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Zev J. Eigen

Northwestern University School of Law, z-eigen@northwestern.edu

Adam Seth Litwin

Carey Business School, Johns Hopkins University

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DUCKS AND DECOYS: REVISITING THE EXIT-VOICE-LOYALTY FRAMEWORK IN ASSESSING THE IMPACT OF A WORKPLACE DISPUTE RESOLUTION SYSTEM

Zev J. Eigen and Adam Seth Litwin *

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ABSTRACT

Until now, empirical research has been unable to reliably identify the impact of organizational dispute resolution systems (DRSs) on the workforce at large, in part because of the dearth of data tracking employee perceptions pre- and post- implementation. This study begins to fill this major gap by exploiting survey data from a single, geographically-expansive, US firm with well over 100,000 employees in over a thousand locations. The research design allows us to examine employment relations and human resource (HR) measures, namely, perceptions of justice, organizational commitment, and perceived legal compliance, in the same locations before and after the implementation of a typical, multistep DRS that begins with informal reporting to local managers and culminates with mandatory arbitration. Even after holding all time-constant, location-level variables in place, we find that introduction of the DRS is associated with elevated perceptions of *informal* procedural justice and interactive justice, but diminished perceptions of *formal* procedural justice. We also find no discernible effect on organizational commitment, but a significant boost to perceived legal compliance by the company, raising important questions about the trade-off between voice and exit and formal versus informal aspects of dispute resolution mechanisms.

* Author names are in alphabetical order. Zev J. Eigen is an Assistant Professor of Law at Northwestern University School of Law, and Adam Seth Litwin is an Assistant Professor at the Carey Business School at Johns Hopkins University. The authors acknowledge the generosity of “Gilda’s, Inc.” and, more specifically, of managers in its Human Resources Department for their assistance and patience. The authors also thank Roberto Fernandez, Kenneth Ayotte, and the participants of Northwestern University School of Law’s Internal Faculty Workshop for their helpful guidance and suggestions.

Introduction

Why do employers implement dispute resolution systems (DRS) in nonunion workplaces? Some theorize that employers are motivated by reduced costs associated with defending employee lawsuits (Bingham 1997; Stone 1996). Some posit that DRSs serve as a tool for employers attempting to discourage or avoid unionization (Colvin 2003). Others cite more altruistic reasons for implementing a workplace DRS, like improved opportunities for remedial voice (Lewin 1999; Sheppard, Lewicki and Minton 1992), reduced exit, and increased perceptions of procedural justice (Gordon and Fryxell 1993; Lind et al. 1993; Spencer 1986). In all cases, whether altruistic or self-interested, employers' rationales for implementing DRSs are inextricably linked to employees' perceptions of the DRSs. If employees regard the DRS as an unbiased procedure for resolving conflict, providing a fair measure of due process, and not just a litigation-cost-reduction tool of the employer, employees should be less likely to sue or unionize. Increased *legitimate* opportunities for voice and greater perceived procedural justice should increase employees' organizational commitment and lower turnover, part of the "exit-voice-loyalty" trade-off (Folger 1977; Hirschman 1970). This is visually represented in Figure 1 below, which depicts the standard model connecting DRS implementation, voice, and organizational commitment.

[—INSERT FIGURE 1 ABOUT HERE.—]

Lower turnover and improved voice and procedural justice lead to a more stable and productive workforce, less likely to shirk, and more likely to exhibit so-called *organizational citizenship behavior* (Cohen-Charash and Spector 2001; Moorman 1991a; Moorman 1991b; Moorman, Niehoff and Organ 1993; Niehoff and Moorman 1993). Resolving conflict internally also reduces costs because litigating disputes is often more expensive than addressing them internally. Along the same lines, internal DRSs reduce the likelihood that what might otherwise be a lower-cost non-legal issue (e.g., an employee complaint of generic unfair treatment) is transmogrified by a plaintiff lawyer into a higher-cost legal issue (e.g., the unfair treatment was a manifestation of employment discrimination).

While this bank of theory makes intuitive sense, there are surprisingly few organizationally-grounded studies to back it up. In spite of repeated calls for empirical research in this area, as other researchers have observed, very little is known about how implementation of DRSs affect employees' perceptions of voice and justice (Budd and Colvin 2008; Mahony and Klaas 2008). This research therefore poses a simple, but elusive question: what effects, if any, does implementing an internal DRS have on employees' perceptions of procedural justice and related measures in a nonunionized workplace? More specifically, this study raises critical questions derived from existing theory and empirical work on workplace DRSs: For example, what effect, if any, does implementation of a DRS that culminates in mandatory arbitration of all employment disputes ranging from employee complaints about the fairness of workplace decisions to allegations of discrimination and harassment have on employees' perceptions of procedural justice? Are the effects positive, implying the viability of enabling real remedial voice in a nonunionized environment, or are the effects negative, implying what some theorists suggest—that DRSs imposed unilaterally on employees will not result in voice outlets perceived as procedurally fair? In the exit-voice-loyalty model, one would expect improved perceived procedural justice to correspond with increased organizational commitment—does employee organizational commitment increase or decrease following implementation of the DRS? Lastly, given the formal elements of the DRS and the focus on submitting legal claims to this process in lieu of court, does implementation of a DRS signal to employees that the organization is more complaint with federal and state laws regulating the workplace?

