Misconduct by Nonprofit, For-Profit, and Public Organizations:

All Organization Types Cheat, but with Different Objectives and Outcomes

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ABSTRACT

We examine how the objectives of different organization types (for-profit, nonprofit, and public) influence their misconduct. We argue that all types face incentives to engage in misconduct when doing so enables the achievement of their distinct objectives and concepts of value. We provide empirical support by comparing strategic misrepresentation of information by for-profit, nonprofit, and public firms in a field setting, the liver transplant market, where we leverage a policy change to identify organizational misconduct. Nonprofits misrepresented information at similar, sometimes higher, rates as for-profits. Nonprofit and public centers did so more egregiously than for-profits for certain beneficiaries, in line with their concepts of value. We contribute to an understanding of how organization types' definitions of value influence the conditions under which they engage in misconduct.

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INTRODUCTION

For-profit, nonprofit, and public organizations have distinct objectives.[1] Organizations with distinct objectives define value differently, and make strategic decisions to maximize value creation and capture in accordance with distinct definitions of value. One strategic, yet arguably unethical, behavior that represents an opportunity to capture value is strategic misrepresentation of information (Bennett, Pierce, Snyder, & Toffel, 2013; Crawford, 2003; Feldman & March, 1981; Ostler, 2014; Snyder, 2010). Strategic misrepresentation of information by for-profit organizations has been shown to influence consumer behavior (Dellarocas, 2006) and market demand (Mirman, Samuelson, & Schlee, 1994). We argue that this behavior, driven by the goal of capturing value, is not limited to for-profit organizations; that nonprofit, public, and for-profit firms alike will strategically manipulate information when doing so enables them to capture value per their (distinct) concepts of value. A commonly-held belief persists that for-profit organizations are more likely to "game the system" than nonprofit and public organizations, which have non-monetary, prosocial objectives and, by extension, should behave more "ethically." We, however, show that nonprofit and public organizations are just as likely as for-profit organizations, and in some circumstances, more likely, to strategically misrepresent information, when doing so conforms with their concept of value.[2]

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[1] Broadly, one can categorize the primary objective of a for-profit organization as profit maximization, whereas the primary objective of a nonprofit or public organization is to maximize a single or combination of non-monetary objectives. Though nonprofit and public organizations are certainly subject to monetary (i.e., financing and fundraising) constraints, the degree to which these constraints are central to their objectives is lower than that of for-profit organizations. We recognize that there are also double and triple bottom line organizations that do not fit clearly into the distinction we are making here, since these organizations have both monetary and non-monetary objectives as primary objectives. However, for simplicity of exposition, and because of the nature of the organizations in the empirical setting we examine, we focus in this paper on three types of organization: private, nonprofit, and public.

[2] The National Nonprofits Ethics Survey reports that nonprofits generally have a stronger ethics culture compared to businesses (available at: https://www.soe.vt.edu/highered/files/Perspectives_PolicyNews/04-08/NationalNonprofitEthicsSurvey.pdf). Americans report having more confidence in charitable organizations compared to for-profit or public organizations (Bowman, 2016). Nonprofit board members are perceived to behave

Though it has been established that characteristics of for-profit organizations influence the prevalence of misconduct within an organization (Edelman & Larkin, 2015; Pierce & Snyder, 2008), there has been little examination of how nonprofit, public and for-profit firms compare in the degree to which or circumstances under which they engage in misconduct. That is, how organization type influences whether and how organizations exhibit unethical behavior. This line of inquiry is challenging because 1) nonprofit, for-profit, and public organizations rarely do the same thing, making it hard to compare across organization types without confounding differences in organization type with differences in activities being performed, and 2) misconduct in organizational settings is difficult to observe, since organizations hide this behavior rather than make it public. Indeed, most empirical evidence on behavioral misconduct uses laboratory experiments or self-reported survey based data (Pierce and Balasubramanian 2015), rather than behavioral field evidence. This paper leverages a unique setting that enables us to address these empirical challenges: the liver transplant market. First, in this setting, for-profit, nonprofit, and public liver transplant centers all do the same thing: they provide liver transplants. The setting thus holds constant any differences in unethical behavior by organization type that are driven by differences in basic activities.[3] Second, by examining centers' responses to a policy shock in how livers were allocated to individuals who need liver transplants, we are able to identify strategic manipulation of intensive care unit (ICU) enrollment in the liver transplant market.[4] The use of

more ethically than corporate for-profit board members (Brower & Shrader, 2000; Machan & Uyl, 1987). Health sector-focused studies also claim that nonprofit organizations are less likely to make misleading claims than for-profit organizations, for example (Schlesinger *et al.*, 2005).

[3] For example, though in the same general industry, we would not want to compare a for-profit bank to a nonprofit organization working to help low income families save; these organizations' basic activities are too different to facilitate comparison.

[4] Before March 1, 2002, whether or not a patient was in the ICU was a critical determinant of whether a patient would be allocated a liver; patients in the ICU went to the top of the liver transplant priority list, irrespective of whether they were sicker than others on the transplant list. Transplant centers could strategically report that a patient was in the ICU to increase the chance of their patients receiving a liver. After March 1, 2002, however, allocation of livers changed to a system based only on clinical indicators of sickness, not ICU status. A discontinuous decrease in

this setting and policy shock to identify unethical behavior in an organizational setting was first introduced by Snyder (2010), and has also been adopted by Ostler (2016). As such, it is a well-established methodology for measuring misconduct in organizations.[5] By comparing whether, and for which types of patients, nonprofit, private, and public transplant centers manipulated ICU enrollment, we provide insight into the conditions under which the three organizational types engaged in misconduct, and posit that differences in how the organizational types define, and thus act to capture, value helps explain this behavior.

Contrary to the conventionally held belief that nonprofit and public organizations behave more ethically than for-profit organizations, we show that nonprofit liver transplant centers manipulated ICU enrollment at a similar, and for certain beneficiaries, a higher, rate than for-profit organizations.[6] The manipulation of patient status by nonprofits was not arbitrary across patients on the health margin of being eligible for transplant, as would be expected if the practice was mainly in the pursuit of increased profits (maximizing the number of patients receiving transplants while minimizing the likelihood of being caught for misrepresenting patient status). Rather, nonprofit liver centers manipulated patient status for certain types of individuals: locally residing residents and women, even when relatively healthy (and thus, with a higher likelihood of being caught). For-profit liver centers manipulated ICU enrollment for patients on the margin of being eligible for transplant (that is, clinically unhealthy and nearly indistinguishable from patients on the waiting list above them), but not for relatively healthy patients. Public liver centers

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the number of transplant patients in the ICU or a discontinuous increase in the average sickness of transplant patients after the policy change indicates that centers were strategically manipulating the ICU list to increase the chances that their patients would receive a liver transplant.

[5] It thus enables us to contribute to the empirical evidence on ethical misconduct in organizations that leverages field setting, rather than laboratory experiments or self-reported survey data (Pierce & Balsubramanian, 2015)

[6] Some authors have noted that unethical behavior does indeed take place in nonprofit and public organizations, and have called for further inquiry into this phenomenon (e.g., Archambeault *et al.*, 2015; Bowman, 1990; O'Neill, 1992; Fremont-Smith & Kosaras, 2003; Krishnan *et al.,* 2006)

manipulated ICU enrollment less than the other center types on average, but when they did manipulate ICU enrollment, they did so more similarly to nonprofit than for-profit liver centers. We posit that this behavior is in line with each organization type's objectives and, thus, how we would expect them to define, create, and capture value. Our findings are robust to the use of three different measures of strategic misrepresentation of information and to different functional forms of the regression analyses.

This paper provides a comparison of strategic misrepresentation of information by for-profit, nonprofit, and public organizations to demonstrate that each type of organization faces incentives to engage in misconduct when doing so enables the creation and capture of value as defined by that organization type. This paper responds to a call for scholarly inquiry into unethical behavior in nonprofit and public organizations (e.g., Archambeault, Webber, & Greenlee, 2015; Holtfreter, 2008; Krishnan, Yetman, & Yetman, 2006; Rhode & Packel, 2009), and builds on our understanding of how organizational characteristics can influence unethical behavior in organizations (Peirce & Toffel, 2013), which contributes to our understanding of what drives unethical behavior in organizations more broadly (Bennett *et al.*, 2013; Edelman & Larkin, 2015; Pierce & Snyder, 2008).

Additionally, given that the liver transplant market is overseen by a single (nonprofit) entity, our findings also have broader implications for understanding how policies and regulations will influence nonprofit, public, and for-profit organizations differently, with implications for the governance of these organizations in settings where they co-exist or work together. It has been noted that public-private relationships have potentially contradictory agendas and heterogeneous interests which can lead to tensions (Cabral, Lazzarini, & de Azevedo, 2010; Henisz, 2006; Kivleniece & Quelin, 2012; Mahoney, McGahan, & Pitelis, 2009; Pierce & Toffel, 2013; Utting

& Zammit, 2009). Our paper demonstrates that the heterogeneous objectives of different organization types can result in different manifestations of misconduct that at times conflict with, and at times complement, the objectives of the overseeing entity.

