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Pay communication: An overview, scale development, and analysis of its influence on workplace deviance

Shelly A. Marasi
Louisiana Tech University

PAY COMMUNICATION: AN OVERVIEW, SCALE DEVELOPMENT, AND ANALYSIS OF ITS INFLUENCE ON WORKPLACE DEVIANCE

by

Shelly A. Marasi, B.A., M.B.A.

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Supervisor of Dissertation Research

Head of Department

Management

Department

Recommendation concurred in:

Advisory Committee

Approved:

Director of Graduate Studies

Dean of the College

Approved:

Dean of the Graduate School

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ABSTRACT

Pay communication is an important yet complex organizational practice that assists organizations in achieving their compensation systems' goals and objectives (Gely and Bierman 2003). However, the management literature has neglected the pay communication concept, resulting in a scarce and undeveloped knowledge base on pay secrecy and pay openness. Given this opportunity, this dissertation focuses on pay communication and its influence on employee behaviors.

Chapter 2 presents an overview of the pay communication literature in the management discipline. A broader analysis of pay secrecy practices is provided since it is the practice primarily focused on in the pay communication literature, including details about pay secrecy's legality, benefits, and costs. Additionally, prior research is summarized.

Chapter 3 involves the development and validation of a pay communication measure with pay secrecy and pay openness representing the extremes. Three multistage studies were conducted to validate the pay communication scale. The first study consisted of generating a pool of items that together represent pay communication and initiating the refinement process of the items. The second study further refined the items by analyzing the inter-item correlations, variances, and factor loadings of each item in an exploratory factor analysis. In the third study, the proposed scale and dimensionality of the remaining

items was confirmed by using confirmatory factor analysis and construct validation was determined.

Chapter 4 analyzes the relationship between pay secrecy and workplace deviance. This study utilizes the pay communication (pay secrecy and pay openness) scale developed in Chapter 3. Specifically, pay secrecy is expected to positively influence workplace deviance. Additionally, the pay secrecy-workplace deviance relationship is expected to be mediated by distributed justice, procedural justice, informational justice, interpersonal justice, organizational trust, and managerial trust. Continuance commitment is also proposed to moderate the relationship between pay secrecy and workplace deviance.

Chapter 5 concludes this dissertation. This chapter provides a summary of the overall research efforts conducted in Chapters 3 and 4. A brief review of the overall contributions of this dissertation to the pay communication literature and management discipline is also provided.

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CHAPTER 1

INTRODUCTION

Pay communication is an important yet complex organizational practice that assists organizations in achieving their compensation systems' goals and objectives (Gely and Bierman 2003). However, the management literature has neglected the pay communication concept, resulting in a scarce and undeveloped knowledge base on pay secrecy and pay openness. The utilization of certain pay communication practices in the workplace (e.g., pay secrecy and pay openness) should be further analyzed to identify the impact each distinct type of pay communication has on employee's attitudes and behaviors since compensation is an important factor for employees (e.g., Gerhart and Rynes 2003) and organizations (e.g., to achieve a competitive advantage; (Gerhart 2000)).

Given this research gap, this dissertation explicitly focuses on pay communication and the impact pay secrecy and/or pay openness has on employee's attitudes and behaviors. Pay communication consists of two main aspects. First, pay communication refers to the compensation practice that determines when, how, and which pay information (such as pay ranges, pay raises, pay averages, individual pay levels, pay processes, and/or the entire pay structure) is distributed and communicated to employees and possibly to outsiders. This aspect is called organizational restrictions. The second aspect of pay communication, called employee restrictions, refers to whether discussions involving pay information are permitted amongst employees and also with outsiders. Pay communication resides along a continuum as organizations vary in the amount and type of pay information they provide to employees. Pay secrecy and pay openness are the two anchors of the pay communication continuum. Generally, pay openness is a compensation practice that allows employees to discuss their pay information amongst each other (and possibly outsiders) while the organization distributes most, if not all, pay information to employees on a regular basis or upon request; whereas, pay secrecy involves prohibiting the distribution and communication of most, if not all, pay information to employees (and possibly outsiders). Each of the following chapters is dedicated to advancing knowledge about pay communication and complements the existing pay secrecy and pay openness research.

Chapter 2 provides a thorough analysis of the pay communication literature in the management discipline. Based on prior literature, a definitive description of pay communication is provided. A broader analysis of pay secrecy (opposed to pay openness) practices is given since it is the practice primarily focused on in the pay communication literature. Specifically, an overview of pay secrecy's legality and benefits and costs are discussed. Prior research is summarized to provide an overview of the previously-analyzed employee and organizational outcomes affected by pay secrecy and/or pay openness practices. Future directions are offered to extend and further develop the pay communication literature.

Chapter 3 focuses on the development and validation of a pay communication measure with pay secrecy and pay openness representing the extremes. This assessment is necessary to determine the extent to which an organization's pay communication resembles pay secrecy or pay openness and to advance the literature by investigating the impact pay secrecy and/or pay openness practices have on different organizational outcomes and employee attitudes and behaviors. Three multistage studies were conducted to substantiate the pay communication scale. The first study consisted of generating a pool of items that encompassed the entire domain of pay communication and having management academicians review and assess these items for refinement. The second study further refined the items by analyzing the inter-item correlations, variances, and factor loadings of each item in an exploratory factor analysis. In the third study, the proposed scale and dimensionality of the remaining items was confirmed by using confirmatory factor analysis and construct validation was determined.

Chapter 4 attempts to identify ways pay communication (specifically, pay secrecy) impacts different employee attitudes and behaviors. This study utilizes the pay communication (pay secrecy and pay openness) scale developed in Chapter 3. Following equity theory (Adams 1965), uncertainty management theory (Lind and van den Bos 2002; van den Bos and Lind 2002), and reactance theory (Brehm 1966), pay secrecy is expected to positively influence workplace deviance. Additionally, the pay secrecy-workplace deviance relationship was expected to be mediated by several variables. Specifically, distributive justice (based on equity theory; (Adams 1965)), procedural justice (based on fairness heuristic theory; (Lind 2001)), informational justice (based on fairness heuristic theory; (Lind 2001)), interpersonal justice (based on fairness heuristic theory; (Lind 2001)), managerial trust and organizational trust (based on social exchange theory; (Blau 1964)) were hypothesized to mediate the relationship between pay secrecy and workplace deviance. Based on power dependence theory (Emerson 1972; Molm

2003), continuance commitment is also proposed to moderate the relationship between pay secrecy and workplace deviance such that the relationship between pay secrecy and workplace deviance will be mitigated, if not eliminated.

Chapter 5 concludes this dissertation. This chapter provides a summary of the overall research efforts conducted in Chapters 3 and 4. A brief review of the overall contributions of this dissertation to the pay communication literature and management discipline is also provided.

CHAPTER 2

HISTORY OF PAY COMMUNICATION (PAY SECRECY AND PAY OPENNESS) WITHIN THE MANAGEMENT LITERATURE

The management literature has overlooked the organizational practice involving pay communication causing the overall pay secrecy and pay openness research to be limited and underdeveloped. Because compensation is an important factor for employees, the usage of certain pay communication practices should be investigated to identify the impact pay secrecy and/or pay openness has on employee's attitudes and behaviors, as well as organizational outcomes.

This chapter provides a thorough analysis of the pay communication literature in the management discipline. Since the majority of the pay communication literature focuses on pay secrecy (rather than pay openness) practices, a broader analysis of this concept is provided. Specifically, a definitive description of pay secrecy, based on the prior literature, is developed. Additionally, an overview of pay secrecy's legality, benefits and costs, multiple forms, and preferential usage by different entities are provided. Prior research is summarized to provide an overview of the previously-analyzed employee and organizational outcomes affected by pay secrecy and/or pay openness practices. Future directions are offered to extend and further develop the pay communication literature.

Compensation Systems

Organizations employ valuable human resource practices and policies (such as an effective compensation system) to improve organizational productivity along with profits and to create a competitive advantage (Guest 2011; Gerhart 2000). One of the most prominent human resource structures involves the compensation (pay) system. A compensation system entails not only the administration of pay itself, but also the development of procedures and policies used to remunerate employees. The main purpose of an organization's compensation system is to attract, motivate, and retain employees (Heneman, Schwab, Fossum, and Dyer 1989; Weiner 1980). The compensation system is a critical element in determining the overall effectiveness of the organization.

Compensation has been indicated as an important job factor by employees (Gerhart and Rynes 2003; Opsahl and Dunnette 1966); thus, it may influence employee behavior which, in turn, can affect organizational effectiveness (Beer and Gery 1972; deCarufel 1986; Lawler 1981). Additionally, employee compensation is a complex notion since it represents an exchange for work performed (Andersson-Straberg, Sverke, and Hellgren 2007) or for individual human capital (Lawler 2000), as well as an achievement or form of recognition (Ackley 1993; Goodman 1974; Lawler 1966, 1971; Lawler and Porter 1963), an indication of organizational value (Lawler 1966, 1971), a determinant of social status (Andersson-Straberg et al. 2007), a motivator (Ackley 1993), performance-related reward (Ackley 1993), an aspect of performance feedback (Lawler 1965b, 1966), and a self-esteem booster (Goodman 1974), among other things. Generally, an employee's pay is a sensitive issue (especially since it signifies many different things to employees) and discussions relating to it are usually avoided altogether. Furthermore, employee compensation tends to be a considerable, if not the biggest, expense for the majority of organizations (Ackley 1993; Wallace and Fay 1983). Therefore, a substantial amount of effort is exerted by organizations in generating the best possible compensation system, with some organizations seeking advice from compensation consultants (Bebchuk, Fried, and Walker 2002).

Compensation systems are usually organization-wide structures, rather than only involving certain departments or divisions, and they evolve over time (Lawler 1981). Unfortunately, their progression is normally linked to organizational traditions and other administrative factors rather than changing organizationally and employee desired outcomes, such as higher performance (Beer and Gery 1972). However, not all aspects of a compensation system change over time. A subset of the compensation system that tends to remain unchanged once implemented involves the practices or strategies regarding pay communication, otherwise known as pay secrecy and/or pay openness practices and policies.

Pay Communication

Pay communication is the organizational practice that determines when, how, and which pay information (such as pay ranges, pay raises, pay averages, individual pay levels, and/or the entire pay structure) is distributed and communicated to employees and possibly outsiders. There are two main forms of pay communication: pay secrecy and pay openness. Generally, both pay communication practices consist of two aspects: organizational restrictions and employee restrictions. Pay openness is a compensation practice that (1) allows employees to discuss their pay information amongst each other and possibly with outsiders (employee restrictions) while (2) the organization distributes most, if not all, pay information to employees on a regular basis (usually at specific time intervals such as yearly) or upon request (organizational restrictions); whereas, pay secrecy involves prohibiting the distribution and communication of most, if not all, pay information to employees (and possibly outsiders).