We subject these questions to eight years worth of data spanning more than 100,000 workers and more than 1,000 locations across the United States provided by a large company, “Gilda’s, Inc.,”¹ to be described below. We find that the answers to these questions reveal a new wrinkle in explaining the standard exit-voice-loyalty model. Like most workplace DRSs, the program at Gilda’s starts informally with claim initiation with local supervisors, escalates to formal review by the corporate Human Resources Department, and terminates with final, binding, mandatory arbitration. Implementation of this bifurcated informal/formal system produced a bifurcation in effects on perceived procedural justice. Implementation of the DRS is associated with a statistically significant decrease in perceived *formal* procedural justice (focused on the formal aspects of the organization and the HR Department), but a statistically significant increase in perceived *informal* procedural justice (focused on local management’s ability and likelihood to successfully resolve employees’

¹ “Gilda’s” is a pseudonym used to protect the company’s anonymity.

problems). Similarly, implementing the DRS is associated with a statistically significant augmentation in perceived interactive justice²—a real measure of the *informal* fairness of local management. Therefore, if managers or researchers look only at the “decoy”—the impact of formal aspects of a DRS, most of which the workforce at large might learn about, but will probably never use—they may well find that the program did not improve employees’ perceptions of the fairness of the remedial voice outlet. However, if they look more broadly at informal aspects of the program, they will find the real “duck”—the sought-after increase in “labor peace” that can be delivered by a DRS of this nature.

This duck-and-decoy bifurcation of formal and informal procedural justice effects could be related to our findings on organizational commitment and perceived legal compliance; implementation of the DRS has no statistically significant effect on organizational commitment, but it has a strong, positive effect on the degree to which employees perceive that Gilda’s is complying with laws regulating the workplace (i.e., preventing harassment and discrimination based on protected categories like race, age, and gender). In the traditional exit-voice-loyalty framework, increased procedural justice perceptions associated with voice mechanisms correspond with greater employee retention and organizational commitment. We find that formal aspects of a typical DRS correspond with reduced procedural justice and have no effect on organizational commitment, but do correspond with a significant increase in the degree to which employees perceive that the company is complying with the law. However, the informal component of the very same DRS corresponds with increased procedural and interactive justice.

These findings raise important questions about the degree to which commitment to remain employed at a firm is associated with unilaterally imposed DRSs in a nonunion environment, implying that perhaps part of the fundamental trade-off of formal voice procedures like mandatory arbitration is increased perceived legal compliance for reduced formal perceived procedural justice, with no apparent effect on organizational commitment. Perhaps the corresponding improved perceived informal procedural and interactive justice associated with the informal aspect of the DRS are associated with employee commitment, but to local supervisors (what the authors refer to as “interpersonal commitment”), not to the organization.

² Discussed more below, interactive justice is distinct from procedural justice and measures the extent to which employees believe that their needs are taken into account in making decisions, and that employees are provided with adequate explanations when management decisions are made.

Theory

There is a stark contrast in conceptualization of the relationship between employment DRSs and perceived procedural justice in unionized and nonunionized settings. In a unionized setting, there is significant evidence to support the nexus between augmented procedural justice (voice) derived from grievance and arbitration procedures and increased commitment to remain at the firm. Theorists disagree on whether improved perceived procedural justice is even attainable in a nonunionized setting where a DRS is unilaterally imposed by an employer as opposed to being the product of collective bargaining, i.e., where employee participation is necessarily less collective and more individualized (Budd 2004; Clegg 1975; Sheppard, Lewicki and Minton 1992). There has been vastly more speculation and hypothesizing than empirical study of the relationship between procedural justice and DRS implementation in the nonunion setting. This may be due in part to the private nature of employment dispute resolution and the difficulty gaining access to data. To the extent that information is reported through clearinghouses like the American Arbitration Association (AAA), it may be reasonably assumed that AAA data capture only the tip of the iceberg, may not be representative of the non-available data, and most importantly for this study, never include any information about how employees perceived workplace metrics related to procedural justice *before* implementation of a workplace DRS. Because of the general dearth of before and after information on employees' perceptions of procedural justice, research has focused instead on discerning the characteristics of competing dispute resolution models (Ewing 1989), the causes for grievance initiation (Boroff and Lewin 1997), the effects of grievance activity (Ichniowski 1986), claimant win rates (Colvin 2010; Sherwyn, Estreicher and Heise 2005) and *disputants'* perceptions of procedural justice (Aram and Salipante 1981; Fryxell and Gordon 1989), among other important areas.

Some have suggested that implementing a DRS signals a constructive and proactive approach to dispute resolution on the part of employers, generating significant effects on *non-disputant* employees—the workforce at large (Lewin 1999). However, empirical study of such effects is hampered by the lack of evidence of changes in perceptions brought on by implementation of the DRS. This is exactly the research gap that this paper aims to fill using pre- and post- DRS implementation data, as described in more detail below. Before describing the employer's DRS and these data, we first outline concepts of justice as related to employee voice and formal and informal means of employment dispute resolution.

Justice and Voice

Researchers have sub-classified fairness perceptions into distributive, procedural, and interactive justice, which have been shown to measure distinct constructs (Cohen-Charash and Spector 2001). Distributive justice focuses on the perceived equity in distribution of outcomes or rewards, whereas procedural justice is the perceived fairness of the decision-making processes as opposed to outcomes (Folger and Greenberg 1985; Lind and Tyler 1988). In the workplace, this may be measured as the perceived effectiveness of appealing adverse employment actions such as discipline and discharge, the degree to which management is perceived as accessible and proficient at resolving problems, and offering guidance for dispute resolution, and generally, the extent to which employees believe that the organization is committed to resolving employee disputes quickly and fairly (Cohen-Charash and Spector 2001; Sheppard, Lewicki and Minton 1992).