OBJECTIVES, VALUE, AND ORGANIZATION TYPE

Value is generally defined in monetary terms for for-profit organizations. Given the profit-maximizing objective of for-profit organizations, a monetary concept of value is both theoretically appealing and empirically tractable for for-profit firms (Lieberman, Garcia-Castro, & Balasubramanian, 2017). Per the (for-profit) value creation/appropriation framework, value is defined based on the vertical chain that extends from suppliers of resources, through the firm, to the buyers of the firms' products and services (Brandenburger, 2002; Brandenburger & Stuart, 1996). The amount of value created is the willingness of the buyer to pay minus the opportunity cost of the supplier (Brandenburger & Stuart, 1996), while the amount of value captured by the firm is determined by competition and the resulting prices paid (Chatain, 2011; MacDonald & Ryall, 2004). When externalities are present, such as in the cases of public and nonprofit organizations (Ostrom, 1990; Brinkerhoff & Brinkerhoff, 2011; Mahoney *et al.*, 2009; Rangan, Samii, & Van Wassenhove, 2006), the exchange value, or monetary amount realized in exchange for the firm's product or service (Bowman & Ambrosini, 2000; Lepak, Smith, & Taylor, 2007), does not accurately reflect the amount of value captured by the organization (Klein, Mahoney, McGahan, & Pitelis, 2013).

For public and nonprofit organizations, the goal is to maximize non-monetary, often prosocial, objectives (Filistrucchi and Prufer, 2018). Though attempts have been made to translate prosocial outcomes into monetary equivalents (e.g., to quantify the value of saving a life, by Thaler

& Rosen, 1976, or of recycling by Viscusi, Huber, & Bell, 2011), monetary values are often difficult to assign to prosocial outcomes. In fact, some posit that the role of the nonprofit organization is precisely to provide goods and services whose benefits are difficult to observe or measure (Easley & O'Hara, 1983). Even if all prosocial outcomes could be translated into agreed-upon monetary equivalents, it is unlikely that a simple maximization of this monetary equivalent would adequately capture the complex prosocial objectives of many nonprofit and public organizations. The strategy literature on value creation and capture has recognized that some values cannot be measured and monetized (Kivleniece & Quelin, 2012; Ramírez, 1999), paving the way for the notion that organizations simply have different concepts of value, some which are monetary in nature and some of which are not.

Organizations of different ownership type (i.e., nonprofit, for-profit, and public) also respond to different sets of stakeholders and differentially weight the importance of these stakeholders. Indeed, it has been established that how much attention will be paid to which stakeholders is the result of the organization's conceptualization of itself and its relationship to society (Crilly & Sloan, 2012), as well as the power, legitimacy and urgency of the stakeholder to each organization (Mitchell, Agle, & Wood, 1997). The strategy literature has begun to incorporate the stakeholder view of strategy into the value creation and appropriation frameworks (Garcia-Castro & Aguilera, 2015). This literature has extended the set of for-profits' value-appropriating stakeholders from consumers and suppliers to include government, capital providers, and society more broadly (Clarkson, 1995; Garcia-Castro, & Aguilera, 2015; Hillman & Keim, 2001; Lepak *et al.*, 2007; Porter & Kramer, 2011). This literature has made the link between a for-profit organization's stakeholders and the value it creates and appropriates. A link has similarly been made between nonprofit organizations' values and their relationships with stakeholders (Voss,

Cable, & Voss, 2000). Given the difference in the weight placed on different stakeholders by organization type, we would expect organizations to have different concepts of value by organization type.

Strategic Misrepresentation of Information and Organization Type

Just as organizational characteristics, such as governance and scope, have been shown to influence the prevalence of organizational misconduct (Pierce & Toffel, 2013), organizations' distinct concepts of value will influence whether and under what circumstances organizations will engage in misconduct. One type of misconduct that has been the object of study is strategic misrepresentation of information (Feldman & March, 1981).

Numerous antecedents of strategic misrepresentation of information have been put forth. Some are clearly tied to stakeholders and objectives that exist in for-profit organizations, but not in nonprofit or public organizations. For example, O'Connor, Priem, Coombs, and Gilley (2006) showed that CEO stock options can promote fraudulent financial reporting. Strategic misrepresentation of information has been described as a means of increasing customer utility or willingness to pay (Becker & Milbourn, 2011; Bennett *et al.*, 2013), and thus increase the value created through a key for-profit stakeholder, the consumer. Indeed, studies have shown that unethical behavior is influenced by characteristics of the organization (Pierce & Snyder, 2008) including the preferences of and pressure from an organization's stakeholders (Iriyama, Kishore, & Talukdar, 2016; Jansen & Von Glinow, 1985; Stevens, Steensma, Harrison, & Cochran, 2005). At the same time, managerial incentives have been shown to drive strategic misrepresentation of information such as expense misreporting in nonprofit organizations (Krishnan *et al.*, 2006). Other antecedents predictive of strategic misrepresentation of information and misconduct exist in and

are thus likely to drive strategic misrepresentation of information in for-profit, nonprofit, and public organizations alike. These include organizational scope and governance structures (Pierce & Toffel, 2013), the influence of compensation incentives (Larkin, 2014; Tenbrunsel, 1998), degree of monitoring (Pierce, Snow, & McAfee, 2015) organizational performance (Harris & Bromiley, 2007), unfavorable social comparisons among employees (Edelman & Larkin, 2015), as well as competition (Bennett *et al.*, 2013; Snyder, 2010).

Because the objectives, set of primary stakeholders, and resulting concepts of value are different in for-profit, nonprofit, and public organizations, we would expect strategic misrepresentation of information to take place under different circumstances. We argue that nonprofit, for-profit and public organizations will all strategically misrepresent information when doing so enables them to achieve their objectives and create and capture what they define as value.

EMPIRICAL SETTING

We test this proposition in the U.S. liver transplant market, where approximately 6,500 liver transplants are performed by over 100 for-profit, nonprofit, and public centers each year. The distribution of livers for transplant across all organization types is regulated and overseen by the Organ Procurement and Transportation Network (OPTN), a nonprofit organization that is overseen by Congress. It is organized geographically such that all hospitals belong to one regional organ procurement organization (OPO). When a liver becomes available, transplant centers within that OPO have first rights to obtain the organ.[7] Thousands of individuals die each year while on the waiting list for a new liver, and liver transplants are lucrative for hospitals with transplant centers.[8]

[7] If no claim is made on the organ within the OPO, then transplant centers within the organ transplant region (comprised of more than one OPO) have access to the organ.
[8] Each transplanted liver represents $739K in billings. http://www.transplantliving.org/before-the-transplant/financing-a-transplant/the-costs/

As such, the demand for liver transplants is high, and there could be an incentive for centers to pursue unethical means of obtaining organs for transplant.

Identifying opportunistic behavior in the liver transplant market

A 2002 policy change in how livers were allocated offers a unique opportunity to identify liver transplant organizations' unethical behavior in a natural field setting. Prior to March 1, 2002, individuals in the intensive care unit (ICU) received transplant priority ahead of individuals not in the ICU. Centers could behave strategically by placing individuals on the ICU list that they would not have placed otherwise to increase their likelihood of obtaining a liver for transplant. Cases were found where patients supposedly in the ICU were at home and out at restaurants when receiving word that they would be getting a transplant (Murphy, 2004). On March 1, 2002, the liver allocation process changed such that livers were allocated by individuals' Model for End-Stage Liver Disease (MELD) score, which is determined by clinical indicators of a patient's sickness (and no longer influenced by ICU status). The opportunity to game the liver allocation policy by placing individuals on the ICU list thus ended with the change in the policy on March 1, 2002.[9]

A discontinuous decrease in the proportion of liver transplant patients coming from the ICU after (compared to before) the policy change reflects opportunistic gaming of the ICU policy while it was in place (prior to March 1, 2002). Likewise, a discontinuous increase in liver transplant patients' MELD scores, which are clinical measures of sickness (with higher MELD scores indicating sicker patients), or a discontinuous decrease in the proportion of patients with MELD scores less than 15 after, compared to before, the policy change, reflects opportunistic gaming of

[9] It is important to note the impetus to change the policy was not related to the practice of placing patients in the ICU. Rather, it was due to research on predicting patient mortality based on clinical health measures.

the ICU policy while it was in place.[10] Figure 1 demonstrates the proportion of liver transplant patients coming from the ICU in the quarters leading up to, and after, the policy change. The discontinuous decrease in the trend line before and after March 1, 2002 is consistent with opportunistic gaming of the ICU policy prior to the policy change.

