

**Zero-Sum Games & Zero-Sum Frames:
Employee Cognitive Consequences of Financial Firm Performance**

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ABSTRACT

This dissertation examines the psychological consequences of firms' financial and prosocial strategies and practices pertaining to how firms define value and performance. Firms typically measure value and performance financially. However, we know little about how this affects the zero-sum perceptions and satisfaction of firms' stakeholders, such as employees. In contrast, firms are increasingly considering social value in their strategic management of firm performance and including prosocial practices in their evaluations of employee performance, such as including CSR work in employees' performance appraisals. Yet, we know little about how these strategies and practices affect workers' satisfaction with the firm and other firm-stakeholder outcomes. I examine these questions through a mixed methods set of studies using field data from real firms. First, through seven field experiments, I find that reporting financial performance measures increases employees' zero-sum perceptions and ultimately decreases workers' satisfaction with the firm. In contrast, through a unique dataset of survey responses from architecture firms engaged in pro bono work, I find that incorporating CSR into employee performance appraisals increases employee satisfaction. This suggests that a pluralistic orientation toward firm value may mitigate the zero-sum pitfalls of financial performance for employees and other stakeholders. Through exploring a unique combination of datasets, including parsed word counts of financial value and social value words from firms' annual reports, and firm-level outcome data for employees, customers, shareholders, and the community, I find a preliminary positive relationship between collective stakeholder outcomes, particularly employee satisfaction and community impact ratings, and firms' described activities toward both financial and social value; however, this relationship holds only in more recent years, possibly due to a potential shift in the institutional logics of firm value supporting firms' consideration of social value. The research contributes to theories of strategic management, performance measurement, financial psychology, and employee satisfaction.

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INTRODUCTION

The relationship between workers and the firm remains a significant area of importance for management scholars and practitioners. A growing body of research in strategic management and employee psychology reveals a positive effect of workers' satisfaction on financial and nonfinancial firm performance (Edmans, 2012; Huselid, Jackson, & Schuler, 1997; Ostroff, 1992). Yet, we lack a clear understanding of how and why financial and nonfinancial measures of firm performance psychologically affect the workers of organizations. This dearth of research has persisted despite the growing prevalence of performance measurement systems throughout the organizational landscape, particularly financial performance measures (Davis & Kim, 2015; Harrison & van der Laan Smith, 2015).

Recent research in strategic management suggests that nonfinancial measures of firm performance, particularly prosocial measures of performance such as corporate social responsibility (CSR) and corporate social performance (CSP) can positively affect the cognition and behavior of employees (Bauman & Skitka, 2012; Bode, Singh, & Rogan, 2015; Burbano, 2016). However, an understanding of the mechanisms underlying such effects have thus far eluded us. We know even less about how and why financial measures of firm performance cognitively affect workers (Cardinaels & van Veen-Dirks, 2010; Lau & Sholihin, 2005), despite the instrumental and normative relevance of this topic to managers and organizations (Edmans, 2012; Jones et al., 2016; Margolis & Walsh, 2003). Research at the individual-level has revealed negative effects from financial framing, such as decreases in prosocial behavior (Vohs, Mead, & Goode, 2006), egalitarianism (DeVoe & Iyengar, 2010), enjoyment (DeVoe & House, 2012), and increases in zero-sum (i.e., win-lose) perceptions (Sirola & Pitesa, 2017).

The question of how firms' financial performance measurement practices affect employee cognition requires examination across theories and levels of analysis. For example, recent research in strategic management has identified a strong association between macroeconomic cues, such as recessions, and workers' individual-level zero-sum perceptions (Siroła & Pitesa, 2017), perceptions that "one person's gain is possible only at the expense of others," (Różycka-Tran, Boski, & Wojciszke, 2015:525). Such research would not be possible without an understanding of how macroeconomic conditions contribute to firm-level outcomes (e.g., recessions may prompt layoffs), which in turn can create expectations of job and resource scarcity, ultimately fueling individual-level zero-sum competition among colleagues. Accordingly, research examining how financializing firm performance affects employee satisfaction requires knowledge of how and why firms measure performance financially, for example, to manage the scarce value captured in competitive markets (Bowman & Ambrosini, 2000; Jensen, 2001; Priem, 2001, 2007), the intermediate consequences of this financialization, such as deleterious relative social comparisons of wealth and omission of nonfinancial, non-zero-sum sources of value such as CSR (Fredrickson, Davis-Blake, & Sanders, 2010; Kaplan, 1984), and how these consequences cognitively affect employees (Cardinaels & van Veen-Dirks, 2010; Pfeffer & Langton, 1993; Siroła & Pitesa, 2017).

In this dissertation, I draw from the macro-level research on performance measurement and the micro-level research on financial psychology and zero-sum perceptions to investigate how firms' financial performance measures cognitively affect workers, and how certain prosocial measures of performance may mitigate these effects. In developing a theory of the middle range, I propose that firms' financial performance measures increase workers' zero-sum perceptions of the worker-firm relationship due to the zero-sum aspects of exchange value capture, and that

these zero-sum perceptions ultimately decrease workers' satisfaction with the firm. In contrast, I propose that the inclusion of more prosocial measures of performance, particularly those related to social value (e.g., CSR), will mitigate the zero-sum aspects of firm financial performance and increase the satisfaction of workers.

The research contributes to theories of strategic management, performance measurement, financial psychology, and employee satisfaction by filling important gaps in their literatures. First, this set of studies provides a multi-level theory of firm performance by taking a common outcome, firm financial performance, and examining it as an explanatory variable that may trigger workers' zero-sum perceptions and in turn reduce worker satisfaction. Existing theory would then posit that this reduced worker satisfaction could ultimately reduce firm financial performance (Edmans, 2012; Ostroff, 1992), bringing the relationship full-circle. My studies and theorizing in Chapter 1 support this contribution. Chapters 2 and 3 suggest these negative effects may be mitigated by the inclusion of prosocial measures of performance. Specifically, the inclusion of volunteer CSR work into employee performance appraisals seems to increase employee satisfaction. At the firm-level, preliminary data on firms' described activities toward both financial and social value just might positively relate to employee satisfaction and collective stakeholder outcomes overall in recent years, though more research will be needed to verify this tentative relationship.

As a result, the research also contributes to theories of performance measurement, particularly the underresearched field of performance measurement psychology. Building on prior research that suggests potential relationships between how performance measures are presented and cognitive variables such as fairness perceptions and satisfaction (Cardinaels & van Veen-Dirks, 2010; Lau & Moser, 2008; Lau & Sholihin, 2005), the current research provides

experimental evidence of a negative causal effect of financial performance measures on worker satisfaction while also shedding light on a mechanism, increased zero-sum perceptions of the worker-firm relationship. Furthermore, the psychological effects of firms' performance measurement and reporting practices around social performance remain an underexplored area of research despite their growing importance. The potential positive relationships identified between employee satisfaction and both firms' inclusion of CSR work in performance appraisals and their reporting of potential activities pertaining to both financial and social value adds to the groundwork being laid on this fruitful area of research. The identification of all of these relationships also connects the psychology of performance measurement to the literatures on strategic management and employee satisfaction.

In addition to firm-level theoretical contributions, the research also contributes to theories at the individual-level of analysis, particularly the literatures on financial psychology (DeVoe & Iyengar, 2010; Vohs et al., 2006). First, my research demonstrates how firm-level practices around performance measurement may affect satisfaction, specifically worker satisfaction. Whereas financial performance measures alone may negatively impact worker satisfaction, the inclusion of prosocial performance measures may mitigate these effects and perhaps even positively affect the satisfaction of workers. Importantly, the experimental evidence in Chapter 1 suggests a potential mechanism through which these effects and possibly prior effects identified in the financial psychology literatures occur—increases in zero-sum perceptions (Sirola & Pitesa, 2017). Such a mechanism could help explain win-lose results from economic priming such as decreased prosocial behavior (Vohs et al., 2006) and reduced preferences for egalitarian distribution of resources (DeVoe & Iyengar, 2010).

Finally, this set of studies contributes to theories of employee satisfaction (Edmans, 2012; Ostroff, 1992; Schminke, Caldwell, Ambrose, & McMahon, 2014). Most research on the relationship between firm performance and employee satisfaction has examined how more satisfied employees increase firm financial performance (Ostroff, 1992), such as stock price (Edmans, 2012). However, my studies suggest that, paradoxically, the reporting of a firm's financial performance measures may actually decrease employees' satisfaction with the firm. This effect appears to be driven by increases in zero-sum perceptions toward the firm-employee relationship, which may be due in part to the zero-sum aspects of financial exchange value capture (Priem, 2001). This assertion and the results that accompany it connect the literature on employee satisfaction back to the value literature in strategic management. Lastly, in contrast to financial value, firms' consideration of social value in their measures of performance may provide a means through which to expand the pie of value for the firm and for stakeholders such as employees. For example, including volunteer work in employees' performance appraisals may increase employee satisfaction, as the theorizing and data presented in Chapter 2 suggest. Importantly, such inclusion of social value need not (and should not) supplant considerations of financial value. As the exploratory data in the final chapter suggest, firms' described activities toward both financial and social value together just might be positively related to employee satisfaction, and perhaps even broader stakeholder outcomes collectively in more recent years, relative to the consideration of either in isolation. However, more research will be needed to verify these preliminary relationships. As such, I conclude with a call for future research to continue building on these important findings.

THE EMPLOYEE-FIRM RELATIONSHIP & FINANCIAL PERFORMANCE

The satisfaction of workers is of critical importance to theories of organization and management, as well as managers and organizations in practice, given its effect on firm financial performance (Edmans, 2012; Ostroff, 1992). However, considering effects of worker satisfaction on firms' financial performance alone neglects the multi-faceted nature of firm performance (Miller, Washburn, & Glick, 2013), and its potential effects on worker satisfaction itself. In addition to financial performance, worker satisfaction predicts a plurality of outcomes beneficial to firms, including reduced turnover (Harrison, Newman, & Roth, 2006) and organizational citizenship behaviors (Bateman & Organ, 1983), among others. Similarly, worker satisfaction has been studied through a plurality of constructs, including job satisfaction (Judge, Thoresen, Bono, & Patton, 2001), workers' life satisfaction (Erdogan, Bauer, Truxillo, & Mansfield, 2012) and satisfaction with the organization (Schminke et al., 2014). Workers' satisfaction with the organization has become particularly important given the increasing attention to the quality of firms' relationships with their employees (Shore & Jacqueline, 2003). Although this relationship typically entails an exchange of labor for pay, employees' work can also provide a variety of nonfinancial benefits, such as meaningfulness (Bunderson & Thompson, 2009; Pratt & Ashforth, 2003) and identity (Ashforth & Mael, 1989; Ramarajan, 2014), which can be enhanced through nonfinancial prosocial practices, such as CSR (Henderson & Van den Steen, 2015). However, such intrinsic aspects of the employee-firm relationship may have been impaired by firms' focus on financial performance. This financial performance focus has been driven in large part by the emergence of shareholder primacy (i.e., firms' prioritization of shareholders over other stakeholders), which has reduced employee financial and nonfinancial benefits, increased inequality, and ultimately may have impaired the worker-firm relationship (Bidwell, et al, 2013).

Because firms concentrated on a single metric of performance—the return on corporate stock—no consideration was given to the possible negative ramifications for workers of changes in the employment relationship. A “retain and reinvest” approach, which kept employees and profits internal to the organization, was replaced by a “downsize and distribute” approach (Lazonick & O'Sullivan, 2000). (Bidwell, Briscoe, Fernandez-Mateo, & Sterling, 2013:81)

To maximize financial value for shareholders, firms introduced a host of financial performance measures to monitor and increase profitability; as Peter Drucker asserted, “what gets measured gets managed.” As a result, financial measures of performance have become the most prevalent measures of performance used by firms (Davis & Kim, 2015; Harrison & van der Laan Smith, 2015). Despite the prevalence of these financial measures, scholars have highlighted their shortcomings for assessing firm performance (Kaplan, 1983; Podolny, Khurana, & Hill-Popper, 2004). Focusing solely on financial measures can obscure important nonfinancial considerations, such as “intangibles” (Lau & Moser, 2008:59) and long-term considerations (Kaplan & Norton, 1996), given that financial measurement often excludes what cannot be measured objectively (Ittner & Larcker, 1998). Arguably many aspects of the worker-firm relationship fall under this intangible category. Employee skills, experience, intrinsic motivation, and meaningful work, along with firms’ prosocial activities such as CSR are all difficult to measure objectively, particularly through financial metrics, but are valued by both workers and their firms. Firm that fail to measure them, and in turn fail to manage them, may impair their workers’ satisfaction.

How a firm measures performance signals how the firm construes value, as value in organizations is commonly operationalized through performance measures that facilitate the assessment of organizational effectiveness (Henri, 2004; Matthews, 2011) and ultimately client and societal benefits (Cunningham, 1977). Similar to how the concept of value comprises both objective and subjective elements (Zuckerman, 2012), performance measures serve both the

functional roles above as well as socio-political roles, coordinating interests, influencing expectations, channeling social behavior, and even permeating entire institutions (Ebrahim & Weisband, 2007; Espeland & Sauder, 2007). Indeed, research suggests that financial performance measures have permeated organizations and society more broadly (Davis & Kim, 2015; Harrison & van der Laan Smith, 2015; Hiss, 2013). In strategic management, despite a distinction between “use value,” the perceived usefulness of a product, service, or task, and “exchange value,” the monetary amount a user is willing to exchange to receive this value (Bowman & Ambrosini, 2000; Lepak, Smith, & Taylor, 2007), exchange value captured has been emphasized over use value created (Makadok & Russell, 2002; Priem, 2007). The issue is that financial exchange value capture is predominantly zero-sum (Priem, 2001).

Although economic exchanges themselves are not zero-sum, the prices set to distribute the fixed-pie of profits between players in a value chain create no additional value, holding constant end-consumers’ willingness to pay (Brandenburger & Stuart, 1996)¹. In this sense, the act of capturing scarce dollars is relative, and a monistic (i.e., singular) focus on it through financial performance measures that commensurate a host of intrinsically valued criteria likely increases zero-sum perceptions of value and performance. Such outcomes are reinforced by the limited ability of firms and individuals (e.g., employees and shareholders) to simultaneously share scarce dollars without increased transaction costs, coordination, and risk (Coase, 1937; Williamson, 1981), legal boundaries around bookkeeping and distinct owners’ financial accounts (Carruthers & Espeland, 1991), and the negative psychological effects from relative social

¹ For example, assume a supplier’s cost to produce a product is \$25, the supplier sells this product to a firm for \$50, the firm prices this product at \$75, and the consumer is willing to pay \$100 for the finished product. An increase of the price from the supplier to the firm from \$50 to \$60 would merely distribute \$10 dollars of economic profit (i.e., exchange value) from the firm to the supplier. Similarly, if the firm then increased its price from \$75 to \$85, this would merely distribute \$10 of economic profit from the consumer to the firm.

comparisons of pay and wealth, which increase anxiety and feelings of competitiveness (Fredrickson et al., 2010; Garcia, Tor, & Schiff, 2013; Gilbert, McEwan, Bellew, Mills, & Gale, 2009; Srivastava, Locke, & Bartol, 2001). Although it is possible to use financial units of account independently from the medium exchange function of money (Hiss, 2013), psychological heuristics that implicitly associate financial units of account with the scarce medium of exchange may nevertheless condition a zero-sum perception of performance (Meegan, 2010; Tversky & Kahneman, 1974). As such, the zero-sum structural aspects of exchange value capture and the financial performance metrics used to measure it may increase workers' zero-sum perceptions of the worker-firm relationship.

Zero-sum structures and zero-sum perceptions have garnered interest in social psychology for decades. In the competition literature, scholars have taken up interest in structural competition, “an actual situation in which two or more people vie for a mutually exclusive achievement outcome” and perceived environmental competitiveness, “an individual’s cognitive construal of the competitive nature of the achievement setting” (Johnson & Johnson, 1989; Murayama & Elliot, 2012). Notably, the degree to which a situation is actually zero-sum and the degree to which an individual perceives it to be zero-sum may diverge. For example, students may harbor heightened levels of perceived competition despite an absence of structural competition, such as forced-distribution grading schemes, when such schemes were previously the norm (Meegan, 2010). In negotiations, parties tend to overlook mutually beneficial opportunities due to “fixed-pie” perceptions despite opportunities for mutual gain (Bazerman, 1983; De Dreu, Koole, & Steinel, 2000). In marketing, consumers often inadvertently devalue products that serve multiple purposes in favor of specialized products, even when the attribute or quality desired is the same across both products (Chernev, 2007). And as alluded to previously,

workers in recessionary periods may take on a more zero-sum construal of success and reduce helping behaviors toward their colleagues even when macroeconomic conditions remain uncertain (Sirola & Pitesa, 2017). Thus, firms may trigger their employees' zero-sum perceptions when performance is reported financially, even when performance is not structurally zero-sum.

ZERO-SUM FIRM PERFORMANCE

The claim that financial firm performance invokes zero-sum perceptions requires explanation of what makes certain construals of performance seem more or less zero-sum²? I propose three dimensions through which this occurs. The first of these dimensions is the extent to which performance is defined through relative criteria between parties, such as firms' rankings of employees to determine pay rate increases, as opposed to absolute criteria independent of each party, such as ratings. The second dimension through which performance seems to become more zero-sum is the extent to which performance is directly associated with scarce resources, such as money. Finally, the third dimension is the extent to which performance is commensurated into a single construct (Espeland & Stevens, 1998; Lamont, 2012), such as employees' billable revenue, as opposed to a more pluralistic construct comprised of multiple, intrinsically important criteria, such as workers' billable revenue, contributions to firm culture, and volunteer work for the community. I explain each of these dimensions in turn.

Relative between Parties vs. Absolute, Independent Criteria

First, performance determined relative to other parties, as opposed to via absolute criteria independent of other parties, can make performance seem more zero-sum and invoke zero-sum perceptions. For example, one of the most common examples of relative performance is the

² Although classic definitions of "zero-sum" imply a binary nature of the construct, I relax this constraint in line with more recent bodies of literature that treat it as a continuous construct. Such treatment is similar to the construct of "negative interdependence" from earlier work in competition theory, but also encompasses trade-offs between non-human objects (e.g., firm performance, monetary allocations, etc.).

employee ranking system (Espeland & Sauder, 2007). Such rankings force comparisons of each employee with one another in terms of how well they fare on specific pre-established dimensions, such as contributions to their firm's billable revenue, to determine employee outcomes like pay increases and bonuses. Such rankings typically limit the total resources distributed to employees (e.g., a fixed bonus pool); if employees collectively perform better than expected, top-ranked performers capture most of the pre-established fixed-pie of value while the firm captures the surplus. Such ranking systems conform most closely to the classic definition of zero-sum in which one party's gain is at the expense of another party's loss (von Neumann & Morgenstern, 1944). Rankings may even limit how pluralistic evaluators are in their considerations of performance criteria, which can be detrimental to both employees and firms (Lamont, 2012). In contrast, rating systems allow for comparisons against an external set of criteria (e.g., billable hours, quality ratings, volunteer hours, etc.) as opposed to comparisons of employees against one another. All employees can potentially receive a top rating; in contrast, ranking imposes a zero-sum game. The same logic holds for rankings of firms themselves.

Importantly, certain operationalizations of performance such as rankings, may impose relative comparisons between parties without relative trade-offs between commensurated standards of value. For example, with multiple rankings (Sauder & Espeland, 2006), although such an operationalization of performance would still entail trade-offs between parties due to the comparative nature of each ranking system, the pluralistic aspect alleviates some of the relativity between the standards commensurated within the rankings. Within firms, employees who value other intrinsic aspects of their jobs, such as meaningful tasks, social comradery, and contributions to societal welfare, will likely be more satisfied than employees who only value their paychecks. However, firms that measure performance only financially may be

unintentionally signaling to employees that they should discount the value of these other nonfinancial aspects of the firm-worker relationship relative to the financial aspects such as pay (Ebrahim & Weisband, 2007; Espeland & Sauder, 2007). When money becomes relatively and monistically valued in a social sense, such as through social comparisons of individuals' pay and overall wealth (Fredrickson et al., 2010; Srivastava et al., 2001), financial performance may seem more zero-sum. Such relative conceptions of performance that enforce trade-offs between parties are likely to have deleterious effects on employees' psychological well-being (Frank & Cook, 1995).

Degree of Association with Scarce Resources

The second dimension through which performance may invoke zero-sum perceptions is its association with scarcity. It could be argued that operationalizing performance in a zero-sum manner is appropriate in contexts characterized by scarce resources. For example, a firm's ability to pay its employees is often restricted by its revenue. Indeed, the allocation of scarce resources within and across firms has been of central concern to the fields of economics and strategy (Lambin & Meyfroidt, 2011; Pfeffer & Salancik, 1978), and has also become a topic interest in financial psychology (Krosch & Amodio, 2014; Shah, Mullainathan, & Shafir, 2012). When a scarce resource is demanded, market mechanisms establish a price for the resource representing the construal of its value in terms of consumers' willingness to pay, or in the case of workers, their willingness to sell their labor (Brandenburger & Stuart, 1996). This price mechanism makes the resource available only to those workers or firms willing to relinquish an equivalent amount of scarce monetary currency to obtain it, imposing inevitable yet arguably necessary trade-offs. In the firm-employee relationship, firms typically try to minimize workers' pay since it reduces the firm's exchange value capture (and accordingly, is accounted for as an expense in their

financial accounting records), while employees typically try to maximize their pay. This classic tension illustrates the high demand for money itself relative to its supply. As Adam Smith (1776) affirmed, “No complaint... is more common than that of a scarcity of money.”

However, recent innovations may be mitigating scarcity (Jones et al., 2016; Rifkin, 2014). Technological progress and new approaches to management have enabled value-creating enhancements in human capital (O'Reilly & Pfeffer, 2000), production (Chandler, 1977), land (Lambin & Meyfroidt, 2011), and even our approaches to time (Landes, 2000). Theories of the firm focused solely on alleviating economic scarcity may no longer be necessary (Jones et al., 2016). However, even after the alleviation of zero-sum structures, psychological heuristics may still condition zero-sum perceptions (Meegan, 2010). Social processes can shift our value systems, and in turn our measures of performance, toward new scarce resources, e.g., conspicuous consumption (Amaldoss & Jain, 2005; Worchel, Lee, & Adewole, 1975), creating new zero-sum perceptions (Krosch & Amodio, 2014; Roux, Goldsmith, & Bonezzi, 2015). As such, even when firms report positive financial performance, employees' heuristics may remind them of the zero-sum tension of firm profit vs. employee pay and reduce employees' satisfaction.

In contrast, firms that report prosocial measures of performance not so associated with scarce resources may help mitigate these zero-sum perceptions and ultimately improve employee satisfaction. For example, employees' CSR work may help the community and enhance the meaningfulness of work while also improving a firm's reputation and ultimately future financial performance (Ioannou & Serafeim, 2015). Such synergies may not even come at a cost to employee time when such work is voluntary and employees enjoy the work. This requires heterogeneity in value systems (Tantalo & Priem, 2014). Thus a pluralistic approach to

performance measurement with measures less tied to scarce resources may be key to alleviating zero-sum structural and psychological barriers, and ultimately improving employee satisfaction.

Monistic vs. Pluralistic Criteria

The third dimension through which performance can become more zero-sum is the extent to which it is measured via a single, monistic criterion, such as financial performance, as opposed to multiple, pluralistic criteria, such as financial performance and CSR. The resulting trade-offs between firms' and employees' standards of valuing may increase employees' zero-sum perceptions and reduce their satisfaction, irrespective of pay considerations. I assert that two aspects of monistic operationalizations of performance cause them to be more zero-sum than pluralistic operationalizations of performance, namely, the relative nature of commensuration (Espeland & Stevens, 1998) and over-simplification (Espeland & Sauder, 2007). First, commensuration assumes that "all value is relative and that the value of something can be expressed only in terms of its relation to something else. This form of valuing denies the possibility of intrinsic value, pricelessness, or any absolute category of value," (Espeland & Stevens, 1998:324). Such is the case when firm financial performance, such as stock price, is used to commensurate a host of financial and nonfinancial outcomes valued intrinsically (i.e., valued in and of themselves) like monetary profits distributable to stakeholders and social responsibility. Although such relative valuing does not necessarily entail trade-offs between parties, it does force trade-offs between standards of value. For example, commensurating the value employees' create through a single financial metric, such as revenue, subsumes a host of important financial information such as sales prices, quantity of customers served, the satisfaction of those customers, and any socially irresponsible externalities produced in the sales process. In this case, higher sales revenue could be used to justify externalities such as human

rights violations when the latter is financialized. “When used to make decisions, commensurated value is derived from the trade-offs made among the different aspects of choice. Value emerges from comparisons that are framed in terms of how much of one thing is needed to compensate for something else,” (Espeland & Stevens, 1998:317). Davis and Kim (2015) note how aspects of CSR, such as sustainability performance, are becoming increasingly commensurated through financial performance measures. Thus, although performance measure commensuration does not inherently force trade-offs between parties per se, an absence of any trade-offs between parties is only possible if all parties agree on the commensurated measure of performance while not preferring the primacy of other measures it subsumes.

Such value system homogeneity is arguably not realistic nor beneficial (Tantalo & Priem, 2014). Pluralistic systems of value are viewed as necessary for improving societal well-being through enhancing social resilience and the effective distribution of resources (Lamont, 2012; Walzer, 1983). Indeed, pluralistic performance, such as the intrinsic consideration of revenue, customer satisfaction, and CSR ratings distinctively may partially alleviate the zero-sum constraints of relative operationalizations of performance and those tied to scarce resources, such as monistic financial performance (Mitchell, Weaver, Agle, Bailey, & Carlson, 2016). As discussed previously, although rankings are often both relative and associated with scarce resources, having multiple, incommensurable rankings may alleviate some of the trade-offs between those in upper and lower tiers (Sauder & Espeland, 2006). For companies, the reporting of CSR rankings or best firms to work alongside revenue or market share rankings could help alleviate employees’ zero-sum perceptions and increase satisfaction.

In addition to their relative nature, the simplicity that monistic operationalizations of performance impose creates a scarcity of channels through which performance can be achieved,

which ultimately limits the total performance that individuals, such as employees, and the collective, such as the firm, can achieve. When performance is commensurated into a monistic measure, performance that could have been achieved according to other criteria (e.g., CSR) must then be compensated from this single criterion (e.g., profit), if these other types of performance can even be commensurated into that single performance criterion (Anderson, 1995). For example, although employees engage in economic exchanges with organizations through selling their labor for wages, employees also derive value from social relationships with colleagues, fairness, meaningful work, and CSR (Bode et al., 2015; Bunderson & Thompson, 2009; Burbano, 2016; Masterson, Lewis, Goldman, & Taylor, 2000). Oversimplifying performance through prioritizing a single financial measure may exclude these other concerns valued by employees, which may directly impair employee satisfaction with the firm excluding them.

Implied in these three dimensions of zero-sum performance is the need to consider both structural and psychological factors (Zuckerman, 2012). The confluence of macro-level and micro-level factors influencing employees' perceptions of financial performance measures requires consideration of not only the afore mentioned organizational factors, such as shareholder value primacy and the zero-sum nature of exchange value capture, but also the potential social psychological factors resulting from them. Relative social comparisons of wealth, perceptions of scarcity, and competitiveness indicate an increase in zero-sum perceptions by employees toward the work-firm relationship. Indeed, a growing body of research in financial psychology suggests that financial framing in the forms of money, pay rates, and macroeconomic conditions may invoke zero-sum perceptions. The research suggests that such zero-sum perceptions may in turn reduce work meaningfulness and ultimately employees' satisfaction with

the firms focused on financial measures of performance. In contrast, the inclusion of more synergistic prosocial measures of performance may help alleviate these effects.

FINANCIAL PSYCHOLOGY & ZERO-SUM PERCEPTIONS

Research on financial psychology seems to indicate potential negative effects from financial framing, some of which may relate directly to zero-sum thinking and reduced employee satisfaction. For example, primes of money or economic value can prompt individuals to become less social and prosocial (Vohs et al., 2006), particularly for workers during economic downturns (Sirola & Pitesa, 2017), more focused on product possession (Mogilner & Aaker, 2009), less egalitarian (DeVoe & Iyengar, 2010), and less able to savor pleasurable experiences (DeVoe & House, 2012). The findings that reminders of money can decrease prosocial motivation and egalitarianism suggest that thoughts of money may invoke zero-sum perceptions, decreasing individuals' willingness to help create value they may not be able to claim. Such an explanation is in line with Sirola and Pitesa's (2017) findings that macroeconomic recessionary primes directly trigger zero-sum perceptions among workers. This may reduce the meaningfulness and satisfaction that workers feel with their jobs and the firm (Freeman, Harrison, Wicks, Parmar, & de Colle, 2010; Podolny et al., 2004). This is particularly relevant to research on the reporting of performance measures, as the ways in which financial and nonfinancial performance information is presented can affect employees' decision making (Cardinaels & van Veen-Dirks, 2010), as well as managers' perceptions of interpersonal trust, fairness, and job satisfaction (Lau & Sholihin, 2005). Given that performance measures signal to workers how the firm defines value, the reporting of only financial performance measures may convey to workers that the firm views value as more zero-sum. In contrast, a more pluralistic approach that includes measures of

prosocial performance such as CSR or CSP may be more synergistic and less zero-sum in workers' minds since they are often less directly associated with money, a scarce resource.

Even when employees are exposed to financial situations in the firm that are not structurally zero-sum, their zero-sum perceptions may nevertheless persist. This may be in part because human cognition often does not operate at the mean, but rather at the extremes (Kahneman, Fredrickson, Schreiber, & Redelmeier, 1993; Kahneman & Tversky, 1979). For example, it is common for firms to reduce the size of their workforce during recessions. Although this does not mean that a particular firm will lay off workers, the consequences for terminated workers at firms that do are sufficiently concerning that even a small chance of termination for a particular worker may provoke zero-sum attitudes toward colleagues as potential competitors for jobs (Sirola & Pitesa, 2017). In addition to the significance of the consequences, the frequency with which workers are exposed to financial zero-sum situations likely embed a zero-sum heuristic that is primed upon exposure to even non-zero-sum financial situations. For example, workers' wages and benefits are often treated as a cost by firms, and thus are minimized to the point of near-market efficiency (Bidwell et al., 2013). This is likely due in part to firms' focus on maximizing financial returns for owners (Davis, 2009; Khurana, 2010), driven by investor pressures for ever-stronger financial performance and evidenced by the rise in financial performance measures such as stock price and accounting profits (Davis & Kim, 2015; Harrison & van der Laan Smith, 2015; Kaplan, 1984). As such, raises, bonuses, and overtime that are often coveted by employees are often restricted and tightly managed, despite findings that unconditional gifts of such compensation can motivate workers and increase their productivity commensurately (Gilchrist, Luca, & Malhotra, 2016). Repeated exposure to such situations may impose a form of social conditioning (Pavlov & Anrep, 2003) on workers that

prompt them to view financial frames in their organizations, such as financial performance measures, as zero-sum. Such zero-sum perceptions may reduce employees' satisfaction with the firms for which they work when considering that zero-sum beliefs have been found to covary with anxiety, decreased life satisfaction, competition for resources, and societal cynicism (Różycka-Tran et al., 2015).