Procedural justice with respect to workplace DRSs is intrinsically linked to employee “voice” behaviors, attempts to change rather than escape a perceived deterioration of a condition experienced in an organization (Folger 1977; Hirschman 1970). Sheppard, Lewicki and Minton (1992: 139-40) suggest that voice can be “preventative” or “remedial,” the former referring to the solicitation of opinions and suggestions about organizational practices and procedures, and the latter taking the form of appeals to organizational policies and practices after injustice has occurred. Others have distinguished voice along similar lines—as being interest-based versus rights-based (Estreicher and Eigen 2010). Most nonunion DRSs are almost exclusively designed to encourage remedial, interest-based voice without much attention paid to preventative, rights-based voice (Lipsky, Seeber and Fincher 2003). Permitting remedial voice entails ensuring sufficient perceived availability and access. Like procedural justice, it is measured as the degree to which employees feel comfortable reporting problems to management and their actual likelihood of reporting these problems (Spencer 1986). For the purposes of evaluating DRSs, it seems that comfort initiating claims, and the perception that the DRS will address the claim in a neutral, effective and fair way are the two most critical elements by which to gauge the success or failure of a DRS (Folger and Bies 1989; Sheppard, Lewicki and Minton 1992; Tyler and Bies 1990).

Interactive justice is distinct from procedural justice and measures the extent to which employees believe that their needs are taken into account in making decisions and that employees are provided with adequate explanations when decisions are finalized (Aquino, Lewis and Bradfield 1999; Bies 2001). The quality of the interpersonal treatment that an aggrieved employee receives from the decision maker and the way that the decision maker enacts the formal procedure will

heavily influence the aggrieved party's perceptions of whether the procedures are fair (Tyler and Bies 1988). Honesty, courtesy, respectfulness, and appropriate professional decorum affect the way employees regard the fairness of procedures implemented (Sheppard, Lewicki and Minton 1992). Niehoff and Moorman (1993) developed a nine-item, validated measure of interactive justice that gauges employees' beliefs about their managers' interest in their opinions in work-related issues, the degree to which managers listen to their concerns, issues and suggestions, and how much their managers treat them with courtesy and respect among other related measures.

Effective workplace DRSs accord employees adequate opportunities for remedial voice and are regarded as distributively, procedurally, and interactionally just. Because the data available offer evidence of employees' views on how the organization addressed workplace disputes both before and after implementing a formal DRS, this study uniquely identifies the effect of implementation of a DRS on the entire employee population, the vast majority of which are non-disputants that are effectively excised from most existing analyses. It is less informative to compare distributive justice perceptions before and after DRS implementation as compared to procedural and interactional justice perceptions, because distribution of results is partially endogenous to the way in which disputes are addressed. Interactional effects will likely only be applicable in assessing components of the DRS that directly involve immediate supervisors or management, as their interaction reflects interpersonal elements of conflict resolution independent of trust or reliance in the formal mechanisms and non-local decision makers (i.e., "Human Resources," "the company" in the abstract, or formal appeal mechanisms). Procedural justice may be subdivided along similar lines—distinguishing between the extent to which employees trust the organization (HR, the Company, and formal appellate processes) to formally resolve disputes when they are escalated above local management (*formal procedural justice*) from the extent to which employees trust and feel comfortable in initiating and addressing disputes with local management (*informal, localized procedural justice*). The informal component of procedural justice is probably more closely related to interactive justice perceptions. To the extent that DRSs mirror this distinction between formal and informal processes, it makes sense to measure the two separately in order to fully understand the effects of system implementation.

Formal and Informal DRS Mechanisms

The DRS at issue in this study takes a very common form. It begins by directing employees to initiate claims with their local managers informally and culminates in formal, final, and binding

mandatory arbitration. To the extent to which informal mechanisms permit greater participation, they should result in greater perceived procedural and interactive justice (Colvin 2003; Thibaut and Walker 1975). Formal mechanisms like private mediation and arbitration have been shown to result in high levels of participant satisfaction (Lipsky and Seeber 2006; Lipsky, Seeber and Fincher 2003). However, the surveys of the outcomes are often compared with measures of participant satisfaction with outcomes in a judicial forum. This is less useful for managers, who want to know the extent to which a DRS can deliver what used to be thought of as “labor peace.”

Mandatory arbitration, whereby employees waive their right to bring lawsuits even for things like alleged violations of federal and state law, as a condition of employment, has been at the center of the debate on whether nonunion workplace dispute resolution is *fair* to affected employees (Bingham 1997; Estreicher and Eigen 2010; Sherwyn, Tracy and Eigen 1999; Stone 1996). Whether mandatory arbitration enhances or suppresses procedural justice and employee voice is an important but under-analyzed question (Batt, Colvin and Keefe 2002). Some suggest it creates opportunities for due process (Zack 1999) but others are more skeptical of such claims (Schwartz 2009; Stone 1996).

Recent research on employees' interpretations of mandatory arbitration agreements they signed as a condition of their employment reveals that employees may regard these agreements as attempts by the company to insulate itself from legal liability (Eigen 2008). This may be due in part to the formal, legalistic, and contractual way in which such agreements are typically presented. Employees might assume that if corporate headquarters insists that they sign something that looks like a legal document, that the company is doing so to protect its legal interests in a way that impinges on employee rights (Eigen 2008). It is therefore possible that employees could interpret a mandatory arbitration component of an employment DRS as a legal means of insulating corporate rights in a way that fosters overall distrust in the corporate entity because it appears to take away important employee legal rights such as the right to a jury trial.

The Employer's DRS

“Gilda's, Inc.” is a large company operating in the US. Gilda's implemented a four-step DRS for all of its employees in all of its locations that went into effect on January 1, 2004. Prior to this, employees were encouraged to report claims of illegal treatment in violation of federal and state law to their managers or to Gilda's corporate Human Resources Department, which maintained a toll-free, call-in number for employees who wished to make claims anonymously.

The four steps of Gilda's DRS are as follows: (1.) An employee may initiate a claim and attempt to resolve it with his local manager, (2.) If unresolved to his satisfaction at the local level, an employee may then report his claim to the HR Department, and someone will attempt to resolve the claim, (3.) If unresolved to his satisfaction by the HR Department, a claimant may then escalate his claim and choose between a determination made by a tripartite peer-review panel, *or*, by a unilateral determination made by another HR Department member, and (4.) If still unresolved to the employee's satisfaction, he or she may initiate a claim to be brought before final, binding arbitration.