Pay secrecy, also known as wage secrecy (Danziger and Katz 1997; Gan 2002; King 2003), is a compensation practice that involves constraining employees from receiving information about other organizational members' compensation from the employing organization (Bamburger and Belogolovsky 2010; Colella, Paetzold, Zardkoohi, and Wesson 2007; deCarufel 1986). This constriction, termed organizational restrictions, may involve an organization concealing or not supplying employees with certain types of pay information, such as individual employee pay, pay ranges, pay averages, pay raises, and/or the entire pay structure. Additionally, pay secrecy practices may involve the adoption of a policy (generally referred to as a pay secrecy policy but also labeled as pay confidentiality rules; (Bierman and Gely 2004; Gely and Bierman 2003)) which restricts employees from communicating or exchanging their personal compensation information with other organizational members (and possibly outsiders) of the employing organization (Bamberger and Belogolovsky 2010; Bierman and Gely 2004; Burroughs 1982; Colella et al. 2007; Gely and Bierman 2003; Thompson and Pronsky 1975). In order to receive compliance with this restriction, termed employee restrictions, some organizations will compel employees to sign a pledge stating they will not discuss compensation information with other organizational members (and possibly outsiders), while other organizations may enforce the restriction by having disciplinary consequences (such as termination) for those employees who violate the policy (Gomez-Mejia and Balkin 1992). Generally, a pay secrecy policy is conveyed either verbally, usually during employee orientation or employee meetings, or in writing, such as in employee manuals or handbooks (Bierman and Gely 2004; Gely and Bierman 2003).

Different Forms

Pay communication practices function to support organizations in their attainment of their compensation systems' goals and objectives (Gely and Bierman 2003), such as attracting highly skilled workers or achieving higher organizational performance. The needs of the organization determine the extent to which a pay openness or pay secrecy practice is used.

Pay secrecy was originally regarded as a single "all-or-nothing" concept (e.g., Lawler 1965b; (Burroughs 1982; Colella et al. 2007; Thompson and Pronsky 1975)), with pay openness representing the "nothing" portion. However, pays communication practices (pay secrecy and pay openness) exist along a continuum (Burroughs 1982; Colella et al. 2007; Lawler and Jenkins 1992; Patten 1978) as organizations vary on the amount and type of pay information they present to employees (Gomez-Mejia and Balkin 1992; Milkovich and Newman 2005).

Lawler (1981) first indicated that pay communication "ranges from almost total secrecy … through complete openness …" (p. 6). Although, Lawler (1981) may have implied that different degrees of pay communication (pay secrecy and pay openness) existed, it was Burroughs (1982) who demonstrated how organizations may differ in regards to their pay secrecy (or pay openness) levels by illustrating these different pay secrecy (or pay openness) categories. Burroughs (1982) referred to a "red" organization as having complete pay secrecy, where employees are only provided their own pay information, while a "green" organization was indicated as an organization practicing complete pay openness, where all pay information on all organizational members is easily accessible. Additionally, "yellow" and "orange" organizations were identified, with the former more closely resembling pay openness where individual pay raise information is available, and the latter more closely resembling pay secrecy where pay ranges and their corresponding averages are supplied to employees. Building on Burroughs' (1982) categories, it has been suggested (and widely accepted) that pay communication approaches occur along a continuum with one extreme representing absolute pay secrecy and the other representing absolute pay openness (Colella et al. 2007; Lawler and Jenkins 1992). A variety of pay secrecy and pay openness strategies reside on the continuum between these two extremes.

Recently, the pay secrecy concept has been further advanced by the proposal of two different pay secrecy constructs: individual and organizational pay secrecy (Noy 2007). The main difference between the two forms of pay secrecy is the manner in which they are generated and preserved. Organizational pay secrecy (OPS) is sustained through the organization and its structure, strategies and policies (such as a pay secrecy policy); whereas, individual pay secrecy (IPS) is upheld by employees through different norms, such as social and cultural norms (Noy 2007). A three-factor model of perceived OPS (POPS) was established, with the three aspects characterizing perceptions of (1) policy and rules, (2) enforcement, and (3) organizational norms (Noy 2007). However, a substantiated measure of IPS has not been developed. Therefore, discriminant validity between the two constructs has yet to be determined.

Similar to Noy's (2007) notion of multiple pay secrecy dimensions, Colella et al. (2007) argued for different enforcement approaches within an organization. Following the work of Burrough's (1982), these authors argued that an organization's enforcement tactics lie on a continuum ranging from implicit to explicit (Colella et al. 2007). The implicit extreme (similar to IPS) considers the employees more than the organization and entails a social norm, where employees decide not to discuss pay information on their own. The explicit extreme (similar to OPS) is more concerned with the organization and its usage of a formal pay secrecy policy. Various enforcement levels fall between these two extremes, such as levels consisting of departmental, organizational, or industrial norms.

Preferences

Even though there is a notion of pay secrecy being a multi-faceted construct (IPS and OPS), organizations and employees seem to have a similar preference for a certain pay communication strategy (e.g., HRnext.com Survey 2001). Employees (including managers) prefer pay secrecy practices (opposed to pay openness practices) in the workplace (Futrell and Jenkins 1978; Markels and Berton 1996; Schuster and Colletti 1973). Additionally, managers have indicated they prefer pay secrecy practices because employees are more satisfied and most employees want their pay kept secret (Lawler 1981). Privacy protection is the main reason employees have given for preferring pay secrecy (Schuster and Colletti 1973; Markels and Berton 1996). This privacy concern makes sense since pay information is a sensitive issue and discussions about it are considered crass.

Over the past several decades, pay secrecy (as opposed to pay openness) appears to be the favored pay communication strategy for the majority of U.S. organizations (Balkin and Gomez-Mejia 1985; HRnext.com Survey 2001; Lawler 1981; Scott, Sperling, McMullen, and Wallace 2003). Several surveys have found that around three-fourths of employing organizations utilized pay secrecy policies (e.g., Balkin and Gomez-Mejia 1985).

Another survey found that about half of employing organizations do not have a specific pay communication strategy expressed in writing, such as a pay secrecy policy in an employee manual (HRnext.com Survey 2001). However, these organizations may simply not supply pay information to employees or they may unofficially communicate a pay secrecy policy verbally, perhaps during employee orientation or casual office meetings (Bierman and Gely 2004). Additionally, this study found that over a third of the private sector employing organizations imposed a pay secrecy policy that proscribed discussions of pay information with other employees (HRnext.com Survey 2001). However, this estimate of private sector employing organizations' policies may be low since pay secrecy practices are more prevalent in the private sector than in the public sector (the majority of these organizations are required to practice pay openness due to government mandated policies).

Although the majority of organizations seem to prefer pay secrecy practices, many organizations appear to favor the idea of having pay ranges easily available to all employees (Lawler 1981). Therefore, organizations may practice pay secrecy where only individual pay information is withheld or forbidden in discussions, while they provide employees with pay ranges and possibly pay averages for those pay ranges. Nonetheless,

less than a fourth of employing organizations release pay range information, while less than ten percent of organizations supply the base salary (Scott et al. 2003). In regards to pay openness practices, surveys have found that ten percent or less of employing organizations utilize this pay communication approach (HRnext.com Survey 2001; Scott et al. 2003).

Legality

Although organizations seem to prefer and utilize pay secrecy practices, the National Labor Relations Board (NLRB) along with the federal court system have consistently found pay secrecy practices (specifically pay secrecy policies) to be in violation of the National Labor Relations Act (NLRA) and thus, illegal (Bierman and Gely 2004; Estlund 2011; Gely and Bierman 2003). Specifically, the violation of the NLRA occurs when a pay secrecy practice (or policy) prohibits employees from discussing their employment conditions (such as pay information) with other employees (King 2003). Additionally, organizations that require employees to obtain preapproval from management when participating in 'concerted activity' (such as collective bargaining) defy the NLRA (King 2003).

The U.S. Congress ratified the NLRA to protect employees' rights when engaging in activities that would help improve their employment conditions. Section 7 of the NLRA states that employees "shall have the right to self-organization, to form, join, or assist labor organizations, to bargain collectively through representatives of their own choosing, and to engage in other concerted activities for the purpose of collective bargaining or other mutual aid or protection" (National Labor Relations Act). Therefore, discussions pertaining to pay information (whether with organizational members or outsiders) are protected under Section 7 since pay information is used during collective bargaining and thus, is "concerted activity" (e.g., Brockton Hospital v. NLRB 2002; (Cote 2007; Gely and Bierman 2003)). Additionally, Section 8 (a)(1) of the NLRA states that it "shall be an unfair labor practice for an employer ... to interfere with, restrain, or coerce employees in the exercise of the rights guaranteed in section [7]" (National Labor Relations Act). Therefore, a pay secrecy policy practice, including a policy discouraging malicious and disrespectful conversations about the organization, violates the NLRA since it impedes on employee rights stated in Section 7 by not allowing employees to freely discuss their own pay information. Thus, a pay secrecy policy practice that is formally or casually expressed either verbally (such as during employee orientation) or in writing (such as in an employee manual) violates Section 7 and 8 (a)(1) of the NLRA and is unlawful (Cote 2007; King 2003). In support of these NLRA violations, the federal court system has consistently ruled against pay secrecy policy practices and the organizations that utilize them, regardless of whether they are actually enforced (e.g., Brockton Hospital v. NLRB 2002; NLRB v. Brookshire Grocery Co. 1990).

There are two instances where the NLRB has found a pay secrecy policy practice to not violate the NLRA. First, a pay secrecy practice ordained for managers is not unlawful as managers do not qualify under the NLRA's definition of an employee and thus, managers do not have the protection of Section 7 rights (King 2003). This exception seems appropriate since managers prefer to utilize pay secrecy (Lawler 1981). Second, if the pay secrecy policy is worded to be understood as protecting an organizations' confidential information (such as trade secrets or customer information) by prohibiting its disclosure to unauthorized individuals or entities then it is not in violation of the NLRA.

The NLRA has never specifically defined or described exactly what "concerted activity" entails (Cote 2007). However, in order for an activity to be considered "concerted" under the NLRA, at least two employees must take action together to ameliorate their employment terms and conditions. Additionally, "concerted activity" must intend to stimulate group (or perhaps in some instances individual) action, even if no explicit demands or actions are made. Individual actions qualify as protected and "concerted activity" provided that the activity is beneficial for a group of employees and not the individual employee, such as demanding safer working conditions. Activities are also protected despite their rationality or "reasonableness" provided that they do not cause the employee(s) to be unfit to perform work duties (NLRB v. Illinois Tool Works 1946).