RESOLVING THE ZERO-SUM GAME: CSR & SOCIAL VALUE

If firms' financial strategies and practices, such as financial performance measurement, produce zero-sum structures and zero-sum perceptions that reduce employee satisfaction, we are left to wonder whether certain nonfinancial strategies and practices, may help mitigate these zero-sum consequences. Recent research in organization theory hints at a potential solution—firms' prosocial strategies and practices aimed at creating social value (Battilana & Lee, 2014; Jones et al., 2016; Mitchell et al., 2016).

From a strategic standpoint, this entails that firms re-orient their attention and activities away from a monistic conception of financial value for shareholders toward a more pluralistic conception of value encompassing the creation of both financial and social value for a broader group of stakeholders, such as employees, customers, shareholders, and the community (Freeman, 1984; Parmar et al., 2010). The synergies resulting from the strategic management of such pluralistic value may help mitigate the zero-sum aspects of financial performance (Tantalo & Priem, 2014), particularly in recent years in which there appears to have been a shift in the institutional logics of firm value toward a more pluralistic conception encompassing both financial and social value (Ioannou & Serafeim, 2015). This shift in value logics may have manifested through increases in hybrid organizations with both financial and social missions (Battilana, 2015), and practices such as the adoption of social performance measures (Ebrahim &

Rangan, 2014) and the inclusion of CSR into analyst investment recommendations (Ioannou & Serafeim, 2015).

One prosocial practice that may help alleviate the zero-sum aspects of financial firm performance, and in turn, workers' zero-sum perceptions, is CSR. A host of research has established a positive relationship between CSR activities and employee satisfaction (Bauman & Skitka, 2012; Gavin & Maynard, 1975; Grant, 2012a; Rodell, 2013). The pathways through which CSR may cognitively benefit employees is both financial and nonfinancial. Nonfinancially, organizations' CSR practices like volunteering for the community and pro bono work for disadvantaged customers enhance the employee-firm relationship through psychological constructs like trust, fairness, identification, and commitment to the organization (Aguilera, Rupp, Williams, & Ganapathi, 2007; Barnett, 2007; Bode et al., 2015; Dunn, Aknin, & Norton, 2008; Grant, 2012a, b). This is likely because CSR signals to employees that the organization is committed to creating social value for stakeholders other than just shareholders (Backhaus, Stone, & Heiner, 2002; Jones, Willness, & Madey, 2014; Turban & Greening, 1997). However, employees who perform CSR work without receiving value in return may not experience these cognitive benefits. Financial rewards such as bonuses and raises, and nonfinancial rewards such as promotions and recognitions may play an important role in signaling to employees the firms' commitment to social value creation for not just the community, but for workers as well. As such, firms may need to incorporate employees' CSR work into their performance measurement systems, specifically through employees' performance appraisals, to overcome the zero-sum trade-offs and synergistically create value for the community, shareholders, and workers.

In the chapters that follow, I present a mixed methods set of studies using data from real firms in the field to test this multi-level theory of firm performance. In Chapter 1, seven field experiments reveal how firms' reporting of financial performance measures increases workers' zero-sum perceptions, and as a result reduces their satisfaction with the firm. In Chapter 2, the notion that a more pluralistic approach to performance may help alleviate these zero-sum cognitive consequences is tested using a unique dataset of survey responses from architecture firms engaged in pro bono work. The results suggests that incorporating CSR into employee performance appraisals increases employee satisfaction. Chapter 3 offers an exploratory study of the relationship between firms' described activities toward financial value and social value and firms' collective stakeholder outcomes. Through a novel combination of datasets, which includes parsed word counts of financial value and social value words from firms' annual reports, and firm-level outcome data for employees, shareholders, customers, and the community, I find a tentative yet positive relationship between firms' described activities toward both financial and social value, together, and collective stakeholder outcomes, particularly employee satisfaction and community impact ratings. However, this relationship is confined to more recent years, possibly due to a potential shift in the institutional logics of firm value supporting firms' consideration of social value along with financial value. Finally, I conclude with a summary of the research's implications for scholars and managers of organizations concerned with performance and its psychological consequences.

CHAPTER 1:
ZERO-SUM FRAMES: THE PARADOX OF WORKER SATISFACTION AND
FINANCIAL FIRM PERFORMANCE

ABSTRACT

Despite extensive research on how worker satisfaction positively affects the financial performance of firms, we know less about how firms' measurement and reporting of financial performance affects the satisfaction of workers. Through seven experiments, I find that operationalizing firm performance through financial performance measures paradoxically decreases workers' satisfaction with the firm through increased zero-sum perceptions. This effect seems to occur due to the perceived zero-sum nature of firm financial performance and the zero-sum nature of exchange value capture it represents, which reduce the perceived meaningfulness of work and ultimately workers' satisfaction. The findings support this causal process (Studies 1-5). A field experiment with managers across a diverse sample of firms further supports these findings (Study 6), revealing an increase in managers' zero-sum perceptions toward the firm-employee relationship when considering financial performance measures. However, workers with more zero-sum mental models of society more broadly may actually prefer financial performance measures. In support of this explanation, I find that whereas workers with lower zero-sum beliefs about society are less satisfied with a firm that measures performance financially, workers with stronger zero-sum beliefs are actually more satisfied with firms that measure performance financially, despite exhibiting lower satisfaction overall (Study 7).

The importance of workers' satisfaction to firm performance has been well-documented (Edmans, 2012; Ostroff, 1992). However, we know less about the effects of financializing firm performance on workers' satisfaction, despite the instrumental and normative relevance of this topic to managers, scholars, and organizations (Jones et al., 2016; Margolis & Walsh, 2003). Recent research suggests that nonfinancial measures of firm performance, such as CSR outcomes, positively affect the cognition and behavior of employees (Burbano, 2016). Yet, a dearth of research on financial measures of firm performance has persisted despite the growing prevalence of these financial measures (Davis & Kim, 2015; Kaplan, 1984). Findings in psychology have revealed negative effects from financial framing, such as decreases in enjoyment (DeVoe & House, 2012), prosocial behavior (Vohs et al., 2006), and egalitarianism (DeVoe & Iyengar, 2010). However, more research is needed to understand why such effects occur, particularly in organizational contexts.

One explanation for these effects is the zero-sum nature of financial exchange value (Bowman & Ambrosini, 2000; Priem, 2001, 2007) and the zero-sum perceptions—that “one person’s gain is possible only at the expense of others” (Meegan, 2010; Różycka-Tran et al., 2015:525)—that may be invoked when firm performance is measured financially. Indeed, positive associations have been identified between economic cues and workers’ zero-sum perceptions (Siroła & Pitesa, 2017), and negative associations between zero-sum thinking and outcomes such as satisfaction (Różycka-Tran et al., 2015). However, the zero-sum nature of financial performance may not affect all workers equally. Workers’ with stronger, more enduring zero-sum beliefs about society more broadly may prefer financial performance measures over nonfinancial alternatives, and thus be more satisfied with firms reporting them. In contrast, workers with a less zero-sum view of society are likely to experience diminished work

meaningfulness and satisfaction when measures perceived to be more zero-sum, such as financial measures, are used to account for the value their firms create.

In this paper, I draw from the literatures on performance measurement (Cardinaels & van Veen-Dirks, 2010; Kaplan, 1984), financial psychology (Vohs et al., 2006), and zero-sum thinking (Meegan, 2010; Sirola & Pitesa, 2017) to investigate how and why the most common operationalization of firm performance, financial performance measures, affects workers' satisfaction with the firm, and how zero-sum thinking affects this process. Through seven experiments, I find that measuring and reporting firm performance financially decreases workers' satisfaction with the firm through increases in zero-sum perceptions that elicit decreases in work meaningfulness. However, workers' zero-sum beliefs about society moderate this effect. Whereas workers with lower zero-sum beliefs are less satisfied with the firm when performance is reported financially, workers with greater zero-sum beliefs are more satisfied when performance is financial, despite exhibiting lower meaningfulness and satisfaction overall.

THEORY AND LITERATURE

Worker Satisfaction and the Firm-Worker Relationship

The satisfaction of workers is of important to firms given that it has been found to predict outcomes such as firm performance (Edmans, 2012; Ostroff, 1992), turnover (Harrison et al., 2006), and organizational citizenship behaviors (Bateman & Organ, 1983). Regarding firm financial performance in particular, several studies have shown direct and indirect effects of worker satisfaction on firm-level financial outcomes (Symitsi, Stamolampros, & Daskalakis, 2018; Zhou, Li, Zhou, & Su, 2008), making the study of worker satisfaction instrumentally beneficial. The satisfaction of workers is also important from a normative perspective, given their position as a key stakeholder who both affects and is affected by the firm (Harrison &

Wicks, 2013; Parmar et al., 2010). This two-way relationship amplifies the potential for value creation (or value destruction) between firms and workers.

Research on worker satisfaction has been examined through different constructs, such as job satisfaction (Judge et al., 2001), workers' overall life satisfaction (Erdogan et al., 2012) and satisfaction with the organization (Schminke et al., 2014). Workers' satisfaction with the organization has become particularly relevant given the increased attention to the quality of firms' stakeholder relationships (Parmar et al., 2010), particularly employees (Shore & Jacqueline, 2003). Scholars have traditionally used social exchange theory to explain worker-firm relationships (Shore & Jacqueline, 2003). Although rational self-interest and reciprocity play a role, such as through traditional pay-for-employment contracts (Bidwell, et al., 2013), economic exchanges alone cannot fully explain them. For example, employees' work can provide meaningfulness (Bunderson & Thompson, 2009; Pratt & Ashforth, 2003) and contribute to their identities (Ramarajan, 2014), irrespective of economic considerations. These intrinsic aspects of the worker-firm relationship may have been impaired by the advent of shareholder value and the focus on financial performance it brought about (Bidwell et al., 2013).

Financial Performance Measurement in Firms

How a firm measures performance signals how the firm construes value. Value in organizations is commonly operationalized through performance measures, as these measures facilitate the assessment of organizational effectiveness (Henri, 2004; Matthews, 2011) and ultimately client and societal benefits (Cunningham, 1977). Despite a distinction between "use value," the perceived usefulness of a product, service, or task, and "exchange value," the monetary amount the user is willing to exchange for this value (Bowman & Ambrosini, 2000; Lepak et al., 2007), exchange value and value capture have been emphasized in firms over value

creation and use value (Makadok & Russell, 2002; Priem, 2007). The problem is that exchange value capture is predominantly zero-sum (Priem, 2001). Although economic exchanges themselves are not zero-sum, the prices set to distribute profits between players in a value chain create no additional value, holding constant end-consumers' willingness to pay (Brandenburger & Stuart, 1996). In this sense, exchange value capture is relative, and focusing on it increases its zero-sum nature. Relative social comparisons of wealth exacerbate the zero-sum aspects of financial value (Srivastava et al., 2001), increasing anxiety and competitiveness (Garcia et al., 2013). In addition, financial value's association with scarce resources and a scarce medium of exchange reinforce its zero-sum character. Although the money supply can increase, corresponding increases in inflation ultimately distribute value away from holders of pre-existing money (Bailey, 1956). Such outcomes are reinforced by the limited ability of firms and individuals to share dollars without increased transaction costs, coordination, and risk (Coase, 1937; Williamson, 1981), and legal boundaries around bookkeeping and distinct owners' accounts (Carruthers & Espeland, 1991). Together, these factors contribute to the zero-sum nature of financial value, and in turn, the zero-sum aspects of financial performance.

From this focus on exchange value capture, financial performance measurement has become ubiquitous across firms (Davis & Kim, 2015), despite its shortcomings for assessing firm performance (Kaplan, 1983). Focusing solely on financial measures can obscure important nonfinancial considerations, such as "intangibles" (Lau & Moser, 2008:59), since financial measures typically only encompass what can be measured objectively (Ittner & Larcker, 1998). This focus on the objective at the expense of the subjective may decrease meaningfulness throughout the firm (Podolny et al., 2004; Pratt & Ashforth, 2003), as both are needed to adequately account for value (Zuckerman, 2012). Furthermore, how performance information is

presented can affect cognitive and behavioral outcomes (Cardinaels & van Veen-Dirks, 2010). Focusing on financial performance measures can reduce helping behaviors (Sirola & Pitesa, 2017), as well as managers' job satisfaction due to reduced perceptions of fairness (Lau & Sholihin, 2005). Such findings parallel research in financial psychology and suggest that reporting financial performance measures may reduce workers' satisfaction with the firm.

The Psychological Consequences of Money

A growing body of research supports the assertion that framing firm performance financially decreases workers' satisfaction. Priming the concept of money has been shown to inhibit individuals' enjoyment of pleasurable experiences (DeVoe & House, 2012), decrease social and prosocial behaviors (Vohs et al., 2006), and reduce egalitarian preferences for resource distribution (DeVoe & Iyengar, 2010). This suggests that individuals may perceive monetary measures of performance as more zero-sum, particularly since money is likely to be perceived as more closely associated with scarce resources (Mani, Mullainathan, Shafir, & Zhao, 2013), used more frequently for relative social comparisons of status (Pfeffer & Langton, 1993), and considered more monistically in firms (Jensen, 2001). This may reduce individuals' willingness to help create value they may not be able to claim, and in turn may reduce the meaningfulness and satisfaction that employees feel with their work and the firm (Podolny et al., 2004). Together, the findings on the psychological consequences of money and performance measurement suggest that financial performance measures in organizational contexts will negatively affect workers' satisfaction with the firms reporting them.

Hypothesis 1: The reporting of firm performance through financial measures decreases workers' satisfaction with the firm, on average, relative to nonfinancial measures.

ZERO-SUM THINKING

The Mediating Role of Zero-Sum Perceptions

Research is emerging around zero-sum thinking, the context-specific perceptions and enduring general beliefs that one person's gain comes at another person's loss, and how they relate to organizational outcomes. Much of this work has been conducted under the umbrella of perceptions of negative interdependence, including negotiators' fixed-pie bias (Bazerman, 1983), perceptions of competition (Murayama & Elliot, 2012), and recently zero-sum beliefs about society (Rózycka-Tran et al., 2015). Beyond broader zero-sum beliefs about society, workers can also develop zero-sum perceptions about situations within organizations, particularly economic situations (Sirola & Pitesa, 2017). The dynamic nature of performance and the ability of managers to alter how firm performance is measured (Lau & Sholihin, 2005) suggests that workers' state-level zero-sum perceptions of the firm may be altered by the reporting of different performance metrics. Together with the macro-level zero-sum aspects of economic exchange value capture and the micro-level effects of financial psychology, the reporting of financial performance measures could increase workers' zero-sum perceptions of the firm.

Hypothesis 2: The reporting of firm performance through financial measures increases workers' zero-sum perceptions of the firm, relative to nonfinancial measures.

Zero-sum thinking is likely to have an overall negative effect on workers' satisfaction. In addition to associations between zero-sum beliefs and anxiety, lower life satisfaction, societal cynicism, and lower compassion-oriented goals (Crocker & Canevello, 2008; Rózycka-Tran et al., 2015), research in organizational settings has also alluded to the detrimental effects of zero-sum perceptions. Consumers tend to inadvertently devalue products that serve multiple purposes in favor of specialized products, even when the attribute or quality desired is the same across

both products (Chernev, 2007). Employees' prosocial motivation and helping behaviors decrease when success is construed as zero-sum, such as in economic downturns (Sirola & Pitesa, 2017), which may reduce satisfaction given the positive association between workers' prosocial motivation and satisfaction (Bolino & Grant, 2016).

Another reason workers' zero-sum perceptions may decrease their satisfaction is the human propensity to loss aversion (Kahneman & Tversky, 1979). In a purely zero-sum context with an equal number of winners and losers, the net satisfaction of all parties collectively would likely be below average due to the greater salience of losses over gains. For a single individual expecting many zero-sum interactions in a firm, the assumption of an equal number of prospective losses and gains would likely result in lower satisfaction than an individual anticipating more positive interdependence. This is particularly relevant to the workers of firms, where inequality and unfairness concerns about pay and promotions are particularly salient (Furnham, 1998; Pfeffer & Langton, 1993). As such, I predict that workers' zero-sum perceptions will negatively affect their satisfaction with the firm, and that zero-sum perceptions will mediate the negative effect of financial performance measures on worker satisfaction.

Hypothesis 3: Workers' zero-sum perceptions of their firm decrease their satisfaction with the firm.

Hypothesis 4: The negative effect of financial performance measures on workers' satisfaction with the firm is partially mediated by increases in zero-sum perceptions.

Zero-Sum Perceptions' Effect on Work Meaningfulness

Although research has yet to unearth the mechanisms of why zero-sum perceptions may reduce worker satisfaction, scholars have identified a strong link between work meaningfulness, "work or its context [that] are perceived by its practitioners to be, at minimum, purposeful and

significant,” and satisfaction (Pratt & Ashforth, 2003). Deeply meaningful work can prompt workers to make sacrifices, such as accepting lower pay (Bunderson & Thompson, 2009; Burbano, 2016), which may not be problematic for workers who view their firm as rife with win-win opportunities through which their sacrifices expand the pie of value for stakeholders (Parmar et al., 2010). However, a zero-sum view in which one person’s gain comes at the expense of others may reduce workers’ feelings of purpose, significance, and ultimately meaningfulness (Podolny et al., 2004), particularly when firms’ profits are the result of workers’ efforts (Bidwell et al., 2013). This decreased meaningfulness may reduce workers’ satisfaction with their firms. Such arguments are particularly plausible when considered alongside recent findings that zero-sum thinking correlates significantly with negative feelings about the social world, such as societal cynicism and perceptions of injustice (Różycka-Tran et al., 2015). Thus, financial performance measures and zero-sum perceptions likely reduce work meaningfulness, and work meaningfulness likely mediates the effect of zero-sum perceptions on workers’ satisfaction.

Hypothesis 5a: The reporting of financial firm performance measures decreases workers’ feelings of work meaningfulness, relative to nonfinancial measures.

Hypothesis 5b: Workers’ zero-sum perceptions of their firm decrease their feelings of work meaningfulness.

Hypothesis 5c: Workers’ feelings of their work as less meaningful decrease their satisfaction with the firm.

Hypothesis 5d: The negative effect of financial performance measures on work meaningfulness is partially mediated by increases in zero-sum perceptions.

Hypothesis 5e: The negative effect of workers’ zero-sum perceptions on workers’ satisfaction with the firm is partially mediated by decreases in work meaningfulness.

The Moderating Influence of Zero-Sum Beliefs

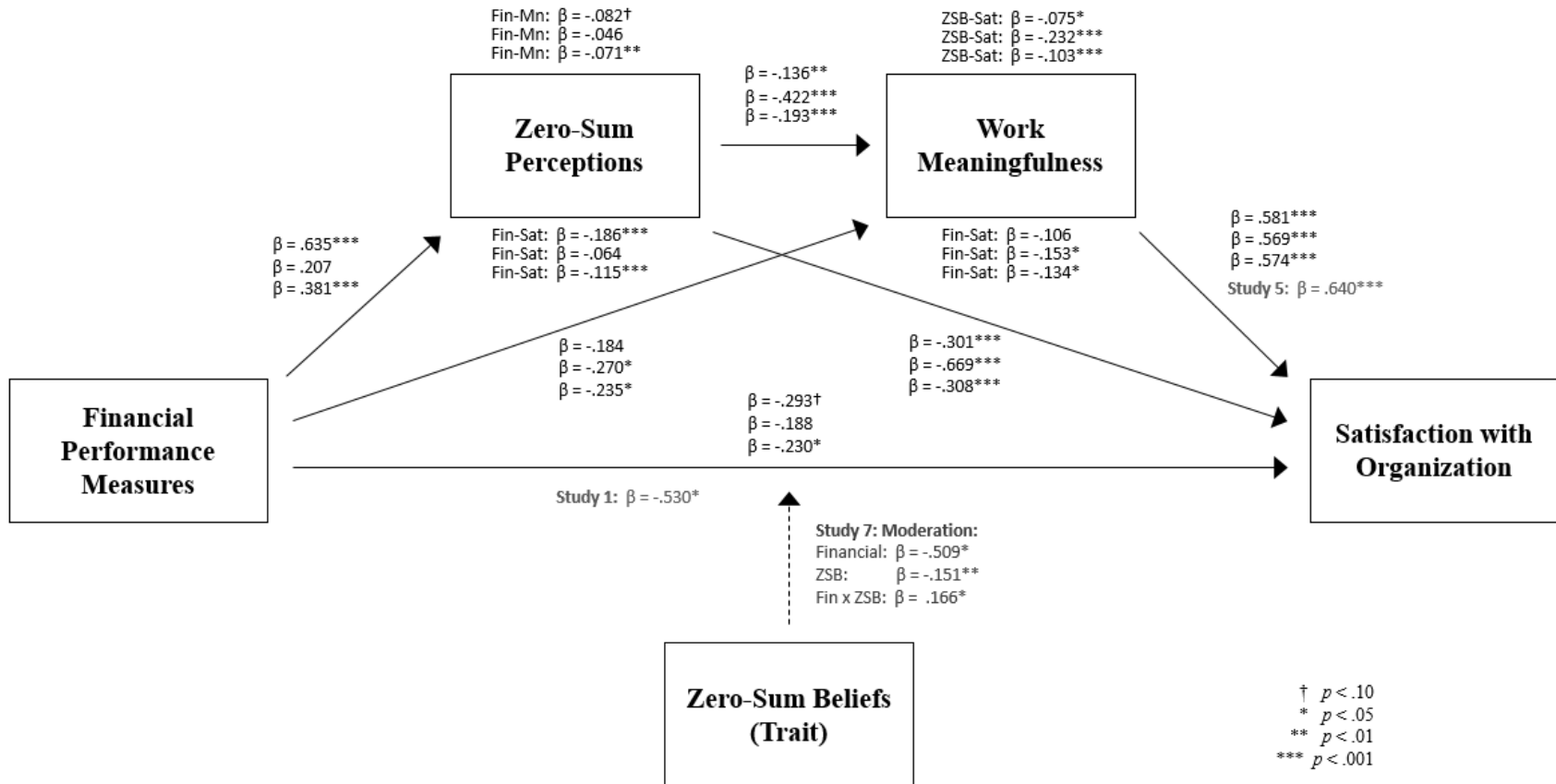
Although workers may be less satisfied with firms that measure performance financially, workers' trait-level zero-sum beliefs may interact with the situation-specific nature of these measures. For workers with a zero-sum mental model of society, particularly with respect to business, a more zero-sum measure of performance may actually increase their satisfaction with the firm due to better perceived fit (Gelfand et al., 2011; Weick, 2000). Prior research has uncovered similar effects, such as the moderating role of trait competitiveness on the relationship between competitive climate and job satisfaction (Fletcher, Major, & Davis, 2008). This is likely because individuals in the organizational sensemaking process attempt to rationally justify situations through socially acceptable reasoning, and in the process create and preserve mental models that guide their actions (Weick, 2000). For example, an economist concerned with scarce resource allocation would likely disagree with a set of metrics that diverges from the mental model, "there is no such thing as a free lunch." Similarly, an employee with the mental model of the firm as manager and steward of scarce resources, such as money, may prefer to see the firm utilizing performance metrics that hold management financially accountable. On the other hand, employees with a mental model of the organization as more a value creator than a value capturer (Bowman & Ambrosini, 2000), may prefer to see less zero-sum performance metrics not as bounded by scarcity, such as satisfaction, quality, or people served. As such, workers who view society as more zero-sum are likely to prefer more zero-sum, financial measures of firm performance that converge with their zero-sum mental models of society.

Hypothesis 6: Workers' zero-sum beliefs will moderate the effect of financial measures on satisfaction, such that workers with lower zero-sum beliefs will be less satisfied with financial measures, while workers with higher zero-sum beliefs will be more satisfied.

OVERVIEW OF STUDIES

Together, these hypotheses comprise a theoretical model (Figure 1.1, with results), of how financial performance measures negatively affect workers' satisfaction with the firm, and how zero-sum perceptions affect this process through reduced work meaningfulness. I test this model through seven framed field experiments with workers of real firms. Study 1 tests the direct effect of financial performance measures on employees' satisfaction with a meat packaging firm. The remaining studies test the hypothesized causal pathway. Five of these studies were conducted with workers on Amazon Mechanical Turk (MTurk), an online marketplace in which workers complete tasks such as surveys and image coding for pay. The Amazon MTurk marketplace has been used in numerous academic studies, and research attests to its usefulness for establishing internal validity (Berinsky, Huber, & Lenz, 2012) and representativeness to the U.S. population (Paolacci, Chandler, & Ipeirotis, 2010). Use of the MTurk workforce also enabled recruitment of larger samples of workers, which helped detect smaller effect sizes from continuous financial priming (e.g., calculating tasks' pay rates). Studies 2 and 3 tested the hypothesized main effects, while Studies 4 and 5 tested the mediating roles of zero-sum perceptions and work meaningfulness. Study 6 corroborated these financial-zero-sum findings through a field experiment with managers in India, while extending the outcomes to managers' perceptions of employee and firm outcomes. Finally, Study 7 used real Amazon performance measures to test the interactive effect of workers' trait-level zero-sum beliefs about society and financial measures on workers' satisfaction with Amazon. The following sections detail these experiments and the results. All survey items were measured on a 1-7 scale, and except where noted, workers were instructed to indicate the extent to which they agreed or disagreed with each statement. I conclude with a discussion of the findings and theoretical contributions.

Figure 1.1: Theoretical Model of Financial Performance Measures, Zero-Sum Thinking, Meaningfulness, and Worker Satisfaction



Note: All variables were measured using a 7-point scale. Results are from Study 4, except where noted. Study 4 results are presented in groups of three, proceeding from top to bottom with the measured mediation group (top) in which zero-sum perceptions were operationalized via ZSP scale, the ZSP-manipulated group (middle) in which zero-sum perceptions were operationalized by the win-lose condition, and both groups combined (bottom). Mediation results are presented directly above and below the ZSP and meaningfulness boxes and preceded by hyphenated independent-dependent variable abbreviations.

STUDY 1: METHODS

The first study tested hypothesis 1 through a between-participants field experiment with 101 employees (82.7% male, median age range of 30-34) of a privately-owned meat packaging firm, “Firm A,” located in Minnesota. The firm was founded in 1993 and employs approximately 500 people. Employees were given a paper survey with a hypothetical performance update from the firm in which value for stakeholders was measured on a 1-10 scale and framed as either “financial value” or “satisfaction value.” Prior to distribution, the order of all surveys was randomized via random number generator to prevent ordering effects. The performance update was preceded by text stating, “Below is an example performance update to show how Firm A can measure the value provided to three groups of people (customers, suppliers, and the community). Please read this important information.” The performance update consisted of a 4 ¾ x 3 inch box titled, “Firm A Performance Update (2015),” with either a “Financial Value Scale” or a “Satisfaction Value Scale” subtitle. In the satisfaction value update, amounts for customers, suppliers, and the community were reported as 9.00 for customers, 8.00 for suppliers, and 7.00 for the community. The financial value update reported these same stakeholders and amounts, only with a dollar sign preceding each amount. A footnote below the box in both conditions stated that the value amounts were on a 1-10 scale. Lastly, in the lower-right corner of the box was printed either a bold “S” in the satisfaction value update or a bold “\$” in the financial value update. Workers then rated their satisfaction with the firm on the following page.

Measures

Satisfaction with the Organization. The Satisfaction with the Organization Measure (Schminke et al., 2014) was used to assess workers’ satisfaction with the firm. The three-item scale asked “To what extent do you agree or disagree with the following statements (using the 1-

7 scale below)?” The items included “All in all, Firm A is a great company to work for,” “In general, I am satisfied with Firm A as a place to work,” and “Firm A is a very enjoyable company to work for” ($\alpha = 0.86$).

STUDY 1: RESULTS & DISCUSSION

An analysis of variance (ANOVA) was conducted to test for significant differences in satisfaction with the firm between respondents who viewed the financial performance update and those who viewed the nonfinancial performance update. On average, respondents who viewed the financial update were significantly less satisfied with the organization (mean = 5.13, s.d. = 1.49) than those who viewed the nonfinancial update (mean = 5.66, s.d. = 1.19), $F(1, 99) = 3.94$; $p = .049$, a difference of 0.53 points on a seven-point scale and a small but approaching medium standardized effect size ($d = 0.40$). Thus, the results support hypothesis 1.

STUDY 2: METHODS

Studies 2-4 tested the causal pathway through which financial performance measurement decreases workers’ satisfaction with the firm. Study 2 tested hypothesis 2, that financial performance measurement increases zero-sum perceptions, through a between-participants experiment with 315 workers on Amazon MTurk (49.2% male, mean age of 34.7 years). Workers were paid \$1.00 for completing a 10-minute survey study in which workers were invited to provide feedback about their experiences working through Amazon’s MTurk workplace and told that they would be provided with some information about Amazon. Workers were assured that their responses would not be shared with Amazon.

Workers first viewed a screen stating that the next page, would provide them with important information about Amazon MTurk, that they should read this information carefully, and then answer the questions that follow. Workers were then randomized to one of three

conditions. In the first condition, the financial condition, workers read the following paragraph: "Amazon prioritizes MTurk's financial performance over the nonfinancial aspects of MTurk. Metrics such as revenue and profit take priority over metrics like quality and number of customers served." In the nonfinancial condition, the order of this financial-nonfinancial prioritization was simply swapped. The third condition, which served as a separate control condition to understand whether the effects were being driven by the financial or nonfinancial condition, simply provided a description of MTurk. This description stated that "Amazon MTurk is a crowdsourcing Internet marketplace that enables individuals and businesses to use human intelligence to perform tasks that computers and other technologies are unable to do."

To address alternative explanations to the hypothesized causal pathway involving zero-sum perceptions, a set of variables closely related to zero-sum perceptions were measured. These alternative variables included state and perceived competitiveness, cooperativeness, and independence. The effects of financial performance measures on these alternative variables were then examined relative to the effects of financial performance measures on zero-sum perceptions.

Measures

Zero-Sum Perceptions. Zero-sum perceptions were assessed through an adapted version of the eight-item Belief in a Zero-Sum Game measure (Rózycka-Tran et al., 2015). Sample items included, "Successes of some people on Amazon MTurk are usually failures of others," "With Amazon MTurk, when somebody gains, others have to lose," ($\alpha = 0.95$).

Perceived Competitiveness. Perceived competitiveness was measured using an adapted version of the 7-item Learning Environment Inventory (LEI) by Fraser, Anderson, and Walberg (1982), with items such as, "There is much competition on the MTurk platform," ($\alpha = 0.76$).

State Competitiveness. State competitiveness was measured using the State Competitiveness Questionnaire (Tost, Gino, & Larrick, 2012), with items such as “Right now, I think that competing against an opponent would be enjoyable,” ($\alpha = 0.71$).