All newly-hired employees complete typical employment forms and sign a contract binding them to resolve any and all legal claims in arbitration. The orientation process is run by local managers based on talking points provided to them by Gilda's corporate HR Department. New employees also watch a short video that plainly describes the-four-step DRS.

Gilda's four-step DRS is typical of many employment DRSs in two, key ways. First, it covers employee claims ranging from generic unfair treatment or complaints about random non-legal matters to highly legalized claims such as discrimination or harassment under Title VII of the Civil Rights Act of 1964. Second, Gilda's DRS contains two distinct components: an informal, localized piece (step 1), followed by a formal, adjudicatory one (steps 2-4).

Data and Methods

At its peak over the 2000 – 2007 sample period, Gilda's employed over 100,000 workers in over 1,000 store locations. Each April, about one third of these locations were chosen at random to participate in an annual, paper-and-pencil survey on employment relations and HR matters. Occasionally, a few stores might be intentionally added to the annual random sample if senior management had a particular interest in a given store. The most likely reason this would occur is because the otherwise random selection of stores had perennially omitted a particular store. Since the survey was administered during regular working hours, it achieved an impressive 80% response rate even in the absence of any financial incentive for completion beyond being paid for their time as employees would otherwise have been working.

As noted above, it was right in the middle of this observation period—January 1, 2004—that Gilda's DRS went into effect for all employees at all locations. Therefore, the data allow us to track movements in employment relations variables over time, including the impact of a policy-induced discontinuity beginning with the 2004 observations. Of course, in order to claim that any discontinuity is associated with the implementation of Gilda's DRS, we would need to control for

any store-level variables that could explain the otherwise “smooth” variation over time in employment relations outcomes. While we have very little information on each store other than its yearly “bag” of survey responses, we can generally match each store’s responses in a given year to its responses in all other years. Consequently, we can control for all time-constant, unobservable sources of variation in employment relations measures using an estimation technique we describe below.

While the sheer quantity of data shared by Gilda’s is massive—over 300,000 worker survey responses spread across eight survey years, the data were not originally collected for research purposes. This engenders two types of challenges—creating a cleanly and confidently linked panel dataset of store-years and constructing appropriate employment relations and HR indices. First, it was not always perfectly obvious when observations from a given store could be reliably linked to that store’s observations in other years. Though Gilda’s uses a numbering system for its stores, there were times when identical store numbers were associated with slightly different store descriptions or when identical store descriptions appeared to be associated with multiple store numbers. We resolved as many of these anomalies as possible with help from Gilda’s management and from reliable external sources. Where we were not able to confidently reconcile survey responses, we dropped them from the analysis. Furthermore, while the original sampling frame included mid-level managers, part-time employees, and workers in supporting roles, we excluded them to ensure that all workers surveyed were frontline workers, doing essentially the same work. In the net, this yielded 215,140 frontline worker responses from 625 different stores over the eight-year period.

The second challenge this company-collected data makes for research is the make-up of the actual survey items. The items themselves were neither developed from pre-validated scales nor kept completely identical across survey instruments. While it is safe to assume that all employees surveyed in a given year in a given store responded to the same instrument, the survey instruments did vary slightly from year to year and even between regions in a given year. In general, each instrument included between 20 and 40 items, all of which were answered on a five-point Likert-type scale in which 1 = “strongly disagree” and 5 = “strongly agree.” We addressed this inconsistency issue first by identifying each of the distinct survey questions asked over all of the survey instruments, allowing even small changes in wording to constitute a distinction. This exercise yielded about 90 “unique” survey items. The researchers then worked independently to group the items by “theme”, e.g., questions regarding perceptions of discrimination, questions regarding the quality and frequency of

managerial communication. This yielded surprisingly similar and thus, (inter-rater) reliable groupings (Schwab 2005).

Ideally, we could then verify high inter-item reliability by computing something along the lines of a Cronbach's α before deciding to coalesce items into a named index. However, none of the groupings yielded any observations that contained values for every single one of the constituent items, thereby preventing our use of the standard estimate of reliability. Consequently, we created scales by taking "row means" consisting of average scores across the items comprising a given index or scale, for however many non-missing items are available, for a given observation. The end result is a set of five employment relations measures that emerge directly from the data, the very same data that the company itself relied on to make and assess its HR strategy. Unfortunately, as will become clear from the descriptive statistics in the next section, the constructs themselves are somewhat correlated with one another, implying low levels of discriminant validity between them (Schwab 2005). However, the five emergent variables span a range of measures that combine to paint a rich picture of the broad employment relations and HR climate pre- and post-DRS.

The definitions of these variables as well as the construction of each index are detailed in Table 1. Three justice measures emerged. The first two are formal and informal procedural justice, respectively. The former, formal procedural justice, measures the degree to which employees perceive the company itself, the company's corporate HR Department, and formal mechanisms for appealing adverse employment actions as accessible and viable options for redressing disputes. The latter captures the degree to which employees perceive local store managers and supervisors as accessible and viable options for dispute resolution. They both measure employee comfort initiating claims, and the perception that the entity, person (Gilda's as a whole, the HR Department, or local supervisor or manager) or process addressing the claim (formal or informal) will address the claim in a neutral, effective and fair way.

The survey questions making up these two constructs align with descriptions of access and problem solving viability described in several studies outlining critical elements by which to gauge the effectiveness of a workplace voice system with or without a DRS in place (Folger and Bies 1989; Sheppard, Lewicki and Minton 1992; Tyler and Bies 1990). The components being judged in both the formal and informal procedural justice constructs exist before and after implementation of the DRS. Once the DRS is implemented, the formal procedural justice components align with steps 2-4, while the informal justice components align with step 1.