Despite the NLRA not explicitly defining "concerted activity," the NLRB and federal courts have recognized that not all activities pertaining to improving employee conditions are considered "concerted activity" and thus, these activities are not protected. Activities that have an intolerable manner or a potentially harmful effect on the organization (and possibly other employees) are found to be undeserving of NLRA protection. For instance, unprotected activities include those that are abusive (e.g., NLRB v. City Disposal Sys., Inc. 1984), violent (e.g., NLRB v. Fansteel Metalurgical Corp. 1939), illegal (e.g., Southern S.S. Co. v. NLRB 1942), in breach of a contract (e.g., NLRB v. Sands Manufacturing Co. 1939), hinder organizational production (e.g., Can-Tex Industries v. NLRB 1982), and noncompliant or unfaithful to the organization and its directives (e.g., NLRB v. Brookshire Grocery Company 1990; NLRB v. Local Union No. 1953). Additionally, when an employee with knowledge of other organizational member's pay information for job purposes (such as employees holding positions in the human resource department) exposes other organizational member's pay information to unauthorized individuals it is not considered "concerted activity" since it involves disclosing the organization's confidential information.

The NLRA protects all employees (except managers), union or non-union, despite labor unions being frequently mentioned throughout its provisions. Moreover, the protection granted by the NLRA does not require non-union employees to form a union. Therefore, organizations that do not have dealings with labor unions are still not lawfully allowed to utilize pay secrecy policy practices. The NLRA protection also extends to employees experiencing disciplinary action for violations of a pay secrecy policy practice, such as termination.

At-Will

But the question that still remains is why do organizations exercise pay secrecy policy practices when the NLRB and the federal court system find them unlawful? Why do organizations thus risk costly settlements with court fines and employee back pay? There are several explanations for the common utilization of pay secrecy practices. First, even though employees have protection from the NLRA, the majority of them (especially non-union employees) are not aware that they are under NLRA protection nor do they understand their employee rights (Morris 1988; Kim 1997). For example, most employees do not know they are at-will employees or what exactly that classification entails (Kim 1997). At-will employees are employees who do not have a contractual arrangement with an organization and may be terminated for any reason (good, bad, or wrong) or for no cause at all provided that the organization does break any state or federal statutes, such as discrimination (Estlund 2002). Generally, at-will employees are non-unionized and in the private sector (Kim 1997). Although at-will employees can be fired for any or no reason, the majority of them believe organizations must lawfully follow a "just-cause standard" when terminating employment. Employees even have this false belief when the organization explicitly states verbally or in writing (such as in an employee manual) that it has the right to terminate employment for any reason (Kim 1997). Specifically, the majority of employees believe that organizations cannot lawfully terminate an employee based on personal dislike (89%), inaccurate beliefs of misconduct (87%), or a lower-waged replacement (82%; (Kim 1997)). Also, at-will employees tend to get confused with wording in employment manuals, such as when the manual refers to them as "permanent" employees or have a policy claiming that employee termination will only occur when there is just cause by believing that their employment cannot be terminated at any time (Kim 1997). Therefore, since the majority of at-will employees do not understand that they can be terminated for any reason, at any time, or that they receive protection from the NLRA, one could safely presume that these employees also do not know that pay secrecy policy practices violate the NLRA and their rights. Given that at-will employees are largely unaware about the illegality of pay secrecy policy practices, they are unlikely to report such practices and policies to the NLRB. On the other hand, employees who are aware of the illegality of pay secrecy policy practices may choose not to report their usage to the NLRB because they are aware of their status as at-will employees and hence they feel vulnerable to being fired or fear other forms of retaliation. The decline of labor unions also affects the possibility of the NLRB not being informed about an organizations' pay secrecy policy practice as they are more likely than individual employees to report such practices to the NLRB (Gely and Bierman 2003).

The fact that the NLRB does not have their own employees to enforce the employee protection granted under the NLRA may be another reason why organizations employ pay secrecy policy practices. Because there is no enforcement arm of the agency, the NLRB only takes action when an employee or entity (such as a labor union) formally charges an organization with a NLRA violation. Since the majority of employees are unaware that pay secrecy policy practices violate the NLRA and their employee rights, violations often go unreported. Therefore, organizations may view the NLRB and its reactive strategy as weak and ineffective.

Another reason organizations are defiant of the NLRA's injunction against pay secrecy policy practices may be because the penalties and fines are rather low (Gely and Bierman 2003). Therefore, organizations do not reap any costly monetary consequences that make them want to cease the practice. This low monetary cost for defiance further supports the notion that organizations may view the NLRB as weak.

Finally, the benefits associated with having a pay secrecy practice may be another reason why organizations dismiss its unlawfulness. A pay secrecy policy practice may be viewed as immensely valuable to organizations. Additionally, due to the low monetary cost associated with a NLRA violation offense, the perceived benefits of a pay secrecy practice (or policy) probably tremendously outweigh the perceived inconsequential disadvantages.

<u>Benefits and Costs</u>

Nevertheless, pay secrecy research has indicated that such a practice provides not only benefits to organizations, employees, and society but also has costs for all three entities as well (Colella et al. 2007; Gely and Bierman 2003; Tremblay and Chênevert 2008). As pointed out by Colella et al. (2007), some perceived benefits may also be costs. For instance, one organization's perceived benefit may be a cost for employees or for society, if not for a different organization. Further, Colella et al. (2007) argued that the extent to which these perceived benefits and costs are endured will vary among organizations and employees due to diverse pay secrecy practices and different contextual and environmental factors affecting the organization or employee. Therefore, perceived benefits and costs may be heightened or reduced in different organizations or employees, depending on the fluctuations of the environmental factors.

Pay secrecy practices have been argued to have several major benefits (refer to Table 2.1 for an overview of the perceived benefits). First, pay secrecy offers organizations and employees privacy protection (Colella et al. 2007; Sim 2001). This is important since employees have listed privacy protection as their primary reason for preferring pay secrecy (Schuster and Colletti 1973; Markels and Berton 1996). However, the reasoning for privacy protection may differ among employees. For instance, lower-paid employees may want privacy to save them from embarrassment or having others think less or look down on them; whereas, higher-paid employees may want privacy to not be referred to as arrogant, risk their "sweet deal" or be targeted as a rate buster (Patten 1978). Additionally, with all of the advancements in technology and ease of gathering information, employees and organizations are constantly apprehensive in regards to their privacy. In regards to an organizations' privacy, pay secrecy allows organizations to attract and retain better employees by giving them higher pay wages without upsetting current employees (Sim 2001). Another privacy protection benefit for an organization is the reduction of certain competitive tactics, such as poaching, since competitors are unaware of current pay information.

Table 2.1 Benefits of Pay Secrecy

Benefit	Entity Benefitted	Additional Benefits	Entity Disadvantaged
Privacy Protection	Employees Organizations	Stops embarrassment and peer pressure; able to attract and retain employees by offering higher pay; reduces competitive tactics	Employees Organizations Society
Decline in Labor Mobility	Organizations	Lowers employee opportunism; enhances continuance commitment; reduces poaching; decreases labor costs	Employees Organizations Society
Conflict Avoidance	Organizations	Reduces conflict, envy, and resentment; enhances group cohesion	Employees
Impact on employee behavior	Organizations	Reduces persuasive or manipulative behaviors in hopes of getting more pay	Employees
Freedom & Flexibility in Pay Administration	Organizations	Pay reflects performance; less compressed pay structure; able to fix pay discrepancies; avoid confrontations	Employees
Autonomy Limitations	Organizations	Limits employee's autonomy; decreases turnover	Employees Organizations Society
Enforcement Approaches	Organizations	Hinders pay inequities being found	Employees Society

The resultant decline in labor mobility is another perceived benefit of pay secrecy practices to organizations, although it may be a cost to employees and society and possibly to some organizations (Colella et al. 2007; Danziger and Katz 1997; Patten 1978; Sim 2001). Since employees are unable to compare pay information with external referents or the job market, the likely discovery of their lower relative pay is minimized, causing them to be unlikely to leave their current organization (Danziger and Katz 1997; Lawler 1971). Additionally, since employee opportunism or their perceptions of additional job opportunities is decreased, employee continuance commitment is boosted. As previously mentioned, poaching is minimized so competitors are less likely to be able to lure better-performing employees away from the organization. Therefore, labor mobility reduction helps organizations keep better-performing employees, while also evading certain labor costs, such as recruitment and training costs (Patten 1978).

Multiple forms of organizational control are other perceived benefits of pay secrecy practices (Colella et al. 2007). One form of organizational control is conflict avoidance (Colella et al. 2007; Patten 1978). Managers have claimed that one of their primary reasons for implementing pay secrecy practices is to evade "jealousies and strife among employees" (Bierman and Gely 2004) and the conflicts caused by pay envy and resentment (Gomez-Mejia and Balkin 1992; Steele 1975). Additionally, conflicts may cause a loss of group cohesion (Opsahl 1967). Therefore, pay secrecy practices help diminish, if not eliminate, any jealousy or inequity employees may experience since actual pay levels are unknown.

A second form of organizational control that is beneficial to organizations entails influencing employee behavior (Bierman and Gely 2004). For example, under pay openness conditions, employees may participate in certain persuasive or manipulative behaviors or acts (such as informing management about a co-worker's misconduct or attempting to deceitfully befriend managers) in attempt to receive more pay (Bartol and Martin 1989). These Machiavellian tactics may potentially lead to conflict between employees and possibly between employees and their manager(s). Thus, pay secrecy practices are thought to control employee behavior by preventing Machiavellian behaviors and the conflicts that may arise from them.

Another perceived advantage that pay secrecy creates for organizations is freedom and flexibility in pay administration (Bartol and Martin 1988; Colella et al. 2007; deCarufel 1986; Lawler 1981; Patten 1978). Pay secrecy practices allow managers to feel powerful and comfortable in making their pay decisions more reflective of employees' performance differences without having to explain their decisions to the low-performing or angry employees (Gomez-Mejia and Balkin 1992; Lawler 1981, 1990; Leventhal, Michaels, and Sanford 1972). Therefore, managers are more inclined to appropriately dispense pay raises among employees based on their performance levels, resulting in a better pay-for-performance system. Additionally, pay secrecy allows pay ranges and the overall pay structure to be less compressed since managers can successfully, and without fear of angering employees, implement a genuine pay-for-performance system with maximum partitioning in the raises given (Bartol and Martin 1988). Organizations also have the flexibility to fix individual pay and pay structure discrepancies, inequities, or mistakes at their leisure, without having to deal with angry employees (and their complaints or whining) or explain the slightest inconsistency (deCarufel 1986; Gomez-Mejia and Balkin 1992; Milkovich and Newman 2005; Patten 1978).

Some additional forms of organizational control that are enhanced from the usage of pay secrecy practices are autonomy limitations and enforcement approaches (Colella et al. 2007). Organizations restrict employees' autonomy by keeping pay secret without giving employees the option of knowing. Organizations engage in these autonomy-limiting, paternalistic behaviors because they believe they know what is best for their employees and they want to deter them from acting unreasonably (such as quitting) when they experience distress from pay inequities. Therefore, organizations benefit from this type of autonomy control by potentially reducing turnover. Additionally, organizations control employees through the enforcement tactic they use to ensure the pay secrecy practice (such as pay secrecy policy) is upheld. Organizations benefit from enforcing a pay secrecy practice (such as terminating employment for violators) by hindering the employees' ability to discover problems within the pay structure (such as pay inequities). As previously mentioned, the enforcement approach, like the pay secrecy construct, resides on a continuum ranging from implicit to explicit (Colella et al. 2007).