Insert Figure 1 about here

We compare nonprofit, for-profit, and public liver transplant centers' gaming behavior prior to the policy change by estimating how these centers changed their behavior due to the change in policy. Leveraging this policy change follows the approach used by Snyder (2010) and Ostler (2016). Snyder (2010) focused on the impact of competition, and found that while competition did drive increased use of the ICU, centers seemingly coordinated to still have the sickest patients represented (competition drove misrepresentation of only those patients who were on the margin, or unclear cases where the patient could just as easily have been placed in the ICU or not). Ostler (2016) focused on how gaming of the system by placing patients in the ICU increased firm entry and survival, and the subsequent impact of these entering firms on the diffusion of the practice to game the system by placing patients in the ICU. Neither Snyder (2010) nor Ostler (2016) examined differences in this behavior by nonprofit, for-profit, and public organization types, nor did they examine differential behavior to benefit different types of patients, as we do in this paper.

The liver transplant market is one that lends itself to different possible manifestations of value. Since transplants are lucrative, some centers could derive value from increasing their number of transplants as part of a monetary, profit-maximizing objective. Others could seek to maximize social welfare or allocate livers to important stakeholder groups like those individuals

[10] A MELD score of less than 15 is used to indicate that the patient is relatively healthy (as opposed to unhealthy), as this is the cutoff score associated with a lower mortality risk and many centers will not list patients on the active transplant waiting list until their score is greater than 15.

whom they seek to serve. Given the distinct concepts of value across organizations of different types, we would expect organizations of different types to engage in this misconduct at different rates, at different degrees, and for different patients, in line with their distinct objectives and concepts of value.

VALUE, ORGANIZATION TYPE, AND MISCONDUCT IN THE LIVER TRANSPLANT MARKET

For-profit Organizations

Strategic misrepresentation of information has been described as a means to increase customer utility and willingness to pay (Becker & Milbourn, 2011; Bennett *et al.*, 2013), which in turn increase a for-profit firm's potential to capture value and increase profits (Brandenburger & Stuart, 1996; Chatain, 2011; MacDonald & Ryall, 2004). Given the fiduciary duty of a for-profit organization to its shareholders, the primacy of shareholders as the most important stakeholder to for-profit firms has been established (Friedman, 2007). Likewise, the for-profit organization's objective of maximizing profit for shareholders has been well-established (Friedman, 2007). Even the stakeholder view of strategy, which highlights the role that (non-shareholding) stakeholders play in determining for-profit organizations' success, links the preferences and behaviors of these (non-shareholding) stakeholders to the profitability of the firm (e.g., Sundaram & Inkpen, 2004; for a discussion of the distinction between primary and non-primary stakeholders, see Hillman & Keim, 2001).

A study of hospital services in the United States demonstrated that the mix of health services offered by for-profit hospitals is more profitable than that of other hospital types (Horwitz, 2005). For-profit hospitals have also been shown to adopt technological advancements when these

advancements are revenue-enhancing (Greenwood *et al.*, 2017). This suggests that profitability is indeed the prime objective of for-profit organizations in this industry, despite the fact that hospitals all treat patients with a mix of needs and operate under the same health regulations (Horwitz, 2005). As for-profit organizations seek to maximize profits for shareholders, and liver transplants are lucrative, we would expect for-profit liver centers to face monetary incentives to strategically misrepresent information to increase the number of liver transplants administered.

For-profit organizations are subject to regulatory and nonprofit watchdog scrutiny if they engage in unethical behavior, which would result in financial penalties, and thus reduced value capture, if caught (Delmas & Burbano, 2011; Sethi & Sama, 1998). When engaged in misconduct, they are thus likely to do so in a manner that maximizes the financial upside while simultaneously minimizing the likelihood of being caught and penalized.

In the liver transplant context, we would thus expect for-profit centers to engage in misconduct in a manner that maximizes the number of patients receiving transplants while simultaneously minimizing the likelihood of being caught. Indeed, given a set of patients for whom they could strategically misrepresent ICU status, we would expect them to do so for the patients least likely to draw adverse attention or scrutiny. We would thus expect for-profit liver transplant centers to be more likely to misrepresent patient health for sicker patients who are on the margin of being eligible to receive a transplant, and less likely to misrepresent patient health for healthier patients.

Nonprofit Organizations

In contrast to for-profit organizations, nonprofit organizations do not have shareholders and thus do not face the clear primary objective of creating and capturing monetary value for

shareholders. The nonprofit non-distribution constraint states that no one has a legal claim to the organization's earnings (Hansmann, 1980, 1987; Rose-Ackerman, 1996). Though nonprofits face an objective of fundraising to support their activities, this objective is not the primary objective. The existence and function of the nonprofit organization has been framed in much of the literature in contrast to that of the for-profit organization. For example, in the traditional economics and related strategy literatures, public goods, contract failure, transaction costs, and agency theory have been put forth as explanations for the existence of nonprofit and public organizations (see Gassler (1986) and Rose-Ackerman (1996) for surveys, also Kaul and Luo (2017)). Nonprofits have also been described as maximizers of (prosocial) services that help their beneficiaries (Steinberg, 1986), and as sources of experimentation to solve social problems (DiMaggio & Anheier, 1990). A common thread in this diverse set of literature on the rationale for the existence of the nonprofit is that nonprofits provide (prosocial) services to beneficiaries in need of these services. We would thus expect nonprofits to strategically misrepresent information when this behavior enables them to serve the groups of patients they seek to serve.

Given that nonprofits do not face the primary objective of maximizing financial value for their shareholders, they are less likely than for-profits to be concerned about the implications of getting caught and financially penalized for engaging in strategic misrepresentation of information. This makes more egregious misrepresentation of patient health for relatively sick patients less of a concern for nonprofit than for-profit organizations. The beneficiary of dishonest acts can be important in predicting unethical behavior (Gino & Pierce, 2009). Given their concept of value is centered around the provision of services to target beneficiaries, we would expect nonprofits to strategically misrepresent information for even relatively healthy patients who are part of the

beneficiary groups they seek to serve (as opposed to sicker patients who are not part of the beneficiary groups they seek to serve).

Nonprofit organizations have been described as mechanisms by which people become involved in their communities (Boris, 1999), and as vehicles for empowering local residents and improving local quality of life (De Vita & Fleming, 2001). Indeed, nonprofit hospitals have been shown to have local, community-related constraints and incentives (Greenwood *et al.*, 2016; Nicholson et al., 2000), and nonprofit hospitals' webpages often describe themselves as "putting (local) community needs first" (Nicholson et al., 2000).[11] Additionally, nonprofits have been identified as sources of experimentation in local contexts to solve social problems (DiMaggio & Anheier, 1990). Nonprofit hospitals, in particular, have been shown to have local community-related constraints and incentives (Greenwood *et al.*, 2017). Nonprofit organizations furthermore often support and represent traditionally underserved groups, which include women. Nonprofits seeking to maximize social welfare often seek to benefit women in particular; numerous microfinance studies have shown women to be more trustworthy and more likely to act on behalf of the welfare of children and the family as a whole than men (Lott, 2009), for example.

Public Organizations

Public organizations respond to a much larger set of primary constituents and stakeholders than for-profit organizations, and even nonprofit organizations (Boyne, 2002). As a result, organizational goals are more difficult to define with precision in public organizations (Lyden, 1975). It has even been suggested that public organizations are deliberately vague in their goals so that their activities will be acceptable to all constituents (Christensen *et al.*, 2007). As a result,

[11] For example, https://www.sharp.com/about/being-not-for-profit.cfm

public organizations have conflicting, more vaguely defined goals than other organization types that are not beholden to political constituents to the same degree (Boyne, 2002). As the importance of who an organization's stakeholders are, and how urgent their demands are for the organization, have been highlighted in determining strategic choices in general (Garcia-Castro & Aguilera, 2015; Mitchell *et al.*, 1997), as well as unethical behavior specifically (Delmas & Burbano, 2011), we would expect that organizations with less clearly defined primary stakeholders or beneficiaries and less clearly defined goals would be less likely to engage in strategic misrepresentation of information.

Nonprofit and public organizations have been described as complements in the provision of (similar) public goods (Boris & Steuerle, 2006; Salamon, 1995, 2015). It has been suggested that public organizations exist in cases when nonprofits would be the preferred provider of a certain service but are unable to meet perceived societal needs (Salamon, 1995). Others have explained the existence of nonprofits as due to an undersupply of a public good or service to a group of citizens whose demand for the good exceeds that of the median voter (Weisbrod, 1988). The concepts of value among nonprofit and public organizations are thus more similar than those of for-profit organizations. Similar to nonprofit organizations, we would expect that if public organizations do strategically misrepresent information, they would do so to benefit the constituents they seek to serve. Because public organizations are neither responsible to shareholders, nor face fundraising pressures, we would expect them to be the least concerned of the three organization types about financial penalties for being caught engaging in strategic misrepresentation of information.