Interactive justice reflects the degree to which workers feel well-treated (given courtesy and respect) and listened to, not by “the company” per se, but by managers and direct supervisors with whom they deal on a personal level. The survey questions making up this construct align closely with validated scales used by Moorman (1991b) and Niehoff and Moorman (1993).

Legal compliance gets at employees’ perceptions not of how they are treated, but rather the degree to which the firm is following the law, particularly with respect to laws prohibiting discrimination and harassment. This allows for a nuanced examination of DRS effectiveness, whereby workers may believe the law is being better followed post-DRS, whether their personal treatment has improved or not.

Finally, in order to vet the standard exit-voice-loyalty model, we measure organizational commitment as well. The survey questions making up this construct align well with commonly used validated scales (Cook and Wall 1980; Mowday, Steers and Porter 1979). In the aggregate, we believe that the judgments made in assembling the panel as well those made in constructing the employment relations and HR measures work to attenuate rather than to bias our estimates, engendering a collectively conservative assessment of the impact of Gilda’s DRS.

[—INSERT TABLE 1 ABOUT HERE.—]

While the indices were constructed using worker-level data, the multivariate analysis relies on a store-level dataset, created by taking means of each of the resulting indices by store-year. Since stores can be linked from year-to-year but individuals cannot be, the decision to use store-years as the unit-of-analysis allows us to take advantage of powerful techniques for analyzing cross-sectional times series (panel) data. Given the conservative pruning of the data described above, the resulting dataset includes 1,171 store-years representing 635 distinct stores. Table 2 shows the number of stores contributing observations for each of the dependent variables, by year. The employment relations and HR measures serve as dependent variables in the sense that their movement over time should reflect the impact of Gilda’s DRS. The latter is the focal independent variable and is operationalized as a binary variable equal to one for years 2004 onward.

[—INSERT TABLE 2 ABOUT HERE.—]

The Model

The most transparent and conservative way to link the implementation of the DRS to employment relations outcomes is to consider same-store values of each dependent variable pre- and post-DRS, net of as many confounding effects as possible. The longitudinal nature of our data facilitates this effort first by allowing us to estimate fixed-effects models to account for time-constant unobservable drivers of employment relations at the store-level (Baltagi 2005). From a practical perspective, this requires a model that includes a vector of 635 store-specific dummies on the right-hand side. Second, reliance on panel data also facilitates a way of dealing with time-varying unobserved variables that could be positively correlated with both the implementation of the DRS and of the dependent variables, factors that could bias the critical estimates of the slope coefficient associated with the DRS. It is important to note that since the DRS was instituted centrally and simultaneously across all stores and by Gilda's senior management at corporate headquarters, it is likely that these unobserved variables would be company- or even economy-wide, not store-specific. Therefore, we can strip the estimates of these time-varying unobservables by including an additional vector of binary variables—one for each year—on the right hand side of the equation. Formally, we model employment relations and HR variables using a multilevel model,

$$(1) \quad y_{it} = \sum_{k=1}^{635} d_k \alpha_k + \sum_{T=2001}^{2007} d_T \alpha_T + \beta_{it} x_{it} + \varepsilon_{it} ,$$

where y represents any one of the five employment relations variables for store i in year t and ε_{it} is a zero-expectation error term. The first term on the right-hand side represents a dummy variable for each store, d_k , multiplied by a store-specific intercept, α_k . Since there is no shared intercept term (akin to α_0), this entire first term can be simplified to α_i , a single intercept term for store i . Similarly, the second term adds a dummy, d_T , for each year other than the first year, 2000, multiplied by a year-specific intercept, α_T . This captures the year-specific mean of the dependent variable, and can thus be simplified to α_t . Consequently, Equation (1) can instead be written as

$$(2) \quad y_{it} = \alpha_i + \alpha_t + \beta_{it} x_{it} + \varepsilon_{it} ,$$

where the key explanatory variable—the binary representing the implementation and ongoing use of the DRS—is represented by x_{it} . Therefore, the focal coefficient estimate is β_{it} —the impact of the DRS on the dependent variable, net of all unobserved sources of store-specific and year-specific variation. To further error in the conservative direction, we compute standard errors using the generalized Huber-White formula clustered by store, allowing for arbitrary correlations of residuals among store-year observations (Bertrand, Duflo and Mullainathan 2004).³

Results

Table 3 shows descriptive statistics and correlations for the focal independent variable as well as for the five employment relations measures. Note that about 56% of the observations are post-DRS and that none of the employment relations variables are strongly correlated with the use of the DRS. Interestingly, both formal procedural justice and organizational commitment reveal a negative, zero-order association with the DRS, while the other three variables are positively, pairwise correlated with the DRS. Delving more deeply into the employment relations variables, recall that each is measured on a five-point, Likert-type scale in which 1 = “strongly disagree” and 5 = “strongly agree.” Therefore, since the means for these variables are all in the range from 3.24 to 3.88, all are somewhere between the neutral response (“neither agree nor disagree”) and agreement. This stems in part from the positive correlations between some of these variables. For example, informal procedural justice is somewhat strongly correlated with both interactive justice and legal compliance.