Perceived Cooperativeness. Perceived cooperativeness was measured using the Perceived Environmental Cooperativeness Scale (Chatman & Flynn, 2001). Participants rated how characteristic the words “Cooperative,” “Collectivist,” “Individualistic” (reverse-coded), “Team-oriented,” and “Supportive,” ($\alpha = 0.84$) were in describing Amazon MTurk.

State Cooperativeness. State cooperativeness was assessed using the single-item measure by Barsade (2002), “I believe that I am affiliative, cooperative, flexible, and likable,” (1-7 scale).

Perceived Independence. Given the dearth of measures for the lack of perceived or state competitiveness or cooperativeness, I adapted the perceived competitiveness scale (Fraser et al., 1982) with items such as, “There is much independence in the MTurk workplace,” ($\alpha = 0.62$).

State Independence. A measure of state independence was adapted from the State Competitiveness Questionnaire (Tost et al., 2012), with items such as, “At this moment, I think that working independently of others would be enjoyable,” ($\alpha = 0.80$).

STUDY 2: RESULTS & DISCUSSION

ANOVAs were conducted to test for significant differences in zero-sum perceptions between workers in the financial performance condition, the nonfinancial performance condition, and the control condition. An ANOVA between the financial condition ($M = 3.52$, $S.D. = 1.58$) and the control condition ($M = 2.77$, $S.D. = 1.49$) revealed a significant difference in zero-sum perceptions, with workers in the financial condition perceiving the MTurk workplace as much more zero-sum, $F(1, 211) = 12.63$; $p < .001$, a 0.75 point difference on a 7-point scale (Cohen’s $d = 0.49$). An ANOVA between the nonfinancial condition ($M = 3.08$, $S.D. = 1.46$) and the control

condition revealed no significant difference in zero-sum perceptions, $F(1, 211) = 2.24$; $p = .136$, suggesting that the effect of performance measurement on zero-sum perceptions is more so driven by financial performance measurement as opposed to nonfinancial performance measurement. Finally, an ANOVA revealed a significant difference between the financial and nonfinancial conditions, $F(1, 202) = 4.37$; $p = .038$. Thus, the results support hypothesis 2.

To test whether the financial performance manipulation was primarily affecting zero-sum perceptions and not an alternative outcome, I also tested for differences in perceived and state competitiveness, cooperativeness, and independence between the financial and nonfinancial conditions. ANOVAs revealed no significant differences in perceived competitiveness, $F(1, 202) = 0.96$; $p = .328$, state competitiveness, $F(1, 202) = 1.79$; $p = .183$, perceived cooperativeness, $F(1, 202) = 0.12$; $p = .735$, state cooperativeness, $F(1, 187) = 0.12$; $p = .735$, perceived independence, $F(1, 202) = 0.05$; $p = .821$, nor state independence, $F(1, 202) = 0.01$; $p = .915$.

STUDY 3: METHODS

The next study tested hypothesis 3, that zero-sum perceptions decrease workers' satisfaction with the firm, through a between-participants experiment with 532 workers (54.3% male, mean age of 37.2 years) on Amazon MTurk. Participants were paid \$1.00 for completing the 10-minute survey study in which workers were invited to again provide feedback about their experiences working through Amazon's MTurk workplace. The study design was very similar to Study 2. Workers were told that the survey contained important information about Amazon MTurk based on research conducted over several years. Workers were then randomized to one of three conditions. The control condition contained the same MTurk description from Study 2. The zero-sum condition emphasized the negative interdependence of the MTurk workplace through a "win-lose" paragraph stating, "Amazon MTurk is a very win-lose workplace. Research suggests

that as Amazon's performance improves, the benefits to people like requesters and workers decrease (Brown, 2017).” The non-zero-sum condition emphasized the positive interdependence of the MTurk workplace through a “win-win” paragraph stating, “Amazon MTurk is a very win-win workplace. Research suggests that as Amazon's performance improves, so to do the benefits of people like requesters and workers. (Brown, 2017).”

Measures

Satisfaction with the Organization. The Satisfaction with the Organization Measure (Schminke et al., 2014) was adapted to assess workers’ overall satisfaction with Amazon MTurk, the outcome variable of interest, on 1-7 scale. The items included “All in all, Amazon MTurk is a great place to work for,” “In general, I am satisfied with Amazon MTurk as a place to work,” and “Amazon MTurk is a very enjoyable place to work” ($\alpha = 0.95$).

Zero-Sum Perceptions. Zero-sum perceptions were again measured using the same adapted BZSG measure (Rózycka-Tran et al., 2015) as in Study 2 ($\alpha = 0.95$).

Controls. To again address potential alternative explanations, the same control variables as in Study 2 were collected, including perceived competitiveness ($\alpha = 0.78$), state competitiveness ($\alpha = 0.75$), perceived cooperativeness ($\alpha = 0.83$), state cooperativeness (single-item), perceived independence ($\alpha = 0.64$), and state independence ($\alpha = 0.77$). In addition, measures for positive affect ($\alpha = 0.93$) and negative affect ($\alpha = 0.90$) were included via the Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988) to ensure the effects of the manipulations on workers’ satisfaction were not merely being driven by changes in mood.

STUDY 3: RESULTS & DISCUSSION

As a manipulation check, ANOVAs were conducted to test for differences in zero-sum perceptions between workers in each condition. The results revealed a significant difference in

zero-sum perceptions between workers in the win-lose ($M = 3.90$, $S.D. = 1.56$) and control condition ($M = 2.66$, $S.D. = 1.29$), $F(1, 342) = 64.30$; $p < .001$, a 1.24-point difference ($d = 0.87$). An ANOVA revealed no significant difference in zero-sum perceptions between workers in the win-win ($M = 2.61$, $S.D. = 1.42$) and control condition, $F(1, 353) = 0.13$; $p = .715$, possibly due to workers' low base-levels of zero-sum perceptions and perceptions of positive interdependence from the Amazon MTurk description. Finally, a significant difference in zero-sum perceptions was identified between workers in the win-lose vs. win-win conditions, $F(1, 364) = 69.04$; $p < .001$, which remained significant in an analysis of covariance (ANCOVA) with all alternative explanatory variables included, $F(9, 355) = 41.25$; $p < .001$, specifically perceived and state competitiveness, cooperativeness, and independence, and positive-negative affect.

In support of hypothesis 3, an ANOVA revealed significantly lower satisfaction for workers in the win-lose condition ($M = 4.39$, $S.D. = 1.55$) relative to the control condition ($M = 4.73$, $S.D. = 1.59$), a 0.34 point difference on a seven-point scale, $F(1, 342) = 4.16$; $p = .042$. An ANOVA between the win-win condition ($M = 5.04$, $S.D. = 1.47$) and the control condition revealed a difference in satisfaction that was approaching significance, $F(1, 353) = 3.57$; $p = .060$, with workers in the win-win condition 0.31 points more satisfied. Finally, an ANOVA revealed a very significant difference in satisfaction between workers in the win-win and win-lose conditions, $F(1, 363) = 17.00$; $p < .001$, a difference of .65 points on a seven-point scale ($d = .43$). This difference in satisfaction remained significant in an ANCOVA between the win-lose and win-win conditions with all control variables, $F(9, 355) = 7.49$; $p = .007$.

STUDY 4: METHODS

To test whether zero-sum perceptions mediate the relationship between financial performance measures and satisfaction (hypothesis 4), Study 4 utilized a parallel mediation

design (Pirlott & MacKinnon, 2016) with both measured mediation, in which the hypothesized mediator, zero-sum perceptions, was allowed to vary freely, and experimental manipulation of both performance measures and the zero-sum perceptions mediator. This study also experimentally tested hypotheses 5a, 5b, and 5d, that financial performance measures and zero-sum perceptions causally decrease work meaningfulness, and that the decrease in meaningfulness from financial measures is mediated by zero-sum perceptions. Lastly, the study provided a preliminary, measured-mediation test of hypothesis 5e, that the negative effect of zero-sum perceptions on satisfaction with the firm is partially mediated by decreases in work meaningfulness.

The study, conducted on Amazon MTurk, consisted of both a between-participants experiment with 433 workers testing measured mediation (48.3% male, mean age of 36.2 years) and a between-participants experiment with 635 workers testing experimentally manipulated mediation (58.3% male, mean age 37.9 years). Participants were paid \$0.50 for completing the 5-minute survey study in which workers were again invited to provide feedback about their experiences working through Amazon's MTurk workplace after view some information

The study utilized the same paragraphs as Studies 2 and 3. In the measured mediation group, only financial vs. nonfinancial performance measurement was manipulated—zero-sum perceptions were allowed to vary freely. In the manipulated mediator group, both financial vs. nonfinancial performance and zero-sum perceptions were manipulated in a 2x2 experimental design. Thus, workers viewed two brief paragraphs, including either the financial or nonfinancial paragraph from Study 2, and either the win-lose or win-win paragraph from Study 3. Workers then answered the same series of survey questions to measure the variables of interest.

Measures

Satisfaction with the Organization. The same satisfaction with the organization measure (Schminke et al., 2014) was used to assess workers' satisfaction with Amazon MTurk ($\alpha = 0.95$).

Zero-Sum Perceptions. Zero-sum perceptions were again measured using the same adapted Belief in a Zero-Sum Game measure (Różycka-Tran et al., 2015) as was used in Studies 2 and 3 ($\alpha = 0.95$).

Work Meaningfulness. Work meaningfulness was measured using the adapted five-item work meaningfulness scale by Bunderson and Thompson (2009). Example items included “The work that I do here on Amazon MTurk is meaningful,” and “What I do at work on Amazon MTurk makes a difference in the world,” ($\alpha = 0.96$).

STUDY 4: RESULTS & DISCUSSION

Direct Effects

Mean results for each outcome variable by condition are presented in Table 1.1, and difference coefficients and significance values according to the hypothesized model are presented in Figure 1.1. Overall, the results support the hypothesized mean differences in satisfaction, work meaningfulness, and zero-sum perceptions between the financial vs. nonfinancial measures conditions and the win-lose vs. win-win conditions, and the hypothesized mediating effects. ANOVAs with all workers revealed significant differences in satisfaction between the financial ($M = 4.50$; $S.D. = 1.57$) and nonfinancial condition ($M = 4.73$; $S.D. = 1.55$), $F(1, 1,066) = 5.82$; $p = .016$, significant differences in meaningfulness between the financial ($M = 4.15$; $S.D. = 1.56$) and nonfinancial condition ($M = 4.39$; $S.D. = 1.60$), $F(1, 1,066) = 5.89$; $p = .015$, and significant differences in zero-sum perceptions in the measured-mediation component of the study between the financial ($M = 3.70$; $S.D. = 1.45$) and nonfinancial condition

($M = 3.06$; $S.D. = 1.57$), $F(1, 431) = 19.17$; $p < .001$. ANOVAs including only workers in the measured-mediation component of the study revealed a difference in satisfaction approaching significance between the financial ($M = 4.38$; $S.D. = 1.61$) and nonfinancial condition ($M = 4.68$; $S.D. = 1.65$), $F(1, 431) = 3.47$; $p = .063$, but no significant difference in meaningfulness between the financial ($M = 4.20$; $S.D. = 1.58$) and nonfinancial condition ($M = 4.38$; $S.D. = 1.70$), $F(1, 431) = 1.35$; $p = .245$, perhaps due to the lower sample size and small effect size.

Table 1.1: Experimental Mediation Results: Means (Standard Deviations in Parentheses)

Study 4: Parallel Mediation: Performance Measures and Zero-Sum Perceptions

Outcome: Zero-Sum Perceptions

X Condition	M* Condition		
	Win-Lose	Control	Win-Win
Nonfinancial	4.24 (1.47)	3.06 (1.57)	2.45 (1.29)
Financial	4.33 (1.48)	3.70 (1.45)	2.75 (1.41)

Outcome: Work Meaningfulness

X Condition	M* Condition		
	Win-Lose	Control	Win-Win
Nonfinancial	4.15 (1.59)	4.38 (1.70)	4.64 (1.43)
Financial	3.96 (1.62)	4.20 (1.58)	4.30 (1.47)

Outcome: Satisfaction with the Organization

X Condition	M* Condition		
	Win-Lose	Control	Win-Win
Nonfinancial	4.44 (1.47)	4.68 (1.65)	5.11 (1.42)
Financial	4.26 (1.55)	4.38 (1.61)	4.92 (1.44)

Study 5: Concurrent Double Randomization: Zero-Sum Perceptions and Meaningfulness

Outcome: Zero-Sum Perceptions

X Condition	M* Condition	
	Meaningless	Meaningful
Win-Win	2.82 (1.22)	2.47 (1.30)
Win-Lose	3.52 (1.53)	3.38 (1.39)

Outcome: Work Meaningfulness

X Condition	M* Condition	
	Meaningless	Meaningful
Win-Win	3.51 (1.35)	5.04 (1.31)
Win-Lose	3.38 (1.35)	4.63 (1.41)

Outcome: Satisfaction with the Organization

X Condition	M* Condition	
	Meaningless	Meaningful
Win-Win	4.57 (1.33)	5.21 (1.46)
Win-Lose	4.19 (1.54)	4.79 (1.48)

Direct effects of zero-sum perceptions on work meaningfulness and satisfaction were tested using workers from the manipulated-mediator component of the study. As a manipulation check, an ANOVA identified a significant difference in zero-sum perceptions between workers in the win-lose condition ($M = 4.28$; $S.D. = 1.48$) and win-win condition ($M = 2.60$; $S.D. = 1.35$), $F(1, 633) = 224.27$; $p < .001$. ANOVAs also revealed significant differences in meaningfulness between the win-lose ($M = 4.05$; $S.D. = 1.60$) and win-win condition ($M = 4.48$; $S.D. = 1.45$), $F(1, 633) = 12.05$; $p = .001$, along with significant differences in satisfaction between the win-lose ($M = 4.35$; $S.D. = 1.51$) and win-win conditions ($M = 5.02$; $S.D. = 1.43$), $F(1, 633) = 32.82$; $p < .001$. Similar negative relationships were identified for workers in the measured-mediation component of the study. An OLS regression of work meaningfulness on zero-sum perceptions revealed a significant relationship, $F(1, 431) = 7.10$; $p = .008$; $\beta = -.136$, as did a regression of satisfaction on zero-sum perceptions $F(1, 431) = 37.43$; $p < .001$; $\beta = -.301$. Thus the results support hypotheses 1, 2, 3, and 5b, partially support hypothesis 5a, and provide preliminary non-causal support for hypothesis 5c.

Mediation: Financial → Zero-Sum Perceptions → Satisfaction

To test hypothesis 4, that zero-sum perceptions partially mediate the relationship between financial measures and satisfaction with the organization, bootstrap mediation analyses of the variables of interest were used (Preacher & Hayes, 2004, 2008)³. I conducted a bootstrapped mediation analysis with 5,000 sampling replications to test whether changes in zero-sum perceptions mediated the effect of financial performance measurement on satisfaction. The results revealed an observed coefficient of $-.186$ ($p < .001$) that explained 63.7% of the total effect and a significant bootstrapped percentile 95% confidence interval of $-.306$ to $-.089$.

³ Mediation results using Baron and Kenney (1986) regression analyses are available from the author upon request.

Next, I examined the component of this study in which I experimentally manipulated the mediator, zero-sum perceptions, by randomly encouraging or discouraging zero-sum perceptions in addition to financial vs. nonfinancial performance measurement. I then compared the results of this double randomization design with the results from the measured mediation component of this study, according to Pirlott and MacKinnon's (2016) parallel mediation design.

In line with a blockage design, I examined the effects of financial performance measurement on worker satisfaction within the condition in which zero-sum perceptions were suppressed (i.e., win-win) and within the condition in which zero-sum perceptions were stimulated (i.e., win-lose), relative to the results from the measured mediation part of the study. The results showed no significant difference between the financial and nonfinancial conditions within the win-win condition, $F(1, 311) = 1.39$; $p = .239$, nor within the win-lose condition, $F(1, 320) = 1.07$; $p = .302$. In contrast, significant differences in satisfaction were identified between the win-lose and win-win conditions within both the financial condition, $F(1, 311) = 15.17$; $p < .001$, and the nonfinancial condition, $F(1, 320) = 17.61$; $p < .001$, supporting hypothesis 4.

In line with an enhancement design, I examined the effects of financial vs. nonfinancial performance measurement on worker satisfaction when each would be expected to co-occur with the corresponding levels of zero-sum perceptions (e.g., financial with win-lose, nonfinancial with win-win), relative to the results from the measured mediation part of the study. The results revealed a very significant difference in satisfaction between the financial win-lose ($M = 4.26$; $S.D. = 1.55$) and nonfinancial win-win conditions ($M = 5.11$; $S.D. = 1.42$), $F(1, 318) = 26.11$; $p < .001$. Together, the results support hypothesis 4, that zero-sum perceptions partially mediate the negative effect of financial performance measures on workers' satisfaction with the firm.

Mediation: Financial → Zero-Sum Perceptions → Meaningfulness

Next, I tested whether zero-sum perceptions mediated the effect of financial performance measurement and work meaningfulness. Considering only workers in the measured-mediation component of the study, a bootstrapped mediation analysis with 5,000 sampling replications revealed that zero-sum perceptions mediated the effect of financial performance measurement on work meaningfulness through an observed coefficient of $-.082$ that explained 44.6% of the total effect and a significant bootstrapped percentile 95% confidence interval of $-.183$ to $-.005$.

In line with a blockage design, I examined the effects of financial vs. nonfinancial performance measurement on work meaningfulness within both the win-win (i.e., ZSP suppressant) and win-lose (i.e., ZSP stimulant) conditions, relative to the results from the measured mediation part of the study. The results revealed no significant difference within the win-lose (i.e., stimulant) condition between financial ($M = 3.96$; $S.D. = 1.62$) and nonfinancial condition ($M = 4.15$; $S.D. = 1.59$), $F(1, 320) = 1.14$; $p = .287$; however, a significant difference was identified within the win-win condition, $F(1, 311) = 4.44$; $p = .036$, between the financial ($M = 4.30$; $S.D. = 1.47$) and nonfinancial condition ($M = 4.64$; $S.D. = 1.43$).

In line with an enhancement design, I examined the effects on meaningfulness when financial vs. nonfinancial would be expected to co-occur with corresponding levels of zero-sum perceptions. The results revealed a very significant 0.68-point difference in meaningfulness between the financial win-lose ($M = 3.96$; $S.D. = 1.62$) and nonfinancial win-win conditions ($M = 4.64$; $S.D. = 1.43$), $F(1, 318) = 16.20$; $p < .001$, a 273% greater difference relative to the measured-mediation group. Together, the results moderately support hypothesis 5d, that zero-sum perceptions mediate the negative effect of financial measures on work meaningfulness.

Mediation: Zero-Sum Perceptions → Meaningfulness → Satisfaction

To preliminarily test the next stage of the causal pathway (hypothesis 5e) that the negative effect of zero-sum perceptions on workers' satisfaction is mediated by decreases in work meaningfulness, I performed bootstrapped mediation analyses with workers from the ZSP-manipulated part of the study. A bootstrapped mediation analysis with 5,000 sampling replications revealed an observed coefficient of $-.232$ ($p < .001$) that explained 34.7% of the total effect and a significant bootstrapped percentile 95% confidence interval of $-.371$ to $-.099$. A similar bootstrapped mediation analysis was conducted with workers from the component of the study in which zero-sum perceptions were not manipulated. These results revealed a significant coefficient of $-.075$ ($p = .022$) that explained 25.0% of the total effect and a bootstrapped 95% confidence interval of $-.140$ to $-.011$, again supporting hypothesis 5e.

Mediation: Financial → Meaningfulness → Satisfaction

Next, I tested whether decreases in meaningfulness directly mediate the negative effect of financial measures on satisfaction, as opposed to zero-sum perceptions alone directly mediating this effect. Bootstrapped mediation analyses with 5,000 sampling replications revealed mixed results. Considering all workers in the study revealed an observed coefficient of $-.134$ ($p = .015$) and a significant bootstrapped percentile 95% confidence interval of $-.241$ to $-.029$. However, when only workers from the measured mediation part of the study were considered, the results revealed a nonsignificant coefficient of $-.106$ ($p = .240$) that explained 36.3% of the total effect, significantly lower than the 63.7% from zero-sum perceptions, and a nonsignificant bootstrapped percentile 95% confidence interval of $-.277$ to $.077$. A multiple mediation analysis of meaningfulness and zero-sum perceptions identified consistent results, suggesting a stronger mediating influence of zero-sum perceptions on the financial-satisfaction relationship.

STUDY 5: METHODS

To test whether decreases in work meaningfulness mediate the negative effect of zero-sum perceptions on workers' satisfaction, Study 5 used a similar experimental mediation design, specifically a concurrent double randomization design (Pirlott & MacKinnon, 2016) in which both zero-sum perceptions of the Amazon MTurk workplace and work meaningfulness were experimentally manipulated. These results were then compared with the results from Study 4 in which zero-sum perceptions were manipulated with performance measurement, but meaningfulness was allowed to vary freely. This causally tested hypotheses 5c and 5e, that decreases in work meaningfulness decrease satisfaction with the firm, and that meaningfulness mediates the effect of zero-sum perceptions on workers' satisfaction.

The between-participants study was conducted on Amazon MTurk with 678 workers (59.6% male, mean age of 37.8 years). Participants were paid \$0.50 for completing the 5-minute survey study. The study utilized the same designs as Studies 2, 3, and 4. Workers were randomized to one of four conditions following a 2x2 experimental design, consisting of two brief paragraphs, either the win-lose or win-win paragraph, and either a meaningful or meaningless work paragraph. The meaning[ful/less] work paragraphs stated, "Much of the work done on Amazon MTurk is [not] used in requesters' finished products, which ultimately leads to a very [high / low] positive impact on people outside of MTurk (Brown, 2017)." Workers then answered the same series of survey questions as in Study 4 to measure the variables of interest.

STUDY 5: RESULTS & DISCUSSION

Mean results for each outcome by condition are presented in Table 1.1. Overall, the results provide robust support for the hypothesized direct effects of zero-sum perceptions and work meaningfulness on workers' satisfaction with the firm, and moderately strong support for

the mediating role of work meaningfulness on the ZSP-satisfaction effect. As manipulation checks, ANOVAs revealed significant differences in zero-sum perceptions between workers in the win-lose ($M = 3.45$; $S.D. = 1.46$) and win-win condition ($M = 2.63$; $S.D. = 1.28$), $F(1, 676) = 60.22$; $p < .001$, and significant differences in meaningfulness between the meaningless ($M = 3.44$; $S.D. = 1.35$) and meaningful condition ($M = 4.84$; $S.D. = 1.37$), $F(1, 676) = 179.08$; $p < .001$. In further support of hypotheses 3, a significant difference in satisfaction was again identified between workers in the win-lose ($M = 4.49$; $S.D. = 1.54$) and win-win conditions ($M = 4.91$; $S.D. = 1.44$), $F(1,676) = 13.44$; $p < .001$. Causally supporting hypothesis 5c, a significant difference in satisfaction was also identified between workers in the meaningless ($M = 4.37$; $S.D. = 1.45$) and meaningful conditions ($M = 5.01$; $S.D. = 1.48$), $F(1, 676) = 32.08$; $p < .001$.

To causally test whether decreases in work meaningfulness mediate the effect of zero-sum perceptions on workers' satisfaction with the firm, I again performed both blockage and enhancement design analyses, using the difference in satisfaction between the win-lose vs. win-win conditions from Study 4 as the comparison group (i.e., where meaningfulness was allowed to vary freely). Recalling from Study 4, a significant 0.67-point difference in satisfaction was identified between the win-lose and win-win conditions, $F(1, 633) = 32.82$; $p < .001$.

In line with a blockage design, I examined the effects of win-lose framing on satisfaction within the meaningful (i.e., suppressant) and meaningless (i.e., stimulant) conditions. Within meaningful, although the results still showed a statistically significant difference between the win-lose ($M = 4.79$; $S.D. = 1.48$) and win-win condition ($M = 5.21$; $S.D. = 1.46$), $F(1, 347) = 7.07$; $p = .008$, this 0.42-point difference was notably 37% lower than the 0.67-point difference in Study 4. Furthermore, a 59.9% reduction in the F-statistic was identified using a conservative

comparison within Study 4's nonfinancial condition alone⁴. Within the meaningless condition, the results again revealed a lower significant difference between the win-lose ($M = 4.19$; $S.D. = 1.54$) and win-win condition ($M = 4.57$; $S.D. = 1.33$), $F(1, 327) = 5.64$; $p = .018$, a 43.3% decrease in mean differences and a 68.0% decrease in F-statistic.

In line with an enhancement design, I examined the effects on satisfaction when win-lose vs. win-win framing would likely co-occur with corresponding levels of meaningfulness (e.g., win-lose with meaningless; win-win with meaningful). The results revealed a very significant difference in satisfaction between the win-lose meaningless ($M = 4.19$; $S.D. = 1.54$) and win-win meaningful conditions ($M = 5.21$; $S.D. = 1.46$), $F(1, 348) = 40.65$; $p < .001$. This 1.02-point difference represents a 52.2% increase from the difference in Study 4, and a 130.8% increase in the F-statistic compared to workers in Study 4's nonfinancial condition. Taken together, the results support hypothesis 5c, that decreases in work meaningfulness negatively affect workers' satisfaction with the firm, and moderately support hypothesis 5e, that decreases in work meaningfulness mediate the negative effect of zero-sum perceptions on workers' satisfaction.

STUDY 6: METHODS

The next study served to corroborate the findings by testing whether the zero-sum effects of financial performance measures on the firm-employee relationship are salient to managers as well, given their intermediary role in this relationship. A between-participants field experiment was conducted with 119 managers (89.1% male, mean age of 38.3 years) of firms across India, spanning a variety of industries and hierarchical positions. Through a framing manipulation that varied whether managers considered their firm's financial or nonfinancial performance measures

⁴ A more substantial decrease in F-statistic of 78.5% was identified when workers from both the financial and nonfinancial conditions of Study 4 were included in this comparison. However, the larger sample size may account for some of this increased difference; thus only results from the nonfinancial condition were used for comparison.

and their effects on the employee-firm relationship, this study tested the effects of financial performance measures on managers' zero-sum perceptions toward the firm-employee relationship, as well as managers' perceptions of firm and employee outcomes.

Participants, Design, and Procedures

Managers were invited to participate in the research study from two independent sources. 94 managers were recruited from the India Institute of Management (IIM) Executive Education program. Simultaneously, 25 managers were recruited from a diverse population of managerial contacts from Harvard's India Research Center in Mumbai⁵. The email requested managers' participation in a research study on the psychology of value in firms that involved a strategic management scenario and a series of survey questions. In return, managers were promised a summary of the research results upon conclusion of the study. Managers were told that the study would take 10 minutes to complete and that their responses would remain anonymous and confidential. The email concluded with a link to the study, hosted on Qualtrics.

As part of the exercise, managers were asked an open-ended question instructing them to discuss the important aspects of their firm's relationship with employees and the performance metrics used to measure value for the firm and employees. Half of the participating managers were randomly assigned to a control condition in which the instructions to the open-ended question were unchanged. The other half of participating managers were assigned to a financial condition in which the open-ended question instructed them to discuss the important financial aspects of their firm's relationship with employees and the financial performance metrics used to measure financial value for the firm and employees. After submitting their responses, managers

⁵ No significant difference in zero-sum perceptions were observed between managers in each sample.

completed a survey measuring their zero-sum perceptions toward their firm's relationship with employees and a series of firm-level and individual-level demographic variables.

Upon completion of the data collection, managers' open-ended responses were coded separately by the researcher and two independent research assistants. Each coder rated each manager's response on a 1-5 scale along three dimensions, (a) the extent to which the manager perceived trade-offs, (b) the extent to which the manager perceived positive outcomes for the firm, and (c) the extent to which the manager perceived positive outcomes for employees.

Measures

Zero-Sum Perceptions. Managers' zero-sum perceptions were again assessed through the same adapted version of the eight-item Belief in a Zero-Sum Game measure (Różycka-Tran et al., 2015), ($\alpha = 0.93$). To triangulate the results from this measure and specifically test managers' perceptions of firm-employee trade-offs specifically, ratings of managers' open-ended responses regarding firm-employee value metrics were also used to assess zero-sum perceptions ("trade-off ratings"), using the average of all three coders' ratings for the extent to which the manager perceived trade-offs from their firm's metric prioritization. Inter-rater reliability was evident through a significant Cohen's Kappa ($k = .23$; $p < .001$), significant intra-class correlation coefficients (Individual ICC = .51, Average ICC = .26, $p < .001$), and a significant correlation with the BZSG survey measure ($r = .22$; $p = .016$).

Firm and Employee Outcome Perceptions. To assess how each set of firm-employee metrics could negatively affect outcomes for employees or the firm, ratings of managers' responses were again used, specifically the average of all three coders' ratings for the extent to which the manager perceived positive outcomes for the firm, positive outcomes for employees, and positive joint outcomes for the firm and employees as the average of the firm and employee

ratings. Inter-rater reliability was evident for each measure, including firm outcomes ($k = .20$, $p < .001$; Ind. ICC = .34, $p < .001$; Avg. ICC = .61, $p < .001$), employee outcomes ($k = .15$; $p < .001$; Ind. ICC = .54, $p < .001$; Avg. ICC = .78, $p < .001$), and joint outcomes ($k = .20$; $p < .001$; Ind. ICC = .46, $p < .001$; Avg. ICC = .72, $p < .001$).

Firm-Level and Individual-Level Demographics. Although the randomization of managers between conditions mitigates the need to control for otherwise endogenous variables, a series of firm-level and individual-level covariates were collected via survey following the experiment to improve the precision of the average treatment effects and ensure the results were not being driven by random yet spurious differences in certain manager-level or firm-level variables across conditions. Individual-level control variables include manager tenure, gender, age, education level, income, and whether the manager served in a finance department. Firm-level control variables include revenue, number of employees, firm age, and industry.

STUDY 6: RESULTS & ANALYSIS

A series of two-sample t-tests and Ordinary Least Squares (OLS) regression analyses with individual-level and firm-level control variables were used to test whether managers' zero-sum perceptions and perceptions of employee and firm outcomes were significantly affected by managers' consideration of financial performance measures. Table 1.2 presents summary statistics and correlations of all variables. Table 1.3 presents coefficients, standard errors, and significance values of the OLS regressions with all control variables. A significant difference in managers' zero-sum perceptions was identified between the financial (mean = 3.41, s.d. = 1.38) and nonfinancial conditions (mean = 2.77; s.d. = 1.35), $t(117) = 2.54$; $p = .013$, a difference of .64 on a seven-point scale. This difference equated to a 23.1% increase in managers' zero-sum perceptions, a medium standardized effect size ($d = .47$). An OLS regression holding constant all

firm-level and individual-level demographic variables further supported the effect of financial performance measures on managers' zero-sum perceptions ($\beta = .55$, $p = .034$), per Table 1.3, Model 1. Significant results were also obtained when the zero-sum perceptions survey measure was substituted with ratings of managers' perceived trade-offs ($\beta = .30$, $p = .005$).