DATA AND EMPIRICAL STRATEGY

Our data comes from a comprehensive database of all liver transplants taking place in the United States, provided by the United Network for Organ Sharing. The data includes patient health information, patient demographic characteristics, and the center in which the transplant was performed. The name of the center was used to determine each center's nonprofit, for-profit, or public status, which was obtained from the website www.healthgrades.com and cross-referenced with information from the centers' websites to confirm organizational type at the time of the policy change. Pediatric hospitals were dropped as there were no for-profit children's hospitals with transplant centers. Additionally, children's hospitals' transplant centers often serve larger geographical areas that do not match up with OPOs. Thus, our analysis only uses transplants performed on adults. We also drop three centers associated with military and veterans' hospitals. In two cases where hospitals shared an experimental shared services arrangement, the associated centers are coded as a single center. In these cases, the organizational type of the hospitals sharing transplant centers were the same (i.e., for-profits shared with for-profits, etc.). We focus on one year before and after the policy change to isolate the effect of the policy change.

Independent variables. The main independent variable of interest is organization type, (*OrgType),* a categorical variable taking on three values: for-profit, nonprofit, and public.

Dependent variables. To proxy opportunistic gaming of the ICU liver allocation policy prior to the policy change, we observe three outcome variables of interest before and after the policy change: *ICU*, *MELD Score*, and *MELD<15*. Each is an individual, patient-level variable that is measured at the time of the transplant. *ICU* is a binary variable indicating whether the patient was listed as being in the ICU; *MELD Score* is a continuous variable capturing the patient's MELD score; and *MELD<15* is a binary variable indicating whether the patient's MELD score was less

than 15. Patients' MELD scores are a clinical objective measure of patient health. A MELD score of less than 15 is used to indicate that the patient is relatively healthy (as opposed to unhealthy), as this is the cutoff score associated with a lower mortality risk and many centers will not list patients on the active transplant waiting list until their score is greater than 15.[12]

Control variables. To address the possibility that competitive effects could contaminate the results, we control for competition by constructing a measure equal to the number of transplant centers in any given OPO (the same measure for competition used by Snyder (2010)) and a measure for the total number of transplants in the OPO by year. To address concerns about time trends, month fixed effects, and a quadratic time control of the number of months from the policy change are included as controls. To control for potential differences in health or types of patients across organization type, in specifications where the outcome of interest is whether transplant patients come from the ICU (*ICU*), we include the patient's MELD scores as a control for patient health. Similarly, in specifications where the outcome of interest is patient health (*MELD Score* or *MELD<15*), we include as a control whether a patient is in the ICU. We include controls for patient demographic characteristics including race, gender, and age. We also include center fixed effects to control for unobserved center differences.

Measuring gaming of the liver allocation policy

To identify a baseline effect of the policy change on each of the three outcomes of interest, we use the following specification at the patient and calendar month level (*i* and *t* respectively), by organization-type subsample (that is, separately for nonprofit, for-profit, and public organizational types):

[12] http://blog.texasliver.com/2012/06/waiting-for-a-liver-transplant-my-meld-score-is-low-now-what/

$$Outcome_{i,t} = \beta_1 MELD\ era_t + \beta_2 Controls_{i,t} + Calendar\ month_t + Center_i + \varepsilon_{i,t}. \quad (1)$$

A dummy variable, *MELD era,* identifies whether a transplant occurred before or after the policy change that determined that livers be allocated solely on a patient's MELD score (rather than ICU status). This variable takes the value of 0 before the policy change and 1 after the policy change. Thus, β_1 is an estimate of the change in outcome due to the new policy. A decrease in *ICU* after (compared to before) the policy change reflects opportunistic gaming of the ICU policy while it was in place. Likewise, an increase in MELD Score or decrease in MELD<15 after, compared to before, the policy change, reflects gaming of the ICU policy while it was in place.

Comparing gaming of the liver allocation policy by organization type

To estimate the differential effect of ownership type, we next use a differences-in-differences estimation approach with the following specification:

$$Outcome_{i,t} = \beta_1 MELD\ era_t \times Org\ Type_i + \beta_2 Controls_{i;t} + \beta_3 MELD\ era_t \times Controls_{i,t} + Month_t + Center_i + \varepsilon_{i,t} \quad (2)$$

The differential impact of organization type on the change in the outcome of interest before and after the policy change is measured by β_1. $Month_t$ dummy variables for each individual month in the data are also included (24 dummies, instead of 12 as in Equation 1), in addition the other control variables. No main effect for *Org Type* or *MELD era* is included in the estimation equation because

these are absorbed by the center and month fixed effects, respectively. All controls are also interacted with the variable *MELD era.*

Comparing gaming of the liver allocation policy to benefit certain consumer-beneficiaries

We finally estimate how organization type influences differential gaming of the ICU liver allocation policy to benefit specific consumer-beneficiaries, or in this context, groups of patients, by using the following differences-in-differences specification:

$$\begin{aligned} Outcome_{i,t} = \quad & \beta_1 Z_{i,t} + \beta_2 MELD\ era_t \times Z_{i,t} + \beta_3\ MELD\ era_t \times Org\ Type_i \times Z_{i,t} \\ & + \beta_4 Org\ Type_i \times Z_{i,t} + \beta_5 MELD\ era_t \times Org\ Type_i + \beta_6 Controls_{i,t} \\ & + \beta_7 MELD\ era_t \times Controls_{i,t} + Z_{i,t} \times Controls_{i,t} + \beta_8 MELD\ era_t \\ & x\ Z_{i,t} \times Controls_{i,t} + Month_t + Center_i + \varepsilon_{i,t} \end{aligned} \quad (3)$$

In this model, *Z* is a binary variable indicating whether the patient is of a beneficiary type of interest. As discussed previously, beneficiaries that have been suggested as groups served by non-profits include local communities and underserved groups such as women. We thus examine locally-residing patients in one specification and female patients in another specification. β_3 is the estimate of interest, measuring differential ICU manipulation by organization type for the consumer-beneficiary group. To represent whether the patient resides locally, we construct the dependent variable *Same zip*, which takes the value of 1 if the transplant patient is from the same zip code as the center and 0 otherwise.[13] Similarly, *Female* is a binary variable indicating whether the patient is female.

[13] In a small number of cases the patient zip code was not available. These cases were dropped. There were no systematic differences in the patients with missing zip codes.

When the outcome variable is either *ICU* or *MELD<15,* the model is estimated using ordinary least squares, resulting in a linear probability model. A linear probability model is reported instead of a logistic model to be consistent with previous work in this context (Snyder, 2010), to allow for easy interpretation of the results, and to avoid the complications arising from using many fixed effects in logistic models (Katz, 2001; Wooldridge, 2010). In differences-in-differences estimations, there is the potential for serial correlation which would inflate standard errors (Bertrand et al, 2003). Given the nature of the variables of interest, this is not likely to be a concern. To be sure, however, we account for the two corrections recommended by Bertrand et al, (2003). First, we cluster using an arbitrary variance-covariance matrix at the level of OPO, and all reported specifications use ordinary least squares models with standard errors clustered at the OPO level. Second, we perform a robustness check collapsing time series information into only pre and post policy time periods, and find the results to be robust to this specification. Additionally, we create a quadratic distance measure as a control which, when interacted with both *Z* and *MELD era* as shown in Equation 3, should help control for any potential issues related to time trends in the variables of interest. All reported results include this control.[14]

RESULTS

Patient health misrepresentation, overall and by center type

Table 1 reports summary statistics for key variables before and after the policy change. The proportion of patients coming from the ICU dropped significantly, by 11.83 from 23.22, while average patient sickness as measured by the MELD score increased by 1.25 points. If there were no manipulation of ICU status taking place, we would expect the number of patients coming from

[14] This is similar to the procedure used in Snyder (2010) to control for time trends using a similar dataset.

the ICU to increase as average patient sickness increases. The contrary pattern exhibited in Table 1 is consistent with strategic manipulation of the liver transplant waitlist by listing patients in the ICU.[15]

Insert Table 1 about here

Table 2 reports summary statistics for the three main outcome variables of interest (proportion of transplant patients coming from the *ICU*, *MELD* scores of liver transplant patients, and proportion of transplant patients with *MELD* scores below 15) by center ownership type, before *(pre)* and after *(post)* the policy change. Column 1 demonstrates that while the proportion of patients coming from the ICU dropped after the policy change in all organization types, the magnitude of each drop varies. The decrease in proportion of patients coming from the ICU appears to be smallest in public centers (17.25 pre vs. 12.71 post). The decrease in proportion of patients coming from the ICU was greatest for for-profit centers (29.78 pre vs. 11.76 post), while the associated change in patient health, *MELD Score*, did not change significantly for for-profits (21.36 pre compared 21.48 post). Interestingly, the proportion of healthy patients receiving transplants in for-profit centers increased rather than decreased after the policy change (25.97 pre vs. to 35.29 post), opposing the general decreasing trend shown in Table 1. By contrast, in both public and nonprofit centers, the average patient sickness level increased after the policy change and the fraction of healthy patients receiving transplants decreased.