[—INSERT TABLE 3 ABOUT HERE.—]

The regression estimates in Table 4 allow for a more-nuanced analysis of the employment relations variables, one that teases out the impact of the DRS from the other store-level and year-specific forces that impinge on the dependent variables. Each model estimates Equation (2) independently for each of the enumerated employment relations variables. Walking through Model 1 to illustrate, notice that even after controlling for store-fixed and year-fixed effects, the introduction of the DRS is associated with .13 point decrease in the five-point measure of formal

³ In almost all cases and as expected, the standard errors calculated by the Huber-White formula are only minutely greater than the standard errors that otherwise emerge from this model, since the model already accounts for the dependence structure of the data.

procedural justice. This effect, while seemingly small, is significant at the $p < .05$ level. The model explains just nine percent of the within-store variance in formal procedural justice across the 444 stores that were able to provide data for this index, and thus, that were included in the estimate. Each store lent, on average, 1.6 observations ($725 \div 444$) to the estimate of Model 1. Finally, ρ is the share of the estimated variance of the overall error, ε_{it} , accounted for by effects at the store level, a measure of intraclass correlation. In this case, 59 percent of the variability in formal procedural justice can be attributed to differences between (versus within) stores. This value for ρ bolsters our analysis in two ways. First, it substantiates our decision not to estimate conventional OLS models, since OLS requires that $\rho = 0$ (Singer and Willett 2003). Second, it justifies our decision to model the dependent variable at the store-level as opposed to the person-level as individual survey responses in a given year do, indeed, cluster within a given store. The remaining four models can be interpreted similarly. Models 2-4 are particularly important for the analysis. Note that in all three cases, relative to Model 1, they explain a measurably larger share of observed variance. Furthermore, in all three cases, the impact of the DRS is positive and highly statistically significant. Finally, Model 5 attempts to predict organizational commitment using the exact same model and right-hand side variables as the other four models. It is interesting to note that the same variables that shed light on procedural justice and legal compliance do very little to illuminate the drivers of organizational commitment. Therefore, in the net, the regression results support the theory that the DRS affected the workforce in a bifurcated manner, decaying at perceptions of formal procedural justice while boosting perceived levels of informal and interactive justice. The DRS, on average, was also associated with increased perceptions on the part of frontline employees that Gilda's was, indeed, complying with the law. However, once store-level and year-level effects are controlled for, there is no evidence of a simple, DRS-induced change in organizational commitment.

[—INSERT TABLE 4 ABOUT HERE.—]

Discussion and Conclusions

This paper presents evidence of the effects of implementing a workplace DRS with bifurcated formal and informal components. For the most part, these effects are positive and, like ducks, they quack as one might anticipate and predict based on theory. For instance, implementation

of Gilda's DRS is associated with improved perceived informal procedural justice and improved perceived interactive justice. That is, employees reported feeling more comfortable reporting problems to their immediate supervisors with the DRS than when no DRS was in place, and they reported feeling that their local managers care about their concerns and are more interested in their opinions on work-related issues with the DRS in place. Essentially, limitations of this natural experiment notwithstanding, the evidence in this paper suggests that implementation of Gilda's DRS improved "localized" employee voice.

There are some decoy effects as well; they appear to paddle on the water, but do not quack, and thus, are not ducks. Specifically, implementation of the DRS is associated with reduced perceptions of formal procedural justice. Furthermore, the DRS has no discernible effect on organizational commitment, at least not in a way that could be teased out using the same techniques as those applied to the other variables. Employees report regarding the more formal components of procedural justice (appeal to HR and the formal appellate process for discipline and discharge actions) with more skepticism than they did prior to the rollout of the DRS. These are decoys because one would expect them to move in the same direction as perceptions of informal procedural justice and interactive justice. However, it is possible that employees are drawing a sharp distinction between their trust and comfort with their immediate supervisors and their trust and comfort with Gilda's as an organization. Figure 2 illustrates the proposed bifurcated model connecting DRS implementation, procedural justice, and organizational commitment.

[—INSERT FIGURE 2 ABOUT HERE.—]

This seeming inconsistency could be a function of two things. First, it might be the result of the way in which local managers explain Gilda's DRS to employees and the fact that local supervisors are perceived by Gilda's corporate HR Department as being better at their jobs if fewer employee claims are escalated. They are encouraged and rewarded for resolving claims at the local level. Immediate supervisors might be incentivized to encourage their employees to trust them to resolve claims *instead of* allowing HR or Gilda's as a corporate entity to do so. Perhaps local managers are actively encouraging employees to trust them, which could be interpreted implicitly as being encouraged to distrust Gilda's DRS or the company writ large.

The last effect jives with this hypothesis and is neither duck nor decoy. Implementation of the DRS is most strongly associated with an increase in employees' perception that the Company is

in compliance with the law. This might seem counter-intuitive at first given the lack of effect on organizational commitment and the decrease in perceived formal procedural justice, which could be interpreted as a lack of trust in Gilda's to fairly resolve disputes internally. Why would employees regard the Company as more compliant with the law if it is less fair in resolving disputes? One possible explanation is the heightened salience of legal compliance that might be assumed from the Company's new requirement to sign a form-contract requiring acquiescence to final, binding, mandatory arbitration. This is especially likely to be the case here since the form explicitly mentions coverage of employment discrimination and harassment and other statutory claims. Employees may regard the formal processes associated with the DRS and Gilda's requirement that they contract away their right to a jury trial as a signal that the Company takes its legal rights and obligation very seriously. This explanation derives from employees' perceptions of the formal aspect of the DRS.

Alternatively, employees might believe the Company complies with the law because of the heightened trust and comfort with local management. Employees might feel that they are treated fairly by local supervisors, they have increased opportunities for voice, and that their concerns are genuinely heard by local management. In turn, employees may be more likely to perceive local management as being compliant with laws that prohibit discrimination based on gender, race, or age. This explanation accords research that suggests that employees over broadly characterize "unfair" behavior as "illegal" (Bies and Tyler 1993). It also implies the converse: that they over broadly characterize "fair" behavior as "legal." It is hard to tell if the augmented legal compliance perceptions are related to the positive effects of informal procedural justice or the negative effects of formal procedural justice.