Table 1.2: Summary Statistics and Correlations from Manager Field Experiment

Variables	Mean	S.D.	Min.	Max.	Correlations					
					1	2	3	4	5	6
1 Zero-Sum Perceptions	3.06	1.40	1.00	6.25						
2 Financial	0.45	0.50	0.00	1.00	0.23*					
3 Trade-Off Perception Ratings	2.88	0.54	1.33	4.33	0.22*	0.25**				
4 Employee Outcomes Ratings	3.32	0.65	1.67	4.33	-0.26**	-0.46***	-0.73***			
5 Firm Outcome Ratings	3.45	0.54	2.00	4.33	-0.06	-0.11	-0.66***	0.62***		
6 Firm-Emp. Outcome Ratings	3.39	0.53	1.83	4.33	-0.19*	-0.33***	-0.77***	0.92***	0.88***	
7 Male	0.89	0.31	0.00	1.00	-0.09	-0.01	-0.01	-0.01	-0.08	-0.04
8 Age	38.29	9.05	22.00	71.00	-0.27**	-0.03	-0.15†	0.01	0.07	0.04
9 Education	6.50	0.68	6.00	9.00	-0.18†	-0.07	-0.08	0.12	0.14	0.14
10 Income	3.81	1.67	1.00	7.00	-0.33***	-0.04	-0.24**	0.13	0.13	0.15
11 Manager Tenure	7.49	6.93	0.00	31.00	-0.22*	-0.16†	-0.08	0.01	0.05	0.03
12 Finance Role	0.30	0.46	0.00	1.00	0.00	-0.08	0.08	-0.06	-0.08	-0.08
13 Ownership %	1.41	0.83	1.00	4.00	-0.09	0.09	0.00	-0.01	0.03	0.01
14 Firm Revenue	3.83	1.28	1.00	5.00	0.07	0.00	-0.03	-0.07	-0.03	-0.06
15 Firm Employees	66,684	123,000	1.00	542,000	0.13	0.07	-0.09	-0.07	0.06	-0.01
16 Firm Age	39.56	34.07	1.00	118.00	-0.12	-0.10	0.05	-0.05	-0.18*	-0.12

Variables	Correlations									
	7	8	9	10	11	12	13	14	15	
8 Age	0.16†									
9 Education	-0.14	0.28**								
10 Income	0.17†	0.53***	0.09							
11 Manager Tenure	-0.06	0.76***	0.3**	0.34***						
12 Finance Role	0.00	0.04	0.08	-0.14	0.07					
13 Ownership %	0.01	0.11	0.13	0.03	0.10	0.23*				
14 Firm Revenue	0.08	0.05	-0.11	0.09	0.04	-0.13	-0.59***			
15 Firm Employees	0.07	-0.11	-0.12	0.01	-0.12	-0.20*	-0.22*	0.44***		
16 Firm Age	0.10	0.06	0.01	-0.02	0.07	0.08	-0.31***	0.50***	0.25**	

*** p<0.001, ** p<0.01, * p<0.05, † p<0.1

Table 1.3: OLS Regressions of Managers' Zero-Sum Perceptions and Perceived Firm-Employee Outcomes on Financial Performance Measures

VARIABLES	Model 1: Zero-Sum Perceptions	Model 2: Employee Outcomes	Model 3: Firm Outcomes	Model 4: Joint Outcomes
Financial (vs. Nonfinancial)	0.546** (0.255)	-0.637*** (0.116)	-0.163 (0.106)	-0.400*** (0.100)
Male	-0.331 (0.431)	-0.012 (0.196)	-0.114 (0.179)	-0.063 (0.170)
Age	-0.010 (0.0240)	-1.69e-05 (0.011)	0.003 (0.010)	0.001 (0.009)
Education	-0.230 (0.194)	0.117 (0.088)	0.111 (0.081)	0.114 (0.077)
Income	-0.220* (0.091)	0.046 (0.041)	0.026 (0.038)	0.036 (0.036)
Tenure as manager	0.002 (0.028)	-0.013 (0.013)	-0.004 (0.012)	-0.008 (0.011)
Finance Department	0.191 (0.285)	-0.138 (0.130)	-0.073 (0.119)	-0.106 (0.112)
% Ownership	-0.098 (0.190)	0.006 (0.086)	0.017 (0.079)	0.011 (0.075)
Firm revenue	0.153 (0.140)	-0.023 (0.064)	0.022 (0.058)	-0.000 (0.055)
Firm employees	1.12e-06 (1.13e-06)	-1.69e-07 (5.14e-07)	4.70e-07 (4.70e-07)	1.51e-07 (4.46e-07)
Firm age	-0.009* (0.004)	-0.001 (0.002)	-0.004* (0.002)	-0.002 (0.002)
Constant	5.607*** (1.517)	2.947*** (0.689)	2.751*** (0.630)	2.849*** (0.598)
Observations	115	115	115	115
F-statistic	2.87**	3.42***	1.07	2.12*
Adj. R-squared	0.153	0.189	0.007	0.098

^a Dependent variables indicated in model title, with ZSP measured on a seven-point scale, all others five-point scale. Revenue reported on a 1-5 scale, 1 = < \$10m, 2 = \$10m-\$100m, 3 = \$100m-\$1b, 4 = \$1b-\$10b, 5 = > \$10b. Number of employees is in thousands. Standard errors in parentheses. † p < .10; * p < .05; ** p < .01; *** p < .001

To test whether the consideration of financial performance measures significantly affects managers' perceptions of outcomes for employees, the firm, and joint outcomes, two sample t-tests were conducted between the financial and nonfinancial conditions. The results revealed that managers perceived significantly worse outcomes for employees, when financial measures of value and performance were considered ($m = 2.99$, $s.d. = 0.68$) relative to nonfinancial ($m = 3.59$, $s.d. = 0.49$), ($t = 5.54$, $p < .001$), a difference of $-.59$ on a five-point scale, and a large standardized effect size ($d = -1.02$). However, no such effect was identified for firm outcomes between the financial condition ($m = 3.38$, $s.d. = 0.59$) and nonfinancial condition ($m = 3.50$, $s.d. = 0.49$), ($t = 1.18$, $p = .242$). Nevertheless, joint firm-employee outcomes seemed to be effected by managers' consideration of financial ($m = 3.19$, $s.d. = 0.57$) relative to nonfinancial performance measures ($m = 3.54$, $s.d. = 0.45$), ($t = 3.79$, $p < .001$), ($d = -.70$). OLS regressions with all control variables revealed similar results, with the financial condition negatively affecting managers' perceptions of employee outcomes ($\beta = -.64$, $p < .001$) and joint firm-employee outcomes ($\beta = -.40$, $p < .001$), but no such effect for firm outcomes ($\beta = -.16$, $p = .126$), as presented in Table 1.3, Models 2-4.

To examine whether perceived trade-offs mediated the effect of considering financial performance measures on employee outcomes, bootstrapped mediation analyses with 5,000 sampling replications were conducted using the financial performance measures condition as the explanatory variable, ratings of managers' perceived trade-off as the mediator, and ratings of managers' perceptions of employee outcomes and joint firm-employee outcomes as the dependent variables. For employee outcomes, a significant coefficient of $-.21$ ($p = .015$) was identified that explained 35.6% of the total effect and a significant bootstrapped percentile 95% confidence interval (CI) of $-.38$ to $-.05$. For joint firm-employee outcomes, a significant

coefficient, $-.19$ ($p = .014$), explaining 55.0% of the total effect and a significant 95% CI of $-.35$ to $-.04$ was identified.

Overall, the results align with the findings from the field experiments with employees through showing that managers' zero-sum perceptions also increase when considering the financial aspects of the firm-employee relationship, specifically financial performance measures. The results also extend these findings through showing how managers' consideration of financial value and performance measures may negatively affect employee outcomes and joint firm-employee outcomes through the zero-sum trade-offs that capturing scarce financial value entails. Thus, the zero-sum nature of firm financial value and financial performance metrics is not only felt by managers in addition to employees, these financial measures may unintentionally heighten managers' zero-sum perceptions toward the firm-employee relationship and limit value creation for both parties; however, incorporating a more nonfinancial orientation toward value and performance may help mitigate these zero-sum perceptions and create additional value for both employees and the firm.

STUDY 7: METHODS

The final study consisted of a between-participants field experiment with workers on Amazon's Mechanical Turk, and served to test hypothesis 6, that zero-sum beliefs moderate the effect of financial performance measures on workers' satisfaction with the firm, along with the possibility that zero-sum beliefs will be negatively associated with workers' satisfaction, and that this effect will also be mediated by decreases in work meaningfulness. 1,166 workers⁶ (female = 52.8%, median age = 36.5 years) were paid \$1.00 for participating in the five-minute activity.

⁶ A large number of workers were recruited for this study based on a power calculation that assumes a small effect size of $.20$, estimated from the previous studies, with a 90% probability of finding an effect if it exists. The total sample size suggested from this power calculation was 1,054.

Similar to the field experiment in Study 1, workers were invited to provide feedback about their experiences working with the firm Amazon.com and told that they would be provided with some information about Amazon, specifically a performance update. Workers were assured that their responses would not be shared with Amazon. For external validity, the performance measures were taken from real publicly available sources, including Amazon's 10-K, Morningstar investor information, and Statista information provided by Amazon. Workers were randomly assigned to view one of two brief tables containing either financial performance information, including Amazon's 2015 revenue of \$107 billion and stock price of \$693.94, or nonfinancial performance information, including number of customers, 304 million, and number of owners 6,383. These measures were selected for their similarity, as customers' and owners' purchasing decisions largely determine revenue and stock price, respectively.

Measures

Satisfaction with the Organization. The same satisfaction with the organization measure (Schminke et al., 2014) was used to assess workers' satisfaction with Amazon MTurk ($\alpha = 0.97$).

Zero-Sum Beliefs. Trait-level zero-sum beliefs were measured using the six-item Zero-Sum Beliefs Measure developed by Crocker and Canevello (2008). Sample items included, "One person's success depends on another person's failure," "In order to succeed in this world, it is sometimes necessary to step on others along the way," ($\alpha = .79$).

Work Meaningfulness. Work meaningfulness was again measured using an adapted version of the work meaningfulness scale (Bunderson & Thompson, 2009), ($\alpha = 0.96$).

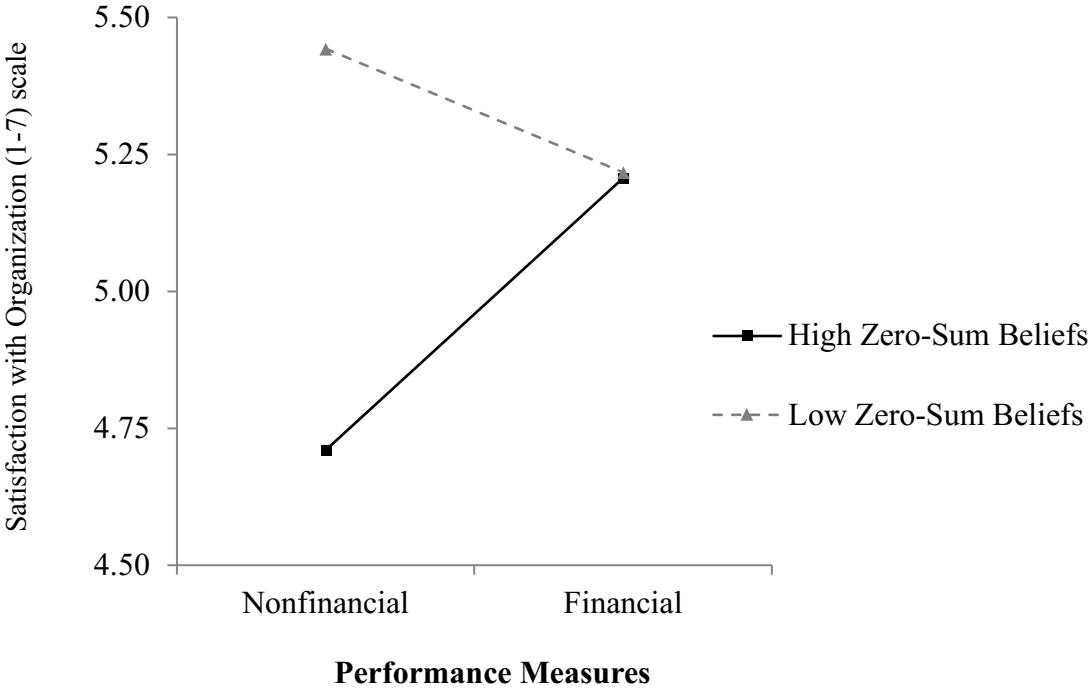
Controls. As zero-sum beliefs were not randomized, additional variables were included to control for alternative moderators possibly correlated with ZSB. The variables included knowledge of financial decision-making (Wong, Yik, & Kwong, 2006), as workers with less

financial knowledge may simply dislike financial measures, socioeconomic status (SES), as workers lower in SES may experience negative affect in the presence of financial reminders (Lim & Teo, 1997), and demographic variables, including age, education level, and income.

STUDY 7: RESULTS & DISCUSSION

OLS regression analysis was used to test whether workers were less satisfied with Amazon when financial performance was reported relative to nonfinancial performance and whether zero-sum beliefs moderated this effect. An interaction term was created by multiplying the financial condition (1 = financial, 0 = nonfinancial) and zero-sum beliefs. In summary, significance was identified for the overall model, $F(8, 1,158) = 14.61, p < .001$, financial performance ($\beta = -0.509, p = .037$), zero-sum beliefs ($\beta = -0.151, p = .003$), and the interaction ($\beta = 0.166, p = .019$), holding constant financial knowledge, SES, age, education, and income. Figure 1.2 illustrates this interaction. Coefficients and standard errors for all variables are available from the author upon request. No significant differences were identified between the model with full controls and a model with only the three primary variables. Thus, hypothesis 6 was supported.

Figure 1.2: Zero-Sum Beliefs as a Moderator of Financial Measures' Effect on Satisfaction



Finally, a bootstrapped mediation analysis tested whether diminished work meaningfulness mediates the negative relationship between satisfaction and zero-sum beliefs, similar to zero-sum perceptions. The results revealed an observed coefficient of $-.068$ ($p = .002$) that explained 72.6% of the total effect, and a significant bootstrapped percentile 95% confidence interval of $-.109$ to $-.025$, suggesting that decreases in work meaningfulness may also mediate the relationship between satisfaction and zero-sum beliefs.

GENERAL DISCUSSION

The financialization of performance has become pervasive across the organizational landscape. And yet, we know little about how financial performance measures cognitively affect the workers of firms. This series of experiments examined the causal effects of financial firm performance measurement on workers' satisfaction with the firm, and the causal process through which these potential effects occur. The results reveal a paradox—whereas prior research has established significant positive effects of work satisfaction on firm financial performance, workers are significantly less satisfied, on average, when their firms measure and report firm performance financially. The results also support the explanation that zero-sum perceptions about financial performance, brought about by the zero-sum nature of financial exchange value captured (Bowman & Ambrosini, 2000; Priem, 2001), drive this decrease in satisfaction through decreases in the meaningfulness of work. These effects were corroborated at the manager-level through increased perceptions of trade-offs and reduced perceptions of employee outcomes from considering the financial aspects of the firm-employee relationship, specifically financial performance measures. However, the final study revealed that workers with greater zero-sum beliefs about society more broadly were actually more satisfied when performance was financialized, despite exhibiting lower satisfaction overall. This final result reveals the

importance of workers' overarching mental models of a negatively or positively interdependent society on their satisfaction with firms and approaches to performance measurement.

Theoretical Contributions

This research contributes significantly to the literatures on employee satisfaction, the psychology of performance measurement, financial psychology, and the nascent yet growing research on zero-sum thinking while bridging these disconnected literatures. First, the research contributes to our understanding of the antecedents of workers' satisfaction with organizations (Schminke et al., 2014; Shore & Jacqueline, 2003). Although much research has investigated the effects of worker satisfaction on firm financial performance (Edmans, 2012; Ostroff, 1992), less attention has been given to the effects of firms' financial performance on worker satisfaction. The results reveal a paradox, in that whereas worker satisfaction may increase firms' financial performance, a firm that financializes performance may actually decrease workers' satisfaction. Furthermore, much of the theorizing around worker satisfaction has focused on constructs such as job satisfaction or employee engagement with the work itself (Bode & Singh, 2018; Judge et al., 2001). However, scholars are increasingly shining a spotlight on workers' satisfaction with the organization itself, given the increased attention to the quality of firms' relationships with their stakeholders (Parmar et al., 2010), particularly employees (Shore & Jacqueline, 2003). The findings suggest that firm-employee relationships may benefit from more nonfinancial, less zero-sum measures of performance, despite isomorphic pressures to financialize performance further.

The research also furthers our understanding of performance measurement (Kaplan, 1983; Richard, et al., 2009), particularly the more nascent work on the psychological effects of performance measures (Lau & Moser, 2008; Lau & Sholihin, 2005). The findings extend our knowledge of the causal effects of financial vs. nonfinancial performance measures (Cardinaels

& van Veen-Dirks, 2010; Lau & Sholihin, 2005) through revealing the negative and moderated effects of financial measures on workers' satisfaction with the firms reporting them. The findings also help explain the mechanisms through which these effects occur, zero-sum perceptions. Although a financial objective function helps simplify and rationalize firms' operationalization of success (Jensen, 2001), this approach may be rejected by stakeholders who view firm success as more about meaningful value creation through win-win opportunities (Mitchell, et al., 2016; Tantalo & Priem, 2014). The results open a path for future work on how financial measures affect other stakeholders, such as customers and community members, and how different types of nonfinancial measures psychologically affect workers.

The findings also contribute to financial psychology research. Although notable direct effects from priming thoughts of money have been identified (DeVoe & Iyengar, 2010; Vohs et al., 2006), we know less about why these effects occur, particularly in firms. The results provide a possible explanation as to why thoughts of financial currency and financial units of account invoke detrimental psychological consequences, such as reduced meaningfulness and satisfaction—zero-sum perceptions about financial value. Operationalizing firm value via money, a finite resource, imbues value and firm performance with a more finite and zero-sum nature (Priem, 2001), which invokes zero-sum perceptions that decrease workers' feelings of meaningfulness with their work and satisfaction with the firm. This may help explain prior findings that financial framing can decrease workers' prosocial motivation and behavior (DeVoe & Pfeffer, 2007; Sirola & Pitesa, 2017). The results also identify an important moderator of these effects—individuals' zero-sum beliefs about society. Although most of the financial psychology literature considers average effects, the results presented here reveal heterogeneity in how financial framing affects individuals with higher or lower levels of certain trait variables, in this

case, zero-sum beliefs. Finally, the findings bridge the previously disconnected literatures on financial psychology and performance measurement, contributing to the growing need for literature that spans the micro and macro divide.

Finally, this research contributes to theories of zero-sum thinking. Perceptions of negative interdependence have been studied through negotiators' fixed-pie bias (Bazerman, 1983), competition (Murayama & Elliot, 2012), and recently zero-sum beliefs (Różycka-Tran et al., 2015). However, few studies have examined the effects of financial framing on perceptions of negative interdependence, particularly in organizations in which financial primes are prevalent (Sirola & Pitesa, 2017). I contribute to this work through theory and findings that connect the macro-level theorizing around the zero-sum aspects of financial value and performance (Priem, 2001, 2007) with the micro-level empirical work on zero-sum thinking (Sirola & Pitesa, 2017), while providing causal evidence of the negative effects of zero-sum perceptions and the role they play in how financial performance measures affects workers' meaningfulness and satisfaction.

Managerial Implications and Future Directions

These findings have important implications for managers and policy-makers who define, measure, and report performance in organizations. Economists and managers often point to financial metrics as the most accurate representations of the value individuals derive from goods, services, jobs, and even entire firms, often due to the importance of allocating scarce resources. However, the findings suggest detrimental effects on workers' psychological well-being from these financial measurement approaches. Future research should further investigate the potential differences between workers' and managers' zero-sum thinking, and the potential consequences for the stakeholders of organizations led by managers with high zero-sum beliefs.

It could be argued that the scarcity of resources makes zero-sum measures appropriate in certain contexts. Yet, recent innovations may be slowly loosening the bonds of such limitations. New technologies and approaches to management have enabled value-creating enhancements in production, human capital, and our approaches to measuring time itself. Such sentiments are echoed by scholars in a recent special issue of the *Academy of Management Review*, in that “the wisdom of relying on a model that focuses exclusively on alleviating economic scarcity no longer makes sense,” (Jones et al., 2016). Although natural and socially constructed impediments to a purely win-win society exist, recent advances have called into question the monistic focus on scarce, relative construals of firm performance—both financial and nonfinancial. Future research should examine whether certain nonfinancial measures of performance, such as rankings, invoke similar zero-sum consequences for workers, as well as other stakeholders, and whether certain prosocial measures of performance, such as CSR, can mitigate such consequences. Together, this line of research opens a promising path forward for understanding how the ways in which organizations define performance cognitively affect the well-being of their workers, other stakeholders, and society.

CHAPTER 2:

DO YOU VALUE MY VALUES? THE BENEFITS OF INTEGRATING CORPORATE SOCIAL RESPONSIBILITY INTO THE PERFORMANCE APPRAISAL PROCESS⁷

ABSTRACT

Answering calls for research on firms' responses to social issues beyond their link to financial performance, this study examines the effect of firms' social responsibility on a key group of stakeholders, their workers, specifically employees. We theorize that organizations' formal processes and structures, specifically the integration of employees' CSR work into their formal performance appraisals and the existence of a formal position or department dedicated to coordinating CSR activities, add value to employees through improving their satisfaction. Using a unique dataset of survey responses from architecture firms engaged in pro bono work from 2011 and 2013, we find that incorporating CSR into employee performance appraisals significantly increases employee satisfaction. However, the existence of a formal position or department for coordinating CSR exhibits no effect. We conclude that while CSR can enhance employee satisfaction, companies must move beyond the ceremonial adoption of CSR into their formal structure and instead demonstrate that the organization genuinely values and rewards employees' CSR efforts by systematically accounting for them in performance appraisals.

⁷ This chapter is part of a paper in collaboration with my coauthors, Lakshmi Ramarajan and Julie Battilana. I am grateful for the opportunity to work with them on this project, and I look forward to continuing our work together.

INTRODUCTION

Employees' search for meaning at work has forced firms to revisit their role not only as maximizers of financial performance, but also as managers of social performance (Grant, 2013; Grant, 2012a). Research shows that firms' engagement in prosocial practices, specifically CSR programs, has become a key factor in attracting and retaining talent (Jones et al., 2014), especially those who value prosocial activities (Bode & Singh, 2018; Bode et al., 2015). Yet, despite firms' efforts to develop engaging CSR initiatives and policies for their employees, startling trends in employee disengagement in the United States⁸ and more broadly all over the world⁹ suggest that employees are not fully satisfied with their firms' human resources approaches more generally, let alone those pertaining to CSR.

The literature on CSR echoes these observations. On the one hand, research shows that employees seem to be more engaged and satisfied when their organizations have CSR programs (Bhattacharya, Sen, & Korschun, 2008; Mirvis, 2012). On the other hand, some studies also show that employees tend to doubt the authenticity of their company's engagement in CSR (Jones, Parker, & Bos, 2005; L'Etang, 1994; Roberts, 2003). Firms have been criticized for window-dressing, i.e., engaging in CSR mostly for public relation purposes (Costas & Kärreman, 2013). While studies have documented the challenge that firms face in managing perceptions of authenticity in their CSR efforts (McShane & Cunningham, 2012), we surprisingly know little about how they can overcome this challenge and credibly convey their commitment to social responsibility to their employees.

⁸ A January 2015 Gallup Poll reports that only 31.5% of U.S. employees are engaged in their jobs. <http://www.gallup.com/poll/181289/majority-employees-not-engaged-despite-gains-2014.aspx>.

⁹ Worldwide, only 13% of employees across the globe were engaged in their jobs according to a 2011-2012 poll. <http://www.gallup.com/poll/165269/worldwide-employees-engaged-work.aspx>

The central argument of this chapter is that how companies manage the internal implementation and integration of their CSR initiatives with organizational processes and structures is critical to this process. Specifically, aligning firms' core processes and structures with their CSR activities may be essential for firms' CSR efforts to be perceived as authentic by their employees and thereby increase their satisfaction. It may be particularly critical to align Human Resources Management (HRM) processes and structures with CSR, as HRM practices significantly affect employee outcomes (Arthur, 1994; Huselid, 1995; Jones & Wright, 1992; McEvoy & Cascio, 1985). Specifically, HRM practices lead to better firm outcomes through (1) influencing employee motivation, particularly through performance appraisals, and (2) providing organizational structures that improve how the work is done (Huselid, 1995). Accordingly, the integration of CSR activities into performance appraisals and the creation of a formal position in charge of managing CSR-related activities may contribute to employees' satisfaction.

To test this theory, data was collected from over 250 architecture firms that are all members of a pro bono initiative. The architecture industry is a particularly relevant context to study, as firms within it face a host of opportunities to use prosocial strategies and practices to enhance social performance for the built environment, from environmental impacts to its effects on rebuilding after disasters, and its ability to influence health, equity and social justice. Prominent architects have called for the profession to transform from one that prizes aesthetic values above all else to include societal good (Frumkin & Kolendo, 2014; Kimmelman, 2014). Our sample consists of a swathe of firms at the leading edge of this transformation; firms that have made a public commitment to creating design for the betterment of the community.

The results indicate that the integration of CSR-related activities into performance appraisals has a significant and positive influence on employees' satisfaction; however, the

existence of a formal position in charge of CSR-related activities does not. This suggests that the integration of CSR-related activities into performance appraisals sends a strong signal to employees that their CSR efforts are valued and rewarded within the firm. In contrast, the mere creation of a position in charge of managing CSR activities is not a strong enough signal to convince employees of the authenticity of their firm's CSR engagement. This may be because integrating CSR into the employee performance appraisal process clearly rewards employee outputs that contribute to social value creation without necessarily generating value for the firm itself. In contrast, formal positions are visible to external stakeholders, and so may be perceived as merely a public relations tool instead of actually facilitating employee CSR efforts. The findings thus reveal that companies must move beyond the ceremonial adoption of CSR into their formal structure (Meyer & Rowan, 1977). Rather, they must demonstrate that they genuinely value and reward employees' CSR efforts. One key way in which they can do so is through integrating CSR work into performance appraisals.

The idea that firms' prosocial practices such as CSR may be more than mere window-dressing and may actually benefit both society and employees seems inherently attractive as it meets two of the most critical challenges for today's organizations and society more broadly. On the one hand, as Margolis and Walsh (2003) noted ten years ago, "the world cries out for repair," and many firms have taken on the task of resolving complex, societal ills, ranging from inequality to climate change. As these ills have grown, social goals have become increasingly important to workers and organizations. On the other hand, it is widely acknowledged that many workers today are in search of meaning, satisfaction, and well-being, and firms face the challenge of employee disengagement and cynicism. Putting the two together seems tautological. It presents an ideal organization with thriving employees that are making a difference in the

world. Yet, this is a weighty expectation for managers of CSR initiatives and it is not clear how such prosocial practices should be designed, managed, and organized to meet such expectations. Given how important CSR work is currently and is likely to become in the future, this chapter builds on an emerging trend examining how firms' engagement in social issues connects to the well-being of its workers by providing insight into how firms can manage and organize their CSR initiatives to increase employee satisfaction.

In sum, the findings provide significant theoretical contributions to the CSR and employee well-being literature. In terms of the CSR literature, this chapter pushes forward an agenda laid out by Margolis and Walsh (2003) in two ways. First, they argued that to help organizations meet the challenges of society, organizational scholars must include the study of a wider set of consequences of corporate social initiatives beyond the firm's financial performance. The current study does so by closely examining employee satisfaction as an outcome. Second, they argued that scholars must "go inside the firm" to gain a deeper understanding of how such initiatives are managed. This study does so by examining the structures and processes associated with managing CSR. Importantly, the findings that tangible rewards to employees for CSR work improve employee satisfaction challenges notions that rewarding CSR work may violate norms associated with prosocial behavior. Finally, the research contributes to a recent stream of work arguing that attention to the importance of prosocial values, mission, and meaning is critical to revitalizing employees' experience of work (Grant, 2012a; Rodell, 2013). While this work has largely focused on individual-level mechanisms that increase employee outcomes, the findings elucidate how firms manage their prosocial practices through their human resource management systems to improve the satisfaction of employees.

THEORY DEVELOPMENT

CSR and Employee Satisfaction

Employee satisfaction is important to firms because it predicts outcomes such as firm performance (Edmans, 2012), turnover (Harrison et al., 2006), and organizational citizenship behaviors (Bateman & Organ, 1983). Prior research has established a positive relationship between CSR activities and employee satisfaction (Bauman & Skitka, 2012; Gavin & Maynard, 1975; Grant, 2012a; Rodell, 2013). These studies suggest a number of mechanisms through which having CSR activities alters employees' perceptions and attachment to the firm and hence leads to greater satisfaction. For example, CSR activities have been shown to positively affect employee satisfaction through perceived trustworthiness, fairness, organizational identification, organizational commitment, and retention (Aguilera et al., 2007; Barnett, 2007; Bode et al., 2015; Dunn et al., 2008; Grant, 2012a, b). Relatedly, CSR activities signal to employees the organization's commitment to creating social value, thus enhancing an organization's attractiveness to individuals (Backhaus et al., 2002; Fombrun & Shanley, 1990; Greening & Turban, 2000; Jones et al., 2014; Turban & Greening, 1997).

In contrast, research also suggests that CSR presents a set of challenges regarding the authenticity of firms' engagement (Hellsten & Mallin, 2006; Jones et al., 2005; L'Etang, 1994; Mansell, 2013; Roberts, 2003). In particular, firms have been criticized for window-dressing when engaging in CSR primarily for public relation reasons, which has been shown to have a negative influence on employees' satisfaction (Costas & Kärreman, 2013; Turban & Greening, 1997; Wanous, Poland, Premack, & Davis, 1992). This becomes particularly important when considering that employees' perceptions of a firm's CSR affect employee identification, and accordingly, their satisfaction, to a greater degree than the firm's actual CSR (Glavas & Godwin,

2013; Glavas & Kelley, 2014; Van Dick, Wagner, Stellmacher, & Christ, 2004). Similarly, there also exists a relationship between employees' satisfaction and perceptions of their organization's morality, which can be bolstered through CSR (Ellemers, Kingma, van de Burgt, & Barreto, 2011). Taken together, this body of research raises an important question for firms—how can they credibly demonstrate their commitment to CSR to their employees?

CSR and Human Resource Management

Firms engaged in CSR often struggle with aligning their organizational processes and structures with CSR activities (Maon, Lindgreen, & Swaen, 2009). While much of the work noted previously has examined participation in CSR activities as a key variable predicting employee satisfaction, how CSR activities might be best designed to lead to employee satisfaction (rather than dissatisfaction and cynicism) has received less attention. However, a vast amount of research has illustrated that HRM systems play a critical role in employee satisfaction (Eskildsen & Nussler, 2000; Guest, 2002; Macky & Boxall, 2007), notably along two dimensions—employee motivation systems, such as the performance appraisal process that rewards employees for their efforts, and structures that improve how work is done, such as formal positions to coordinate employees' work across the firm (Delaney & Huselid, 1996; Huselid, 1995).