The last two columns of Table 2 report average MELD scores and the proportion of patients with MELD scores under 15 by center type, conditional on patients coming from the ICU. If

[15] See Snyder (2010) for a similar argument.

manipulation of the ICU were indeed resulting in healthier patients receiving transplants, we would expect the average health of patients coming from the ICU to decrease after the policy change. Table 2 shows the increase in patient sickness and the decrease in the proportion of relatively healthy patients receiving transplants is indeed greater when restricted to the subgroup of patients coming from the ICU.

Insert Table 2 about here

While these results are suggestive of centers strategically misrepresenting information in different ways and for different outcomes, there are likely persistent differences across centers that could conflate simple cross-sectional comparisons. To begin to control for these differences, we ran regressions per the specification in Equation 1 for each outcome variable and organization type (as well as for all organization types combined). Table 3 reports in each cell the main coefficient of interest from Equation 1, β_1, which estimates the change in behavior due to the policy shock, along with its corresponding standard errors and p-values, for each permutation of the regression. Controlling for patient characteristics, time trends, and center-level differences, the changes in behavior due to the policy shock as reported in Table 3 are consistent with the summary statistics presented in Table 2.

To put these magnitudes into perspective, patients with MELD scores between 20 and 29 have an estimated 90-day mortality rate of 19.6 percent. The estimated 90-day mortality rate jumps to 52.6 percent for patients with scores between 30 and 39. For patients with alcoholic hepatitis, moving from a MELD score of 20 (the average score for the data used) to a score of 23 increases the estimated 90-day mortality rate from 25 percent to 35 percent. Thus, in this context, the

coefficients representing differences in MELD scores that vary between 1.6 and 2.7 depending on the organization type, represent a sizable difference in the health and mortality projections of transplant recipients.

Insert Table 3 about here

Differences in patient health misrepresentation between for-profit, nonprofit, and public centers

To assess whether gaming of the ICU liver allocation policy was statistically different between organization types, Table 4 displays results for the specification described in Equation 2. The baseline organization type for the regressions shown in Table 4 is nonprofit.

***Insert Table 4 about here ***

Model 1 shows that public centers' drop in the proportion of liver transplant patients coming from the ICU was 8.3 percentage points less than that of nonprofit centers (p=0.001), controlling for patient characteristics, center fixed effects, time trends, and OPO characteristics. Replicating the regression presented in Model 1, but with for-profit as the baseline organization type results in a *Public x MELD era* coefficient of β_1=0.081 (p=0.218).[16] Public centers' drop in the proportion of patients coming from the ICU compared to for-profit centers was thus almost the

[16] Calculated using the same regression as Model 1, but with for-profit as the baseline organization type (rather than nonprofit). The coefficient reported is that corresponding to the interaction *Public x Meld era*. The coefficients can be calculated from the data in the table by subtracting the *Public x Meld era* from the *For-Profit x Meld era* coefficients. The standard errors and p-values can also be calculated from the respective standard errors in the table as well.

same as it was compared to nonprofits, but the difference is only marginally statistically different due to larger standard errors. These results provide support for the idea that public centers are less likely to manipulate ICU status on average than other organization types.

Model 2 indicates that nonprofits had a larger increase in the average MELD score (representing a decline in average health of liver transplant patients in response to the policy change, since a lower MELD scores indicates healthier patients) than for-profit centers that was marginally statistically significant (β_1=-1.69; p=0.059). The results comparing public and for-profit centers are directionally similar, with public centers having a larger decline in the average health of patients; though this result was not as statistically significant (β_1=1.103 p=0.271).[17] MELD scores of patients increased more in nonprofit rather than for-profit liver transplant centers, but MELD scores of public center transplant patients did not statistically increase more in public rather than for-profit centers. This is not surprising though, as public centers had a smaller drop in ICU use, so the average effect on patient sickness would not be as distinct.

Model 3 compares the response to the policy shock in proportion of liver transplant patients that are relatively clinically healthy across organization types. The proportion of healthy patients receiving transplants decreased 12.7 percentage points more in nonprofit than for-profit liver centers (p=0.000) and by 12.6 percentage points more in public than for-profit liver centers (p=0.001).[18]

[17] Computed with the same regression as presented in Model 2 except with for-profit, rather than nonprofit, as the baseline for organization type.

[18] Computed with the same regression as presented in Model 3 except with for-profit, rather than nonprofit, as the baseline for organization type.

Targeted patient health misrepresentation for certain consumer-beneficiaries

Table 5 displays results for the regression specification described in Equation 3. Columns 1 through 3 reflect Equation 3 where Z, the beneficiary group of interest, is *Same Zip*. Columns 4 through 6 reflect Equation 3, where the beneficiary group of interest is *Female.*

Insert Table 5 about here

Columns 1 and 4 demonstrate that nonprofits were more likely to manipulate patient ICU status for certain beneficiaries than for-profits, in line with nonprofits' objectives and definitions of value. The differential increase in proportion of transplant patients coming from the ICU after the policy change was 19.6 and 16.7 percentage points for *Same Zip* and *Female,* respectively, with both being statistically significant (p=0.008 and p=0.028).

Columns 2 and 5 replicate the regressions of Columns 1 and 4 with a different outcome variable: patient MELD score. The estimated coefficients are directionally supportive of the idea that centers would be willing to misrepresent health of even relatively healthier patients belonging to certain groups that align with their mission, with nonprofits estimated to have increases in MELD scores that are 2.129 and 3.555 points higher than for-profits in response to the policy change for *Same Zip* and *Female,* respectively. Only *Female* is statistically significant, however (p=0.254 and p=0.020). Columns 3 and 6 show a similar pattern with respect to the outcome *MELD<15*, with differential percentage point drops in the proportion of healthy patients receiving transplants in response to the policy change by nonprofits compared to for-profits of 0.179 and 0.234, with once again only the coefficient for the interaction with *Female* being statistically significant (p=0.259 and p=0.023).

We replicated the regressions presented in Table 5 except with for-profit, rather than nonprofit, as the baseline for *Org Type*. Compared to for-profit firms, public centers have estimated coefficients of 0.243 (p=0.010), 3.553 (p=0.087), and 0.218 (p=0.211) for the interactions with *Same Zip* in columns 1 through 3. Similarly, the estimated coefficients for the difference between Public and for-profit with respect to the interaction with Female in columns 4 through 6 are 0.133 (p=0.086), 3.20 (p=0.050) and 0.167 (p=0.127) respectively. This suggests that public and non-profit centers were more willing to misrepresent patient health for both local and female transplant patients. However, compared to female patients, centers were not as willing to do so for local patients that were relatively healthy. Also, while the coefficients for both public and non-profit were directionally the same, the magnitude and significance of the coefficients were stronger for nonprofit centers when comparing female to male patients, and stronger for public centers when comparing local to non-local patients.

Robustness Checks

One potential concern could be that centers are less willing to help patients who are sick due to alcohol abuse, which could be related to gender. Other factors could also be correlated with the medical reason that a patient needs a transplant. To rule out these concerns, we check that our results are robust to inclusion of diagnosis (for example, alcoholic cirrhosis).

There could also be concerns that our results are being driven by serial correlation resulting from time trends. To ensure that this is not the case, we performed robustness checks collapsing all time-series information into only pre and post-policy time periods, as well running the analysis with "dummy time periods" using fake dates for the policy change. The results are robust to

collapsing the time series information and the findings disappeared when using fake time periods. Both of these robustness checks indicate that the results are not being driven by time trends.

DISCUSSION AND CONCLUSION

We found that all organization types engaged in some misconduct. For-profit liver centers manipulated ICU enrollment for patients who were clinically unhealthy and nearly indistinguishable from patients on the waiting list above them, but not for relatively healthy patients. This is in line with a profit-maximization objective of engaging in misconduct in a manner that maximizes the likelihood of lucrative transplants taking place at the center while simultaneously minimizing the likelihood of being caught for engaging in such gaming. Nonprofit liver transplant centers manipulated patient status at a similar rate to for-profit centers, but did so differently. They manipulated patient status for relatively healthy individuals (with a higher likelihood being caught) of certain types: locally residing residents and women. We argue that this behavior is in line with maximizing value captured with a concept of value that is not financially-driven, but rather defined by providing value to and serving certain groups of beneficiaries. Public liver centers manipulated ICU enrollment less than the other center types on average, but when they did manipulate ICU enrollment, they did so more similarly to nonprofit than for-profit liver centers. This behavior is consistent with public organizations defining value more similarly to nonprofit than for-profit organizations, but having less precisely defined (and often conflicting) objectives and definitions of value than either nonprofit or for-profit organizations.