However, since Noy (2007) has expanded Colella et al's (2007) enforcement approach by identifying IPS and OPS, the enforcement approach concept may be better represented as an enforcement strategy, where organizations control the manner in which employees comply with a pay secrecy practice (or policy) rather than which entity enforces the compliance. This enforcement strategy concept falls on a continuum ranging from permissive to intolerant. The intolerant extreme involves a zero-tolerance rule in regards to discussions of pay information and any rule infractions result in termination of employment. The permissive extreme entails the organization not reprimanding employees for violating the pay secrecy practice. An assortment of enforcement strategies fall between these two extremes. For example, one strategy near the permissive extreme may involve the organization giving a "warning" or a sign of disapproval to any rule violators without ever actually punishing them. Another strategy closer to the intolerant extreme may entail the organization having a two-step disciplinary program, such as a verbal warning and then termination of employment for rule violators.

Despite these perceived benefits, pay secrecy practices have been argued to produce several perceived costs or drawbacks for employees, organizations, and society (refer to Table 2.2 for an overview of the perceived costs). Naturally, human instincts associate a 'secret' with something bad. Hence, the notion of pay secrecy leads to the belief that something is wrong, especially since employees may ponder that "if nothing is wrong, then why is pay information being hidden?" Therefore, the term 'pay secrecy' influences the perception of the practice being detrimental for employees, organizations, or society. One perceived disadvantage of using a pay secrecy practice is the potential loss of fairness perceptions among employees (Colella et al. 2007; Lawler 1971). It is argued that when pay information is undisclosed, employees are unaware of the reasons for organizational salary differentials (such as whether they are based on performance levels or seniority), forcing employees to rely on managements' claims that pay administration and pay decisions are honest and not based on bias, mistakes, or chance (Colella et al. 2007; Lawler 1971, 1990). Since employees cannot be completely sure of the organizations' sincerity in pay administration and pay decisions, beliefs of unfair pay or pay inequities (such as pay discrimination) are likely to develop. In fact, a vicious cycle may develop where pay inequity beliefs may develop over time as employees begin to speculate about why pay information is being hidden, especially if pay issues are handled illegitimately. These unfair pay perceptions may lead to a lack of trust with management and the organization, especially when employees cannot perform their own inspection of the compensation system (Colella et al. 2007; Lawler 1990). This distrust of management and the organization in general may further lead to conflict between the employees and managers and perhaps even result in workplace deviance (such as employee theft or equipment sabotage) out of retaliation for the injustice. However, organizations not utilizing pay secrecy practices (as they are exercising a pay openness practice instead) are able to demonstrate the integrity and consistency of their pay decisions and related matters by providing pay information and showing no bias or mistakes exist, or that they are minimal and are attempting to be slowly resolved (Milkovich and Newman 2005). For instance, pay openness practices help employees recognize the pay-for-performance system by showcasing that higher-performing employees receive larger earnings and raises (Lawler 1990). Additionally, pay openness practices will enhance employees trust in management and the organization since employees are able to evaluate the pay system and determine its credibility.

Table 2.2 Costs of Pay Secrecy

Cost	**Entity Disadvantaged**	**Additional Costs**	**Entity Benefitted**
Unfairness Perceptions	Employees	Lack of trust in management and the organization; may lead to conflict between employee and managers; may lead to workplace deviance	Organizations
Lower Work Motivation	Employees Organizations	May lower job performance; may increase turnover and pay dissatisfaction	None

Table 2.2 (Continued)

Inefficient Labor Market	Employees Organizations Society	Restricts employee opportunism; employees are unable to identify job alternatives; employees may be underemployed or underpaid; organizations are incapable of attracting higher-performing applicants	Organizations

Another perceived disadvantage may be employees experiencing lower work motivation, which potentially leads to other undesired organizational outcomes (Burroughs 1982; Colella et al. 2007; Futrell and Jenkins 1978; Lawler 1965a, 1966, 1971; Opsahl and Dunnette 1966; Schuster and Colletti 1973). Lawler (1965a, 1966, 1971) has long argued that pay secrecy practices lead to lower employee motivation because employees lack the pay information needed to make accurate comparisons. Additionally, pay secrecy practices are argued to lower job performance (Futrell and Jenkins 1978) while increasing pay dissatisfaction (Opsahl 1967; Thompson and Pronsky 1975).

An inefficient labor market is another perceived cost of utilizing pay secrecy practices (Colella et al. 2007; Danziger and Katz 1997). This is a cost to employees, organizations, and society. Pay secrecy practices cause employees to lose power by restricting them from gathering pay information, which could possibly lead them to identify a better job. Consequently, employees may be underemployed and/or underpaid because of their lack of awareness of higher paying job alternatives. Organizations are also affected by an inefficient labor market as they are deprived of potentially higher-performing applicants since they are incapable of marketing competitive pay information and, consequently, making better workers elsewhere realize the attractiveness of their organization's compensation system. Therefore, by publicizing pay information, economists would argue the labor market would become more efficient and society would benefit from appropriate job transitions.

Theoretical Foundations

Over the past several decades, the pay secrecy literature has expanded its usage of theoretical foundations to explain empirical results. In the beginning, pay secrecy research did not explicitly utilize theories to justify hypotheses or to clarify findings (e.g., Lawler 1965a, 1965b, 1967; Milkovich and Anderson 1972). However, prevalent theories (such as equity theory) quickly penetrated the pay secrecy literature (e.g., Lawler 1971, 1972). There have been several major theories continuously employed throughout the pay secrecy literature that comprise its theoretical framework. A review of these theories and their implications for pay secrecy are examined here.

Equity Theory

Equity theory (Adams 1965) is one of the most prominent theories used throughout the pay communication literature. Its prevalence is probably due to the importance of (and managerial desire for) a compensation system being fair or equitable. Adam's (1965) equity theory mainly emanated from cognitive dissonance theory (Festinger 1957) with additional influences from the principles of distributive justice (Homans 1961), social comparison theory (Festinger 1954), and relative deprivation (Stouffer, Suchman, DeVinney, Star, and Williams 1949). According to equity theory, employees contribute inputs and receive outcomes, while continuously comparing their ratios of inputs to outcomes with the perceived ratios of referent others to analyze the fairness of their pay. Equity theory claims that employees are concerned with the relative value or fairness of their outcomes rather than the absolute value of their outcomes (Gerhart and Rynes 2003). However, equity theory is ambiguous as to which referent others (such as internal versus external referents) are used when making comparisons. Employee inputs include contributions such as education, experience, skills, abilities, effort, creativity, and loyalty. Employee outcomes include rewards such as pay, benefits, working conditions, and job security. Perceived equity is attained when employees believe their personal input/outcomes ratio is equivalent to the referent others' input/outcomes ratio. The perceived equity relationship is expressed by the following equation:

$$\frac{\text{Outcomes (self)}}{\text{Input (self)}} = \frac{\text{Outcomes (other)}}{\text{Inputs (other)}}$$

However, employees differ in which inputs and outcomes they use in their personal and referent others' ratios. Employees also differ in which inputs they believe should have a major role in determining their outcomes and which outcomes are of greater importance. For instance, employees tend to believe that more weight should be put on their superior inputs rather than have an equal weight for all inputs, which makes their weaker inputs more noticeable and influential in the ratio (Lawler 1966, 1981). Additionally, employees tend to overrate their personal inputs (e.g., Kane and Lawler 1979). Therefore, employees are unlikely to experience perceived equity in their comparisons.

Perceived inequity occurs when an employee perceives their personal inputs/outcomes ratio to be nonequivalent with the inputs/outcomes ratio of a referent other. There are two perceived inequity configurations: under-reward (positive) and over-reward (negative) inequity (Kreitner and Kinicki 2001). The perceived under-reward (positive) inequity occurs when an employees' personal inputs/outcomes ratio is smaller (or less than) the referent others' inputs/outcomes ratio. This type of inequity is more common and harmful for both employees and the organization as it may cause employees to engage in selfish and uncooperative behaviors (such as workplace deviance; (Greenberg 1990a; Harder 1992)) due to feelings of relative deprivation. Under-reward inequity may develop from several scenarios. For example, under-reward inequity transpires when employees perceive they supply the same amount of inputs as a similar co-worker but receive smaller outcomes. Perceptions of under-reward also develop when employees believe they provide more inputs than a similar co-worker but receive the same outcomes. The under-reward (positive) inequity relationship is expressed by the following equation:

$$\frac{\text{Outcomes (self)}}{\text{Inputs (self)}} < \frac{\text{Outcomes (other)}}{\text{Inputs (other)}}$$

The perceived over-reward (negative) inequity occurs when an employees' personal inputs/outcomes ratio is larger (or greater than) the referent others' inputs/outcomes ratio. This type of inequity is typically innocuous to the benefitting employees since they are less likely to criticize this inequity; however, it is harmful to the organization as it may lower profits due to certain employees receiving higher pay. There are several ways for this type of inequity to manifest. For instance, when employees believe they do not put forth as much effort or time as a similar co-worker but receive the same outcomes, negative inequity transpires. Also, over-reward inequity develops when employees perceive their outcomes to be more than a similar co-worker who supplies the same amount of inputs. The over-reward (negative) inequity relationship is expressed by the following equation:

$$\frac{\text{Outcomes (self)}}{\text{Inputs (self)}} > \frac{\text{Outcomes (other)}}{\text{Inputs (other)}}$$

Both types of perceived inequities exist along a continuum, with the magnitude of the inequity increasing as the discrepancy between the two ratios becomes larger (Opsahl and Dunnette 1966). The discrepancy between the two ratios can be caused from differing amount of inputs and/or outcomes in the ratios. Generally, minor inequities arise when a discrepancy is between either the inputs or outcomes, while larger inequities are perceived when both the inputs and outcomes are nonequivalent or there is a substantial difference between either the inputs or outcomes (such as the employee exerts twice as much effort or referent others' pay is double). Although the majority of employees may tolerate small inequities (Jaques 1961), the thresholds for under-reward and over-reward inequity differ. For instance, over-reward inequity may be more tolerable at lower levels than under-reward inequity since the employee is actually benefitting from the inequity. Additionally, the perceived inequity creates tension within employees at an amount proportional to the magnitude of the inequity. This tension causes employees to attempt to reduce dissonance and to restore equity through different cognitive and/or behavioral courses of actions. The strength of these equity restoration attempts is proportional with the tension created. Some of the tactics used to restore equity involve employees modifying their inputs (such as by increasing performance or withholding effort) or outcomes (such as by requesting a raise or donating money to charity), distorting their personal or referent others' actual inputs and outcomes, changing their referent other(s) used for comparison, engaging in various behaviors to adjust inputs or outcomes (e.g., deviant behaviors such as employee theft, absenteeism, sabotaging equipment or others' contributions), participating in alternative efforts (such as complaining, filing formal grievances, attempting to form a union), or changing jobs (such as transferring jobs or terminating employment). The chosen tactic is determined by the employee, and the amount of tension and other feelings experienced. Generally, employees enduring an under-reward inequity experience feelings of anger and behave selfishly and uncooperatively with the organization (Harder 1992); whereas, guilt and anxiety is felt for those undergoing an over-reward inequity (Homans 1961; Jaques 1961).

