***	8.11***	3.71***	3.77***
	(2.42)	(2.35)	(1.09)	(1.08)
Log-likelihood	−6,879	−6,550	−7,625	−7,625
var(L1[unit])	0.46	0.43	0.07	0.07
	(0.09)	(0.08)	(0.02)	(0.02)
N	10,655	10,655	3,819	3,819

Note. Standard errors are in parentheses.
$^{+}p < 0.10$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$.

a higher number of fruitful ideas when the goal within their unit was stretched more, whereas a stretch goal had little to no effect on the number of fruitful ideas among those without prior success. Model 6 tests Hypothesis 3b and shows a nonsignificant relationship—prior success has no effect on the number of futile ideas submitted.

Model 3 also tests Hypothesis 4a about the interaction between a unit's stretch goal and individual organizational tenure. We found a significant and positive relationship ($p < 0.05$). The IRR of 1.10 shows that the initial effect of a unit stretch goal on the number of fruitful ideas becomes 10% stronger when an individual has one more year of experience in the organization. Figure 2 indicates that an employee who had been with the firm longer submitted a higher number of fruitful ideas for new business opportunities when his or her respective unit stretched its goal, whereas a shorter-tenured employee was not able to raise the number of fruitful ideas when confronted with a stretched goal. To test Hypothesis 4b, we included the same interaction effect in Model 6 but again, found a nonsignificant effect.

To test Hypothesis 5a, we focus on the interaction between a unit stretch goal and individual hierarchical position in Model 3. We did not find a significant relationship. To test Hypothesis 5b, we included the same interaction effect in Model 6 and found a significant negative relationship ($p < 0.05$). IRR of 0.92 shows that the effect of a unit stretch goal on generating a higher number of futile ideas on average becomes 8% weaker when an employee is ranked one level higher within the hierarchy. The interaction effect between unit stretch goal and individual hierarchical position is plotted in Figure 3. As goals become more stretched, higher-ranked employees generate fewer futile ideas, whereas lower-ranked employees are minimally affected.

Altogether, the moderation results suggest that a unit stretch goal produces significant benefits from more capable employees (i.e., those with prior success, longer tenure, and more seniority) but seems to have

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Table 3. The Number of Fruitful and Futile Ideas

Panel A: Fruitful ideas			
	Model 1	Model 2	Model 3
Unit level			
Market growth	−0.02*	−0.01^{+}	−0.01
	(0.01)	(0.01)	(0.01)
Market size	−0.07*	−0.08**	−0.08**
	(0.02)	(0.03)	(0.03)
Service performance	0.03**	0.03^{+}	0.03^{+}
	(0.01)	(0.01)	(0.02)
Unit size	−0.00006***	−0.00005**	−0.00006**
	(0.00001)	(0.00002)	(0.00002)
Stretch goal		0.094*	0.028
		(0.047)	(0.051)
Individual level			
Female	0.03	0.02	0.02
	(0.07)	(0.08)	(0.08)
Prior success	1.05***	1.03***	0.95***
	(0.06)	(0.06)	(0.07)
Organizational tenure	0.03***	0.03***	0.02***
	(0.004)	(0.004)	(0.004)
Hierarchical position	0.07*	0.12**	0.12**
	(0.03)	(0.03)	(0.03)
Crosslevel interactions			
Stretch goal × prior success			0.21**
			(0.081)
Stretch goal × organizational tenure			0.01*
			(0.005)
Stretch goal × hierarchical position			−0.01
			(0.042)
Cons	−2.40*	−1.60	−1.64
	(0.9)	(1.17)	(1.23)
Panel B: Futile ideas			
	Model 4	Model 5	Model 6
Unit level			
Market growth	−0.01	−0.01	−0.01
	(0.01)	(0.01)	(0.01)
Market size	0.08*	0.08*	0.09*
	(0.04)	(0.03)	(0.03)
Service performance	−0.11***	−0.11***	−0.10***
	(0.02)	(0.02)	(0.02)
Unit size	0.00007**	0.00007**	0.00003**
	(0.00003)	(0.00002)	(0.00006)
Stretch goal		0.112*	0.08
		(0.05)	(0.05)
Individual level			
Gender	−0.07	−0.07	−0.07
	(0.06)	(0.06)	(0.06)
Prior success	−0.15**	−0.15**	−0.16**
	(0.06)	(0.06)	(0.06)
Organizational tenure	−0.01***	−0.01***	−0.01***
	(0.003)	(0.003)	(0.003)

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Table 3. (Continued)