Limitations and Future Research

In our setting, as in most foreseeable settings, it is not possible to randomly assign nonprofit, for-profit, and public status across organizations, so we cannot observe a causal relationship between organization type and gaming of the ICU liver allocation policy. We also note that our setting is a specific one, which can limit the generalizability of our empirical findings, and leaves room for future work examining strategic behavior by organization type in other settings. Nonetheless, the fact that this paper's setting enables us to leverage a policy shock to identify misconduct, a practice that can be difficult to observe, and is one in which all three organization types coexist and conduct the same basic functions, nevertheless makes it an advantageous setting for studying the relationship between organization type and unethical behavior.

Given our interest in comparing behavior across organization types, we treat centers' concepts of value as homogenous by organization type, though we do allow for centers to vary in other ways through the inclusion of center-level fixed effects. More nuanced exploration of differences in concepts of value within organization types can be explored in future work.

Conclusions

Our findings show that different organization types will all exhibit strategic unethical behavior when doing so enables the creation and capture of that organization type's concept of value. These findings are contrary to the popular notion that for-profit organizations are more likely to "game the system" than the more prosocial-oriented, and by extension ethical, nonprofit organizations. This paper thus responds to the literature that has called for increased scholarly inquiry into the unethical behavior in nonprofit and public organizations (Greenlee, Fischer,

Gordon, & Keating, 2007; Holtfreter, 2008; Krishnan *et al.*, 2006; O'Neill, 1992). By demonstrating that the objectives of different organizational forms can influence whether and how organizations engage in unethical behavior, we contribute to the understanding of how organizational characteristics influence moral hazard and unethical behavior in organizations (Bennett *et al.*, 2013; Edelman & Larkin, 2015; Pierce & Snyder, 2008; Pierce & Toffel, 2013). We furthermore contribute to the literature linking differences in strategic choices across organization type to differences in the missions and incentives of organizations (Greenwood *et al.*, 2017).

The liver transplant industry is one in which all three organization types co-exist and are overseen and regulated by a single entity (the OPTN, a nonprofit organization which in turn is overseen by Congress). As such, our findings are relevant to the literature considering the interactions between and oversight of entities of different organization types (Cabral *et al.*, 2010; Henisz, 2006; Kivleniece & Quelin, 2012; Mahoney *et al.*, 2009; Pierce and Toffel, 2013; Utting & Zammit, 2009). This literature has noted that public-private relationships have potentially contradictory agendas and heterogeneous interests which can lead to tensions (Mahoney *et al.*, 2009; Utting & Zammit, 2009; Kivleniece & Quelin, 2012; Cabral *et al.*, 2010). Our paper furthers this conversation by demonstrating that the heterogeneous objectives of different organization types can result in different manifestations of unethical behavior that at times conflict with, and at times complement, the objectives of the overseeing entity.

In a setting where the regulatory agency's objective is the allocation of livers to the sickest patients,[19] it is notable that unethical manipulation of the ICU waiting list by some organization types resulted in allocations that conflicted with the overseeing agency's objectives more than

[19] https://bioethicsarchive.georgetown.edu/pcbe/background/davispaper.html

others.[20] For-profit liver centers, driven by the primary objective of maximizing profitability for shareholders, were incentivized to manipulate ICU status to increase the volume of transplants occurring in their centers, while simultaneously minimizing negative attention from regulators. As such, sicker patients still received liver transplants as result of for-profits' strategic misrepresentation of patient health. The regulatory agency's goals with respect to liver transplant allocations were thus not significantly thwarted by the unethical behavior of for-profit liver centers. Nonprofit (and to a lesser degree, public) centers, on the other hand, that derive value from providing services to certain groups of individuals (such as women and local patients), face an incentive to prioritize patients with the characteristics they seek to help over sicker patients without characteristics they seek to help. Nonprofit, and to a lesser degree, public liver centers, by manipulating ICU status in a way that resulted in healthier patients receiving transplants, thus went against the goals of the overseeing organization.

The overseeing organization in this context is itself a nonprofit organization (the OPTN). It is interesting that nonprofit, and to a lesser extent, public, liver centers' strategic behavior was less aligned with the goals of the overseeing organization of the same type than that of for-profit liver centers. As public-private relationships create tensions (Kivleniece & Quelin, 2012), it is interesting that in this instance the private centers' behavior, rather than the public centers' behavior, was more aligned with the objectives of the public overseer. The distinct objectives and concepts of value of each of the players in each setting (the overseeing organization, as well as the organizations being overseen) are important for predicting how organizations will act and whether the resulting strategic actions will be in alignment or misalignment with the governing entity's

[20] Similarly, Snyder (2010) found that even though competition did drive liver transplant centers to misrepresent patient health (likely for financial reasons), centers did so in a way to still allocated the available livers to the sickest patients.

objectives. This applies to settings where a regulatory organization oversees organizations of different types, such as in our setting, as well more broadly to settings where organizations of different types interact in different ways. This includes situations where public, nonprofit, and for-profit firms contract with one another, compete with one another, have formed alliances, or work in parallel with one another.

REFERENCES

Archambeault, D. S., Webber, S., & Greenlee, J. (2015). Fraud and corruption in U.S. nonprofit entities: A summary of press reports 2008–2011. *Nonprofit and Voluntary Sector Quarterly, 44*(6), 1194–1224.

Becker, B., & Milbourn, T. (2011). How did increased competition affect credit ratings? *Journal of Financial Economics, 101*(3), 493–514.

Bennett, V. M., Pierce, L., Snyder, J. A., & Toffel, M. W. (2013). Customer-driven misconduct: How competition corrupts business practices. *Management Science, 59*(8), 1725–1742.

Bertrand, M., Duflo, E., & Mullainathan, S. (2004). How much should we trust differences-in-differences estimates? *The Quarterly Journal of Economics,* 119(1), 249-275.

Boris, E. T. (1999). The nonprofit sector in the 1990s. In C. T. Clotfelter & T. Ehrlich (Eds.), *Philanthropy and the nonprofit sector in a changing America* (pp. 1–33). Bloomington, IN: Indiana University Press.

Boris, E. T., & Steuerle, C. E. (Eds.). (2006). *Nonprofits & government: Collaboration & conflict* (2nd ed.). Washington, DC: The Urban Institute Press.

Bowman, C., & Ambrosini, V. (2000). Value creation versus value capture: Towards a coherent definition of value in strategy. *British Journal of Management, 11*(1), 1–15.

Bowman, J. S. (1990). Ethics in government: A national survey of public administrators. *Public Administration Review, 50*(3), 345–353.

Bowman, W. (2016). Ethics and nonprofits. In E. A. M. Searing & D. R. Searing (Eds.), *Practicing professional ethics in economics and public policy* (pp. 229–236). New York, NY: Springer.

Boyne, G. A. (2002). Public and private management: What's the difference? *Journal of Management Studies, 39*(1), 97–122.

Brandenburger, A. (2002). Porter's added value: High indeed! *The Academy of Management Executive, 16*(2), 58–60.

Brandenburger, A. M., & Stuart, H. W. (1996). Value-based business strategy. *Journal of Economics & Management Strategy, 5*(1), 5–24.

Brinkerhoff, D. W., & Brinkerhoff, J. M. (2011). Public-private partnerships: Perspectives on purposes, publicness, and good governance. *Public Administration and Development, 31*(1), 2–14.

Brower, H. H., & Shrader, C. B. (2000). Moral reasoning and ethical climate: Not-for-profit vs. for-profit boards of directors. *Journal of Business Ethics, 26*(2), 147–167.

Cabral, S., Lazzarini, S. G., & de Azevedo, P. F. (2010). Private operation with public supervision: Evidence of hybrid modes of governance in prisons. *Public Choice, 145*(1/2), 281–293.

Chatain, O. (2011). Value creation, competition, and performance in buyer-supplier relationships. *Strategic Management Journal, 32*(1), 76–102.

Clarkson, M. B. E. (1995). A stakeholder framework for analyzing and evaluating corporate social performance. *The Academy of Management Review, 20*(1), 92–117.

Crawford, V. P. (2003). Lying for strategic advantage: Rational and boundedly rational misrepresentation of intentions. *The American Economic Review, 93*(1), 133–149.

Crilly, D., & Sloan, P. (2012). Enterprise logic: Explaining corporate attention to stakeholders from the 'inside-out'. *Strategic Management Journal, 33*(10), 1174–1193.