Equity theory explains the impact pay secrecy has on employees and the organization. Lawler (1965a, 1965b, 1967) has continuously argued (and empirically supported) that the motivational role of pay is weakened under pay secrecy practices because inaccurate and unfair pay comparisons are unavoidable when pay information is hidden. Specifically, managers tend to make inaccurate pay comparisons by underestimating their superiors' pay and overestimating the pay of their subordinates and peers (Lawler 1965a, 1967, 1972; Milkovich and Anderson 1972; Mahoney and Weitzel 1978). According to equity theory, these inaccurate comparisons (specifically overestimating subordinates' pay) will cause employees to feel tension and proclivity to restore equity through various methods. For example, employees who inaccurately overestimate their peers' or subordinates' pay and experience under-reward inequity will most likely reduce the dissonance by decreasing desired organizational outcomes, such as performance (Bamberger and Belogolovsky 2010), or by increasing unwanted and possibly harmful behaviors, such as self-interested or counter-productive behaviors (such as reducing effort or performance; (Harder 1992); stealing; (Greenberg 1990a); or sabotage of others' contributions; (Skarlicki and Folger 1997)). Additionally, underestimating superiors' pay undermines motivation as it lowers the expectancy that promotion will lead to a significant pay increase.

Referent Others and Comparisons. Although equity theory does not specifically explain which or how referent others are chosen, prior research on referents gives further insight in regards to comparisons. There are two types of referents: social and self-referents (Gerhart and Rynes 2003; Goodman 1974, 1977; Scholl, Cooper, and McKenna 1987). Self-referents involve the employees' unique personal experiences (such as pay history) and expectations (such as ability to meet financial needs and future pay). Social referents entail using other employees in the comparison process and there are two types: external and internal referents (Hills 1980; Lawler 1990). External referents are individuals employed outside of the organization, but usually within the same job domain. Internal referents are individuals who are employed within the same organization, but not specifically in the same position, department, or job level. Internal referents may involve comparisons of employees at the same job level (horizontal comparisons), downward comparisons (subordinates or lower level employees; (Wills 1991)), or upward comparisons (superiors or higher level employees; (Martin 1982)) within the organization. Generally, equity theory implies the usage of social referents (rather than self-referents) in either a similar position or job level (instead of downward or upward comparisons). Pay inequities with both external and internal referents have consequences for the employing organization, with external inequity usually being more severe (Lawler 1981, 1990). External inequity may cause organizational deviance (such as absenteeism or withheld effort), intentions to quit, and turnover. On the other hand, internal inequity may not increase turnover (especially if there is external equity) but it may lead to interpersonal deviance (such as sabotage of others' contributions) or other organizational problems (such as formal complaints and grievances being filed). Additionally, employees tend to use more than one referent and make multiple comparisons simultaneously (Goodman 1974). Therefore, employees may experience pay equity with some referents and pay inequity with other referents (Scholl et al. 1987).

Organizational Justice/Fairness. Similar to and deriving from equity theory (Adams 1965), the notion of organizational justice (Greenberg 1987a) argues that employees make judgments or fairness comparisons with referents in regards to the organizations' behaviors towards the employee (such as pay outcomes) which, in turn, determines the attitudes and behaviors exhibited from the employee. Rather than prevailing as a single theory, organizational justice is regarded as a multi-dimensional construct (Latham and Pinder 2005) having four distinct dimensions (Colquitt 2001; Colquitt, Conlon, Wesson, Porter, and Ng 2001): distributive justice (Adams 1965), procedural justice (Thibaut and Walker 1975), and interactional justice (Bies and Moag 1986) which encompasses informational justice and interpersonal justice (Greenberg 1990a, 1993).

The organizational justice concept attempts to explain the impact of justice or fairness perceptions in the workplace (Colquitt 2001; Greenberg 1990b). In other words, organizational justice research helps interpret and explain organizational behaviors (Cloutier and Vilhuber 2008; Greenberg 1990b). Typically, the resulting attitudes and behaviors are displayed in a reciprocative and complementary manner. Therefore, equitable judgments or perceptions of fairness suggest a social exchange relationship and are likely to lead to cooperative and organizationally beneficial attitudes and behaviors (such as organizational commitment and trust; (Cohen-Charash and Spector 2001; DeConinck 2010)); whereas, unfair or inequitable perceptions suggest an economical exchange relationship (Organ 1990) and are inclined to cause uncooperative, selfish and potentially harmful attitudes and behaviors (such as organizational distrust and workplace deviance; (Cohen-Charash and Spector 2001; Johns 2001)). All organizational actions and decisions (such as pay outcomes) are used in determining perceptions of fairness or injustice. There are numerous distinct aspects of organizational justice that encompass all organizational actions, such as pay justice regarding fairness perceptions of individual compensation.

Pay justice refers to employee's fairness perceptions of their distributed outcomes, the process used to determine their outcomes and the manner in which the outcomes and process are communicated to them (Andersson-Straberg et al. 2007). Even though both employees and organizations consider pay to be an important job factor (since it achieves employees needs and increases organizational productivity), the pay justice literature is limited (Greenberg 2001; Pfeffer 1997) with only a few studies analyzing fairness perceptions in regards to certain pay-related aspects (such as performance appraisals and pay allocations; (Colquitt, Greenberg, and Zapata-Phelan 2005; Cropanzano, Byrne, Bobocel, and Rupp 2001)). Generally, favorable or positive pay perceptions (such as a higher pay raise) tend to coincide with feelings of pay justice, while unfavorable or negative pay perceptions (such as a lower or no pay raise) lead to unfair feelings about pay (e.g., Folger and Konovsky 1989).

Perceptions of organizational justice, especially pay justice, are influenced by pay secrecy practices since they hinder the availability of pay information. Pay secrecy practices impede an employee's ability to make accurate comparisons since the needed information is hidden, thereby suggesting illegitimacy and unfairness. Therefore, pay secrecy practices collide with the principles of organizational justice and produce perceptions of injustice. On the other hand, pay openness practices are consistent with organizational justice principles as the organization gives the impression of authenticity and fairness. Although each organizational justice dimension (such as distributive and procedural justice) is expected to be negatively affected by pay secrecy practices (Colella et al. 2007), each dimension is affected in a slightly different manner.

Distributive justice (Adams 1965) refers to the perceived fairness of the allocation of outcomes. Distributive justice (or injustice) is determined in the same manner as described in equity theory, where employees compare their personal inputs/outcomes ratio to referent others. As previously mentioned, when pay secrecy practices are implemented, employees are likely to make inaccurate pay estimations (e.g., Lawler 1965a, 1967), which lead to negative comparisons and perceptions of unfairness and injustice. Additionally, pay secrecy practices create uncertainty for employees (Colella et al. 2007), especially since they are unable to receive actual pay information and must depend on innuendo and gossip (deCarufel 1986). According to uncertainty management theory (Lind and van den Bos 2002), this uncertainty of specific position in the pay structure and organizational worth is likely to cause employees to experience anxiety and an increased concern for fairness in order to cope with the tension. Additionally, when employees' emotions are involved, to the extent that high levels of dissonance or anger are experienced, misperceptions or inaccurate comparisons are most likely to transpire (Lawler 1981) and thus, most likely causing feelings of unfairness or injustice. On the other hand, pay openness practices alleviate misperceptions and feelings of unfairness by allowing employees to examine the pay structure and their personal positioning in it. However, if the pay structure is not equitable or prone to favoritism, prejudice, discrimination or the like, then pay openness practices will actually strengthen the feelings of unfairness. Nevertheless, pay inequities are likely to be reduced under conditions of pay openness (deCarufel 1986). Additionally, fairness heuristic theory (Lind 2001) argues that when information is unavailable and specific perceptions of fairness (such as fairness of pay process) are unable to be made, employees will use other fairness perceptions or an overall perception of organizational fairness to infer judgments. Thus, when pay information is unavailable, employees will use their fairness perceptions of other organizational outcomes (such as office space or resources) or other forms of justice (such as procedural or interpersonal justice) to make a fairness judgment about their personal outcomes.

Procedural justice (Leventhal 1980; Leventhal, Karuza, and Fry 1980; Thibaut and Walker 1975) refers to the perceived fairness associated with the process and procedures used to determine outcome distribution. In order for an outcome process to be perceived as fair or justified, there are several criteria (or standards) that the process should possess (Folger and Konovsky 1989; Leventhal 1980; Leventhal et al. 1980): consistency, accuracy, bias suppression or neutrality, representation of all entities affected, comprehensiveness, social morality, and opportunity to correct mistakes. However, employees do not always follow these standards to evaluate all procedural fairness perceptions in that they change under different conditions, situations, or processes (Cloutier and Vilhuber 2008; Jones, Scarpello, and Bergmann 1999; Leventhal 1980). For instance, pay rate processes and pay raise processes use different justice standards or criteria to assess fairness (Cloutier and Vilhuber 2008). Procedural justice is likely to be affected by pay secrecy practices since they prevent the knowledge of the criteria or standards (such as being accurate and unbiased) used to verify its existence (Noy 2007). Therefore, perceptions of procedural unfairness or injustice are likely to prevail under pay secrecy practices since employees cannot determine that the procedures used to determine their outcomes reflect reality and were accurate, unbiased, and consistent with other employees' procedures (Leventhal et al. 1980; Thibaut and Walker 1975). Pay openness practices confirm that organizational rules were not transgressed or neglected for certain employees and that all pertinent information was accurate and utilized in determining the employees' outcomes. Therefore, the practice of pay openness leads to perceptions of fairness. As previously mentioned, fairness heuristic theory (Lind 2001) argues that when there is a lack of information (as there would be under pay secrecy conditions), procedural justice may be determined by the fairness perceptions of other organizational processes (such as disciplinary or raise procedures) or other justice dimensions (such as distributive justice). Therefore, if employees view the disciplinary process as being fair or their personal outcomes as being favorable then procedural justice (rather than unfairness) is likely to exist. Also, procedural and distributive justice create the "fair process effect" (Folger 1993, p.241), in that even when outcomes are unfavorable, as long as the processes used to determine those outcomes are perceived as fair, the employee will be more inclined to accept the outcome as being fair and not respond negatively or in retaliation (Cropanzano and Folger 1991; Greenberg 1987b).