Reward systems are one of the levers that firms have at their disposal to integrate CSR with the rest of their activities (Lyon, 2004). Organizational incentive systems have evolved to encompass many features such as fairness and equity, which go beyond traditional economic theories (Baker, Jensen, & Murphy, 1988). One way of linking CSR to these reward systems is to incorporate CSR into employee performance appraisals. Accordingly, the integration of CSR activities into performance appraisals may be critical for firms to credibly convey their

commitment to CSR and thereby increase their employees' satisfaction. In addition to performance appraisals, research suggests that organizations that formalize their CSR programs through distinct positions or departments and corresponding policies may be indicating to employees that CSR is indeed important (McShane & Cunningham, 2012). Accordingly, formal positions and departments may also help the organization integrate and align CSR with the organization's existing structures, thereby conveying to employees the firm's commitment to CSR and ultimately increasing employee satisfaction.

In summary, building on theories of high performance HRM systems (Eskildsen & Nussler, 2000; Guest, 2002; Huselid, 1995; Macky & Boxall, 2007; Takeuchi, Chen, & Lepak, 2009), firms will likely need to integrate CSR into two key formal organizational processes and structures: performance appraisals and a position or department through which CSR is coordinated. These two processes and structures may demonstrate the firm's commitment to social responsibility to employees, thus increasing their satisfaction with the firm. However, when CSR is not integrated into these two key formal processes and structures, it may imply that CSR is merely tangential to the firm. Employees may be less likely to believe that their firm genuinely cares about its social impact and hence may be less satisfied.

Integration of CSR in Performance Appraisals and Employee Satisfaction

There is surprisingly a dearth of research on the relationship between performance appraisals and employee satisfaction in the CSR context. There is some reason to believe that performance appraisals in the CSR context may violate social norms that suggest charitable behavior should be intrinsically motivated (Deci, Koestner, & Ryan, 1999; Lepper, Greene, & Nisbett, 1973; Roland & Tirole, 2006). For instance, research shows that individuals who spend more of their money, such as a bonus, on others relative to themselves are actually more satisfied

(Dunn et al., 2008). However, individuals clearly also derive satisfaction from extrinsic rewards such as financial compensation and promotions to positions of status, among others (Auriol & Renault, 2008; Baker et al., 1988; Jenkins Jr, Mitra, Gupta, & Shaw, 1998). These extrinsic benefits are likely important for enhancing employee satisfaction in the context of CSR, particularly when implemented through appraisal systems for three reasons.

First, integrating employees' CSR activities into their performance appraisals directly signals to employees that the firm values CSR work. Performance appraisals are a way for firms to elicit desired behaviors from employees (Borman, 1991; Gerhart & Milkovich, 1992; Huselid, 1995). To the extent the firm integrates CSR into its performance appraisal process, the firm is suggesting that it wants employees to engage in CSR, as evidenced by the firm's willingness to reward employees for doing so. This may increase employee satisfaction simply because individuals value being rewarded for their efforts (Baker et al., 1988; Gneezy, Meier, & Rey-Biel, 2011). Furthermore, although some workers are willing to forgo marginal amounts of compensation to satisfy nonfinancial and prosocial preferences (Bode & Singh, 2018; Burbano, 2014; Stern, 2004), not all are willing to "pay" for these preferences (Ruhm & Borkoski, 2003; Sauerermann & Roach, 2014). Pay is important. It is likely to be particularly important in the context of CSR as firms that do not integrate employees' CSR work into their performance appraisals are still asking employees to engage in CSR activities. Thus, they are likely to be sending the signal that they are asking their employees to do "extra" work or "invisible" work (Anteby & Chan, 2013; Fletcher, 2001). In this sense, work that is not tangibly rewarded may not be seen as central to the firm's goals. Thus, employees in firms that do not integrate CSR into their performance appraisals are likely to feel that their activities are not truly valued by their firm, and hence feel dissatisfied.

Second, research also suggests that performance appraisals are one way in which employees' assess their value not just to the firm in absolute terms, but relative to other employees. "In the course of evaluating performance, workers are inclined to ask themselves 'How well am I doing?' More often than not, answering requires posing another question: 'Compared to what or to whom?'" (Greenberg, Ashton-James, & Ashkanasy, 2007:27). Equity theory (Adams, 1963, 1965) argues that an imbalance in comparing one's own ratio of inputs to rewards with similar others may drive employee dissatisfaction. In the case of CSR in particular, when firms do not integrate CSR into employees' performance appraisals, the firm may be perceived as benefiting from some employees' sense of goodwill or desire to help others while rewarding them less than employees doing less work overall, but maybe more work that is directly being rewarded (e.g., revenue-generating work). Indeed, more research indicates that perceptions of relative equity with respect to compensation may be equally, if not more important to employees' satisfaction than the actual amount of pay itself (Berkowitz, Fraser, Treasure, & Cochran, 1987; Blau, 1994; Coff, 1997; McFarlin & Sweeney, 1992). As such, incorporating employees' CSR efforts into the appraisal process may increase employee satisfaction through increased perceptions of fairness and equity within the firm with respect to their work efforts and outcomes.

Lastly, firm-structured performance appraisal systems that incorporate employees' CSR efforts into compensation and promotion considerations may be perceived as a demonstration of the firm's concern for employees themselves. Employees may find value in CSR programs because they provide job meaningfulness through contributing to the welfare of others (Grant, 2012a; Rodell, 2013). However, when CSR work is not integrated into the reward system, employees may perceive a trade-off between their prosocial desire to help others and their

professional desire to do well in their professional lives and meet the daily demands of their work. These two desires relate to different parts of individuals' identities (Ramarajan, 2014). Research illustrates how employees may feel that creating social value is vital to their sense of self (Grant, Dutton, & Rosso, 2008), and so may appreciate when they do not need to put in additional demands of time and energy above and beyond their work day (Kuhn, 2006). That is, when CSR work is incorporated in employee performance reviews, employees may feel the firm is enabling their non-work identities (Ramarajan & Reid, 2013) and that their prosocial and professional desires are synergistic rather than at odds with one another (Grant & Mayer, 2009). Thus, integrating the prosocial practice of CSR in performance reviews may be seen as a form of organizational support (Rhoades & Eisenberger, 2002; Youngcourt, Leiva, & Jones, 2007), helping employees reconcile their desires to create social value for society and to be rewarded in their professional lives (Berman & Small, 2012). Research suggests that employees who perceive organizational support are more satisfied (Valentine, Greller, & Richtermeyer, 2006).

In short, integrating CSR into the performance appraisal process will likely be associated with greater employee satisfaction because it can (1) cultivate greater perceptions that the firm values employees' CSR work, (2) enhance employees' perceptions of being equitably rewarded, and (3) increase employees' perceptions of organizational support and concern for them as individuals trying to do both their regular jobs and prosocial work. Thus, it is reasonable to predict that integrating CSR into firms' performance appraisals will lead to greater employee satisfaction.

Hypothesis 1: Employee satisfaction will be greater in firms in which CSR activities are incorporated into the employee performance appraisal process, relative to firms in which it is not incorporated into this process.

Formal Position for CSR Coordination and Employee Satisfaction

In addition to how firms motivate employees through the reward system, the HRM literature also suggests that firms can influence employees by providing organizational structures that improve how they do their work (Huselid, 1995). In the case of CSR, many firms, in an effort to become “responsible leaders,” have established dedicated positions or departments broadly related to CSR (Gond, Igalens, Swaen, & El Akremi, 2011; Googins, Mirvis, & Rochlin, 2007). However, little is known about the relationship between such formal structures and employee participation in CSR (Maon et al., 2009), and even less is known about how such a relationship, if any, affects employee satisfaction.

Formal functions for coordinating CSR activities, such as positions (e.g., chief sustainability officers) or departments, may help improve CSR work and increase employees’ satisfaction for three reasons. First, a formal CSR position or department may help coordinate CSR activities, which may enhance CSR effectiveness (Strand, 2013) and in turn employee satisfaction. Research suggests that greater task effectiveness leads to employee satisfaction (Judge et al., 2001; Riordan, Gatewood, & Bill, 1997). Particularly in complex, interdependent tasks, many kinds of coordination mechanisms can lead to greater effectiveness (Cotton, 1993; Galbraith, 1977; Gittel, 2001), while low coordination can result in lower levels of employee satisfaction because of poor performance (Rousseau, 1978). In the CSR context, given that such initiatives often target social issues that are rife with complexity and uncertainty—a challenge of value pluralism—a formal position may enable greater coordination and effectiveness, and ultimately satisfaction. Without a formal CSR position or department, the coordination required for the firm’s employees to effectively engage with these complex issues with others inside and outside the firm may be insufficient and thereby be associated with lower employee satisfaction.

Second, the existence of a formal position or department for coordinating CSR may provide greater clarity around employees' roles, clarifying expectations about what CSR work entails and setting clear goals (Gruman & Saks, 2011; Merrell, 2000; Sheldon & Elliot, 1999; Studer & Georg von, 2013; Walter, 1987). Structural formalization has been shown to be negatively associated with role ambiguity (Nicholson & Goh, 1983). This is important as role ambiguity has been found to be negatively associated with job satisfaction (Abramis, 1994), while greater role clarification and overall perceptions of role clarity are positively associated with work satisfaction (Hassan, 2013). In the case of CSR, in the absence of a formal position or department in charge of coordinating the work, questions about who should engage, when, how much, on what tasks, etc. are all decisions that are likely to be left up in the air. This may create role ambiguity for employees. Through formalization of CSR positions or departments, organizations are likely to have routinized and centralized such decisions, which may help decrease role ambiguity, increase role clarity, and ultimately improve employee satisfaction.

Third, a formal CSR position or department serves as a visible symbol of the firm's commitment to CSR, which may result in a positive reputation and image that can increase employee satisfaction. Establishing a formal CSR position or department in the firm's structure is a deliberate, voluntary, and sometimes strategic organizational action characterized as explicit CSR (Matten & Moon, 2008; Strand, 2013). Because formal positions often require direct and continued expenditures of firm resources, and because employees and outside observers are likely to infer that a firm's allocation of resources to an activity means it is a more central activity to the firm (Strand, 2013), the existence of a CSR position should demonstrate the firm's immediate and long-term commitment to CSR. Furthermore, CSR has positive moral and ethical associations and is likely to be seen as a positive value (Koh & Boo, 2001; Valentine &

Fleischman, 2008). Formal positions may therefore help generate a positive reputation and image for the firm. This is important as research suggests that working for a firm that is positively perceived and reputable increases employee attachment (Ashforth & Mael, 1989; Dutton, Dukerich, & Harquail, 1994; O'Reilly & Chatman, 1986) and hence, satisfaction (Riordan et al., 1997).

In summary, a formal organizational position or department dedicated to CSR will likely lead to greater employee satisfaction because it can (1) enhance the effectiveness of employees' CSR efforts through coordination, communication, and mediation between employees and the external environment, (2) provide increased role clarity for employees, and (3) help garner positive reputation and image. Thus, it is reasonable to predict that integrating CSR into firms' formal structures through a CSR position or department will increase employee satisfaction.

Hypothesis 2: Employee satisfaction will be greater in firms in which CSR activities are coordinated through a formal position or department, relative to firms in which it is not formally coordinated.

METHODS

Research Context

These hypotheses were tested using a unique dataset of CSR activities in the architecture industry. The dataset for this study was obtained through collaboration with Public Architecture, an organization that connects nonprofits in need of design assistance with architecture and design firms willing to donate their time on a pro bono (i.e., reduced fee or no fee) basis.¹⁰ In 2005, Public Architecture launched "The 1%," an initiative that requests its architecture and design firm members to commit 1% of their time to pro bono service provision.

¹⁰ Public Architecture. 2014, "The 1% pro bono design program of Public Architecture": Public Architecture. Retrieved November 1, 2014 (<http://www.theonepercent.org/>)

Firms in The 1% join voluntarily and share the view that the architecture profession must move beyond “design for design’s sake” to using design to create social value. There is no monitoring, enforcement, or reward mechanism regarding the quality or quantity of firms’ pro bono work. Firms first designate a primary contact, often top-level leadership in the firm. They then go through a registration process which includes training material on pro bono design, information on how to get the most out of their firm’s participation in The 1%, and how to use the matching process to work with non-profits registered through The 1%. Firms can maintain profiles with their pro bono philosophy and projects on The 1% site. To-date, there are approximately 1,400 architecture and design firms and 937 non-profits that are registered with The 1%. The 1% firms have contributed hundreds of thousands of hours to non-profits in sectors such as education, health, urban housing, and have provided a wide range of services, from early stage conceptual designs to completed buildings.

In order to ensure that this context was appropriate for testing our hypotheses, thirty interviews were conducted with members of two architecture firms that were part of The 1%, the leaders of each of these member firms, and the leader and staff members of Public Architecture. The research team also attended several field-configuring events that brought together numerous actors involved in transforming design for the public good. These interviews and experiences grounded our research in the context and helped us understand the critical nature of the architecture and design profession in addressing many pressing social challenges through the renewal of the built environment¹¹. Unlike the law profession, in architecture, pro bono work is

¹¹ For recent descriptions of some emerging moves in the profession to integrate social goals see the following websites from the National Endowment of the Arts, the Cooper-Hewitt Museum and Harvard magazine. <http://www.designother90.org/> (<http://arts.gov/sites/default/files/Design-and-Social-Impact.pdf>); <http://arts.gov/news/2015/social-impact-design-three-part-series-artsgov>; <http://harvardmagazine.com/2015/03/good-design>

only now slowly becoming institutionalized; for instance, there is no mandated level of pro bono activity by the American Institute of Architects (AIA). The resulting variation in firm practices made this context particularly appropriate for study.

Sample and Procedure

In 2011 and 2013, Public Architecture conducted a survey with its population of over 1,000 member firms to evaluate its services and understand pro bono in the profession. The survey covered the firm's management of pro bono work among other topics such as The 1% matching process and the pro bono services provided by the firms.

Surveys were sent to the firm's primary contact for The 1%. Consistent with primary contacts designated for most 1% firms, respondents primarily consisted of partners or principals (78.2% of respondents) with senior management responsibilities (e.g., CEOs or other members of the executive suite). As such, all respondents had the necessary information and expertise to be able to respond about firm level measures generally as well as specific practices related to pro bono. The instructions assured participants that their information would remain completely confidential, used only by The 1% and for research purposes, and only reported in aggregate. In addition, there were no rewards for pro bono participation or performance neither from Public Architecture nor from the broader architecture industry. Thus, we believe respondents had little incentive to misreport their firm's data.

A response rate of approximately 20-30% was obtained each year, with 341 firms responding in 2011 and 294 firms responding in 2013, which is within acceptable limits for field research (Roth & BeVier, 1998). Of the firms that participated in the 2011 and 2013 surveys, 92 firms responded in both years. In cleaning the database, one criterion was imposed in the construction of the sample. Firms that were sole proprietorships were excluded because it would

be unreasonable to have respondents report on firm practices that they had created and affected only themselves. Applying this criterion, a sample of 130 firms was obtained in 2011, a sample of 127 firms in 2013, and a sample of 41 firms that responded to surveys in both 2011 and 2013. The combined sample of 257 firms are used in the analyses presented below.

To address potential sample bias, a series of two-sample t-tests were conducted at the 95% confidence level between the full set of firms across both years (257 firms total), firms responding in 2011 but not in 2013 (130 firms) and firms responding in 2013 but not in 2011 (127 firms). All variables were compared within each test. Across all tests no significant differences were identified between survey respondents and non-respondents in each year of the sample (i.e., no p-value was below 0.05).¹² Finally, the sample was also compared with the 2012 American Institute of Architects (AIA) report on firm characteristics, which surveyed a sample of over 2,000 firms (of 10,000 AIA members). 98% of firms in the AIA sample had less than 100 employees, which is comparable to the full set of responses in this study's data in which 98% of firms also had less than 100 employees, (95% after removing sole proprietorships); the average annual revenue for architecture firms in the U.S., per industry reports, is approximately \$500,000, which is comparable to the firms in this sample with an average annual revenue of \$501,000-\$999,000; finally, reports on 2011 trends suggest the average billing rate in the industry was about \$100-\$150/hour, which is also comparable to the firms in this sample¹³. Thus, the firms in the present study are similar to typical firms in the architecture industry.

¹² Similar two-sample t-tests at the 95% confidence level were also conducted between observations that responded to some of the survey items but not the items representing our dependent variable (employee satisfaction) and independent variables of interest (CSR integration into performance appraisals and formal CSR positions or departments) with observations in 2011, 2013, and combined samples. We again failed to reject the null hypothesis that no significant differences exist between survey item respondents and non-respondents for each sample year for our key variables.

¹³ We obtained data on firm size from the AIA 2012 Firm Characteristics Survey Report. Average annual revenue for U.S. Architecture firms is calculated by dividing total industry revenue by the number of enterprises in the industry according to an IBIS World Industry Report; Morea, S. (2015, May) *Architects in the US*. *IBISWorld*

Independent Variables

Performance Appraisal. To operationalize the integration of CSR into firms' employee appraisal process, a dichotomous measure of the following survey item was used, "pro bono work is valued and rewarded in employee performance reviews." This binary variable representing performance appraisals was coded as 1 if pro bono work is valued and rewarded in employee performance appraisals, and 0 if not.

Formal Coordination. To operationalize the integration of CSR into firms' formal structures through a formal position or department for coordinating CSR, a dichotomous measure of the following survey item was used, "we have an individual or a team responsible for coordinating all pro bono work." This binary variable representing whether or not there is an individual or a team responsible for coordinating all pro bono work at the architecture firm is coded as 1 if there is an individual or a team responsible for coordinating all pro bono work, and 0 if not.

To cross-validate both independent variables, a random subsample of 15% of the firms from the overall sample were contacted and asked the following questions about their pro bono practices: "Do you value and reward pro bono work in employee performance appraisals" and "Do you have a team or person that coordinates pro bono work?" 91% of the responses from this process are consistent with the original survey responses for performance appraisal and 91% are consistent with the original response for formal position. To further assess the level of agreement between the original and follow-up responses, Cohen's Kappa (Cohen, 1960) was computed to account for the possibility that agreement between the two respondents may occur by chance.

Industry Report 54131. We obtained hourly billing rate data from the 2014 Architectural report by DiCiccio, Gulman and Company.

This yielded a kappa of 0.81 for both items, suggesting “almost perfect” agreement (Landis & Koch, 1977) between the follow-up and survey measures for each item.

Dependent Variable

Employee Satisfaction. For our dependent variable, a single-item measure of employee satisfaction was used. The item asked participants to think about the potential outcomes of their firm’s pro bono work and rate “to what extent has your firm’s pro bono work improved employee’s job satisfaction,” on a scale from 1 (not at all) to 5 (a lot). Single-item measures of employee satisfaction have been found to be at least as robust, if not more so, than multiple-item measures (Wanous, Reichers, & Hudy, 1997). However, there are two other potential limitations of this measure that are addressed as follows. First, the measure could be seen as upwardly biased as it is provided by a survey respondent from the firm. However, The 1% Program’s assurances of confidentiality of their responses and the absence of incentives for reporting inaccurately higher levels of employee satisfaction mitigate some of these concerns. A follow-up interview with the team responsible for collecting the data for Public Architecture’s 1% Program provided assurance over the clarity and consistent interpretation of this item by survey respondents. Open-ended feedback from survey respondents was also examined. These responses further supported the assumption that the interpretation of the employee satisfaction survey question was straightforward and all respondents used the same criteria to answer the question.

Second, this is a third-party assessment of employee satisfaction. However, 78.2% of the respondents in our sample are leaders (e.g., principals or partners) in their firms for whom “taking the pulse” of the organization is reasonably part of their roles. Our in-depth interviews in two member firms with leaders and employees support this interpretation. Thus, the respondents reporting employee satisfaction were in a position to do so, having the necessary information to

be able to assess these criteria within their organizations. In addition, 95% of firms in the data are small to mid-size firms, with less than 100 employees, suggesting that the leaders' ability to make a reasonable aggregate judgment would be more valid than if the firms were very large.

Control Variables

Annual Revenue. Total annual revenue, including worldwide operations, was also included to control for possible effects on employee satisfaction from firms' varying levels of financial resources. Survey participants were asked to choose a category most closely approximating their firm's total revenue in the last fiscal year. This annual revenue variable was measured on a scale of 1 to 7, where 1 indicates "less than \$250,000," 2 indicates "\$251,000-\$500,000," 3 indicates "\$501,000-\$999,000," 4 indicates "\$1 million-\$2.4 million," 5 indicates "\$2.5-\$4.9 million," 6 indicates "\$5-\$9.9 million," and 7 indicates "\$10 million or more."

Hourly Rate. The hourly billable rate of different staff positions (e.g., project architect, designer, etc.) in each firm was also controlled for, as these rates could affect employee satisfaction indirectly in a manner similar to revenue. Survey participants were asked to choose a category most closely approximating their firm's average hourly billable rate. This variable for hourly rate was measured on a scale of 1 to 4, where 1 indicates "under \$100 / hour," 2 indicates "\$101-\$150 / hour," 3 indicates "\$151-\$200 / hour," and 4 indicates "more than \$201 / hour."

Years of Pro Bono Work. Furthermore, the number of years the firm has been pursuing pro bono work was also included as a control variable. Survey participants were asked to select the category that most closely approximates the duration of their firm's commitment to pro bono work. This variable for hourly rate was measured on a scale of 1 to 4, where 1 indicates "under two years," 2 indicates "two to five years," 3 indicates "five to ten years," and 4 indicates "more than ten years."

Number of Employees. Firms' number of employees was also included as a control variable. Survey participants were asked to "estimate your firm's number of full-time equivalent employees based in the U.S." in the previous year. Respondents manually entered this number.

Year of Survey. Lastly, because the sample consists of firms that responded in two different years (130 firms in 2011 and 127 firms in 2013), survey year (2011 or 2013) was also included as a control variable.

Model and Analysis

Multiple linear regression analyses were used to examine the relationship between employee satisfaction and the explanatory variables of interest, specifically performance appraisal and formal coordination. Because 41 firms responded in both years, clustered errors were assumed for those repeated observations and a multiple linear regression with clustered standard errors and a control variable for the year from which the observation came were included. Multicollinearity tests were also performed for all analyses, with none of the results indicating collinearity among the variables¹⁴.

Summary statistics and bivariate zero-order correlations are reported in Table 2.1. A prototypical (i.e., average) architecture firm in the sample had an employee size of about 56 people, with a five- to ten-year commitment to pro bono work, generated a global revenue of \$501,000-\$999,000 in the previous year, and had an average billable hourly rate for a project architect or designer of \$101-\$150 per hour.

¹⁴ Variance inflation factors were computed for all variables in both cross sectional analyses and our stacked analysis in which we cluster standard errors at the firm level. For all independent variables in our cross sectional analyses, the VIF values range between 1.02 and 1.47, below the acceptable standard of 2.0. For our 2011-2013 stacked analyses in which we cluster standard errors at the firm level, VIF values range between 1.02 and 1.38, again below 2.0. Mean VIFs in all analyses were significantly below the acceptable standard of 10.0.

Table 2.1: Means, Standard Deviations, and Bivariate Zero-Order Correlations

Variables	Mean	S.D.	1	2	3	4	5	6
1 Employee satisfaction	3.17	1.14						
2 Performance appraisal	0.66	0.48	0.26					
3 Formal coordination	0.38	0.49	-0.01	0.08				
4 Hourly rate	1.79	0.61	0.00	0.07	0.13			
5 Years of pro bono work	3.05	1.04	0.10	-0.04	0.00	0.01		
6 Number of employees	55.52	277.56	0.17	0.04	0.08	0.12	0.07	
7 Annual revenue	2.82	1.77	0.21	-0.01	0.10	0.23	0.34	0.36

N = 226

Regression Results

The regression analyses tested the hypotheses that pro bono work included in performance appraisals (Hypothesis 1) and formal coordination of pro bono work (Hypothesis 2) are positively associated with employee satisfaction. The regression results in Table 2.2 strongly support the first hypothesis. The coefficient for performance appraisal is positive and statistically significant ($\beta = 0.61$; $p < .01$). Holding all other variables constant, architecture firms in which pro bono work is valued and rewarded in employee performance appraisals are significantly more likely to experience greater levels of employee satisfaction. Furthermore, the adjusted R-squared of the models that incorporate performance appraisals (models 2 and 4) is twice as large as the models without it, indicating improved goodness of fit of the overall model of employee satisfaction when employee performance appraisals are considered.

However, the regression results in Table 2.2 do not support the second hypothesis. The coefficient for formal coordination is negative and not statistically significant. Holding all other

variables constant, having an individual or a team responsible for coordinating pro bono work does not appear to significantly affect employee satisfaction.

Table 2.2: Multiple Linear Regressions with Employee Satisfaction (2011 and 2013)

Variable	1	2	3	4
Performance appraisal		0.61 ** (0.15)		0.61 ** (0.15)
Formal coordination			-0.06 (0.15)	-0.10 (0.15)
Hourly rate	-0.10 (0.12)	-0.13 (0.13)	-0.10 (0.12)	-0.13 (0.12)
Years of pro bono work	0.04 (0.09)	0.05 (0.08)	0.04 (0.09)	0.05 (0.09)
Number of employees	0.00 ** (0.00)	0.00 ** (0.00)	0.00 ** (0.00)	0.00 ** (0.00)
Annual revenue	0.12 * (0.05)	0.12 * (0.05)	0.12 * (0.05)	0.12 * (0.05)
Intercept	3.03 ** (0.38)	2.63 ** (0.37)	3.05 ** (0.38)	2.65 ** (0.37)
Adjusted R-squared	0.05	0.12	0.05	0.11
F-statistic	12.87 **	14.42 **	11.39 **	13.15 **

N = 226. Robust standard errors, clustered by firm code, in parentheses; Constant and year dummy included in all models; Two-tailed tests; one-tailed tests, when hypothesized:

† p < .10; * p < .05; ** p < .01; *** p < .001

Some brief observations are in order regarding the control variables. The variables representing annual revenue and number of employees of the architecture firms are both positively correlated with employee satisfaction at the 0.05 and 0.01 levels, respectively. Holding all other variables constant, firms in the sample that have more financial and human resources also have higher levels of employee satisfaction, perhaps due to greater capacity to allocate or expend such resources toward efforts that increase employees' satisfaction. While statistically

significant, the extent to which those factors influence employee satisfaction is quite small, as indicated by their small coefficients (0.122 for revenue and 0.000 for number of employees). Furthermore, the largest firms in the sample are not large multinationals but rather mid-sized firms. The coefficient dummy variable for year 2013 is negative and statistically significant, meaning that holding all variables constant, employees in 2013 have a slightly lower level of satisfaction than the employees in 2011. Although it remains unknown why such an effect arises across years, controlling for it through multiple years of cross-sectional analyses and additional longitudinal analyses helps mitigate any concerns that such an effect may be biasing the results. Finally, neither the average billable hourly rate for a project architect or designer nor the number of years the firm has pursued pro bono work has a statistically significant effect on employees' satisfaction.

Robustness Checks and Supplementary Analyses

A set of supplementary analyses were conducted using the available data to explore the robustness of the regression results to a number of potential concerns. First, the relationship between employee satisfaction and the two explanatory variables of interest for the 41 firms that responded the survey in both years was examined. The results of the panel analysis of the 82 observations (41 firms repeated) controlling for firm and year fixed effects are consistent with the results of the multiple linear regression of the combined data sets from 2011 and 2013. The coefficient for performance appraisal in the panel analyses is positive and statistically significant, and the coefficient for formal coordination is negative and not statistically significant.

Second, two sets of cross-sectional analyses were conducted, one on the 2011 data and the other on the 2013 data. For each year, employee satisfaction was regressed on the explanatory variables of the same firms (130 firms in 2011 and 127 firms in 2013). The results of

the individual years are consistent with the results of the multiple linear regression of the combined data sets from 2011 and 2013. This suggests it is not a single year's observations driving the results.

It could be argued that ordered logistic regression is a more suitable analysis approach than multiple linear regression because the dependent variable is not truly continuous but rather ordinal, with unevenly increasing levels of improvement in employee satisfaction as one moves up the 1 to 5 scale. As such, both hypotheses were also tested using ordered logistic regression. The results hold across these models as well, supporting the first hypothesis pertaining to performance appraisals while failing to support the second hypothesis for formal position.

Finally, to alleviate some concerns regarding causality and the measure of employee satisfaction being rated by firm leaders, and to provide some additional validation of the finding regarding the positive effect of including CSR in employee performance appraisals, additional data was collected in the form of a short scenario experiment. The goal of this data was to be purely supplementary to the main data and analyses. 400 participants were recruited from Amazon's Mechanical Turk (MTurk), an online task platform, and paid \$1 for their participation. Participants were first asked to imagine they were an employee in a firm that engaged in CSR through an employee volunteering program. They were then asked their likelihood of participating in CSR activities and how important it was to them that their firm cared about the community to control for individual preferences. Participants were then randomly assigned to either a condition in which they were told that their firm valued and rewarded volunteer work in employee performance appraisals or a condition in which they were told it was not rewarded in performance appraisals. As dependent variables, participants were asked about their perceptions of the firm's commitment to CSR and their satisfaction with the firm.

Participants in the condition in which they were told their firm valued and rewarded their CSR work in performance appraisals were significantly more likely to believe the firm was committed to CSR and be satisfied with the firm, compared to those in the condition in which they were told their firm did not value and reward CSR work in performance appraisals, above and beyond participants' initial likelihood to participate and the extent to which it was important to them that the firm cared about the community. These results' preliminary replication of the main study's findings in a different setting and sample provides some tentative triangulation of the measures and the effect of integration of CSR in performance appraisals on employee satisfaction. However, because these data are at a different unit of analysis than the main study's data and use a very different sample and study design, their supplementary nature must be emphasized and caution advised in interpreting the results.

DISCUSSION

Today's firms face the dual challenges of creating social value for society and addressing increasing levels of disengagement and dissatisfaction among workers. This chapter links these two major challenges to investigate how firms can organize and manage their prosocial practices in a way that improves employee satisfaction. These challenges are examined in the context of architecture firms that have made a public commitment to change their profession to consider the creation of social value for the local and global community. As such, these firms and their employees are a lynchpin in addressing the social implications of the built environment. Furthermore, because the architecture profession consists of many small and mid-size firms, the firms studied here are also an example of how everyday firms can best embrace prosocial practices such as CSR initiatives. Nevertheless, this work also speaks broadly to firms in a variety of professions that desire to improve societal and employee welfare simultaneously.

Specifically, this study examined the effects of two formal organizational processes and structures, incorporating CSR into employee performance appraisals and having a formal position or department responsible for coordinating CSR, on employee satisfaction. The results show that when employees' CSR activities are valued and rewarded in employee's performance appraisals, employee satisfaction increases significantly. In contrast, the existence of a formal position or department focused on the management of CSR activities within the organization does not increase employees' satisfaction.