This study offers rare insight into employees' perceptions of important workplace metrics before and after the implementation of a workplace DRS. The findings suggest that more attention should be paid to the bifurcated component parts of dispute resolution systems generally. Our findings also support complementarity models of dispute resolution like that offered by Bendersky (2003), which suggest that varying the degree of input into the process and the flavor of dispute resolution system at-hand differentially impacts upon the non-disputant population. Lastly, this research indicates the need to focus research efforts on understanding differential effects of organizational change on perceptions of local versus nonlocal management, particularly as related to the exit-voice-loyalty model. As other studies have shown, employees may differ in the degree to which they feel committed to organizations locally versus globally (Gregersen and Black 1992) and organizationally versus personally (with respect to their immediate supervisors) (Becker et al. 1996).

As illustrated by the full version of the bifurcated model shown in Figure 3, it could be that there is a trade-off between formal and informal procedural justice that results in less organizational commitment, but greater interpersonal commitment (to immediate supervisors and managers), concurrently with increased perceived legal compliance by the organization.

[—INSERT FIGURE 3 ABOUT HERE.—]

Dispute system design might benefit from contemplating how to plan for a tradeoff of augmented, localized trust in management for diminished, global trust. That is, perhaps the duck and decoy approach is precisely what (unintentionally) yielded the positive results in Gilda's system in tandem with the increased perception of legal compliance. Is such a bifurcated trade-off avoidable? Is it possible to flip in the other direction—augmented, global, organizational trust in exchange for decreased, localized trust for effective and fair dispute resolution? These and other questions raised by this research deserve continued attention given the vast number of organizations contemplating the implementation of a DRS, often without knowledge of the ducks and decoys that this study suggests.

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Table 1. Variable Definitions and Construction

Variable	Definition in italics, with actual survey questions underneath
Dispute Resolution System (DR Is the DRS in place? (binary variable in which 0 = "no" and 1 = "yes"))	
Formal Procedural Justice	<p><i>The Company, its HR department, and formal mechanisms for appealing adverse employment actions, are accessible and viable options for redressing disputes.</i></p> <p>This location has an effective means of appealing discipline and discharge actions. My human resource manager or director of administration is good at solving "people problems." If I can't get a problem resolved in my store, HR continues to be accessible to me and provides guidance. I believe that this company is committed to resolving associate concerns or problems quickly and in a fair manner.</p>
Informal Procedural Justice	<p><i>Local store managers and supervisors are accessible and viable options for redressing disputes.</i></p> <p>If I have a problem, there is someone in senior management I can go to who will assist me. My manager is good at solving "people problems." If someone's behavior made me uncomfortable at work, I would definitely report the problem. If I have a problem or concern, I would feel most comfortable going to my direct supervisor. If I have a problem, there is someone in management I can go to who will assist me. If I have a problem, there is a manager in my location I can go to for help.</p>
Interactive Justice	<p><i>Local store managers and supervisors listen to and interact with employees showing them courtesy and respect.</i></p> <p>My manager is interested in my opinion on work-related issues. My manager regularly shows me that he/she cares about me. My general manager listens to employees' concerns, issues, and suggestions. My direct supervisor is interested in my opinion on work-related issues. My direct supervisor treats me with courtesy and respect. My direct supervisor regularly shows me that he/she cares about me. Once my schedule is posted, my manager only makes changes that I agree to.</p>
Legal Compliance	<p><i>The workplace is in compliance with the law, particularly laws against harassment and discrimination.</i></p> <p>I feel my work environment is free from harassment and discrimination. My supervisor manages everyone in my group equally regardless of their race, age, or sex. My direct supervisor manages everyone in my group equally regardless of their race, age, or sex. I think the company is doing a great job of providing a workplace free from intimidation, threats, and other behaviors that could impact my safety. Racial, ethnic, and gender-based comments/jokes are not tolerated at this location. I feel I am treated fairly and with respect regardless of my race, gender, or age. I feel my work environment is free from discrimination based upon gender, race, age, or sex(ual orientation).</p>
Organizational Commitment	<p><i>Employees feel committed to the organization.</i></p> <p>Work like mine greatly encourages me to do my best. The supervision I receive is the kind that greatly encourages me to give extra effort. I expect to be working here one year from now. My job is considered important in this company. I believe in what we are doing in this store. I feel positive about the opportunity here to advance my career.</p>

Note: With the exception of the DRS dummy, all variables are ordered categoricals on a Likert-type scale such that 1 = "strongly disagree" and 5 = "strongly agree."

Table 2. Observation Counts for Each Dependent Variable, by Year

Variable	2000		2001		2002		2003		2004		2005		2006		2007	
	stores	workers	stores	workers	stores	workers	stores	workers	stores	workers	stores	workers	stores	workers	stores	workers
Formal Procedural Justice	93	7,740	11	605	0	0	132	9,594	89	6,072	115	8,648	141	9,988	260	16,517
Informal Procedural Justice	93	7,925	98	6,746	129	9,908	132	9,571	91	6,226	107	7,813	137	9,534	229	14,318
Interactive Justice	93	7,930	98	6,739	133	10,122	133	9,648	100	6,938	129	9,734	223	15,758	260	16,544
Legal Compliance	93	7,928	100	6,793	133	10,124	133	9,650	100	6,946	129	9,749	223	15,802	229	14,382
Organizational Commitment	93	7,938	100	6,800	133	10,129	133	9,656	100	6,951	129	9,780	223	15,830	260	16,610

Notes: Each cell contains the number of non-missing observations for each dependent variable, by year.

Table 3. Means, Standard Deviations, and Correlations for Study Sample

#	Variable	Mean	SD	1	2	3	4	5	6
1	Dispute Resolution System	.56	.50	1.00					
2	Formal Procedural Justice	3.24	.34	-.13	1.00				
3	Informal Procedural Justice	3.80	.31	.31	.57	1.00			
4	Interactive Justice	3.88	.31	.35	.46	.72	1.00		
5	Legal Compliance	3.80	.32	.24	.51	.69	.61	1.00	
6	Organizational Commitment	3.63	.25	-.14	.75	.60	.51	.43	1.00

Notes: Sample sizes differ by cell, but range from $n = 798$ to $n = 1,171$ store-years.
Key: All correlation coefficients are significant at $p < .001$.