The social component of organizational justice, interactional justice, refers to the interpersonal treatment employees receive from the organization (usually from their boss or superiors) as procedures are executed (Bies and Moag 1986). Interactional justice is comprised of four criteria: justification, truthfulness, respect, and propriety (Bies and Moag 1986). In the beginning interactional justice lacked consensus in regards to its measurement competency in that some researchers considered it to be a subset of procedural justice (e.g., Niehoff and Moorman 1993) while others treated it as a third type of organizational justice (e.g., Skarlicki and Folger 1997) or originally tested it as a third type of justice but then combined it with procedural justice due to high intercorrelations (e.g., Skarlicki and Latham 1997). Additionally, interactional justice was separated for research purposes into two dimensions: explanations and sensitivity (Greenberg 1990a). This separation led to the formation of interpersonal justice, which encompassed the respect and propriety criteria, and informational justice, which included the justification and truthfulness criteria (Greenberg 1993). Further research demonstrated the importance of having separate measures not only for interactional justice but also for interpersonal and informational justice as each separate component of organizational justice displayed different effects (e.g., Colquitt 2001).

Informational justice is the social side of procedural justice and refers to the amount, quality, and timing of information provided to employees that explain the procedures used to determine outcomes (Bies, Martin, and Brockner 1993; Greenberg 1993). Information needs to be accurate, complete, and supplied in timely manner in order for perceptions of fairness to prevail. Therefore, employees are more likely to experience informational justice (rather than injustice) when they are more adequately informed about the processes used to determine their outcomes (Andersson-Straberg et al. 2007). Additionally, perceptions of informational justice are likely to be enhanced when information is given on a regular basis and face-to-face (Bies et al. 1993). Informational justice is likely to be affected by pay secrecy practices since they prohibit employees from receiving pay information. Therefore, informational unfairness or injustice is likely to be experienced when pay secrecy practices are in effect since no information is supplied to the employees. On the other hand, pay openness practices lead to informational justice since pay information is given to the employees. However, if the pay information has flaws or is obtained in an untimely manner, perceptions of informational justice will decrease.

Interpersonal justice is the social side of justice and refers to the extent to which employees are treated with politeness, dignity, and respect from the organization (usually from their boss or superiors) when procedures used to determine their outcomes are executed (Greenberg 1990b, 1993). In order for perceptions of interpersonal justice to be positive, employees need to be treated courteously on every occasion where pay information is supplied. Pay secrecy practices are likely to affect interpersonal justice negatively since the employees' superior is not allowed to supply pay information and may come across as being rude, uncaring, or disrespectful of the employee and his/her feelings toward their pay. However, pay openness practices may lead to positive perceptions of interpersonal justice since employees may feel as though their superiors respect them and their feelings by providing pay information. Although pay openness practices may lead employees to feel as though their superiors respect them by providing them with pay information, if the pay information is given in a rude or insensible manner then perceptions of interpersonal unfairness are likely to transpire. Additionally, when there are no interactions about pay information (as may occur under pay secrecy conditions), fairness heuristic theory (Lind 2001) argues that employees will supplement this perception of fairness with other judgments involving interactions with superiors (such as conversations about scheduling) or other justice dimensions (such as informational justice). Therefore, perceptions of interpersonal injustice are likely to occur when other interactions involving superiors are discomforting or negative.

Expectancy Theory

Expectancy theory (Vroom 1964) is a motivation theory which argues that employees choose to engage in certain behaviors because they are motivated by the expectation of receiving a specific outcome that is associated with the chosen behavior. According to expectancy theory, there are different motivational elements (expectancy, instrumentality, and valence), rather than only the desired outcome, that determine the behavior selected. The formula for motivation involves two components: expectancy and valence. Valence refers to the value the employee personally attributes to a certain outcome or reward.

Expectancy refers to an employee's belief that specific outcomes will result from engaging in certain behaviors. There are two parts of the expectancy element: effort-performance expectancy and performance-outcome expectancy. The effort-performance expectancy refers to the employees' belief that increased effort will lead to achieving desired performance levels. The performance-outcome expectancy, also referred to as instrumentality (Kreitner and Kinicki 2001), refers to the employees' belief that attainment of expected performance levels will result in an outcome or reward (such as a pay raise or promotion).

Expectancy theory is expressed by the following equation:

$$\text{Motivation} = \overbrace{[\text{Effort-Performance} \times \text{Performance-Outcome}]}^{\text{Expectancies}} \times \text{Valence}$$

The most significant portion of the expectancy model relating to pay secrecy practices is the instrumentality element (performance-outcome expectancy) since it motivates employees. However, expectancy theory requires employees to identify a pay-for-performance relationship since an outcome or reward (such as pay raise) is used as the motivator. Nevertheless, several scholars (e.g., Colella et al. 2007; Lawler 1971, 1990) have argued that pay secrecy practices prevent employees from recognizing this relationship because pay information is withheld. Therefore, a direct relationship between pay and performance cannot be established and motivation for higher performance levels is reduced. For instance, Bamberger and Belogolovsky (2010) found that a decrease in pay-for-performance perceptions partially explained the relationship between pay secrecy policy practices and lower task performance levels among employees with lower inequity tolerance levels. On the other hand, pay openness practices have been suggested to substantiate a pay-for-performance relationship (Lawler 1990; Mulvey, LeBlanc, Heneman, and McInerney 2002). In support of this supposition, Futrell and Jenkins (1978) found employee performance increased when an organizations' current pay communication practice changed from pay secrecy to pay openness, where the existence of a pay-for-performance relationship was able to be corroborated and hence to motivate performance.

Prior Research

Even though pay secrecy practices have been commonly acknowledged by practitioners as a good human resource and compensation practice (Lawler 1965b, 1966, 1972), their usage has been a controversial issue for researchers for decades (Bamberger and Belogolovsky 2010; Colella et al. 2007; Gely and Bierman 2003). Despite the fact that discussions about pay are widely considered crass, inapt, and uncomfortable, researchers have been successful in getting employees and organizations to openly discuss (or at least respond to questionnaires) their beliefs, attitudes, outcomes, and expectations about pay secrecy and pay openness practices (e.g., Lawler 1965a, 1967; Bamberger and Belogolovsky 2010). However, the pay communication literature is best described as scarce and confusing. Because pay secrecy practices (specifically pay secrecy policy practices) are both unlawful and a crucial decision for top management and organizations (Henderson 1985), it is baffling as to how limited the pay communication (especially pay secrecy) literature is since it began almost fifty years ago. These limitations (such as few organizational outcomes analyzed) further confuse scholars and practitioners, leading both to question the value of pay secrecy. Additionally, the pay communication research has somewhat conflicting results (e.g., Cloutier and Vilhuber 2008; Thompson and Pronsky 1975), leading to further confusions about pay secrecy's overall efficiency and common practice in the workplace. Nonetheless, this limited research insinuates that pay secrecy practices are detrimental for employees and organizations and thus, should not be utilized (e.g., Bartol and Martin 1989; Lawler 1965a, 1967).

Lawler (1965a, 1965b, 1967) is generally recognized as the seminal researcher in the pay communication (pay secrecy and pay openness) literature (Noy 2007). He is the most notable opponent of pay secrecy practice usage in the workplace (Lawler 1965a, 1967, 1990). For decades Lawler has argued for the usage of a pay openness practice and more pay information dispersion to employees. Lawler's rationale for these arguments is that pay secrecy practices lower employee motivation which, in turn, decrease other desired organizational outcomes (such as pay satisfaction and organizational trust). Thus, pay secrecy practices are counter-productive and contradict organizational goals and objectives.

Pay Level

The compensation literature has categorized employees' pay into several dimensions, such as pay level, pay structure, form and basis of pay (Gerhart and Rynes 2003). Even though pay communication practices can involve and vary across all of the pay dimensions, the majority of the pay communication research has utilized the pay level dimension (e.g., Lawler 1965a; (Gerhart and Rynes 2003)), with some also including pay structure (e.g., Lawler 1965; Milkovich and Anderson 1972). The pay level dimension has conventionally been used throughout the pay communication literature because employees tend to have a bigger concern for it than other pay matters (such as certain benefits), because it is associated with an employees' decision to quit or to apply with an organization, and because it is easily observable to make pay comparisons (Gerhart and Rynes 2003).

Pay Estimations

One of the main reasons organizations claim to utilize pay secrecy practices is to eliminate employees from making negative pay comparisons with internal referents, which leads to pay dissatisfaction (Lawler 1965a, 1965b, 1966, 1967, 1972). Basically, organizations believe that employees will be incapable of making pay comparisons when pay information is limited. However, Andrews and Henry (1963) found that even when organizations used a pay secrecy policy practice, managers made pay comparisons. Based on this finding and additional work from Patchen (1961), Lawler dedicated his initial pay communication research to analyzing the effect pay secrecy practices would have on producing accurate pay comparisons among managers (e.g., Lawler 1965a, 1966, 1967). For an overview of the pay estimation studies refer to Table 2.3.

Table 2.3 Prior Research Involving the Pay Estimation Outcome

Study	Sample	Pay Communication Practice	Main Findings
Lawler (1965a, 1965b, 1966)	Lower- and middle-level managers in several organizations	Some organizations used a complete pay secrecy practice and some used an extreme pay openness practice (only individual pay hidden)	Pay secrecy negatively affects pay comparisons; overestimated subordinates' and peers' pay; underestimated superiors' pay
Lawler (1967)	Lower-level managers to top management in one organization	Used a pay secrecy practice	Overestimated subordinates' and peers' pay; underestimated superiors' pay; misestimations were manifested two levels away; overestimation of peers' pay correlated with pay dissatisfaction

Table 2.3 (Continued)

Milkovich and Anderson (1972)	Lower and middle-level managers in one organization	Used a moderate pay secrecy practice (supplied pay ranges and median pay for personal pay level)	Overestimated subordinates' and peers' pay; underestimated superiors' pay; misestimations were manifested two levels away; accurate estimations were correlated with higher levels of pay dissatisfaction; overestimations of peers' pay correlated with higher levels of pay satisfaction
Lawler (1972) Study 1	Managers in one organization	Used a pay secrecy practice	Overestimated subordinates' and peers' pay; underestimated superiors' pay; misestimations were manifested two levels away; overestimation of peers' and subordinates' pay associated with higher levels of pay dissatisfaction; accurate estimations were correlated negatively with pay satisfaction
Lawler (1972) Study 2	Managers in two organizations	One organization gave annual raises but amount was unknown; one organization gave 10% raises but frequency was unknown	Overestimated unknown parts (size & frequency) of the raises
Mahoney and Weitzel (1978)	Managers in one organization	Used a moderate pay openness practice	Overestimated subordinates', peers', and superiors' pay; accurate estimations of peers' pay correlated with higher levels of pay dissatisfaction; underestimations of peers' pay correlated with higher levels of pay satisfaction

<u>Lawler's (1965a, 1965b, 1966) Pay Secrecy—Pay Comparisons Study.</u> Lawler's original study (1965a, 1965b, 1966) was comprised of lower- and middle-level managers employed with several organizations in different industries. Some of the organizations utilized pay secrecy practices and others practiced pay openness with only individual pay information being hidden. The data revealed that pay secrecy practices do negatively affect the accuracy of pay comparisons among managers employed in both the public and private sectors. Specifically, the managers (in both sectors) consistently overestimated the pay of their peers and subordinates. Additionally, the private sector managers (but not the public sector) had a propensity to underestimate the pay of their superiors; however, the public sector managers tended to be more accurate in their superiors' pay estimation. The managers from the public sector tended to be more accurate in their pay estimations than the private sector managers. Lawler (1965a, 1965b) claimed the reasoning for this was most likely due to the fact that public sector organizations supply more pay information to their employees than private sector organizations. Overall, the results show that pay secrecy practices do not stop employees from making pay comparisons but actually increase the likelihood of making inaccurate and unfavorable pay comparisons, especially since the public sector managers were more accurate in their estimations.