The positive relationship between employee satisfaction and integrating CSR into performance appraisals may seem counter-intuitive when considering that compensation goes against the social norms of charitable work, and may even interfere with employees' intrinsic motivation for engaging in such work (Deci et al., 1999; Lepper et al., 1973). However, extrinsic rewards also profoundly influence employees' perceptions of their firms and the value of their work to their company (Rousseau, 1990), which can lead to greater employee satisfaction.

Regarding the effect of a formal CSR position or department on employee satisfaction, the data did not support the hypothesis. This could be for several reasons. First, the growing adoption of formal structures for coordinating CSR could be part of the increasing prevalence of ceremonial CSR adoption in the face of wider institutional pressures (Matten & Moon, 2008). The diffusion of formal positions encompassing CSR across organizations may represent mimetic or normative isomorphic processes (DiMaggio & Powell, 1983) in which firms are adopting CSR ceremonially in attempts to secure legitimacy (Meyer & Rowan, 1977) or to portray themselves as responsible social actors regardless of functional considerations (Bromley & Sharkey, 2015). In such an instance, formal positions may not be undergirded by substantive improvements in CSR work, such as greater effectiveness or role clarity that can contribute to

employee satisfaction. Second, it may also be that there is potential for employees to perceive the formal position as merely a public relations tool (Costas & Kärreman, 2013), for tensions to arise between the CSR function and other departments (Gond et al., 2011), or for employees to regard the coordination of their CSR activities as coercive (Laufer & Robertson, 1997). These negative effects could be occurring simultaneously leading to a perceived lack of effect.

Interestingly, the significant effect that incorporating CSR into the performance appraisal process has on employee satisfaction indicates that formalizing CSR is not always mere myth and ceremony, but can generate real value for other stakeholders. Contrasting the two effects, an important conceptual distinction between integrating CSR in performance appraisals and creating a formal position for CSR is that one tangibly rewards employees for their efforts while the other is a more collective approach to allocating and coordinating the work. The impact of individualized rewards may therefore be a more proximal connection to employees, while the collective approach may feel more distal and have less of an effect on satisfaction. Indeed, the existing HRM research that has examined the positive effect of the provision of structures that coordinate work have often looked at structures that are more proximal to employees' work experience, such as team structures (Rico, Sánchez-Manzanares, Gil, & Gibson, 2008; Valentine, 2012) or that encourage employee participation (Huselid, 1995).

Relatedly, a reason integration of CSR into appraisals may increase employee satisfaction while formal CSR positions or departments may not is that the latter may not be perceived as authentically "prosocial" as the former. By encouraging employees to engage in CSR through incorporating their CSR work into the performance appraisal process, firms may displace some of the for-profit work these employees might otherwise have undertaken. Formal CSR positions or departments, on the other hand, are more visible to external stakeholders (Matten & Moon,

2008) such as consumers, suppliers, governments, and the media, and may bolster the firm's reputation, and ultimately financial performance. As such, employees may perceive less externally visible prosocial practices like CSR processes and structures as more authentic mechanisms for facilitating social value creation. The research presented here is among the first to deeply tackle the question of how the structures and processes of CSR programs may affect employee satisfaction. Future work will need to consider these and other distinctions between the two key structures and processes studied here, as well as expand upon them.

Theoretical Contributions

The current study contributes to the CSR and employee engagement in prosocial work literatures by examining the relationship between CSR integration into organizations' formal processes and structures and the value created for employees. The research also contributes directly to a challenge facing firms in the twenty-first century, the widespread disengagement of the global workforce, particularly in the context of employees and firms interested in and responsible for altering the built environment. Whereas prior research has extensively explored and tested the relationship between prosocial work and firm performance (Margolis & Walsh, 2003), much less attention has been given to the relationship between prosocial work and employee value creation. The current research fills this gap through a focus on employee satisfaction. Furthermore, very few studies have explored the integration of CSR with firms' core processes and structures, and fewer still have explored the relationship between such management of CSR and employee satisfaction. By addressing this gap, the current research reveals that integrating CSR into employee performance appraisals significantly and positively affects employee satisfaction, whereas a formal position for coordinating CSR does not.

First, this study contributes uniquely to organizational scholarship around CSR (Aguinis & Glavas, 2012). Building upon Margolis and Walsh (2003), this chapter examines the consequences of corporate social initiatives beyond firms' financial performance through investigating employee satisfaction as an outcome. Recent work has just begun to examine the effect that CSR has on employee outcomes (Bauman & Skitka, 2012; Bode et al., 2015; Glavas & Kelley, 2014; Kim, Lee, Lee, & Kim, 2010; Rupp, Shao, Paddock, Kim, & Nadisic, 2013). Yet, we still know little about how CSR generates satisfaction for the organization's employees, particularly from an organizational level of analysis. Margolis and Walsh (2003) entreated scholars to look inside the firm to acquire a deeper understanding of how such initiatives are managed. This paper answers their call by examining the processes and structures associated with managing CSR, and as a result, surfaces an interesting contribution. While tangible rewards directed to employees for CSR work improve employee satisfaction, a formal position for coordinating CSR efforts does not. This challenges notions that rewarding CSR work may violate norms associated with prosocial behavior while also challenging the value employees derive from formal CSR positions or departments. Given these significant findings, future research should explore other potential organization-level mechanisms that may significantly affect, not affect, or negatively affect the value employees derive from CSR.

The research also contributes to the growing body of scholarship around employee engagement in prosocial work that explores and examines the importance of prosocial practices, mission, and meaning to enhancing employees' work experiences (Benjamin, 2001; Booth, Park, & Glomb, 2009; Grant, 2012a; Rodell, 2013). Much of this literature has focused on individual-level mechanisms that increase employee meaning and satisfaction. The present study extends this focus through examining how firms integrate and manage their prosocial activities within

their formal processes and structures to improve employees' satisfaction. Furthermore, whereas prior work has examined the antecedents of employee volunteering (Booth et al., 2009; Grant, 2012a; Pelozo, Hudson, & Hassay, 2009; Peterson, 2004) and the effects of employees' participation on outcomes (Bartel, 2001; Bartel, Saavedra, & Van Dyne, 2001; Bode et al., 2015; Grant et al., 2008), this study sheds light on how firms can help create value for employees.

Limitations and Future Research Directions

A few limitations to these findings merit explanation. First, the data used for the analyses consists of self-report measures from firms in the sample. Although alternative data regarding satisfaction would consist of survey responses from the employees of each firm themselves, a review of the methods typically used to collect such data revealed that data on firm-level human resource practices across hundreds of firms and numerous employees within each firm is typically not collected. This review consisted of recently published articles in top-tier management journals in which employee satisfaction served as a key variable of interest; only five out of 34 articles presented studies in which employees were surveyed directly across more than three organizations¹⁵. This could be because collecting measures of employee satisfaction directly from a large number of employees of the firms themselves would likely be cost-prohibitive given the significant amount of time and resources it would take to coordinate

¹⁵ This search for articles in which employee satisfaction was an important variable of interest included articles published within the past 10 years, specifically within the following journals: *Academy of Management Journal*, *Organization Science*, *Administrative Science Quarterly*, *The Journal of Business Ethics* was also included because it has also published much work on CSR. JSTOR was used to search for articles with the terms "employee" and "satisfaction," or the terms "job" and "satisfaction" within 10 words of each other in either the item title or the abstract. In total, 38 relevant articles were found, 34 of which operationalized employee satisfaction or job satisfaction and collected the data by conducting survey instruments. 12 of these articles presented studies in which the authors conducted their surveys in a single organization, 11 used large-scale commercial databases such as Dunn & Bradstreet or Qualtrics, or a preexisting group or gathering of individuals from multiple organizations, such as a job fair or academic sampling pools for experimental research, as their sampling frame (with total usable responses ranging between 101 and 313), and three used cities (as opposed to firms) as their sampling frames. Of the nine remaining articles, five presented studies in which the authors conducted their surveys across only three organizations, and the remaining five presented studies in which 4, 12, 14, 23, and 31 organizations were used for survey sampling.

organization-wide employee surveys for over 250 firms. Furthermore, the measurement of employee satisfaction by third-parties may mitigate some concerns with nonresponse bias from dissatisfied employees (Rogelberg, Luong, Sederburg, & Cristol, 2000). Lastly, the survey responses regarding firms' integration of CSR into the performance appraisal process and the existence of formal positions or departments for coordinating CSR were cross-validated by following up with a subsample of firms.

Second, the results rely on cross-sectional analyses. Although ideally more than two years of data and a greater number of repeat respondents would have been available, the consistency in findings across the two samples in 2011 and 2013 and the smaller-scale panel analysis of firms that responded in both years provides assurance that the findings are not spurious. This data was also supplemented with an experiment to more causally test and triangulate the findings. Despite these limitations, the study exploits a unique and important sample of firms on the leading edge of transforming the built environment for the good of local and global communities.

Future work can build on and expand these findings in four ways. First, CSR research can delve into how firms can best organize and utilize formal CSR positions, if they are moving in that direction anyway, in order to improve employee satisfaction. In the context of architecture, CSR is slowly becoming institutionalized, thus there is still a fair amount of variation in firm prosocial practices related to CSR. This is similar to firms in other industries (Glynn & Raffaelli, 2013). As CSR practices become more common in this setting and in other contexts, how practices are implemented may become critical. For example, recent work suggests that tensions can arise between the social and commercial parts of the firm (Battilana & Dorado, 2010; Lee & Battilana, 2013), which may pose challenges to CSR implementation. Particularly in terms of

formal positions, tensions can arise in integrating the CSR department and its staff with the rest of the firm because “in corporate settings, ... CSR departments are often quite isolated from the commercial activities of a firm, and are very different in the kinds of people they employ and the kinds of activities these employees carry out” (Bode et al., 2015:8). In one study that explored the CSR-HR interface, when CSR was a function shared across departments or a separate function, tensions occurred across departmental boundaries (Gond et al., 2011). Interestingly, when CSR was part of HR, relations between departments were smoother, perhaps indicating a need to integrate CSR with HR to successfully integrate it with the organization as a whole.

Second, future work may also want to expand, investigate and deepen the findings regarding performance appraisals. While simply looking at whether appraisals integrating CSR exist or not presents an important advance over the current literature, the next step would be to examine how they are implemented. Formal appraisals are meant to prevent managers from making arbitrary decisions (Dobbin, Schrage, & Kalev, Forthcoming), however, in practice, many appraisal systems fall short of their full potential to achieve organizational effectiveness (Taylor, Tracy, Renard, Harrison, & Carroll, 1995:495). For instance, appraisal processes can be seen to be biased, unfair, or benefiting the manager or firm (Clinton, Sims, & Gioia, 1987; Taylor et al., 1995; Wanous et al., 1992). Future work should examine how performance appraisals are enacted internally, as differences in implementation may have an important influence on employee satisfaction.

Third, future work can expand on this chapter’s focal outcome, employee satisfaction, and examine how it may link to other stakeholders (Freeman, 1984). It is possible that some practices may improve employee satisfaction, which may then help create value for the community and shareholders (Edmans, 2012). It is also possible that some practices, such as a

formal position may make the work more effective and visible, thereby increasing financial and social performance, and ultimately generating value for the community and shareholders, even if not for employees. Although the present results cannot attest to value creation for these latter two stakeholders, future research should explore the impact of firm practices that may or may not provide opportunities for synergistic value creation through employees' engagement in prosocial work.

Finally, the study uses data from a sample of architecture firms involved in pro bono work. Although robustness tests helped address some potential limits to the generalizability of this study through comparing the sample with industry averages, future studies will need to test the reliability of these findings across various types of industries. Architecture firms are quite similar to other professional service firms and even more broadly organizations that both see the value and need for managerial practices such as performance appraisals and are interested in CSR. Future research should consider exploring the contingencies of the present findings by taking a similar approach to understanding how CSR is managed in different industries and professions that may be trying to integrate prosocial practices and social value creation with their daily work.

Implications for Practice

The findings contribute to management practice by addressing a major challenge confronting organizations—the extensive disengagement of their employees and workers' and firms' aspirations to effectively contribute to social value creation. Currently, considerable attention is being devoted to rethinking HR, particularly about how to utilize CSR to invigorate HR processes¹⁶. The value that CSR work can create for firms, employees, and society makes

¹⁶ Cappelli, P. (2015). Why We Love to Hate HR...and What HR Can Do About It. (cover story). *Harvard Business Review*, 93(7), 54-61.

understanding how to manage it even more imperative. Most firms tend to take a passive approach to encouraging employees to participate in CSR initiatives, for example, allowing for unpaid time off or adjusting employee work schedules, rather than more active approaches like paying for time off to volunteer (Basil, Runte, Easwaramoorthy, & Barr, 2009). The results of the current study suggest that a more active approach to encouraging employee CSR participation, specifically through incorporating employees' CSR work into the performance appraisal system, creates value for employees.

Some firms may worry that incorporating employees' CSR work into their performance appraisals will attract employees that engage in CSR activities at the cost of revenue-generating work. However, this concern is mitigated when considering that the most competitive prospective employees consider organizations' corporate social performance more so than less competitive groups (Albinger & Freeman, 2000:250-251). Furthermore, the results seem particularly relevant to organizations in which employees' CSR efforts do not displace existing workloads (i.e., pro bono work conducted "after hours" or during weekends or vacation time, common practices in the architecture industry) (Aguinis & Glavas, 2012). Employees in industries in which long working hours are already the norm may find being rewarded for their additional CSR work even more satisfying than employees in less time-intensive industries.

Nevertheless, managers considering integrating CSR work into performance appraisals must remain aware that the appraisal system itself must be well managed. If appraisal systems are already seen as biased or unfair (Clinton et al., 1987; Taylor et al., 1995; Wanous et al., 1992), it is possible that incorporating employees' CSR activities into their appraisals may be perceived in a manner similar to "greenwashing" (Ramus & Montiel, 2005) or merely a public

Boudreau, J., & Rice, S. (2015). Bright, Shiny Objects and the Future of HR. (cover story). *Harvard Business Review*, 93(7), 72-78.

relations tool (Costas & Kärreman, 2013). This could be particularly problematic when employee outcomes like satisfaction are an integral component to the organization's prosocial strategies, in this case, their strategic management of CSR (Turban & Greening, 1997; Wanous et al., 1992).

In conclusion, this study goes beyond current management theory and practice by connecting two challenges confronting organizations, namely how best to engage in social responsibility and how to alleviate employee disengagement. Our findings have important implications for firms desiring to address these dual challenges. Despite norms that suggest prosocial work should be voluntary, valuing and rewarding employees for their prosocial work may improve employee satisfaction. In contrast, creating a formal position to coordinate the work may do little for employees, despite the potential increase in CSR effectiveness and the increased visibility such positions provide to the firm. Thus, firms may have more latitude to improve their prosocial practices pertaining to CSR and employee satisfaction than they assume. What is needed is more knowledge about how they can do so. How firms manage their CSR programs can make a critical difference in the value they create for their employees, and through their employees the financial and social value firms ultimately create for all of their stakeholders.

CHAPTER 3:
**PLURALISTIC POSSIBILITIES: AN EMPIRICAL EXPLORATION OF FIRMS’
DESCRIBED VALUE ACTIVITIES AND COLLECTIVE STAKEHOLDER
OUTCOMES**

ABSTRACT

Despite decades of research on the relationship between firm financial value or social value and outcomes for individual groups of stakeholders, we know much less about the relationship between firms’ described activities toward financial and social value, together, and the well-being of stakeholders collectively. We know even less about how this relationship may have changed over time during a plausible shift in institutional logics toward a more pluralistic conception of firm value. Using a unique combination of datasets, including parsed word counts of financial and social value words from firms’ annual reports, shareholder performance data from Compustat, customer satisfaction ratings from the American Customer Satisfaction Index (ACSI), employee satisfaction ratings from Glassdoor, and community impact data from ASSET4, I find a positive relationship between collective stakeholder outcomes and firms’ descriptions of their activities toward both financial and social value, but only in more recent years following a plausible shift in institutional logics around firm value through which firms’ considerations of social value may be better supported. The correlations are robust to triangulation with different datasets and alternate operationalizations of key variables. However, future research will be needed to establish the causal nature of these tentative findings.

One of the most foundational purposes of the firm is to create value for stakeholders. Yet, different perspectives around what constitutes value and who is a legitimate stakeholder have resulted in the juxtaposition of financial and social value for either shareholders or a broader collective of stakeholders including customers, employees, and the community as well (Donaldson & Walsh, 2015; Jensen, 2001; Parmar et al., 2010). Nevertheless, recent theoretical advances have contributed to our understanding of how firms generate positive outcomes for their heterogeneous stakeholders (Bridoux, Coeurderoy, & Durand, 2011; Garcia-Castro & Aguilera, 2015). Such research has formed the foundation for a more pluralistic theory of firm value (Bridoux & Stoelhorst, 2014; Ioannou & Serafeim, 2015; Mitchell et al., 2016; Tantalo & Priem, 2014). Yet, this work has left open empirical questions with respect to how firms' orientations toward different conceptions of value, such as financial value and social value, relate to stakeholder well-being (Jones et al., 2016; Mitchell et al., 2016), particularly collective outcomes across multiple groups of stakeholders (Donaldson & Walsh, 2015; Garcia-Castro & Aguilera, 2015; Tantalo & Priem, 2014). Such questions are relevant in light of recent plausible shifts in the institutional logics toward a more pluralistic conception of firm value (Aguilera et al., 2007; Battilana & Lee, 2014; Campbell, 2007; Ioannou & Serafeim, 2015).

In this paper, I empirically examine the relationship between collective stakeholder outcomes and firms' descriptions of their activities regarding financial and social value amidst the recently shifting institutional landscape around value in firms. To facilitate this examination, I use a unique combination of longitudinal datasets operationalizing firms' reported descriptions of their activities relating to financial and social value, along with collective stakeholder outcomes across four primary stakeholder groups, including shareholders, customers, employees, and the community. These datasets include shareholder performance data from Compustat,

customer satisfaction ratings from the American Customer Satisfaction Index (ACSI), employee satisfaction ratings from Glassdoor, Inc., and community impact data from Thomson Reuters' ASSET4 ESG Ratings. To measure how each firm describes its activities toward financial and social value, I use parsed word counts of financial and social words from each firm's annual report as a percentage of total words within the annual report (Loughran & McDonald, 2011). Data from all five sources were obtained for 123 firms across six years (2008-2013).

Through this preliminary yet novel dataset, I investigate how a firm's described activities toward social value, financial value, and both interactively relate to collective outcomes for stakeholders. Through including a temporal dimension to account for the gradual yet plausible shift in institutional logics around firm value following the financial crisis (Battilana & Lee, 2014; Ioannou & Serafeim, 2015; Mitchell et al., 2016; Tantalo & Priem, 2014), I find a tentative yet interesting correlation—firms' described activities toward financial value and social value, interactively, are positively associated with collective stakeholder outcomes, but only in more recent years following the possible shift in firm value logics, which may have better supported firms consideration of social value. Disaggregating the stakeholder outcomes reveals that this pluralistic relationship is primarily driven by employees and the community.

Importantly, these correlations are exploratory and descriptive in nature. The results do not establish causality nor should they be used prescriptively by firms. Rather, these associations serve to connect the literatures on firm value and stakeholder management while empirically extending these predominantly theoretical bodies of research. I conclude with a call for more research to test the causality of these relationships and extend their generalizability.

VALUE

Despite its importance to theories of management, strategy, and organizations, the concept of value has evaded consistent definition (Donaldson & Walsh, 2015; Lepak et al., 2007). Much of this disagreement concerns the nature of value as either a monistic construct, commensurable into a single standard or metric (Jensen, 2001; Moore, 1903; Rawls, 1971), or a pluralistic construct with distinctly incommensurable components unrealizable through market mechanisms alone (Anderson, 1995; Beckert & Aspers, 2011; Walzer, 1983). For example, strategy scholars contend that the construct of value is comprised of both use value and exchange value, components that can be created and captured by firms and their stakeholders (Bowman & Ambrosini, 2000; Garcia-Castro & Aguilera, 2015; Priem, 2007). In practice, monistic financial construals of value capture have become the norm in firms and possibly the economy more broadly (Davis & Kim, 2015; Kaplan, 1984).

This value monism is not without reason or rationality. On the one hand, traditional economic theory asserts that when firms' activities are oriented toward maximizing financial value, they maximize welfare for all stakeholders (Jensen, 2000; Tirole, 2001). Empirical research on market orientation has found support for this claim (Narver & Slater, 1990; Zhou et al., 2008). Agency theorists have advanced concerns regarding managers' use of corporate resources for personal benefit (Jensen & Meckling, 1976), often under the guise of CSR (Atkinson & Galaskiewicz, 1988; Galaskiewicz, 1997). Even in the absence of managerial self-interest, the potential benefits from a pluralistic conception of value may be limited by tensions between the heterogeneous components of value and compliance issues by firms (Crane, Palazzo, Spence, & Matten, 2014). In practice, there are often tradeoffs in contexts where the same resources, such as employee time, are sought by multiple stakeholders, such as disparate

customers. Narrowing an organization's objective function to maximizing financial value seems reasonable in these contexts, particularly when scarcity (Hegtvedt, 1987), economic logic (Jensen, 2001; Jensen & Meckling, 1976), and the boundedly rational nature of human managers are considered (Cyert & March, 1963).

Nevertheless, there may be consequences for firms focused monistically on financial value. For example, managers that excessively focus on financial performance may inadvertently discount important nonfinancial considerations, such as intangibles (Kaplan, 1984) or meaningfulness (Podolny et al., 2004), given that financial performance metrics often capture only what can be measured objectively (Ittner & Larcker, 1998). Unduly focusing on financial performance metrics may also encourage short-termism (Kaplan, 1984), which not only decreases the long-term value created for stakeholders broadly, but paradoxically for shareholders specifically (Flammer & Bansal, 2017). For example, research has shown that firms with strong market orientations may yield lower levels of product innovation than firms with both strong market and entrepreneurship orientations (Atuahene-Gima & Ko, 2001). This is likely due in part to the necessity of considering the long-term for fostering optimal levels of innovation (Manso, 2011), both of which enhance the benefits from a firm's activities toward social value (Luo & Bhattacharya, 2006; Wang & Bansal, 2012).

These and other unintended consequences of firms' monistic focus on financial value, particularly leading up to the financial crisis (Davis & Kim, 2015; Dobbin & Jung, 2010), may have fueled a reintegration of non-market conceptions of value (i.e., "social value") such as CSR and CSP into management theory and practice (Harrison & Wicks, 2013; Wood, 2010). Proponents of social value contend that firms' attention toward constructs such as CSR, CSP, and other societal welfare-enhancing non-market activities maximizes both stakeholder welfare

and firm financial performance (Aguinis & Glavas, 2012; Battilana & Lee, 2014; Freeman, Wicks, & Parmar, 2004). Nevertheless, focusing monistically on social value activities at the expense of the financial could bring about the same dilemmas from financial value monism and the “separation thesis” admonished by stakeholder scholars (Freeman, 1994). On the contrary, stakeholder theory itself is rooted in strategic management (Freeman, 1984), and centers on the creation of both financial and social value for shareholders and a broader set of stakeholders, such as customers, employees, and the community (Mitchell et al., 2016; Parmar et al., 2010). Stakeholder scholars have recently asserted that such a pluralistic approach to value could be fundamental to firm performance and value creation itself (Bridoux et al., 2011; Mitchell et al., 2016; Tantalo & Priem, 2014).

COLLECTIVE STAKEHOLDER OUTCOMES

Despite normative and instrumental appeals for creating value for a broader collective of stakeholders, most research in strategy and management has been concerned with variants of shareholder value, such as stock price, return on assets, and Tobin’s Q, among others (Margolis & Walsh, 2003; Miller et al., 2013). However, management scholars have recently identified a need for more research investigating collective stakeholder value (Jones et al., 2016), defined as “the agglomeration of business participants’ benefits, net of any aversive business outcomes,” (Donaldson & Walsh, 2015:188). Although recent theoretical contributions have been made on this front (Bridoux et al., 2011; Mitchell et al., 2016), empirical research has been scarce. The difficulty of operationalizing a collective set of outcomes for multiple stakeholders has contributed to this dilemma, as evidenced by the frequent misalignment between multi-dimensional conceptualizations of firm performance and unidimensional operationalizations (Miller et al., 2013).

Although firms' orientations toward value may affect stakeholders in different ways, such differences may nevertheless yield net positive or net negative consequences for stakeholders when outcomes are considered in aggregate, and may even yield Pareto improvements where one or more stakeholders benefit without detriments to others (Jones et al., 2016). Such research is important in light of the interdependent nature of firm-stakeholder relationships (Bridoux et al., 2011; Parmar et al., 2010). For example, the assumption that a monistic financial value orientation significantly increases shareholder outcomes neglects how social outcomes in local and global communities can infuse meaning into otherwise mundane work and transactions, which may increase employee and customer satisfaction (Aguinis & Glavas, 2012; Luo & Bhattacharya, 2006; Rodell, 2013; Sen & Bhattacharya, 2001), and in turn, contribute to firms' financial performance and ultimately shareholder value (Cheng, Ioannou, & Serafeim, 2014; Godfrey, Merrill, & Hansen, 2009; Luo & Bhattacharya, 2006). The consideration of community and employee issues may also help mitigate risks, protecting shareholder value when these issues are institutionally legitimate (Godfrey et al., 2009). Nevertheless, financial considerations cannot be neglected. For example, customers' preferences around traditional market-oriented aspects of firms, such as price, may at times take precedence over aspects related to social value (Xia, Monroe, & Cox, 2004). Similarly, employees derive satisfaction from both extrinsic and intrinsic aspects of their jobs (Bode & Singh, 2018; Burbano, 2016; Grandey, Chi, & Diamond, 2013). As such, how firms attention and activities toward financial and social value should not be conceptualized as a juxtaposition of the two, but rather as an orthogonal continuum toward each distinctly.

Firms' attention and activities toward financial value need not be incompatible with social value. For example, both manifest through philanthropic donations (Sen, Bhattacharya, &

Korschun, 2006) and managing to CSR or CSP ratings that encompass both social and economic impacts (Wood, 2010). Financial profits can result from traditional economic strategies (Brandenburger & Stuart, 1996) and through social responsibility efforts (Khan, Serafeim, & Yoon, 2016). However, the degree to which this compatibility benefits stakeholders may depend on the institutional logics around value—logics that may have recently shifted closer to a more pluralistic conception of the value firms create (Battilana & Lee, 2014; Ioannou & Serafeim, 2015; Khan et al., 2016).

TOWARD PLURALISTIC VALUE: A SHIFT IN INSTITUTIONAL LOGICS

To some, the notion that firm value pluralism may be positively related to outcomes for stakeholders collectively may seem almost tautological. However, firms' orientations toward social value have not always been considered legitimate (Ioannou & Serafeim, 2015). Historically, under an agency view of the firm, strategies and practices related to social value such as CSR initiatives were regarded as serving the interests of managers rather than shareholders or other legitimate stakeholders (Galaskiewicz, 1997). This lack of legitimacy likely limited firms' abilities to create value through considering social value alongside financial value, as legitimacy confers many benefits to firms essential for effective value creation, such as positive reputation and external evaluations (Ioannou & Serafeim, 2015). However, over time, the support for firms' monistic orientation toward financial value seems to have given way to the encompassment of social value as well (Eccles, Ioannou, & Serafeim, 2014).

There is reason to believe that this temporal divergence may be a manifestation of a shift in institutional logics (Friedland & Alford, 1991; Greenwood, Raynard, Kodeih, Micelotta, & Lounsbury, 2011), “the set of material practices and symbolic systems including assumptions, values, and beliefs by which individuals and organizations provide meaning to their daily

activity, organize time and space, and reproduce their lives and experiences” (Thornton, Ocasio, & Lounsbury, 2012:1). In particular, institutional logics have played a central role in shaping society’s conceptualizations of value, and have even changed what stakeholders deem worthy of valuing (Bitektine, 2011; Lankoski, Smith, & Van Wassenhove, 2016). For example, analysts’ inclusion of CSR into their ratings criteria and investors’ inclusion of material sustainability information into their investing considerations have likely been shaped by shifts in institutional logics toward a more pluralistic construal of firm value (Ioannou & Serafeim, 2015; Khan et al., 2016). Pluralistic logics can represent a blending or even collapse of certain logics (Greenwood et al., 2011; Thornton et al., 2012); however, such logics can also coexist in productive tension (Battilana, Sengul, Pache, & Model, 2015; Dunn & Jones, 2010; Murray, 2010). Although firms may be reluctant to adopt conflicting practices around such logics, their adoption is often driven by the “transformation from consistent to conflicting environmental demands,” (D'Aunno, Sutton, & Price, 1991; Greenwood et al., 2011:325). For example, pluralistic institutional logics have been shown to “reinforce and enable each other” with respect to organizational design and practices around CSR in Fortune 500 firms (Glynn & Raffaelli, 2013:175). Thus, it need not be the case that a market logic of value be blended with or subsumed by a welfare logic of value; rather, the two distinct logics may exist simultaneously and be positively related to shareholder and broader stakeholder performance.

The plausible progression of firm value logics toward encompassing social issues has been facilitated by both rational-technical and social forces. Innovations in social valuation, such as new techniques for objectively measuring the social value firms produce, have enabled firms, policy makers, and stakeholders to better assess firms’ progress on social issues and CSP (Wood, 2010). Such technical valuation innovations were equally crucial for the advancement of

financial accounting centuries ago (Sombart, 1953; Weber, 1956). Rhetorical social forces would have also played a role in a shift in value logics (Carruthers & Espeland, 1991; Suddaby & Greenwood, 2005), particularly forces from actors external to the firm with heterogeneous motives (Aguilera et al., 2007; Campbell, 2007). For example, higher education institutions, particularly economics and business schools, have greatly influenced the legitimation process of firm value (Ferraro, Pfeffer, & Sutton, 2005; Khurana, 2010). The recent increase in research and teaching on CSR, stakeholder management, base-of-the-pyramid strategies, social enterprise, and other topics that emphasize a more socially-oriented welfare logic alongside the preexisting economic logic could indicate a transition toward a more pluralistic approach to firm value (Starik, Rands, Marcus, & Clark, 2010). In addition, to these normative isomorphic processes (DiMaggio & Powell, 1983), coercive isomorphic pressures from regulators may have reinforced the legitimacy of social value and limited firms' propensity to maximize financial value at the expense of social value (Grewal, Riedl, & Serafeim, 2018; Short & Toffel, 2010).