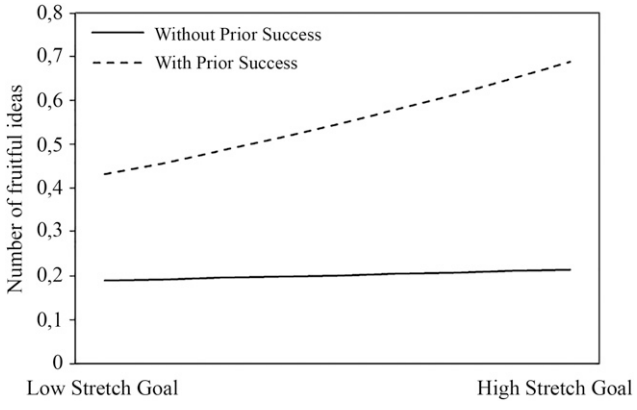
	Model 4	Model 5	Model 6
Hierarchical position	−0.10**	−0.07*	−0.07*
	(0.03)	(0.03)	(0.03)
Crosslevel interactions			
Stretch goal × prior success			0.03
			(0.07)
Stretch goal × organizational tenure			0.006
			(0.004)
Stretch goal × hierarchical position			−0.08*
			(0.03)
Cons	7.54***	8.47***	7.82***
	(1.72)	(1.57)	(1.61)
Fruitful_lnα	0.25***	0.23***	0.21***
	(0.05)	(0.05)	(0.05)
Futile_lnα	−0.64***	−0.63***	−0.63***
	(0.05)	(0.05)	(0.05)
var(L1[unit])	0.02**	0.04**	0.07**
	(0.05)	(0.02)	(0.02)

Note. Standard errors are in parentheses; $N = 3{,}819$.
$^{+}p < 0.10$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$.

little to no effect on other employees. These findings suggest important reasons for why prior research has shown mixed results about the performance implications of stretch goals.

In terms of control variables, Table 2 shows that there is a strong negative relationship between unit service performance and the participation and engagement of employees in idea generation behaviors. Table 3 shows that there is a positive relationship between unit service performance and the submission of fruitful ideas but a negative relationship between unit service performance and the submission of futile ideas. To the extent that we view the individual's service-level goals and idea submission goals as capturing multiple goals, the negative relationship signals that having multiple goals does require trade-offs between the two goals, but the employees actually know relatively well whether a given idea is a good one or not, and they only choose to spend time submitting (secondary goal) if they think it is a good idea, not bothering with less useful ideas.

Figure 1. Interaction Effect of Stretch Goal and Prior Success on Fruitful Ideas



Note. Low or high level of the variable is measured at one standard deviation below or above the mean.

As a robustness check, we considered Poisson models and performed a goodness of fit test of the models in order to determine which data process was most appropriate. The test did not support using the Poisson model ($p = 0.000$). Moreover, the relatively larger variance of our dependent variables compared with the mean and dispersion parameter α, which is significantly greater than zero, suggested the appropriateness of using negative binomial model for our overdispersed dependent variables.

Discussion

This study links the literatures on goal setting and employee innovation by exploring the efficacy of stretch goals for getting employees more successfully engaged in innovation within the firm. We use multilevel data on individual behavior within different units of a single company to explore for whom and under what conditions stretch goals change behaviors and innovative outputs of employees. Our findings show that a

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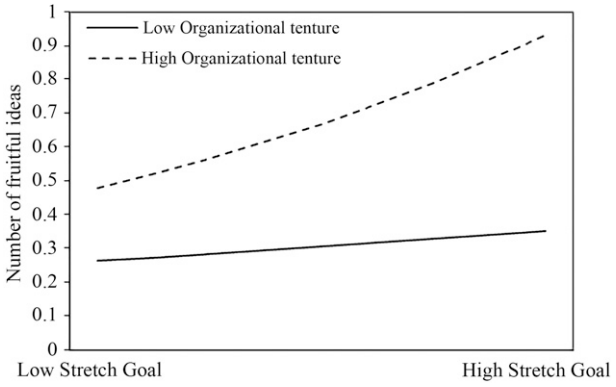
Figure 2. Interaction Effect of Stretch Goal and Organizational Tenure on Fruitful Ideas

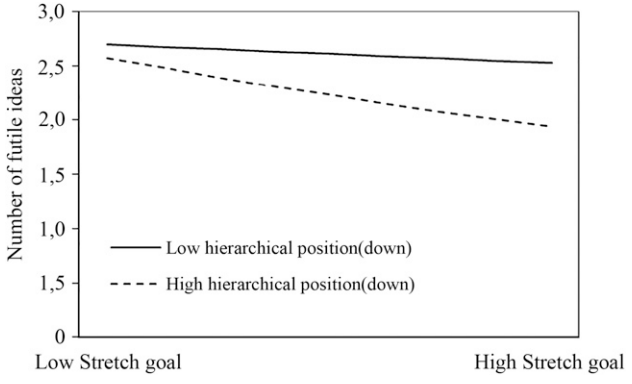


Note. Low or high level of the variable is measured at one standard deviation below or above the mean.

unit stretch goal increases both participation (submitting an idea) and engagement (submitting multiple ideas), although its effect on participation is stronger than on engagement. This suggests that stretch goals primarily encourage marginal contributors to participate, most likely by sending clear signals about how to allocate scarce attentional resources. We also showed that stretch goals only increased the submission of higher-quality ideas among employees with significant capabilities and knowledge—those who had submitted successful ideas in the past, those with substantial organizational experience, and those with senior positions in the hierarchy. These employees have both the perspective to view stretch goals as a challenge to be pursued and the skills to do so effectively.