In addition, the majority of the managers (77%) indicated that pay information was best undisclosed. However, this is most likely due to the fact that most of the managers also thought their pay was too little. The results also show that managers believed the pay structure to be too compressed, in that the pay differentials were not large enough between managerial levels, since they had a tendency to overestimate their subordinates' pay and underestimate their superiors' pay. Therefore, Lawler (1965a) claimed that managers were most likely to be dissatisfied with their pay since they generated negative pay comparisons and perceived the pay differentials to be too small. Additionally, since the downward pay differentials were more likely to be viewed as smaller than the upward pay differentials, Lawler (1965a) claimed that the overestimations of subordinates' pay would probably have a bigger impact on pay dissatisfaction. Lawler (1965a) concluded that pay secrecy practices may not only lead to pay dissatisfaction, but also decrease managers' motivation for better job performance and desire for a promotion.

Lawler's (1967) Pay Secrecy—Pay Estimations—Pay Satisfaction Study. Lawler (1967) conducted another study in hopes of replicating his original (Lawler 1965a, 1965b, 1966) findings of inaccurate pay estimations and to analyze outcomes he expected to be associated with the misestimates, such as pay dissatisfaction and job performance. The participants ranged in their managerial level (from lower-level to top management) and were all employed in the same organization that utilized a pay secrecy practice. In this study, the participating managers not only estimated pay for those directly above and below them in the organizational structure but also two levels above and below them.

Similar to his original study's (Lawler 1965a, 1965b, 1966) findings, managers had a tendency to underestimate their superiors' pay and overestimate their peers' and subordinates' pay. These trends were even more manifested for the managers' pay estimates of those two levels away from the participants. Therefore, the further away a position was from the participating managers' position, the more pronounced the inaccuracy of the pay estimations became. This demonstrates that managers misinterpret their organizations' total pay structure. Additionally, due to these inaccurate pay estimations, managers believed there was not enough pay distance between the managerial levels.

In regards to satisfaction with pay, pay dissatisfaction was associated with overestimations of peers' pay but not with inaccurate estimations of subordinates' or superiors' pay. The non-relationship between overestimations of subordinates' pay and pay dissatisfaction is surprising and against expectations. Lawler (1967) concluded this result may have occurred due to the participating managers not using their subordinates or superiors as reference groups in their pay comparisons, especially since the data revealed external referents to be the most significant group used in pay comparisons.

As expected, managers who underestimated superiors' pay were more likely to indicate how nonessential a promotion was to them. Contrary to expectations, managers who overestimated their superiors' pay (and therefore, those potentially more likely to view promotion as important) had been given lower performance (or effort) ratings by their superiors. Lawler (1967) reasoned that this surprising result may be due to managers not making an association between pay and performance, possibly also causing employees to receive incorrect performance feedback. Thus, pay secrecy practices not only resulted in managers making negative pay comparisons but (as argued throughout Lawler's original study; (Lawler 1965a)) also affected pay satisfaction, promotion desirability, job performance, and possibly perceptions of performance feedback.

Milkovich and Anderson's (1972) Replication Study. Milkovich and Anderson (1972) attempted to replicate Lawler's (1965a, 1965b, 1966, 1967) prior findings in hopes of better understanding the effects pay secrecy and pay openness practices have on managers' pay estimations and additional work outcomes, such as pay dissatisfaction.

This study was fairly similar to Lawler's (1965a, 1965b, 1966, 1967) studies except Lawler's (1967) questionnaire was vaguely tailored to add questions about the extent to which pay communication was expressed by the subjects' supervisor and the degree to which the organization utilized pay secrecy was different. In this study, participants were lower- or middle-level managers working for the same organization which used a moderate pay secrecy practice (supplied pay ranges and median pay for the manager's personal pay level).

Similar to Lawler's (1965a, 1965b, 1966, 1967) studies, managers in this study had a propensity to systematically underestimate their superiors' pay and overestimate their peers' and subordinates' pay. These inaccurate estimations were manifested at two levels away from the managers' own level as found in Lawler's (1967) study. However, this study produced higher overestimations of subordinates' pay than Lawler's (1967) study. Therefore, the weakened pay secrecy practice did not help deteriorate inaccurate estimations of others' pay. Additionally, even though the majority of the managers indicated they had received their managerial levels' pay range (79%) and pay median (64%) information, only a small percentage of them (8% and 10% respectfully) were able to successfully estimate the mean salary for their managerial level. Surprisingly, those managers who indicated they were not given pay range or median information were identical in their accuracy (or inaccuracy) of estimations. Actually, the managers who were not informed of pay range information had a better likelihood (15%) of accurately approximating pay estimations than those who were given the pay information (9%). Milkovich and Anderson (1972) claimed this may have occurred due to communication issues (such as the information communicated was not accurate or information was not actually communicated) or trust issues (such as employees may not trust that the information is accurate).

Contrary to Lawler's (1967) expectations, this study found that managers who underestimated subordinates' pay (53%) were more likely to believe the pay differential between them and their subordinates was too small than those who overestimated their subordinates' pay (31%). As expected though, the results indicated that managers who underestimated their superiors' pay (24%) were more likely to believe the pay differential between them and their superiors was too small than those who overestimated their superiors' pay (23%).

In regards to pay satisfaction, this study had a much larger percentage of managers (40%) who were satisfied with their pay than in Lawler's (1967) study (13%). Despite expectations, the data revealed that managers who were more likely to be accurate in their pay estimations were the most dissatisfied with their pay; whereas, those who were the most satisfied with their pay were the managers that overestimated their peers' pay. This contradicts Lawler's (1967) findings that managers experiencing the highest dissatisfaction were those who overestimated their peers' pay. Milkovich and Anderson (1972) argued this discrepancy may be due to pay satisfaction (or pay dissatisfaction) being manipulated to some extent by pay communication efforts or an overall satisfaction perception.

Despite the inconsistencies in Milkovich and Anderson's (1972) and Lawler's (1967) studies, the results substantiate that inaccurate pay estimations will prevail despite the utilization of a semi-open pay practice. These previously mentioned discrepancies may be due to several differences in the methodology and samples used. For instance, Lawler's (1967) study had some participants that were higher-level or top managers; whereas, Milkovich and Anderson's (1972) study only had lower- and middle-level managers. Also, Lawler's (1967) study only analyzed total pay secrecy and its effects; whereas, Milkovich and Anderson's (1972) study examined the effects of a semi-open or semi-secret practice. However, since the studies differed in the pay communication variable used to predict organizational outcomes the results are expected to vary to some degree.

Lawler's (1972) Additional Outcome Study. Due to previous unexpected findings (Lawler 1967) regarding pay dissatisfaction (specifically the nonexistent relationship between pay satisfaction and the overestimation of subordinates' pay) and the possibility of inaccurate perceptions of performance feedback, Lawler (1972) conducted two separate studies to further analyze these relationships. Contrary to previous pay communication studies, this research utilized theoretical foundations (specifically social comparison theory, equity theory, and relative deprivation theory) to assist in developing the hypotheses and interpreting the findings.

Study 1 was concerned with the prior surprising results involving pay satisfaction. The sample consisted of managers from one organization that utilized pay secrecy practices. The pay estimates for other managers included those two levels away and referent groups were also measured. As found in prior research (e.g., Lawler 1965a, 1967; Milkovich and Anderson 1972), managers tended to underestimate their superiors' pay and overestimate their peers' and subordinates' pay. Also similar to previous findings (e.g., Lawler 1967; Milkovich and Anderson 1972), the incorrect estimations were evident at two levels away from the participants' own managerial level. As expected, the pay differential between the subjects and their subordinates was believed to be too small. Contrary to previous findings (e.g., Lawler 1967) and as expected, pay satisfaction was affected by the overestimation of subordinates' pay. In fact, the higher the overestimations of subordinates' and peers' pay, the more pay dissatisfaction was experienced (with subordinates' pay being more significantly correlated with pay dissatisfaction). Pay satisfaction was also negatively related to accuracy of pay estimations and pay differentials (especially the discrepancy between the managers and their subordinates' pay). Additionally, the managers' perceived relative standing better predicted pay satisfaction than the actual relative standing.

Study 2 analyzed performance feedback as a possible outcome of the pay secrecy—inaccurate pay estimate relationship. This study used pay raises instead of pay level since raises signify recent performance feedback. Participants were managers from two organizations that both used a merit system for dispersing raises. However, one organization gave yearly raises but the size of the raise was unknown, while the other organization gave ten percent raises but the frequency of the raises were unknown. Performance feedback was represented by the relative size and frequency of the raises. In both organizations, the participants overestimated the unknown parts of the pay raise systems (the average size or frequency of raises given to their peers). Therefore, managers were interpreting negative performance feedback from their superiors since they believed they were receiving pay raises either less often or less in amount. However, the managers' perceived personal pay raise characteristics only had a small relationship to self-evaluation of performance. Therefore, pay raise characteristics did not influence the managers' self-evaluation. Lawler (1972) concluded that under pay secrecy conditions, inaccurate performance feedback was being given to managers.

Mahoney and Weitzel's (1978) Regression Study. This study was conducted to analyze the same effects of pay communication practices (such as pay secrecy influencing inaccurate pay estimations and pay dissatisfaction) utilizing regression. The participants used in this study were all employed in one organization and ranged across five different managerial levels, with the majority holding positions in the top two levels. The organization used a moderately open pay practice, in that managers were given pay ranges and midpoints for their own managerial level and contiguous levels (immediate above and below levels). Contrary to previous studies (Lawler 1967; Milkovich and Anderson 1972), this study examined the pay estimates of the managers' peers and adjacent managerial levels (not two levels away).

Similar to the previous studies (e.g., Lawler 1967; Milkovich and Anderson 1972), managers had a propensity to overestimate their peers' and subordinates' pay. Surprisingly, this study found that managers were also more likely to overestimate their superiors' pay. This contradicts Lawler's (1965a, 1965b, 1966, 1967) and Milkovich and Anderson's (1972) results of managerial tendencies to underestimate superiors' pay. This study, like the prior studies (e.g., Lawler 1967; Milkovich and Anderson 1972), had a relatively small number of managers make accurate estimations of peers', superiors', and subordinates' pay.