An important caveat is that shifts in institutional logics typically occur gradually, attaining legitimacy as the new logics solidify, are adopted by a larger number of participants, and eventually become taken for granted (Berger and Luckmann 1967; Espeland and Stevens 1998). Although the shift toward a more pluralistic logic of firm value has yet to be taken for granted, the temporal trend over which this shift has occurred may have steepened following the financial crisis of 2008-2009 (García-Benau, Sierra-Garcia, & Zorio, 2013; Jacob, 2012). The crisis triggered significant public pressure around firms' consideration of social value. Such environmental demands could have prompted firms' adoption of practices around the then-conflicting logics of both financial and social value (D'Aunno et al., 1991). The founding, growth, and popularity of organizations such as the Sustainability Accounting Standards Board

(SASB) and the Global Impact Investing Network (GIIN), coupled with the rapid growth of the impact investing industry and a political climate favoring the inclusion of social issues, could have steepened this shift in logics away from a monistic financial construal of firm value toward a more pluralistic construal of value encompassing both economic and social welfare (Campbell, 2007; Grewal et al., 2018; Khan et al., 2016). Taken together, this potential shift in logics could help facilitate a positive relationship between firms' pluralistic value activities and collective stakeholder outcomes. However, research to date has been limited in its capacity to explore such relationships due to a lack of empirical data.

EXPLORATORY METHODOLOGY

Recent advancements in stakeholder outcomes data and textual analysis using machine learning may provide a novel means through which to explore these constructs and potential relationships. In this study, a unique combination of datasets was compiled to measure outcomes for firms' shareholders, customers, employees, and communities, along with firms' descriptions of their activities pertaining to financial and social value via counts of financially oriented and socially oriented words within firms' annual reports filed publicly with the U.S. Securities and Exchange Commission (SEC). To operationalize collective stakeholder outcomes, data was compiled and merged from four independent sources. Data on shareholder returns, measured via Tobin's Q (firm market value of assets / book value of assets), was collected from Compustat for 4,337 firms from 1998-2013. Customer satisfaction data, measured on a 100-point scale, was collected from the American Customer Satisfaction Index (ACSI) for 160 firms from 1995-2013. The ACSI surveys approximately 250,000 customers annually about the products and services most used across more than 380 firms. The resulting customer satisfaction scores have been shown to have high construct validity and have been used extensively in research published in

top marketing and management journals (Anderson, Fornell, & Mazvancheryl, 2004)¹⁷. Employee satisfaction data, measured as the average ratings of individual employees of each firm on a 1-5 scale, was collected from Glassdoor, Inc. for 2,105 firms from 2008-2013. Prior research has found that these ratings positively predict firm financial performance in terms of both financial statement line items, such as revenue and gross profit (Hales, Moon, & Swenson, 2018), and firm market value (Symitsi et al., 2018), adding to the construct validity and usefulness of the data for management research (Teoh, 2018). Although a firm's current cumulative average employee satisfaction rating is publicly available (<https://www.glassdoor.com/Reviews>), the longitudinal data for all years, which remains proprietary, was obtained directly from Glassdoor's Economic Research department.

Data on firms' impacts on their communities was collected from Thomson Reuters ASSET4 ratings (Cheng et al., 2014; Eccles et al., 2014), which provides environmental, social, and governance (ESG) performance data for over 4,200 firms globally, including U.S. firms in the Russell 1000 index since 2002. ASSET4 ratings cover over 750 ESG considerations and are aggregated into four pillars, including environmental, social, corporate governance, and economic performance. Performance scores for the economic pillar are excluded, given its overlap with shareholder value. Scores for corporate governance are included, as it connects internal and external stakeholders in ways that may not manifest through a single stakeholder outcome (e.g., satisfaction or profit) and is often of normative importance to scholars and stakeholders. Analyses were also conducted using ASSET4 scores excluding governance and analyses including economic performance since it includes shareholder-relevant impacts not always encompassed by Tobin's Q (e.g., shareholder and client loyalty). For additional rigor and

¹⁷ This data is publicly available: <http://www.theacsi.org/acsi-benchmarks/benchmarks-by-company>

triangulation, analyses were also conducted substituting ASSET4 scores with variants of Kinder, Lydenberg, Domini (KLD) social ratings to operationalize community outcomes (Ioannou & Serafeim, 2015; Waddock & Graves, 1997), as detailed in the robustness tests section.

To calculate collective stakeholder outcomes, I computed composite standardized z-scores for each firm in each year based on the firm's outcomes for each stakeholder, including shareholders, customers, employees, and the community. Z-scores were computed for each year in which overlapping data was available across all four stakeholders (2008-2013). First, each raw stakeholder outcome score (e.g., customer satisfaction) for each firm (i) in each year (t) was used to calculate a z-score using the following formula:

$$Z_{it} = \frac{RawScore_{it} - \mu_t}{\sigma_t},$$

where $RawScore_{it}$ is the firm-year stakeholder outcome (e.g., a customer satisfaction score of 75 out of 100 in 2010), μ_t is the sample mean in year t , and σ_t is the standard deviation of the raw stakeholder outcome scores for all firms in year t . Next, a firm's collective stakeholder outcome, CSO_{it} , was computed by summing the four stakeholder outcome z-scores:

$$CSO_{it} = Z_{shr,it} + Z_{cus,it} + Z_{emp,it} + Z_{com,it}$$

To measure firms' descriptions of their activities toward financial value and social value, I used the textual dataset of parsed word counts for every publicly traded U.S. firm's 10-K, made publicly available by Loughran and McDonald (2011), computing the percentage of financial value and social value words in the annual report for each firm in each year of the sample. The population of words counted in the dataset is from an 85,000-word master dictionary (the LM master dictionary), derived from English word lists from 12 source dictionaries and updated to

include terms commonly found in 10-K filings.¹⁸ The dataset has been used rigorously for textual analysis in accounting and finance research (Bodnaruk, Loughran, & McDonald, 2015; Loughran & McDonald, 2014, 2016). Although use of only the Management's Discussion and Analysis (MD&A) section of the annual report was considered, research indicates that the MD&A has become more standardized over time (Brown & Tucker, 2011) and analyses of the MD&A alone produce no discernable improvement in textual measurements such as tone relative to perusal of the entire 10-K (Loughran & McDonald, 2016). In contrast, use of the entire annual report may better capture management's descriptions of the financial and social value activities undertaken by the firm, for example, complex financial instruments or equity structures disclosed in the notes to the financial statements, and environmentally friendly or ethical product sourcing in the business overview section of the annual report. Nevertheless, as a robustness test, variables for firms' described activities toward financial value and social value were also computed using the percentage of financial value words and social value words contained solely within the MD&A. An important limitation to both approaches, however, is their inability to reliably measure firms' actual activities pertaining to financial value or social value. Rather, the variables operationalized by these textual analyses are confined to firms' descriptions of their activities pertaining to financial and social value, not their actual activities.

Two lists of words were compiled to measure firms' described activities toward financial value and social value, respectively. The financial word list consisted of 2,327 financial words from the LM master dictionary. Each of the LM dictionary's 85,000 words was assessed for inclusion or exclusion using a combination of the author's previous experience in capital markets

¹⁸ Complete documentation of the 10-K scraping and word count parsing process can be found in the "10-X File Summaries" section of Bill McDonald's "Word Lists" page: http://www3.nd.edu/~mcdonald/Word_Lists.html; For more information about the LM master dictionary, refer to: <http://wordlist.aspell.net/12dicts-readme/>

accounting and reporting, as well as publicly available financial text guides such as the NASDAQ Glossary of Financial and Investing terms¹⁹. Care was taken to select words that were unambiguously related to financial value, as opposed to homographs or homonyms²⁰. The number of words in this list, 2,327, was comparable to other lists used in similar financial textual analyses (Loughran & McDonald, 2011). Counts of each word were then retrieved from the Loughran and McDonald (2011) dataset for each firm's 10-K for each year. These word counts were summed for each firm-year, then divided by the total number of words in that firm's 10-K in that year to compute the percentage of financial words in each annual report. For robustness, analyses using this list of financial words were supplemented with a short list of 131 financial words used in prior textual accounting research by Matsumoto, Pronk, and Roelofsens (2011).²¹

A word list was also compiled to measure firms' described activities toward social value. Given the absence of word lists pertinent to social value, care was taken to compile a word list that maximized construct validity (i.e., including words relevant to the construct of social value) while minimizing potential ambiguity (i.e., excluding words with multiple meanings, such as homonyms). Although no such word list was available from prior research, such a list was constructed in a manner similar to the financial word list, reading through each word in the 85,000-word LM dictionary and including a word if it was both representative of and unambiguously related to the construct of social value. 58 words were identified as most aptly and unambiguously representing social value, such as "wellbeing," "humanitarian," "ethical," and "environmentalism." These 58 words comprised the main social value word list.

¹⁹ The complete NASDAQ glossary can be found here: <http://www.nasdaq.com/investing/glossary/>

²⁰ Exceptions include words such as "hedge," which although also a homograph of a bush or shrub, would almost always be used for its financial meaning in a 10-K filing.

²¹ Six of their original 137 words were abbreviations not contained within the LM master dictionary, and were thus excluded from the analyses. These words were CAPEX, EBIT, EBITDA, EPS, ROA, and ROI.

Although the original 58-word social value list sought to balance construct validity with unambiguity, trade-offs were inevitable given the nature of social value terminology (e.g., “green” as environmentally friendly or a color). To address both of these aspects, two alternative social value word lists were compiled. First, a word audit was conducted to identify words in the original 58-word social value list that could contain potential ambiguity despite their strong relevance to the social value construct. For each word, sentences containing that word were pulled from a random sample of 10 annual reports, with the probability of each report’s selection weighted by its number of uses of that word as a percentage of that word’s total use across all annual reports in the sample. The author and a research assistant then separately read each set of 10 sentences for each word and dichotomously coded each word’s use to indicate either no alternative usage (i.e., the word was used only in the context of social value), or some alternative usage. Any word coded by either the author or the research assistant as containing some ambiguity was dropped. Next, using a machine learning algorithm, all words from the Global Reporting Initiative’s (GRI’s) 2016 Consolidated Set of Sustainability Reporting Standards, an already-existing source of social value words, were scraped and compiled into a list of words related to social value. The author and the research assistant then separately read through this list of GRI social value words, coding each as either ambiguous or not, and dropping any word coded as ambiguous (e.g., homonyms). Any words from the audit that did not overlap with this GRI list were dropped, leaving a short list of 21 words unambiguously representing social value. Finally, a long list of social value words was compiled by including any unique word from the LM dictionary and the GRI standards with a primary meaning related to social value. A long list of 308 social value words was compiled from these sources. Both short and long social value word lists were used to replicate the results.

Lastly, a series of control variables were added to address alternative explanations. For example, perhaps firms describe their activities toward financial value more strongly in years in which they have higher (or lower) revenues, profits, or cash to manage and expend. It could also be that larger firms, such as those with higher revenues or more employees, are simply better able to manage heterogeneous stakeholders or perhaps are more constrained and thus fail to manage stakeholders successfully. As such, I control for firms' total revenue, number of employees, and net cash flows from operating, investing, and financing activities.

EXPLORATORY RESULTS AND ANALYSES

To gain a descriptive understanding of the collective stakeholder outcomes score, a six-year average score was computed for each firm in the sample. This average score was then inputted into a table alongside each firm's name, sorted ascendingly by average score, and inspected for whether the firms in the top, middle, and bottom 33rd percentiles of the sample, as a whole, aligned with general sentiment and media attention regarding these firms' positive or negative impact on stakeholders. This list of average collective stakeholder outcomes scores for each firm in the sample is presented in Table 3.1. Overall, the collective stakeholder value scores were in line with expectations, with firms better known for positive impacts on stakeholders, such as Google, Apple, and Starbucks, appearing in the top 10.

Table 3.1: Collective Stakeholder Outcome Scores by Firm, Averaged Across Years (2008-2013)

Top 33rd Percentile			Middle 33rd Percentile			Bottom 33rd Percentile		
	Firm Name	Score		Firm Name	Score		Firm Name	Score
1	Colgate-Palmolive Company	5.79	42	The Gap, Inc.	0.94	83	Reynolds American, Inc.	-1.10
2	The Hershey Company	4.26	43	Dr Pepper Snapple Group Inc.	0.85	84	JPMorgan Chase & Co.	-1.11
3	Google Inc.	4.14	44	Dominion Resources, Inc.	0.83	85	Wells Fargo & Company	-1.17
4	Apple, Inc.	4.08	45	Hanesbrands, Inc.	0.74	86	Sprint Corporation	-1.20
5	The Clorox Company	3.86	46	General Motors Co.	0.66	87	FirstEnergy Corp.	-1.22
6	General Mills, Inc.	3.58	47	Target Corporation	0.64	88	Ameren Corporation	-1.24
7	Starbucks Corporation	3.54	48	The Walt Disney Company	0.56	89	PG&E Corporation	-1.24
8	Nike, Inc.	3.38	49	American Electric Power Co.	0.52	90	DIRECTV Group, Inc.	-1.26
9	Procter & Gamble Company	3.13	50	Staples, Inc.	0.46	91	Loews Corporation	-1.31
10	Campbell Soup Company	2.90	51	McDonald's Corporation	0.35	92	Safeway, Inc.	-1.37
11	United Parcel Service, Inc.	2.67	52	TJX Companies, Inc.	0.34	93	AT&T, Inc.	-1.44
12	Southwest Airlines Co.	2.62	53	Motorola Solutions, Inc.	0.32	94	Barnes & Noble, Inc.	-1.51
13	PepsiCo, Inc.	2.56	54	Xcel Energy Inc.	0.29	95	Macy's, Inc.	-1.70
14	Coca-Cola Company	2.55	55	Dunkin' Brands Group, Inc.	0.27	96	New York Times Co.	-1.76
15	LinkedIn Corporation	2.55	56	Energy Corporation	0.25	97	Citigroup, Inc.	-1.79
16	VF Corporation	2.38	57	Kroger Co.	0.18	98	Charles Schwab Corp.	-1.79
17	Marriott International, Inc.	2.34	58	Exelon Corporation	0.16	99	Bank of America Corp.	-1.97
18	Microsoft Corporation	2.31	59	Best Buy Company, Inc.	0.09	100	Pepco Holdings, Inc.	-2.18
19	FedEx Corporation	2.29	60	Netflix, Inc.	0.00	101	Northeast Utilities	-2.22
20	Whole Foods Market, Inc.	2.22	61	CenterPoint Energy, Inc.	-0.02	102	Continental Airlines, Inc.	-2.23
21	Molson Coors Brewing Co.	2.21	62	Prudential Financial, Inc.	-0.03	103	WellPoint, Inc.	-2.23
22	Nordstrom, Inc.	2.20	63	The Allstate Corporation	-0.04	104	Yahoo! Inc.	-2.30
23	Amazon.com, Inc.	2.12	64	eBay, Inc.	-0.04	105	Sears Holdings Corp.	-2.32
24	Kellogg Company	2.11	65	Edison International	-0.05	106	SuperValu, Inc.	-2.46
25	ConAgra Foods, Inc.	2.08	66	Kohl's Corporation	-0.13	107	Delta Air Lines, Inc.	-2.64
26	Public Service Enterprise Group	1.98	67	The Progressive Corporation	-0.25	108	Aetna, Inc.	-2.73
27	Yum! Brands, Inc.	1.82	68	J.C. Penney Company, Inc.	-0.38	109	TD Ameritrade Holding	-2.76
28	Sempra Energy	1.70	69	NextEra Energy, Inc.	-0.40	110	Wyndham Worldwide	-2.80
29	Mondelez International, Inc.	1.70	70	Office Depot, Inc.	-0.41	111	Expedia, Inc.	-2.84
30	Priceline.com, Inc.	1.69	71	Wal-Mart Stores, Inc.	-0.47	112	Dollar General Corp.	-2.90
31	Costco Wholesale Corp.	1.65	72	Tyson Foods, Inc.	-0.47	113	The Wendy's Company	-2.98
32	Ford Motor Company	1.65	73	The Home Depot, Inc.	-0.55	114	UnitedHealth Group, Inc.	-3.20
33	PPL Corporation	1.55	74	NiSource, Inc.	-0.56	115	Rite Aid Corporation	-3.22
34	Duke Energy Corporation	1.54	75	Atmos Energy Corporation	-0.59	116	E*Trade Financial Corp.	-3.57
35	General Electric Company	1.43	76	CVS Caremark Corporation	-0.71	117	American Airlines Group	-3.57
36	Whirlpool Corporation	1.26	77	Verizon Communications	-0.73	118	Comcast Corporation	-3.65
37	Altria Group, Inc.	1.25	78	Starwood Hotels & Resorts	-0.84	119	CMS Energy Corporation	-3.68
38	Southern Company	1.21	79	DTE Energy Company	-0.86	120	CenturyTel, Inc.	-3.95
39	Darden Restaurants, Inc.	1.16	80	Brinker International, Inc.	-1.01	121	United Continental Holding	-4.23
40	Choice Hotels International	1.09	81	MetLife, Inc.	-1.06	122	Dillard's, Inc.	-4.55
41	Facebook, Inc.	1.01	82	Consolidated Edison, Inc.	-1.08	123	Dish Network Corporation	-5.84

Summary statistics for all variables of interest, including means, standard deviations, and pair-wise correlations, are presented in Table 3.2. The correlations between stakeholder outcomes seem to be in line with a stakeholder synergy perspective, as suggested by the statistically significant correlation coefficients between each pair of stakeholder outcomes ($p < .001$). For example, I find significant positive associations between community ESG outcomes and employee satisfaction ($r = .22; p < .001$) and customer satisfaction ($r = .17; p < .001$), significant positive associations between employee satisfaction and customer satisfaction ($r = .19; p < .001$) and shareholder value measured via Tobin's Q ($r = .10; p = .007$), and significant positive associations between customer satisfaction and shareholder value ($r = .20; p < .001$). Ordinary Least Squares (OLS) panel regression with firm and year fixed effects and robust standard errors clustered at the firm level yielded similar results.

However, these correlations cannot be interpreted as any form of evidence of a causal relationship, nor can the fixed effects regressions used in the following sections. The purpose of this study was to demonstrate the empirical possibility of analyzing both individual and collective stakeholder outcomes and their relationships with how firms describe their activities. Future research will be needed to assess the causal nature of any the relationships identified in this or the following sections.

Exploratory Results

To explore the dataset and correlations further, OLS panel regressions with firm and year fixed effects and robust standard errors clustered at the firm level were conducted to measure the association between collective stakeholder outcomes and a three-way interaction between (a) the percentage of financial value words in firms' annual reports, (b) the percentage of social value words in firms' annual reports, and (c) a linearly increasing time trend representing the shift in logics toward pluralistic value. Firms' revenue, number of employees, and cash flows were included as control variables. Table 3.3 presents these exploratory results. Per Model 3, the potential three-way interaction was statistically significant ($\beta = 9,840.80$; $p = .002$), as was the model overall $F(16,122) = 3.00$, $p < .001$.

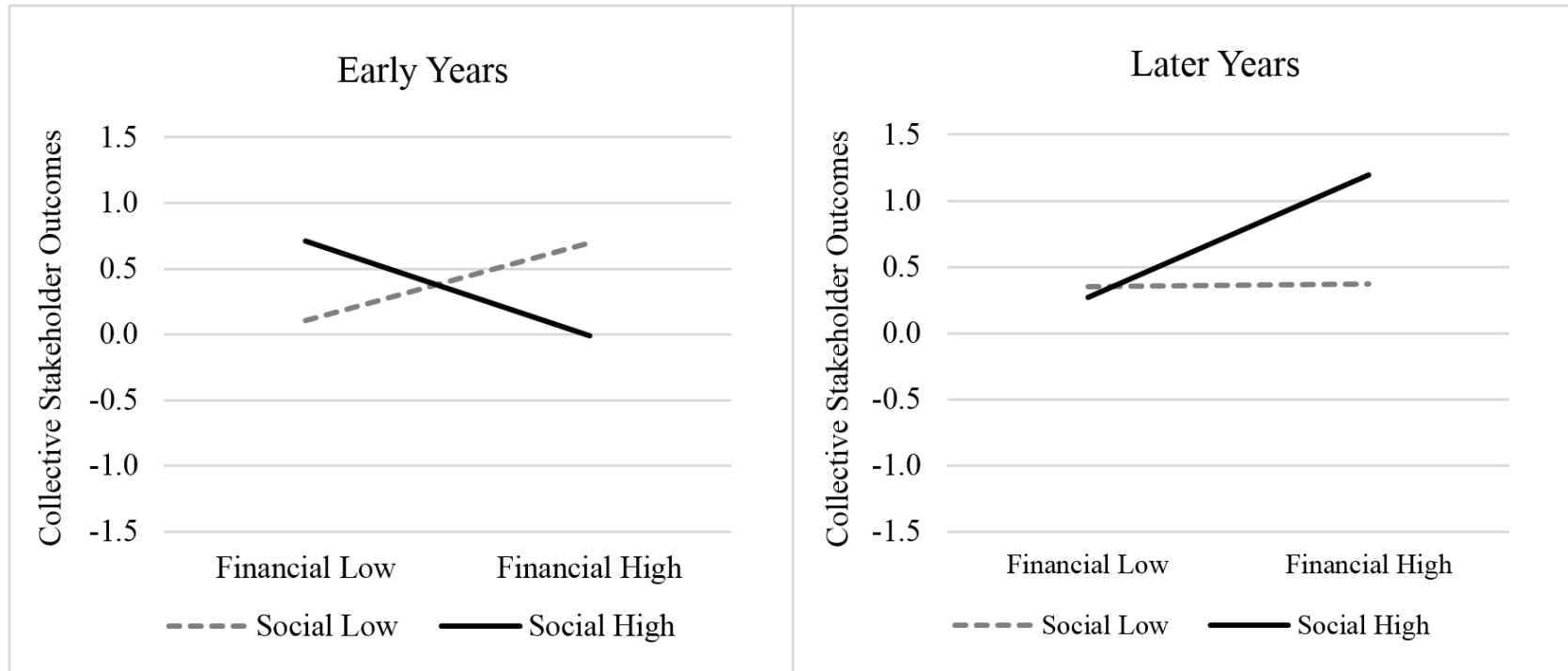
Table 3.3: OLS Panel Regressions of Collective Stakeholder Outcomes on Firms' Described Financial Value and Social Value Activities over Time

VARIABLES	Model 1: Base Model	Model 2: Size Ctrl	Model 3: FullCtrls	Model 4: Fin-Short	Model 5: Soc-Short	Model 6: Soc-Long	Model 7: MD&A	Model 8: KLD
% Financial words	23.99* (9.75)	24.14* (9.56)	26.65** (9.54)	44.19** (16.14)	11.74† (6.06)	47.12* (18.08)	1.65 (1.84)	27.36** (9.77)
% Social words	4,476.79** (1,672.16)	4,442.77** (1,658.68)	4,658.55** (1,659.07)	3,460.11** (1,249.76)	5,025.78* (2,214.02)	642.78* (245.69)	783.82** (249.63)	3,741.51* (1,492.65)
% Financial words x % social words	-36,606.15* (14,710.56)	-36,152.98* (14,593.98)	-38,065.47* (14,679.14)	-57,413.08* (23,080.11)	-39,267.47* (18,878.60)	-5,322.86* (2,275.44)	-2,230.26*** (467.32)	-34,336.34** (12,540.69)
Year trend	0.64** (0.24)	0.68** (0.24)	0.70** (0.23)	0.51** (0.19)	0.33* (0.16)	1.16* (0.47)	0.12 (0.08)	0.41 (0.34)
% Financial words x year trend	-5.53** (1.93)	-5.68** (1.90)	-5.87** (1.90)	-8.60** (3.27)	-2.54† (1.33)	-10.59** (3.97)	-0.35 (0.43)	-4.44 (2.73)
% Social words x year trend	-1,101.68** (341.87)	-1,104.04** (339.42)	-1,127.38** (340.60)	-749.05** (260.12)	-1,329.22** (495.50)	-152.47** (54.85)	-190.35** (70.65)	-667.21† (368.59)
% Financial words x % social words x year trend	9,751.24** (3,035.30)	9,679.48** (3,007.94)	9,840.80** (3,040.85)	13,320.87** (4,831.38)	11,111.26* (4,369.15)	1,420.73** (521.49)	511.91*** (148.52)	7,152.69* (3,194.82)
Revenue		-6.96* (2.70)	-11.87** (3.87)	-12.12** (3.99)	-13.35** (4.08)	-11.36*** (3.28)	-14.86*** (3.89)	-11.19 (7.04)
Employees			5.32* (2.66)	5.48* (2.64)	5.62* (2.52)	4.67† (2.53)	5.37* (2.37)	3.65 (4.96)
Operating cash flows			4.26 (4.77)	4.53 (4.95)	4.46 (5.27)	2.28 (5.24)	4.20 (5.02)	2.35 (4.44)
Investing cash flows			0.67 (5.02)	1.34 (5.42)	0.82 (5.71)	-1.47 (5.81)	0.43 (5.82)	2.95 (4.59)
Financing cash flows			3.69 (4.92)	4.28 (5.19)	3.29 (5.53)	1.07 (5.62)	2.25 (5.41)	3.11 (4.43)
Constant	-3.04** (1.15)	-2.86* (1.13)	-3.59** (1.13)	-2.94** (0.91)	-1.79* (0.72)	-6.00** (2.10)	-0.59 (0.36)	-3.05* (1.18)
Observations	658	658	658	658	658	658	660	696
Number of Firms	123	123	123	123	123	123	123	130
Firm FE	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES
F-statistic	2.080*	2.775**	2.999***	2.323**	2.257**	2.757**	13.25***	1.477
R-squared (within)	0.027	0.031	0.040	0.034	0.035	0.038	0.050	0.037

All models use collective stakeholder outcomes as the dependent variable, and include firm and year fixed effects. Revenue and cash flows reported in billions, then multiplied by 10^3 . Number of employees reported in thousands. Robust standard errors in parentheses. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.1$

To aid interpretation of this preliminary three-way interaction, Figure 3.1 graphically presents the temporal change in the simple two-way interaction between financial and social value orientations. Per the left panel of Figure 3.1, higher levels of collective stakeholder outcomes seem to be associated with either higher degrees of financial value orientation or higher degrees of social value orientation separately, but not both interactively. However, as illustrated in the right panel, in later years plausibly characterized by a gradual shift in institutional logics of firm value from monistic toward pluralistic, higher levels of collective stakeholder outcomes seem to be associated with both higher degrees of financial and social value orientations in combination.

Figure 3.1: Interaction of Firms' Financial and Social Value Orientation with Time Trend (Dichotomized)



Note: The graphs show the change in interaction between firms' orientations toward financial value and social value, operationalized via percentages of financial and social words in the annual report, across earlier years in which institutional logics supporting a pluralistic orientation toward value were likely still nascent (e.g., 2008) and later years in which such logics had possibly developed more fully (e.g., 2013). High and low financial value and social value orientations are presented as +/- 1 standard deviation of the mean percentage of financial and social word counts in the annual report, respectively.

To determine whether a fixed effects or random effects model would more appropriately fit the data, a Hausman (1978) test was conducted. Fixed effects regression models control for between-firm variation, enabling examination of within-firm associations while holding constant firm-specific considerations. The drawback is that between-firm variation cannot be examined through these models. In contrast, random effects regression models facilitate the examination of both within-firm and between-firm variation. The results of the Hausman test revealed a statistically significant difference between the two models, $\chi^2(5) = 12.68, p = 0.027$, suggesting that a fixed effects model is consistent and more efficient. As a robustness test the same OLS regression analyses were conducted using a random effects specification to evaluate the combined between-firm and within-firm effects. As illustrated in Table 3.4, Model 1, the results maintain significance, consistent with the results from the fixed effects model, in Model 2.

Table 3.4: Hybrid Regressions of Collective Stakeholder Outcomes on Firms' Described Activities Toward Financial Value and Social Value, over Time

VARIABLES	Model 1: RE Model	Model 2: FE Model	VARIABLES	Model 3: Hybrid Model
% Financial words	25.12* (10.27)	26.65** (9.54)	Mean % financial words	16.09 (113.00)
% Social words	4,483.94** (1,534.66)	4,658.55** (1,659.07)	Mean % social words	-16,583.23 (13,755.00)
% Financial words x % social words	-35,300.07** (13,312.06)	-38,065.47* (14,679.14)	Mean % financial words x % social words	170,158.13 (126,995.41)
Year trend	0.69** (0.26)	0.70** (0.23)	Mean year trend	1.33 (3.26)
% Financial words x year trend	-5.89** (2.24)	-5.87** (1.90)	Mean % financial words x year trend	-12.28 (31.09)
% Social words x year trend	-1,107.95** (342.99)	-1,127.38** (340.60)	Mean % social words x year trend	3,142.35 (3,604.07)
% Financial words x % social words	9,715.84** (3,019.65)	9,840.80** (3,040.85)	Mean % financial words x % social words	-30,862.40 (33,752.27)
x year trend			x year trend	
Revenue	-7.46 (4.66)	-11.87** (3.87)	Deviation % financial words	26.69* (10.46)
Employees	1.95 (1.25)	5.32* (2.66)	Deviation % social words	4,668.68** (1,552.06)
Operating cash flows	3.15 (8.92)	4.26 (4.77)	Deviation % financial words x % social words	-38,162.55** (13,433.59)
Investing cash flows	-0.78 (8.94)	0.67 (5.02)	Deviation year trend	0.70** (0.26)
Financing cash flows	2.27 (9.55)	3.69 (4.92)	Deviation % financial words x year trend	-5.89** (2.23)
Constant	-3.31** (1.21)	-3.59** (1.13)	Deviation % social words x year trend	-1,130.66*** (342.47)
			Deviation % financial words x % social words	9,871.75** (3,015.30)
			x year trend	
			Mean control variables	Suppressed
			Deviation control variables	Suppressed
			Constant	-8.376 (13.00)
Observations	658	658	Observations	654
Number of Firms	123	123	Number of Firms	122
Firm FE	NO	YES	Firm FE	No
Year FE	YES	YES	Year FE	YES
Wald- χ^2 / F-statistic	22.27	2.999***	Wald- χ^2	38.09†
R-squared (within)	0.037	0.040	R-squared (within)	0.040

All models use collective stakeholder outcomes as the dependent variable, and include firm and year fixed effects. Revenue and cash flows reported in billions, then multiplied by 10^3 . Number of employees reported in thousands. Robust standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.05, † p<0.1

Hybrid Model

To understand whether the exploratory association identified between collective stakeholder outcomes and the interaction of firms' financial value orientations, social value orientations, and the linear time trend is driven more by between-firm or within-firm variation, regressions following Allison's (2005) hybrid approach were conducted. In hybrid regression analyses, the explanatory variables are each bifurcated into two variables, one representing the group mean ("mean x_i "), and one group-mean centered variable ($x_{it} - x_i$, "deviation x_i "), (Certo, Withers, & Semadeni, 2017). Thus, a hybrid model uses random effects regression, separating within-firm and between-firm variance, but enables the identification of which type of variance drives the results. The coefficients of the mean variables represent between-firm estimates and the coefficients of mean-centered variables represent within-firm estimates. These exploratory results, presented in Table 3.4, Model 3, show that the coefficients and significance values of the mean-centered variables mirror those of the fixed effects model. No such significance was identified for the group mean variables, suggesting that the preliminary associations identified would be driven by within-firm variation—i.e., changes over time due to the shift toward pluralistic value logics—not between-firm variation.