De Vita, C. J., & Fleming, C. (Eds.). (2001). *Building capacity in nonprofit organizations*. Washington, DC: The Urban Institute. Retrieved from http://research.urban.org/UploadedPDF/building_capacity.PDF

Dellarocas, C. (2006). Strategic manipulation of internet opinion forums: Implications for consumers and firms. *Management Science, 52*(10), 1577–1593.

Delmas, M. A., & Burbano, V. C. (2011). The drivers of greenwashing. *California Management Review, 54*(1), 64–87.

DiMaggio, P. J., & Anheier, H. K. (1990). The sociology of nonprofit organizations and sectors. *Annual Review of Sociology, 16,* 137–159.

Easley, D., & O'Hara, M. (1983). The economic role of the nonprofit firm. *The Bell Journal of Economics, 14*(2), 531–538.

Edelman, B., & Larkin, E. (2015). Social comparisons and deception across workplace hierarchies: Field and experimental evidence. *Organization Science, 26*(1), 78–98.

Ethics Resource Center. (2008). *National nonprofit ethics survey: An inside view of nonprofit sector ethics*. Arlington, VA: Ethics Resource Center.

Feldman, M. S., & March, J. G. (1981). Information in organizations as signal and symbol. *Administrative Science Quarterly, 26*(2), 171–186.

Filistrucchi, L., & Prufer J. (2018). Faithful strategies: how religion shapes nonprofit management. *Management Science,* early online version.

Fremont-Smith, M. R., & Kosaras, A. (2003). Wrongdoing by officers and directors of charities: A survey of press reports 1995–2002. *The Exempt Organization Tax Review, 42*(1), 25–59.

Friedman, M. (2007). The social responsibility of business is to increase its profits. In W. C. Zimmerli, K. Richter, & M. Holzinger (Eds.), *Corporate ethics and corporate governance* (pp. 173–178). New York, NY: Springer.

Garcia-Castro, R., & Aguilera, R. V. (2015). Incremental value creation and appropriation in a world with multiple stakeholders. *Strategic Management Journal, 36*(1), 137–147.

Gassler, R. S. (1986). *The economics of nonprofit enterprise: A study in applied economic theory.* Lanham, MD: University Press of America.

Gino, F., & Pierce, L. (2009). Dishonesty in the name of equity. *Psychological Science, 20*(9):1153-1160.

Greenlee, J., Fischer, M., Gordon, T., & Keating, E. (2007). An investigation of fraud in nonprofit organizations: Occurrences and deterrents. *Nonprofit and Voluntary Sector Quarterly, 36*(4), 676–694.

Greenwood, B. N., Agarwal, R., Agarwal, R., & Gopal, A. (2017). The when and why of abandonment: The role of organizational differences in medical technology life cycles. *Management Science, 63*(9), 2948–2966.

Hansmann, H. B. (1980). The role of nonprofit enterprise. *The Yale Law Journal, 89*(5), 835–901.

Harris, J., & Bromiley, P. (2007). Incentives to cheat: The influence of executive compensation and firm performance on financial misrepresentation. *Organization Science, 18*(3), 350–367.

Henisz, W. J. (2006). Governance issues in public private partnerships. *International Journal of Project Management, 24*(7), 537–538.

Hillman, A. J., & Keim, G. D. (2001). Shareholder value, stakeholder management, and social issues: What's the bottom line? *Strategic Management Journal, 22*(2), 125–139.

Holtfreter, K. (2008). Determinants of fraud losses in nonprofit organizations. *Nonprofit Management & Leadership, 19*(1), 45–63.

Horwitz, J. R. (2005). Making profits and providing care: Comparing nonprofit, for-profit, and government hospitals. *Health Affairs, 24*(3), 790–801.

Iriyama, A., Kishore, R., & Talukdar, D. (2016). Playing dirty or building capability? Corruption and HR training as competitive actions to threats from informal and foreign firm rivals. *Strategic Management Journal, 37*(10), 2152–2173.

Jansen, E., & Von Glinow, M. A. (1985). Ethical ambivalence and organizational reward systems. *The Academy of Management Review, 10*(4), 814–822.

Katz, E. (2001). Bias in conditional and unconditional fixed effects logit estimation. *Political Analysis, 9*(4), 379–384.

Kaul, A., & Luo, J. (2017). An economic case for CSR: The comparative efficiency of for-profit firms in meeting consumer demand for social goods. *Strategic Management Journal*, forthcoming.

Kivleniece, I., & Quelin, B. V. (2012). Creating and capturing value in public-private ties: A private actor's perspective. *Academy of Management Review, 37*(2), 272–299.

Klein, P. G., Mahoney, J. T., McGahan, A. M., & Pitelis, C. N. (2013). Capabilities and strategic entrepreneurship in public organizations. *Strategic Entrepreneurship Journal, 7*(1), 70–91.

Krishnan, R., Yetman, M. H., & Yetman, R. J. (2006). Expense misreporting in nonprofit organizations. *The Accounting Review, 81*(2), 399–420.

Larkin, I. (2014). The cost of high-powered incentives: Employee gaming in enterprise software sales. *Journal of Labor Economics, 32*(2), 199–227.

Lepak, D. P., Smith, K. G, & Taylor, M. S. (2007). Value creation and value capture: A multilevel perspective. *The Academy of Management Review, 32*(1), 180–194.

Lieberman, M. B., Garcia-Castro, R., & Balasubramanian, N. (2017). Measuring value creation and appropriation in firms: The VCA model. *Strategic Management Journal, 38*(6), 1193–1211.

Lott, C. E. 2009. Why women matter: The story of microcredit. *Journal of Law and Commerce, 27*(2), 219–230.

Lyden, F. J. (1975). Using Parsons' functional analysis in the study of public organizations. *Administrative Science Quarterly, 20*(1), 59–70.

MacDonald, G., & Ryall, M. D. (2004). How do value creation and competition determine whether a firm appropriates value? *Management Science, 50*(10), 1319–1333.

Machan, T. R., & Uyl, D. J. D. (1987). Recent work in business ethics: A survey and critique. *American Philosophical Quarterly, 24*(2), 107–124.

Mahoney, J. T., McGahan, A. M., & Pitelis, C. N. (2009). The interdependence of private and public interests. *Organization Science, 20*(6), 1034–1052.

Mirman, L. J., Samuelson, L., & Schlee, E. E. (1994). Strategic information manipulation in duopolies. *Journal of Economic Theory, 62*(2), 363–384.

Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *The Academy of Management Review, 22*(4), 853–886.

Murphy, T. F. (2004). Gaming the transplant system. *The American Journal of Bioethics, 4*(1), 28.

O'Connor, J. P., Priem, R. L., Coombs, J. E., & Gilley, K. M. (2006). Do CEO stock options prevent or promote fraudulent financial reporting? *The Academy of Management Journal, 49*(3), 483–500.

O'Neill, M. (1992). Ethical dimensions of nonprofit administration. *Nonprofit Management & Leadership, 3*(2), 199–213.

Ostler, J. (2016). Corrupt business practices as a market entry strategy. University of Michigan Working Paper.

Ostrom, E. (1990). *Governing the commons: The evolution of institutions for collective action.* Cambridge, UK: Cambridge University Press.

Pierce, L., & Balasubramanian, P. (2015). Behavioral field evidence on psychological and social factors in dishonesty and misconduct. *Current Opinion in Psychology, 6,* 70–76.

Pierce, L., Snow, D. C., & McAfee, A. (2015). Cleaning house: The impact of information technology monitoring on employee theft and productivity. *Management Science, 61*(10), 2299–2319.

Pierce, L., & Snyder, J. (2008). Ethical spillovers in firms: Evidence from vehicle emissions testing. *Management Science, 54*(11), 1891–1903.

Pierce, L., & Toffel, MW. (2013). The role of organizational scope and governance in strengthening private monitoring. *Organization Science* 24(5): 1558-1584.

Porter, M. E., & Kramer, M. R. (2011). The big idea: Creating shared value. *Harvard Business Review, 89*(1, 2), 62–77.

Ramírez, R. (1999). Value co-production: Intellectual origins and implications for practice and research. *Strategic Management Journal, 20*(1), 49–65.

Rangan, S., Samii, R., & Van Wassenhove, L. N. (2006). Constructive partnerships: When alliances between private firms and public actors can enable creative strategies. *The Academy of Management Review, 31*(3), 738–751.

Rhode, D. L., & Packel, A. K. (2009). Ethics and nonprofits. *Stanford Social Innovation Review, 7*(3), 29–35.

Rose-Ackerman, S. (1996). Altruism, nonprofits, and economic theory. *Journal of Economic Literature, 34*(2), 701–728.

Salamon, L. M. (1995). *Partners in public service: Government-nonprofit relations in the modern welfare state.* Baltimore, MD: Johns Hopkins University Press.

Salamon, L. M. (2015). *The resilient sector revisited: The new challenge to nonprofit America.* Washington, DC: Brookings Institution Press.