It is worth noting that we study the effects of a stretch goal on extra role behaviors, whereas firms may use stretch goals to support behaviors associated with main roles (i.e., R&D employees get stretch goals to generate ideas for new products and services). We believe that our theorizing applies to such situations.

Figure 3. Interaction Effect of Stretch Goal and Hierarchical Position on Futile Ideas



Note. Low or high level of the variable is measured at one standard deviation below or above the mean.

For instance, although R&D employees may feel less inherent tensions because they may not need to move beyond primary roles, they still need effortful and novel approaches to reach a stretch target successfully. However, they might need different types of experience to respond successfully to stretch goals.

Implications for Stretch Goals

Stretch goals are inherently paradoxical—they may encourage employees to search for novel solutions and increase dedication (Sitkin et al. 2011) but also, may lead to unintended negative consequences (Zhang and Jia 2013) that diminish performance by discouraging employees. This study moves beyond average outcomes and focuses on effects at the individual level in a way that unpacks the heterogeneity in response to stretch goals. Stretch goals definitely change behavior in line with suggestions of Sitkin et al. (2011), but future research should distinguish between participation (involving marginal employees) and engagement (deepening connection with already-involved employees). Our findings show that stretch goals encourage both but have a clearer effect on participation. This suggests that the primary benefit of stretch goals is to encourage employees who did not previously invest significant effort to take goals seriously. We believe this highlights the signaling and attention-related effects of stretch goals—seemingly impossible goals tell experienced and busy employees where to focus their constrained attention. The distinction between participation and engagement may help explain mixed findings about performance consequences of stretch goals.

Importantly, however, our study suggests that stretch goals may not universally improve employees' ability to discern which ideas are worth submitting and therefore, may encourage submissions irrespective of quality. Although this results in more new useful ideas, it also creates additional work to sort through suggestions. We suggest that, if the task in question has a relatively high success rate, then stretch goals may provide real benefits through increased volume of effort. However, if the task has a very low likelihood of success (e.g., radical innovation), stretch goals may create more useless "busywork" that consumes company resources. This important limitation or downside of stretch goals deserves more attention in the literature.

We also contribute to our overall understanding of when and why stretch goals may be useful by suggesting that stretch goals may only produce beneficial behavior from some employees, as opposed to all, and that this contingency may be driven by how employees perceive stretch goals. For those who have the abilities (e.g., those who have had success in the past, have been with the organization for a long time, and have attained senior roles in the firm), stretch goals mean a sensible challenge that motivates and focuses attention

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on a key objective. For employees without such a broader experience, stretch goals may encourage the submission of anything irrespective of quality. This highlights a second important downside of stretch goals—pushing stretch goals on very junior employees may be particularly detrimental to performance. Moving beyond the notion that stretch goals may have uniform effects on behavioral and performance outcomes (Gary et al. 2017), we suggest that the aggregate benefits or costs of stretch goals depend crucially on the types of employees being pushed through stretch goals, and their ability to discern behavior that will be beneficial from behavior that will not be helpful. Importantly, this moves our theoretical understanding beyond macrolevel contingencies such as slack resources and structural arrangements that shape the effectiveness of stretch goals (Thompson et al. 1997, Sitkin et al. 2011) to understand the individual contingencies affecting the effectiveness of stretch goals within organizations. Stretch goals are a double-edged sword (Sitkin et al. 2011), and firms need to be careful and judicious in deciding when and where to deploy them.

We also contribute to conversations about how multiple goals function within organizations (Jensen 2001, Meyer 2002, Ethiraj and Levinthal 2009). The strong negative relationship between service performance and idea submission in our data shows that having multiple goals does require trade-offs in line with the view of Jensen (2001) (see also Hu and Bettis 2018). More interesting are the results showing a positive relationship between service performance and the submission of fruitful ideas but a negative relationship between service performance and the submission of futile ideas. Given that these results are cross-sectional, this may indicate that some units show strong overall performance (on both service performance and idea submission), but it may also suggest that excelling at one task provides the best foundation for understanding how to do a related task well. Future research is needed to disentangle the effects around multiple goals.