Disaggregated Stakeholder Outcomes

Commensurating stakeholder outcomes without acknowledging each distinct stakeholder group's outcomes would make any theory of value pluralism incomplete. As such, the same set of OLS regressions with firm and year fixed effects and robust standard errors clustered at the firm level as in Table 3.3, Model 3 were conducted to explore which stakeholder groups, if any, were driving the correlations between collective stakeholder outcomes, financial and social value orientations, and the linear trend. The results, presented in Table 3.5, suggest two such groups of

stakeholders—employees and the community (Models 1a-2b). This is plausible given that the traditional focus on shareholder value likely benefited shareholders and customers to a greater extent than employees and community members. Nevertheless, customers and shareholders may have also benefited, or at least have not been harmed, from the potential shift in value logics toward encompassing social value, as suggested by the nonsignificant yet positive three-way interaction coefficient for unstandardized customer satisfaction ($\beta = 10,540$; $p = .142$) and the positive three-way interaction coefficient approaching significance for Tobin's Q ($\beta = 2,498.67$; $p = .066$). One of many interpretations of these results is that even when firms' orientations toward both financial and social value together increase alongside outcomes for some stakeholder groups (e.g., employees and the community) more than others (e.g., customers and shareholders), an interactive value orientation may nevertheless be associated with Pareto improvements for stakeholders collectively when supported by pluralistic value logics. However, given the correlational nature of these findings, future research will be needed to test their causal nature, if any, and address alternative explanations such as latent variables.

Table 3.5: OLS Panel Regressions of Stakeholder Outcomes (Unstandardized and Standardized), by Stakeholder Group

VARIABLES	Model 1a: Community	Model 1b: Com-Z	Model 2a: Employee	Model 2b: Emp-Z	Model 3a: Customer	Model 3b: Cus-Z	Model 4a: Shareholder	Model 4b: Shr-Z
% Financial words	539.56* (253.98)	9.24* (4.09)	9.82** (3.08)	16.94** (5.41)	0.29 (21.47)	-0.41 (3.56)	5.18 (4.09)	0.88 (3.43)
% Social words	58,507.63 (39,490.78)	1,048.19† (632.33)	1,643.69** (562.54)	2,912.04** (991.46)	444.60 (3,385.84)	44.48 (566.73)	1,494.55* (722.33)	653.85 (562.33)
% Financial words x % social words	-492,777.67 (332,211.91)	-8,828.20 (5,339.52)	-12,023.68* (4,813.98)	-21,901.65* (8,531.93)	-10,688.46 (30,018.50)	-1,681.30 (5,001.62)	-12,736.59† (6,742.71)	-5,654.32 (4,884.08)
Year trend	19.15** (7.02)	0.31** (0.11)	0.21** (0.08)	0.33* (0.14)	0.76 (0.56)	0.06 (0.10)	0.21† (0.12)	0.01 (0.11)
% Financial words x year trend	-145.39* (57.53)	-2.49** (0.92)	-1.39* (0.63)	-2.47* (1.13)	-4.45 (4.83)	-0.69 (0.81)	-1.16 (0.94)	-0.22 (0.82)
% Social words x year trend	-18,042.23* (8,388.96)	-314.86* (134.16)	-309.99* (118.73)	-560.47** (213.87)	-938.87 (756.82)	-159.20 (127.13)	-272.10† (149.22)	-92.84 (121.98)
% Financial words x % social words x year trend	154,849.42* (74,320.48)	2,703.69* (1,188.06)	2,273.72* (1,043.63)	4,350.26* (1,889.82)	10,540.34 (7,129.80)	1,827.74 (1,189.57)	2,498.67† (1,345.84)	959.11 (1,014.36)
Revenue	-37.02 (87.54)	-0.69 (1.40)	-1.86† (1.10)	-2.27 (2.52)	-23.63* (9.20)	-4.02* (1.61)	-4.53** (1.64)	-4.89** (1.55)
Employees	-26.80 (63.65)	-0.40 (1.05)	2.08*** (0.58)	3.99** (1.23)	7.10 (6.10)	1.32 (1.01)	2.69† (1.47)	0.41 (1.17)
Operating cash flows	76.91 (62.41)	1.55 (1.04)	2.54 (1.70)	3.97 (2.83)	-2.12 (11.10)	-0.48 (1.94)	-0.15 (1.09)	-0.78 (0.90)
Investing cash flows	2.31 (71.59)	0.25 (1.17)	2.17 (1.84)	3.24 (3.16)	-14.29 (10.73)	-2.57 (1.90)	1.04 (1.15)	-0.26 (1.12)
Financing cash flows	47.68 (72.47)	1.11 (1.17)	2.86 (2.02)	4.50 (3.49)	-6.26 (9.96)	-1.10 (1.71)	0.61 (1.30)	-0.83 (1.17)
Constant	144.51*** (29.90)	-1.12* (0.48)	1.71*** (0.36)	-2.61*** (0.65)	75.73*** (2.68)	0.10 (0.44)	0.74 (0.48)	0.05 (0.43)
Observations	658	658	658	658	658	658	658	658
Number of Firms	123	123	123	123	123	123	123	123
Firm FE	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES
F-statistic	2.115*	1.075	5.517***	2.770**	4.200***	1.516	4.023***	2.461**
R-squared (within)	0.071	0.044	0.078	0.034	0.140	0.048	0.104	0.037

Dependent variable for each model is the outcome for the stakeholder specified in the model title. Revenue and cash flows reported in billions, then multiplied by 10^3 . Number of employees reported in thousands. Robust standard errors in parentheses. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.1$

Robustness Tests

Winsorized and truncated variables. To test whether the associations were driven by outliers, financial and social value word percentages were winsorized at the 1st and 99th percentiles. The same set of OLS regressions with firm and year fixed effects and robust standard errors clustered at the firm level were conducted as in Table 3.3. The results all supported the three-way interaction between financial word percentages, social word percentages, and the linear time trend, including the main regressions replicating Model 3 of Table 3.3 ($\beta = 10,244.60$; $p = .002$). Results for each of the other models are available from the author upon request. As a robustness test for the dependent variable, all observations in the top and bottom 1% of the standardized z-scores for each stakeholder were dropped (50 observations total) and the same main regressions run again. The results remained significant ($\beta = 11,469.27$; $p < .001$).

Separate firm controls. Since firms' revenue, number of employees, and cash flows from operating, investing, and financing activities could be correlated due to their relevance to firm size, regressions were also conducted in which all three key explanatory variables and their interactions were included along with each control variable separately, in separate models. No significant differences were identified when only one control variable was included, for example, Model 2 of Table 3.3 in which only revenue was included ($\beta = 9,679.48$; $p = .002$). Results for each control variable are available from the author upon request.

Alternate ASSET4 scores. Although community ESG outcomes were operationalized via ASSET4 scores for the three pillars of environmental, social, and corporate governance performance, some have excluded the governance score to more closely measure societal benefits, as opposed to stakeholder benefits (Lys, Naughton, & Wang, 2015). Thus, as robustness tests, alternate community outcome scores were computed using only ASSET4's environmental

and social performance pillars, as well as using the total rating with all four pillars, including economic, before standardizing and including the measure in the collective stakeholder outcomes composite score. OLS regressions with firm and year fixed effects and robust standard errors clustered at the firm level were conducted in the same way as Table 3.3, Model 3. The results supported the three-way interaction between financial value words, social value words, and the linear trend toward pluralistic value logics for both the environmental-social community outcomes score ($\beta = 9,701.63$; $p = .002$) and the total ratings score ($\beta = 9,075.05$; $p = .003$). The size and significance of the other coefficients and the model overall remained practically the same. The full table of statistics is available from the author upon request.

Alternate word lists for financial and social value. To mitigate the possibility that the results were driven by idiosyncrasies in the financial value or social value word lists, the same main regression analyses as in Table 3.3, Model 3 were conducted, substituting the long financial word list for the short 131-word financial list used by Matsumoto and colleagues (2011), substituting the social value word lists for the short 21-word list, and substituting the social value word list for the long 308-word list. The results again revealed statistically significant models and three-way interactions for the short financial word list ($\beta = 13,320.87$; $p = .007$), the short social word list ($\beta = 11,111.26$; $p = .012$), and the long social word list ($\beta = 1,420.73$; $p = .007$), in Table 3.3, Models 4, 5, and 6, respectively, with changes in coefficient size due primarily to the reasonable increases or decreases in the number of words in each list (e.g., from 2,327 to 131 in the long and short financial lists, respectively). The associations remained significant even when the alternative financial word list and alternative social word lists were also used in combination (results available from the author upon request).

Zipf distributions. Most textual analyses of this nature take on a power law distribution known as Zipf's law (Manning & Schutze, 2003), in which a few key words substantially influence the results (Loughran & McDonald, 2016). Although this is not problematic, it is important to ensure that the results are not being driven by misclassifications of these most influential terms. As such, Tables 3.6 and 3.7 provide cumulative tabulations of the 25 most influential words identified across firms' annual reports from the short and long financial word lists and social value word lists. No substantial concerns emerged from these tabulations, as the most influential words differed across the lists and seemed quite relevant to the constructs of financial value orientation and social value orientation, such as "financial," "assets," "cash," and "environmental," "responsible," "ethics," respectively.

Table 3.6: Zipf Tabulation of 25 Most Influential Words from Financial Value Word Lists in Firms' Annual Reports

Panel A: Financial Short List			Panel B: Financial Long List		
Word	% of Total	Cumulative %	Word	% of Total	Cumulative %
FINANCIAL	6.77%	6.77%	FINANCIAL	3.18%	3.18%
ASSETS	4.33%	11.10%	VALUE	2.36%	5.54%
INTEREST	4.12%	15.23%	ASSETS	2.04%	7.58%
INCOME	4.10%	19.33%	INTEREST	1.94%	9.52%
CASH	4.09%	23.42%	INCOME	1.93%	11.45%
COSTS	3.91%	27.34%	CASH	1.92%	13.38%
TAX	3.82%	31.15%	COSTS	1.84%	15.22%
SECURITIES	2.62%	33.78%	TAX	1.80%	17.01%
SALES	2.45%	36.23%	STOCK	1.76%	18.78%
SHARES	2.44%	38.67%	RATE	1.55%	20.33%
COST	2.34%	41.01%	CREDIT	1.34%	21.67%
DEBT	2.14%	43.15%	MARKET	1.32%	22.98%
CAPITAL	2.01%	45.16%	SECURITIES	1.23%	24.22%
PAYMENT	1.95%	47.11%	SALES	1.15%	25.37%
EXPENSE	1.93%	49.04%	SHARES	1.15%	26.52%
LIABILITIES	1.86%	50.91%	BILLION	1.11%	27.62%
EQUITY	1.80%	52.71%	COST	1.10%	28.73%
LOSSES	1.79%	54.50%	DEBT	1.01%	29.73%
LOSS	1.75%	56.25%	FISCAL	0.95%	30.68%
INVESTMENT	1.75%	58.00%	CAPITAL	0.95%	31.62%
ACCOUNTING	1.64%	59.64%	PAYMENT	0.92%	32.54%
EXPENSES	1.60%	61.25%	EXPENSE	0.91%	33.45%
PAYMENTS	1.59%	62.84%	LIABILITIES	0.88%	34.33%
OBLIGATIONS	1.57%	64.41%	EQUITY	0.85%	35.17%
EARNINGS	1.55%	65.96%	LOSSES	0.84%	36.02%

Table 3.7: Zipf Tabulation of 25 Most Influential Words from Social Value Word Lists in Firms' Annual Reports

Panel C: Social Value Main List			Panel D: Social Value Short List			Panel E: Social Value Long List		
Word	% of Total	Cum. %	Word	% of Total	Cum. %	Word	% of Total	Cum. %
ENVIRONMENTAL	35.32%	35.32%	ENVIRONMENTAL	69.49%	69.49%	RESPECT	10.32%	10.32%
RESPONSIBLE	22.46%	57.78%	COMMUNITY	5.37%	74.86%	EMPLOYMENT	6.72%	17.04%
RESPONSIBILITY	13.75%	71.53%	ETHICS	4.45%	79.31%	RIGHTS	6.09%	23.13%
RESPONSIBILITIES	7.24%	78.77%	COMMUNITIES	3.47%	82.79%	NATURAL	4.50%	27.62%
WELFARE	3.05%	81.82%	CHARITABLE	2.69%	85.47%	EQUAL	4.03%	31.65%
COMMUNITY	2.73%	84.55%	DIVERSITY	2.44%	87.92%	HEALTH	3.85%	35.50%
ETHICS	2.26%	86.81%	SUSTAINABLE	2.38%	90.30%	SECURITY	3.56%	39.06%
COMMUNITIES	1.76%	88.58%	SUSTAINABILITY	1.78%	92.08%	PUBLIC	3.31%	42.37%
CHARITABLE	1.37%	89.94%	STAKEHOLDERS	1.54%	93.62%	LOCAL	3.11%	45.48%
DIVERSITY	1.24%	91.18%	ETHICAL	1.53%	95.15%	ENVIRONMENTAL	3.08%	48.56%
SUSTAINABLE	1.21%	92.39%	HEALTHY	1.25%	96.40%	DEVELOPMENT	3.06%	51.62%
GREEN	1.20%	93.59%	CITIZENS	1.04%	97.43%	QUALITY	2.15%	53.77%
SUSTAINABILITY	0.91%	94.50%	STAKEHOLDER	0.71%	98.15%	RESPONSIBLE	1.96%	55.73%
STAKEHOLDERS	0.78%	95.28%	ENVIRONMENTALLY	0.71%	98.86%	ASSESSMENT	1.70%	57.43%
ETHICAL	0.78%	96.06%	HEALTHIER	0.33%	99.19%	NATURE	1.60%	59.03%
HEALTHY	0.63%	96.69%	SOCIETY	0.28%	99.46%	EMISSIONS	1.59%	60.62%
CITIZENS	0.53%	97.22%	SOCIALLY	0.14%	99.60%	SUPPLIERS	1.51%	62.12%
CITIZENSHIP	0.40%	97.62%	CHARITY	0.14%	99.74%	ENVIRONMENT	1.43%	63.55%
STAKEHOLDER	0.36%	97.99%	SOCIETAL	0.13%	99.86%	RELIABILITY	1.39%	64.94%
ENVIRONMENTALLY	0.36%	98.35%	CHARITIES	0.12%	99.98%	CONDUCT	1.24%	66.18%
NONPROFIT	0.26%	98.61%	WELLBEING	0.02%	100.00%	RESPONSIBILITY	1.20%	67.38%
STEWARDSHIP	0.25%	98.86%				LABOR	1.17%	68.55%
HEALTHIER	0.17%	99.03%				COLLECTIVELY	1.04%	69.59%
RESPONSIBLY	0.14%	99.17%				SAFETY	0.96%	70.55%
SOCIETY	0.14%	99.31%				PARTNERS	0.91%	71.46%

MD&A word counts. Despite negligible differences between the use of words across the entire annual report and the use of words only within MD&A (Loughran & McDonald, 2016), some research has perused the MD&A as a viable stand-alone source of under-recognized firm information (Mayew, Sethuraman, & Venkatachalam, 2015; Sun, 2010). Thus, as an additional robustness test, the same OLS regressions with firm and year fixed effects and robust standard errors clustered at the firm level were conducted operationalizing firms' financial and social value orientations as the percentage of financial and social words (from the primary lists) in the MD&A section of each firm's annual report. The results, presented in Table 3.3, Model 7, revealed a significant three-way interaction between firm's financial value orientations, social value orientations, and the year trend representing the institutional shift toward pluralistic value ($\beta = 511.91; p < .001$), and a very significant model $F(16,122) = 13.25, p < .001$.

Community outcomes via KLD. In addition to triangulating the independent variables, robustness tests were also conducted to partially triangulate the collective stakeholder outcomes variable through use of an alternative dataset to measure community ESG outcomes. Prior research has identified significant divergences between datasets used for operationalizing community ESG outcomes (Chatterji, Durand, Levine, & Touboul, 2016). To ensure the associations were not being driven by idiosyncrasies in the datasets used, particularly around community outcomes given their more direct relationship with firms' social value orientations, the main analyses were replicated substituting data from ASSET4 with KLD social ratings, a dataset commonly used in stakeholder and CSR research (Ioannou & Serafeim, 2015; Waddock & Graves, 1997) for which social ratings of several publicly traded firms have been published since 1991 (e.g., 3,000 firms in 2003-2013). Both positive and negative social ratings are compiled for firms' impacts on the community, humanitarian activities, diversity, the

environment, products, employee relations, corporate governance, and other similar social issues. Net KLD ratings (positive score less negative score) were used to measure each firm's net ESG-related community outcomes within each year in this robustness test, an approach that comprehensively accounts for firms' positive and negative externalities (Barnett & Salomon, 2012; Waddock & Graves, 1997)²². The collective stakeholder outcomes score was then recomputed using this net KLD score as the measure for community outcomes. The results are presented in Table 3.3, Model 8. OLS regressions with firm and year fixed effects, robust standard errors clustered at the firm level, and all control variables showed a significant three-way interaction between firms' orientations toward financial value, firms' orientations toward social value, and the linear time trend ($\beta = 7,152.69$; $p = .027$).

Generalizability. Analyses were conducted to test the generalizability of the findings. A series of statistical comparisons using two-sample t-tests were conducted to test for significant differences in firm size (total revenue and assets) and profitability (profit margin, ROA, and EBITDA margin), between the sample of 123 firms and the population of firms listed in the S&P 500, by industry within each year. Statistically significant differences were identified for firm size between the sample and S&P 500. Fewer significant differences were identified for firm profitability; significant differences were identified for 5.6% of profit margin t-tests, 13.9% of ROA t-tests, and 8.3% of EBITDA margin t-tests. A full table of these statistics, disaggregated by industry and year, are available from the author upon request.

²² Due to methodology changes in MSCI's computation of KLD ratings, particularly the start of the industry-based key issue ratings model in 2010, a remapping was performed to control for these methodology changes throughout all years in the dataset. Analyses were conducted using the net of all KLD scores (strengths less concerns) for both the original data and the remapped data, with similar results between the raw net scores ($\beta = 6,427.58$; $p = .053$) and remapped net scores ($\beta = 7,152.69$; $p = .027$), as well as when only positive scores were used ($\beta = 9,604.80$; $p = .001$). Full details of the remapping and regression model statistics are available from the author upon request.

Combined robustness tests. Finally, a series of second- and third-degree robustness tests were conducted to test the combination of different variable operationalizations (e.g., alternative financial and social word list counts within the MD&A while community ESG outcomes are operationalized via KLD ratings, etc.). Variations of these robustness test combinations are available from the author upon request. Overall, the relationships between collective stakeholder outcomes and financial and social value orientations with the linear time trend hold. However, it is important to note that none of these robustness tests provide causal evidence of these relationships. Future research will be needed to understand whether or not firms' financial and social value orientations toward value and the institutional logics of firm value causally affect stakeholder outcomes and the size of such effects, if any.

GENERAL DISCUSSION

Answering calls for research that pivots from the focus on how social value affects firm financial performance toward the investigation of relationships between firms and broader stakeholder outcomes (Donaldson & Walsh, 2015; Jones et al., 2016), this study explored the associations between firms' orientations toward financial and social value and outcomes for stakeholders collectively during a time of institutional change in the logics underpinning firm value. Through a novel dataset of collective stakeholder outcomes for 123 firms over six years, a correlational relationship was identified between collective stakeholder outcomes and firms' orientations toward both financial and social value in an emerging era in which shifting institutional logics have increasingly supported a more pluralistic construal of firm value. Whereas prior research often descriptively and normatively emphasized shareholder value (Jensen, 2000; Jensen & Meckling, 1976) and juxtaposed firms' orientations toward financial and social value (Atkinson & Galaskiewicz, 1988; Galaskiewicz, 1997), this study empirically

built on a growing area of research that considers the interdependent nature of financial and social value and its link to the well-being of a broader group of stakeholders (Battilana & Lee, 2014; Bridoux & Stoelhorst, 2016; Freeman et al., 2010; Tantaló & Priem, 2014). Although the findings are only correlational as opposed to causal, they suggest that orientations toward social value in tandem with orientations toward financial value may in some way be linked to collective stakeholder welfare.

The identification of a positive relationship between collective stakeholder outcomes and firms' combined orientation toward financial and social value is both practically and theoretically important. However, of equal interest is the possibility that shifting institutional logics around value may also play a role in this relationship (Ioannou & Serafeim, 2015). In the dataset, it was only in more recent years that firms' pluralistic value orientations coincided with greater contributions to collective stakeholder welfare; one explanation for this could be that the maturation of logics supported the management of social value alongside the logics of financial value in these more recent years. Hybrid regression models lend some support to this claim, revealing that it is the within-firm variation over time driving this relationship, not the differences between firms or the stakeholders they serve. However, tensions still exist between these logics and the stakeholders firms' serve (Battilana et al., 2015). To enhance collective stakeholder outcomes, firms would likely need to overcome these tensions and the imperfect alignment of stakeholders' interests, particularly in the presence of heterogeneous motives and different systems of valuing (Bridoux & Stoelhorst, 2014; Mitchell et al., 2016). More research is needed to understand if and how firms accomplish this. The disaggregated stakeholder outcomes results provide a small contribution to this research. Significant positive associations were identified between firms' combined value orientations and outcomes for employees and the

community, while nonsignificant positive associations were identified for customers and shareholders. This leaves open the possibility that firms' pluralistic value orientations could be Pareto optimal going forward. However, more causal research is needed to test this possibility.

Theoretical Contributions

These findings contribute to the literatures on stakeholder theory and value in organizations, particularly the relationship between value pluralism and value creation for a broader group of stakeholders. Stakeholder theorists have contributed greatly to the normative, descriptive, and instrumental aspects of the issues that stakeholder theory strives to address, namely the problems of value creation and trade, ethics in capitalism, and the managerial mindset (Freeman et al., 2010; Parmar et al., 2010). However, stakeholder scholars have grappled with empirically testing many of the propositions around these overarching themes, particularly at their intersection (Laplume, Sonpar, & Litz, 2008). This study is the first to contribute empirical evidence on how firms' management toward a broader conception of value creation, one that encompasses the social value called for by many business ethics scholars alongside financial value, relate to the outcomes of multiple stakeholders and how this relationship has changed with the shift in institutional logics around firm value. In doing so, this paper bridges the previously disconnected literatures on stakeholder theory (Freeman, 1994) with the growing body of work on the management of hybrid value logics around economic and social value (Battilana & Lee, 2014; Battilana et al., 2015). This bridging extends the empirical literature on stakeholder management by moving beyond the investigation of the relationship between stakeholder management and shareholder value (Hillman & Keim, 2001; Margolis & Walsh, 2003), to the examination of how financial and social value, separately and interactively, relate to collective stakeholder value (Donaldson & Walsh, 2015).

Stakeholder research has recently begun to address the issue of value creation through new construals of value in firm-stakeholder contexts (Bridoux & Stoelhorst, 2016; Harrison & Wicks, 2013; Jones et al., 2016; Lankoski et al., 2016). Recent research has acknowledged the particular importance of pluralism in organizations with heterogeneous objectives and stakeholders (Bridoux & Stoelhorst, 2014; Mitchell et al., 2016). However, the findings caution against the generalized assumption that value pluralism always leads to better stakeholder outcomes. By connecting these topics to recent advances in institutional theory, specifically institutional change around social value (Ioannou & Serafeim, 2015), this paper highlights that only in more recent years following the change in institutional logics around firm value has this positive relationship manifested.

In addition to stakeholder theory, the results also contribute to the established and growing literatures on value and firms' orientations toward it. Despite abundant theoretical scholarship on value (Anderson, 1995; Bowman & Ambrosini, 2000; Lepak et al., 2007) empirical research has also been sparse in this area. Although strategy research has traditionally construed firm value monistically through a focus on financial exchange value (Brandenburger & Stuart, 1996; Peteraf, 1993), the possible zero-sum implications of doing so (Garcia-Castro & Aguilera, 2015; Priem, 2001) have spurred normative work on the need for a more pluralistic construal of value in organizations (Bridoux & Stoelhorst, 2016; Kroeger & Weber, 2014; Mitchell et al., 2016; Tantalo & Priem, 2014). Through the use of a contemporary methodology in accounting (Loughran & McDonald, 2011, 2016), the findings here provide tractable evidence that organizations' orientation toward a more pluralistic construal of value encompassing both financial and social aspects are significantly associated with increased outcomes for stakeholders

collectively, but only in more recent years in which this orientation is supported by the rise of pluralistic institutional logics around value (Ioannou & Serafeim, 2015).

The fact that institutional logics around value can and do shift has manifested through the shift toward managerial capitalism in the early-to-mid twentieth century (Chandler, 1984) and the shift away from managerial capitalism toward shareholder value in the late twentieth century following the economic crisis of the 1970s (Davis & Kim, 2015; Davis & Marquis, 2005; Krippner, 2011). Recent research has even begun investigating the antecedents and consequences of such shifts in logics around financial and social value, such as the inclusion of corporate social responsibility into analysts' ratings (Ioannou & Serafeim, 2015), sustainability reporting and its effects on firm financial performance (Eccles et al., 2014; Khan et al., 2016), and the inclusion of social welfare considerations into new forms of corporate organizing, such as social enterprises (Battilana & Lee, 2014). However, the role that institutional logics play in shaping how firms' orientations toward either financial value or social value, or both in combination, relate to the collective welfare of firms' stakeholders has until now been unexamined. A novel contribution of this study is the examination of this relationship, and through it, the suggestive finding that the inclusion of social value alongside firms' orientations toward financial value may be associated with higher levels of collective stakeholder welfare when such pluralistic orientations toward value are supported by pluralistic value logics.

Limitations and Future Directions

The concepts of social value, collective stakeholder value, and even the construct of "value" itself are far from devoid of ambiguity and disagreement. The commensuration of pluralistic criteria into monistic constructs seldom are (Espeland & Stevens, 1998). However, this should not impede investigation of these critically important topics—what is needed is more

research, more discussion, and more tolerance of different conceptualizations and operationalizations of value, not less. This study contributes to the conversation around these different types of value through empirically exploring the relationship between one multi-dimensional construct of collective stakeholder value, firms' descriptions of their activities toward financial and social value, and how this relationship may have changed alongside a possible shift in institutional logics around firm value. Future work should examine these relationships using other combinations of stakeholder outcomes as well.

Another limitation to this study is the limited construct validity from how the main independent variables were operationalized. Rather than measuring firms' actual orientations or activities toward financial value and social value, the textual analyses of firms' annual reports only provides firms' descriptions of their activities. Such reported descriptions are susceptible to window-dressing critiques (i.e., firms say one thing and do another) as well as imprecision of the actual activities reported (i.e., firms actually do the thing they said, but talk about it too much or too little in the annual report relative to other things they did). Although basic correlations showed a significant positive association between firms' reported social value words and their community outcomes scores (e.g., ASSET4 and KLD ratings) this still does not rule out these alternative explanations for the firm-years driving the main associations. This limited construct validity also applies to the use of the linear temporal trend for operationalizing the shift in institutional logics around firm value. Although prior research has operationalized this shift linearly (Ioannou & Serafeim, 2015), the actual trend could be nonlinear or more or less gradual than an annual increase of one point. Although several nonlinear models were tested with no significant results, this still leaves open the possibility that a linear shift in logics is not the explanatory construct but rather some other linearly trending factor. As such, future research

with different datasets will be needed to credibly confirm the exploratory results and the explanations put forth.

Finally, an important limitation to this study is its inability to determine causality. Despite the use of firm and year fixed effects and various robustness tests, there remains a host of alternative explanations, particularly those involving endogenous variables. For example, firms descriptions of their activities around financial or social value may be affected by some time-varying factor (e.g., market expectations, changing political climate, or media environments), and this alternate factor could affect how firms report their financial and social value-related activities as well as stakeholder outcomes. Although natural experiments with policy changes or other forms of exogenous shocks could arguably be used to refute or verify such explanations, none were available for this dataset. Future research could nevertheless examine the causal effects of different firm value orientations on collective and individual stakeholder outcomes, perhaps through framed field experiments or future exogenous shocks.

Despite its limitations, this study provides one possible empirical approach to analyzing theories of firm value and stakeholder management. Establishing a credible body of empirical scholarship in these areas, however, will take more than one approach. It will require a pluralistic orientation toward value and stakeholder research.

CONCLUSION

The constructs “value” and “performance” have become almost instinctively financial within theories of management, strategy, and organizations. And yet, some scholars assert that our commensuration of their underlying nuance into monistic financial measures has become akin to the neoinstitutional theorist’s moniker for formal structures—a myth (Miller et al., 2013). But the impracticality of such commensuration collides with a pluralistic society’s need for sensemaking (Weick, 2000), concession to satisficing (Simon, 1947), and abdication of power to financial institutions (Davis, 2009). When the worker’s desire for satisfaction contrasts with the firm’s desire for efficiency, trade-offs must often be made and both parties may lose.

This story is changing. The institutional landscape upholding our notions of value and performance is shifting to encompass both financial and social, for shareholders and other stakeholders like workers and the community. To requote Margolis and Walsh (2003), “the world cries out for repair,” and firms are increasingly called upon to help answer those cries. But as Margolis and Walsh later assert, this will require more than instrumental approaches to firm management, particularly those centered on exchange value capture. It will require grappling with the more subjective and often more contested normative aspects of firms and their management. In essence, we must learn how to create social value too. This will require a greater understanding of firms’ stakeholders, their preferences, and strategies and practices for identifying and creating the non-zero-sum synergies between them. It will also require stakeholders themselves to work with their organizations to facilitate these synergies, particularly workers. Establishing appropriate performance measures will be critical to the success of these endeavors, because as Peter Drucker accurately asserted, “what gets measured gets managed.”

A good place to start is moving away from performance measures encompassing the

three factors that contribute to zero-sum performance, namely relativity, scarcity, and monism. Scholars, managers, and their organizations can establish performance criteria not dependent on another organization's or individual's performance being lower (e.g., rankings), not associated with scarce resources (e.g., cash flow), and not focused on a single commensurating metric (e.g., stock price). Doing so may mitigate the zero-sum trade-offs firms face when competing for exchange value and increase the potential for synergies across individuals and organizations with pluralistic preferences. Although it is difficult to alleviate scarcity, organizations often do wield the power to establish multiple performance measures based on absolute criteria (e.g., multiple ratings instead of one ranking). And such measures will significantly affect their performance and the value they ultimately create for their stakeholders (Espeland & Sauder, 2007).

Furthermore, firms can substitute some of their zero-sum performance measures for measures that allow for additional synergies across stakeholders. For example, there is a reason satisfaction was chosen as the dependent variable for most of my studies. Whereas higher employee wages may limit a firm's ability to provide lower customer prices or higher donations to the community, increasing employee satisfaction may synergistically yield higher quality products, more volunteers, and more satisfied customers and community members. And as chapters 2 and 3 affirmed, CSR and corporate social performance measures are proving to be effective tools for creating cross-stakeholder synergies that increase this satisfaction, particularly when combined with traditional financial performance measures. This latter part merits emphasis. Meaningful work cannot completely substitute for compensation. Employees need both. A monistic focus on social performance that excludes the financial may ultimately fail to alleviate the zero-sum games and the zero-sum frames identified for financial performance.

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