Sethi, S. P., & Sama, L. M. (1998). Ethical behavior as a strategic choice by large corporations: The interactive effect of marketplace competition, industry structure and firm resources. *Business Ethics Quarterly, 8*(1), 85–104.

Schlesinger, M., Quon, N., Wynia, M., Cummins, D., & Gray, B. (2005). Profit-seeking, corporate control, and the trustworthiness of health care organizations: Assessments of health plan performance by their affiliated physicians. *Health Services Research, 40*(3), 605–646.

Snyder, J. (2010). Gaming the liver transplant market. *Journal of Law, Economics, & Organization, 26*(3), 546–568.

Steinberg, R. (1986). The revealed objective functions of nonprofit firms. *The RAND Journal of Economics, 17*(4), 508–526.

Stevens, J. M., Steensma, H. K., Harrison, D. A., & Cochran, P. L. (2005). Symbolic or substantive document? The influence of ethics codes on financial executives' decisions. *Strategic Management Journal, 26*(2), 181–195.

Sundaram, A. K., & Inkpen, A. C. (2004). The corporate objective revisited. *Organization Science, 15*(3), 350–363.

Tenbrunsel, A. E. (1998). Misrepresentation and expectations of misrepresentation in an ethical dilemma: The role of incentives and temptation. *The Academy of Management Journal, 41*(3), 330–339.

Thaler, R., & Rosen, S. (1976). The value of saving a life: Evidence from the labor market. In N. E.

Terleckyj (Ed.), *Household production and consumption* (pp. 265–302). New York, NY: National Bureau of Economic Research.

Utting, P., & Zammit, A. (2009). United Nations-business partnerships: Good intentions and contradictory agendas. *Journal of Business Ethics, 90*(Supplement 1), 39–56.

Viscusi, W. K., Huber, J., & Bell, J. (2011). Promoting recycling: Private values, social norms, and economic incentives. *The American Economic Review, 101*(3), 65–70.

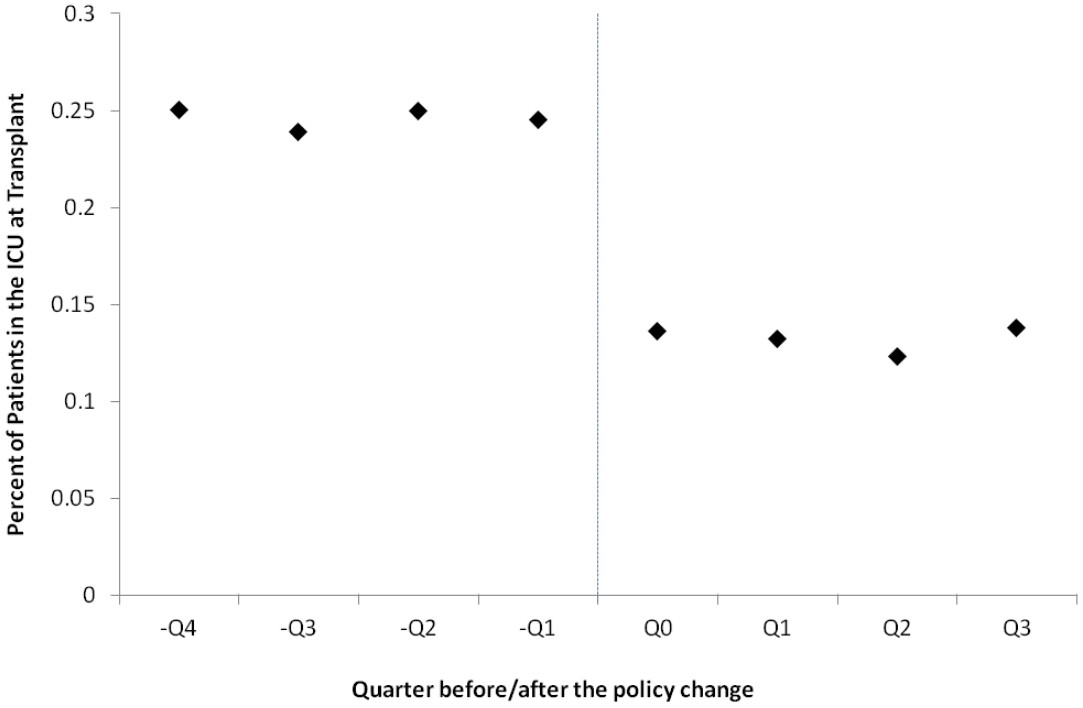
Voss, G. B., Cable, D. M., & Voss, Z. G. (2000). Linking organizational values to relationships with external constituents: A study of nonprofit professional theatres. *Organization Science, 11*(3), 330–347.

Weisbrod, B. A. (1988). *The nonprofit economy*. Cambridge, MA: Harvard University Press.

Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data* (2nd ed.). Cambridge, MA: The MIT Press.

Tables and Figures

Figure 1: Proportion of patients in ICU before and after the policy change



Note: The Policy Change Occurred March 1, 2002. Data from UNOS STAR file.

Table 1: Summary statistics of transplant patients at time of transplant

	Pre-MELD policy	Post-MELD policy
Percent coming from ICU	23.22	11.39
Average computed Meld Score	18.83	20.08
Percent with Meld<15	42.38	39.77
Percent female	35.22	32.26
Average age	51.32	51.59

Table 2: Summary statistics of transplant patients at the time of transplant by organization type

		ICU	Meld Score	Meld<15	Meld Score (from ICU)	Meld<15 (from ICU)
Public	Pre	17.25	18.83	44.03	28.84	9.17
	Post	12.71	20.27	39.21	34.22	3.00
For-Profit	Pre	29.78	21.36	25.97	28.26	8.70
	Post	11.76	21.48	35.29	31.25	8.33
Nonprofit	Pre	25.95	18.76	42.04	24.62	20.42
	Post	10.71	19.93	40.20	31.89	7.16

Table 3: Patient health misrepresentation

	ICU	MELD Score	Meld<15
All Centers Combined	-0.139***	2.579***	-0.070***
	(0.017)	(0.283)	(0.015)
Public	-0.075***	2.207***	-0.080***
	(0.023)	(0.467)	(0.027)
For-Profit	-0.198**	1.613*	0.024
	(0.049)	0.621	(0.049)
Nonprofit	-0.172***	2.709***	-0.066***
	(0.019)	(0.310)	(0.017)
Observations	8867	8867	8867

Each cell contains the coefficient β_1 from Equation 1 for the respective organization type and outcome variable.
All specifications include individual and OPO level controls along with center and month fixed effects.
Standard errors in parentheses. SEs clustered at the OPO level.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4: Impact of Center Type on Patient Health Misrepresentation

	(1) ICU	(2) MELD	(3) Meld<15
Public × MELD era	0.083***	-0.59	0.002
	(0.024)	(0.493)	(0.030)
For Profit × MELD era	0.003	-1.693*	0.127***
	(0.062)	(0.876)	(0.022)
Individual Level Controls	Yes	Yes	Yes
Center/OPO Controls	Yes	Yes	Yes
Month Fixed Efects	Yes	Yes	Yes
Center Fixed Effects	Yes	Yes	Yes
Observations	8867	8867	8867

All controls and fixed effects are interacted with MELD era.

SEs clustered at the OPO level.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5: Patient misrepresentation of specific groups by center type

	(1) ICU	(2) MELD Score	(3) Meld<15	(4) ICU	(5) MELD Score	(6) Meld<15
Public × MELD era	0.090***	-0.807*	0.009	0.075***	-0.558	-0.014
	(0.026)	(0.467)	(0.026)	(0.022)	(0.515)	(0.034)
For-Profit × MELD era	-0.034	-1.196	0.095***	-0.059	-0.382	0.037
	(0.069)	(0.845)	(0.026)	(0.075)	(1.019)	(0.054)
Public × MELD era	-0.047	1.425	-0.039			
× Same Zip	(0.051)	(1.179)	(0.079)			
For-Profit × MELD era	0.196***	-2.129	0.179			
× Same Zip	(0.071)	(1.845)	(0.157)			
Public × MELD era				0.034	-0.355	0.067
× Female				(0.025)	(0.602)	(0.046)
For-Profit × MELD era				0.167**	-3.555**	0.234**
× Female				(0.073)	(1.471)	(0.100)
Individual Level Controls	Yes	Yes	Yes	Yes	Yes	Yes
Center/OPO Controls	Yes	Yes	Yes	Yes	Yes	Yes
Month Fixed Efects	Yes	Yes	Yes	Yes	Yes	Yes
Center Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	8867	8867	8867	8867	8867	8867

All controls are interacted with MELD era and either Same Zip (for columns 1-3) or Female (columns 4-6).
Main effects are included in all specifications with interactions.
Standard errors in parentheses. SEs clustered at the OPO level.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$