Implications for Employee Innovation

Organizations rely heavily on innovative ideas from employees (Burgelman 1983, 1991; Amabile 1996; Ahuja and Lampert 2001), and this study contributes to research exploring specific means of encouraging and engaging employees better in innovation. Prior literature has investigated the role of stock options (Baumann and Stieglitz 2014), voluntarily suggestion systems (Deichmann and Van Den Ende 2014, Deichmann and Jensen 2018), strategic urgency (Lewin et al. 2011, Peeters et al. 2014), and team configurations (Vakili and Kaplan 2020), and we extend this literature by assessing the potential for stretch goals to help improve innovation. We suggest that stretch goals may be especially valuable for focusing limited employee attention, especially for senior employees who both are capacity constrained and have relevant knowledge. Our theory and findings about employee-level heterogeneity also highlight important questions—should firms seek to stretch all employees across the organization for innovative activity, or should they focus only on specific employees who have relevant skill and knowledge? This is a question that clearly involves trade-offs—higher costs and broader coverage to avoid missing good ideas versus more focused efforts that are likely to generate a greater value. This trade-off deserves more focus in the literature on employee innovation in the future.

Implications for Practice

For managers, our study offers specific and actionable takeaways around stretch goals and innovation. We suggest that stretch goals may be a viable means of encouraging employee innovative effort but only under a set of conditions. First, stretch goals add most value when significant numbers of employees were not already participating in the relevant activity (i.e., suggesting ideas). Second, the expected return on ideas from those marginal (nonparticipating) employees is worth the cost in terms of program fees or distraction from core activities. Third, managers should think carefully about whether to apply stretch goals to all organizational members or whether to focus on those who are more likely to produce valuable insights (based on experience and ability).

Limitations, Future Research, and Generalizability

Like all studies, the current work has important limitations. First, our measurement of stretch goals was survey based and subjective. Our approach makes sense given that we are interested in measuring employee's perception and behavior. At the same time, this does not provide a clear indication for managers ex ante on what type of goal will actually be perceived as a stretch goal by each employee. To improve this, we encourage more research in organizations: for example, via field experiments to test the relationships, where targets in a homogenous group of firms or units can be manipulated while keeping all other factors intact in a real business setting.

Second, in this study we focus on stretch goals related to a specific individual-level task—the submission of new business opportunities. Given concerns that the near impossibility of stretch goals may lead to relationship conflict between individuals (Zhang and Jia 2013), the fact that our task was more individual does not allow us to include the potential downside of relationship conflict in our discussion of trade-offs. Future research should further explore the overall implications of stretch goals in relation to tasks that are

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done collectively and require more coordination. Although this is an important limitation, given the overall emphasis in the innovation literature on "suggest box"-type employee innovation, these findings represent an important—if constrained—contribution.

Third, prior research suggests that stretch goals may incite unethical behavior and relationship conflict, and knowing how to decrease such disruptive effects is important. For example, research suggests that when employees experience a higher interpersonal justice at work (Karriker and Williams 2009), the tension that accompanies stretch goals does not lead to as much relationship conflict compared with work contexts with lower interpersonal justice (Zhang and Jia 2013). Given a lack of available data, we have been unable to explore this possibility. Thus, our results should not be interpreted as an overall endorsement of stretch goals for organizations but more in line with furthering our understanding of where stretch goals may be most appealing.

Fourth, we also conducted this study in a single large organization, which allows us to hold contextual factors constant but which raises questions about generalizability. An individual's motivation to contribute to innovation programs might be contingent on organizational routines and incentives or the organizational culture and how errors are handled within firms in general (Baer and Frese 2003, Keith and Frese 2008). To capture fully the boundary conditions of stretch goals, further research is warranted about how contextual factors may shape the effects of stretch goals.

Fifth, our measure of fruitful and futile is based only on the adoption by the organization. As a result, we were unable to incorporate recent research on evaluation biases within organizations (Reitzig and Sorenson 2013, Keum and See 2017). Future research could incorporate evaluation more explicitly into the process.

Finally, it is worth mentioning that goal-setting theory has developed inductively through the accumulation of evidence from numerous studies (Locke and Latham 2002, 2006, 2013). We agree with Locke and Latham (2009), who argue that, despite being rigorously advanced, goal setting is an "open-ended theory" and "there is always more to be discovered" (Locke and Latham 2009, p. 22), especially when it comes to field studies. Therefore, in parallel to frequently used simulation and laboratory experiments, which are valuable, we encourage more field work to explain the effects of goals, focusing on different types of performance and different contexts within organizations.

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Endnote

[1] See Ordóñez et al. (2009), Gary et al. (2017), and Sitkin et al. (2017) for more details on the discussion on the benefits of stretch goals.

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