Table 4. Fixed-Effects Estimates of the Impact of a Dispute Resolution System on Employment Relations Outcomes

Independent Variable	Model 1: Formal Procedural Justice	Model 2: Informal Procedural Justice	Model 3: Interactive Justice	Model 4: Legal Compliance	Model 5: Organizational Commitment
Dispute Resolution System	-.13** (-2.22)	.30*** (6.10)	.14*** (3.91)	.36*** (9.60)	.001 (0.03)
<i>n</i> store-years	725	909	1,051	1,032	1,053
<i>n</i> distinct stores	444	486	527	527	528
ρ	.59	.53	.54	.63	.54
R^2	.09	.30	.46	.25	.03

Notes: Table reports coefficient estimates and associated *t*-statistics from longitudinal regression models on panel data, with standard errors clustered by store location. All models include dummy variables for each survey year and for each store. Therefore, models estimate fixed-year and fixed-store effects, where ρ is a measure of intraclass correlation. The R^2 reported is the "within-" R^2 , meaning that it does not reflect the explanatory power arising from the large vector of store dummies or from "between-store" differences in the independent variables.
Key: * $p < .10$, ** $p < .05$, *** $p < .01$.

Figure 1. Standard Model Connecting DRS Implementation, Procedural Justice, and Organizational Commitment

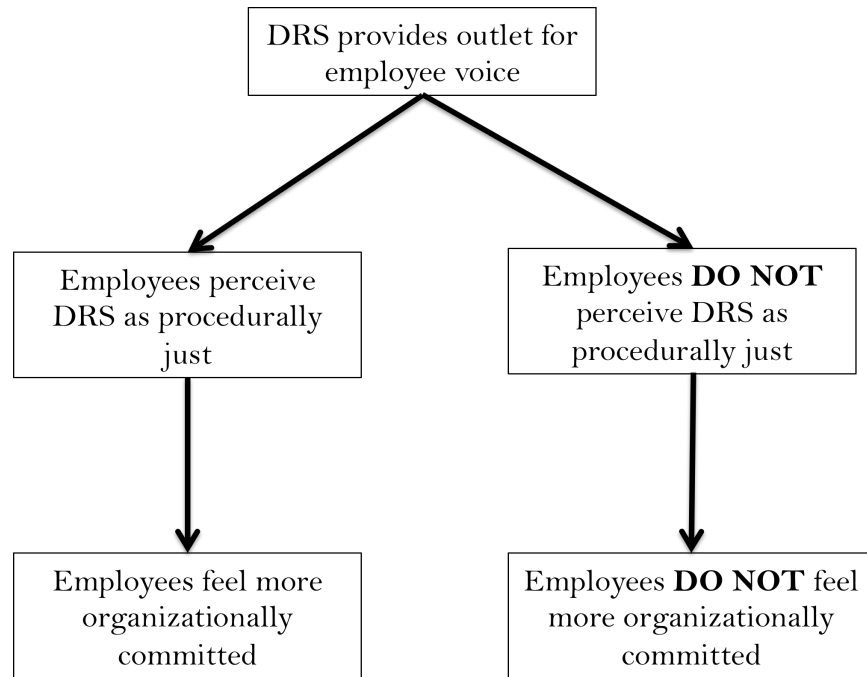


Figure 2. Bifurcated Model Connecting DRS Implementation, Procedural Justice, and Organizational Commitment—Simplified Version

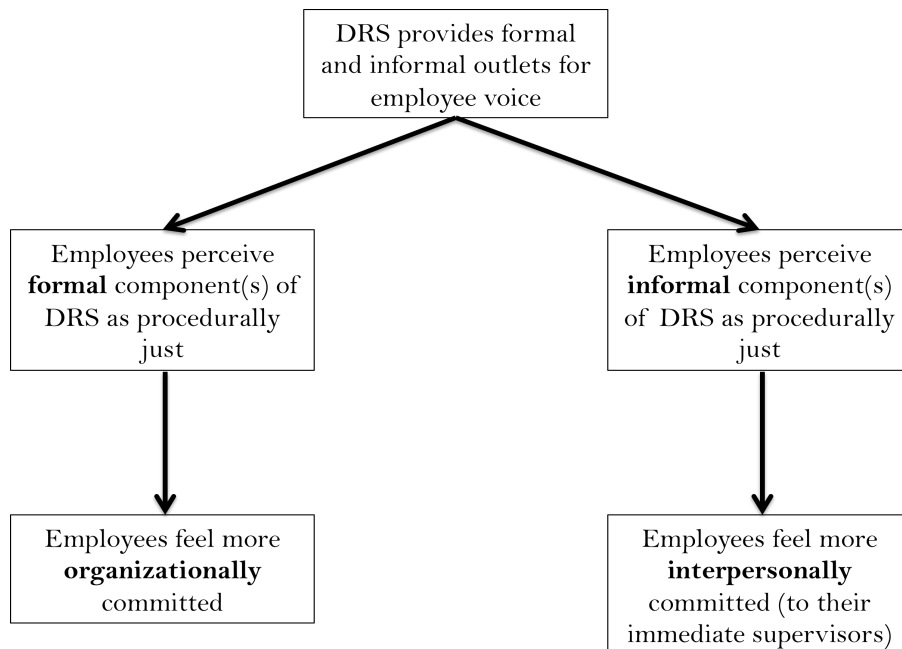


Figure 3. Bifurcated Model Connecting DRS Implementation, Procedural Justice, and Organizational Commitment—Full Version