This study had three distinct measures for pay satisfaction: with compensation amount, with compensation administration, and with compensation comparisons. Estimations of peers' pay were significantly related to pay satisfaction with compensation amount and compensation administration. There were no other significant relationships associated with pay estimations and pay satisfaction. However, managers who correctly estimated their peers' pay experienced the highest pay dissatisfaction across all of the pay satisfaction measures.

Contrary to Milkovich and Anderson's (1972) results, managers who underestimated their peers' pay were more likely to experience greater pay satisfaction than those who overestimated or accurately estimated their peers' compensation. In fact, contrary to Lawler's (1967) findings, managers who correctly estimated their peers' pay had a higher propensity to be dissatisfied with their pay than managers who inaccurately estimated their peer's pay. However, the effect on pay satisfaction was opposite for estimating subordinates' pay, in that the managers who accurately estimated their subordinates' pay experienced greater pay satisfaction while the greater pay dissatisfaction was felt by those who underestimated their subordinates' pay. This contradicts Milkovich and Anderson's (1972) results since they found the managers who expressed the highest dissatisfaction with their pay were the ones who made accurate estimations for others' pay. In regards to superiors' pay estimations, managers who misestimated their superiors' pay was more likely to be satisfied (at about an equal extent for under- and overestimations) than those who accurately estimated their superiors' pay.

Mahoney and Weitzel (1978) performed additional tests on the relationships between the adjacent managerial levels and pay estimations. The first test was comprised of regression for each of the pay satisfaction measures with the three perceived pay ratios: self/subordinate, peer/self, superior/self pay. As expected, the peer/self pay ratio was negatively significant for all three pay satisfaction measures and the self/subordinate pay ratio was positively significant for all three pay satisfaction measures. However, since pay estimations explained only a small amount of the variance in pay satisfaction in most of the instances, there is little support for the relationship of pay secrecy causing pay misestimations which lead to pay dissatisfaction. Additionally, the superior/self pay ratio was not significant for any of the pay satisfaction measures. The second test was similar to the first except actual pay (taken from data supplied by the organization) for the three pay ratios were used. Contrary to Lawler's (1967) arguments, the observed pay satisfaction levels were significantly greater than the estimated pay satisfaction levels across all three pay satisfaction measures. This result suggests that a pay openness practice would result in more pay dissatisfaction.

Lawler's (1971) Pay Satisfaction Model and Analysis. Based on his previous results (Lawler 1965a, 1965b, 1966, 1967), Lawler (1971) further developed his research by building a model that explains the pay perceptions—pay satisfaction relationship. This model of pay satisfaction utilized several theories (equity theory, social comparison theory, and discrepancy theory). The pay satisfaction model was proposed to be a function of two perceptions: the amount of pay an employee receives and the amount of pay an employee believes he/she should receive. Essentially, Lawler (1971) defined pay satisfaction as the difference between an employees' perception of the amount of pay he/she should receive and the amount of pay he/she actually receive. Additionally, Lawler (1971) proposed that the second function would be influenced by the employees' perceptions of five factors: personal job inputs (such as skill, education, seniority, performance); job characteristics (such as complexity of tasks and amount of autonomy or responsibility); non-monetary outcomes (such as job security or status); pay history;

inputs and outcomes of referent others. However, since the overall model is based to some extent on social comparisons, the fifth factor (inputs and outcomes of referent others) has been argued to be redundant and should be excluded as a factor (Schwab and Wallace 1974).

Dyer and Theriault (1976) empirically tested a portion of Lawler's (1971) pay satisfaction model as it excluded non-monetary outcomes, income and output of referent others, and pay history factors. Additionally, the employees' perception of pay system administration was added as a determinant of pay satisfaction. This added factor represents the employees' perception of the different policies and procedures (such as pay secrecy practices) used to determine pay. The sample was comprised of three groups of managers: United States (US), French-Canadian (FC), and English-Canadian (EC). All three groups consisted of managers across multiple levels (except first-level managers) from several different organizations. The results partially supported the portion of Lawler's (1971) model tested. Once the administrative-type variables were added to the model the amount of variance explained in pay satisfaction was significantly greater than that explained by Lawler's (1971) model. Also, the addition of the perceived pay system administration variable caused some of the previous results to faintly change in that pay satisfaction was significantly negatively related to performance level for the US group only (the FC and EC groups were not significantly related to any personal job inputs) and perceived job difficulty and responsibility for the EC group only (the US and FC groups were not significantly related to job characteristics).

Weiner (1980) also empirically tested Lawler's (1971) pay satisfaction model and Dyer and Theriault's (1976) addition of the perceived pay system administration variable.

However, Weiner (1980) claimed 'equitable pay' was a better term for Lawler's (1971) definition of pay satisfaction. Pay satisfaction (referred to as relative equitable pay) is the difference between what the employee should be paid and actually is paid relative to his/hers salary. The sample consisted of various employees (not only managers) employed in one organization. The explanatory power for each pay satisfaction scale (e.g., Lawler's (1971) and Dyer and Theriault's (1976) relative equitable pay) was compared against the University of Minnesota Satisfaction Question (MSQ) and tested for predictive abilities in work outcomes. Relative equitable pay accounted for more of the variance (27%) in pay satisfaction (MSQ scale) than Lawler's (1971) model (17 %). Dyer and Theriault's (1976) model accounted for more than twice the variance (67%) in pay satisfaction (MSQ scale) than Lawler's (1971) model (27%). Additionally, Dyer and Theriault's (1976) model had the most accurate predictions for turnover and retention, while Lawler's (1971) model was the least predictive. The MSQ scale was the only measure predictive of absenteeism. Attitude toward unionization was predicted positively by Lawler's (1971) model and predicted negatively by the MSQ scale. Overall, Dyer and Theriault's (1976) model (with the inclusion of the pay system administration factor) was strongly supported as an explanation for pay satisfaction and as a predictor for work outcomes.

Pay Satisfaction

Even though several authors (e.g., Lawler 1967; Mahoney and Weitzel 1978) evaluated pay satisfaction as an outcome of the pay secrecy—inaccurate pay estimation relationship, pay satisfaction has also been analyzed to be directly related to pay secrecy (e.g., Cloutier and Vilhuber 2008; Thompson and Pronsky 1975). For an overview of the following pay satisfaction studies refer to Table 2.4.

Table 2.4 Prior Research Involving the Pay Satisfaction Outcome

Study	Sample	Pay Communication Practice	Main Findings
Thompson and Pronsky (1975)	Employees in two organizations	One organization used a complete pay secrecy practice; one used a partial pay openness practice; both sales departments used a complete pay openness practice	Pay secrecy negatively related to pay satisfaction; those in complete pay openness or partial pay openness groups were more likely to exclusively make internal pay comparisons; those in complete pay secrecy group were more likely to make external or combination pay comparisons
Futrell and Jenkins (1978)	Employees in one organization	Originally used a form of a pay secrecy practice; changed to a complete pay openness practice	Change to pay openness increased job performance, pay satisfaction, and satisfaction with promotional policies, superiors, and work but decreased superior satisfaction, and did not affect peer satisfaction
Cappelli and Sherer (1988)	Employees in one organization	Used a form of a pay openness practice; used a two-tier plan where those in the 2^{nd} tier received about 25% less than those in the 1^{st} tier	Those in the second tier were more satisfied with pay than those in the first tier

Table 2.4 (Continued)

Martin and Lee (1992)	Employees in multiple stores of one organization	Used a form of a pay openness practice; used a two-tier plan where those in the 2nd tier received less pay than those in the 1st tier	Prior pay knowledge was positively related to pay satisfaction and pay fairness; current pay knowledge was negatively related to pay satisfaction and pay fairness; those in the 2nd tier who had low prior pay knowledge were more likely to have negative pay attitudes than those who had high prior pay knowledge; those in the 1st tier (whether low or high prior pay knowledge) were more likely to have positive pay attitudes
Mulvey and Colleagues' (2002)	Employees and managers in multiple organizations	Measured with seven items	Pay knowledge positively related to pay satisfaction and organizational effectiveness
Day (2006)	Graduate students	Measured with five items	Pay communication practice did not impact any of the pay satisfaction dimensions or the referent choice; referent choice did not impact pay satisfaction; those in a pay openness environment were more likely to perceive pay inequity
Cloutier and Vilhuber (2008)	Employees in one organization	Measured with two items	Pay openness did not impact pay equity, pay satisfaction, or job satisfaction

Thompson and Pronsky's (1975) Comparative Study. Following the news of an organizations' bad experience with the adoption of a pay openness practice, Thompson and Pronsky (1975) conducted a study to investigate the direct impact open pay practices have on pay satisfaction, pay comparisons, and employee motivation. The sample consisted of employees from two organizations similar in every aspect except pay policies. One company utilized a complete pay secrecy practice, while the second company used a partial (extreme) open pay practice where only individual pay information was hidden. Additionally, both organizations' sales departments utilized a complete pay openness practice where employees were aware of everyone's pay. Therefore, three different pay system practices (complete pay secrecy, complete pay openness, and partial pay openness) were available for analysis.

The analysis showed a direct negative relationship between pay secrecy and pay satisfaction. As pay information became more unavailable or secret, employees' satisfaction with pay decreased. For instance, almost half of the complete pay openness group (42%) and a third of the partial pay openness group were satisfied with their pay; whereas, a considerably smaller percentage of the total pay secrecy group (12%) experienced pay satisfaction.

The results also revealed that more than half of the complete pay openness and partial pay openness groups (52% and 50% respectfully) were more likely to exclusively make internal pay comparisons (as opposed to only external pay comparisons or a combination of the two); whereas, the majority of the complete pay secrecy group was more likely to make only external pay comparisons or a combination of internal and external pay comparisons (34% exclusively made internal pay comparisons). Additionally, the majority of the complete pay openness group was more likely to recognize a relationship between performance and reward (85%) and expect a pay increase for extra effort expended (79%). Contrary to expectations, the complete pay secrecy group was more likely than the partial pay openness group to identify the performance-reward relationship (57% vs. 39%) and expect more pay when effort was increased (59% vs. 43%).

Based on these findings, Thompson and Pronsky (1975) concluded that the best pay communication approach was not pay openness or pay secrecy, but a moderately open pay communication approach that was a mixture of pay secrecy and pay openness. Thompson and Pronsky (1975) also argued that there were four factors that would assist in determining the proper pay system approach: individual performance measures (pay openness approach needs objective measures); employee or job interdependence (pay openness approach requires low interdependence among jobs or employees); availability of inclusive performance measures (pay openness approach should involve performance measures for all primary job characteristics); input-output relationship (pay openness approach should entail a clear relationship with results occurring relatively quickly).

Futrell and Jenkins' (1978) Longitudinal Study. Based on the concluding remarks of Thompson and Pronsky (1975) and Schuster and Colletti (1973) in regards to organizations needing to delay efforts to change their pay communication system from pay secrecy to pay openness until the effects that more pay information would have on employees (such as performance, pay and job satisfaction) are identified, prompted Futrell and Jenkins (1978) to analyze the effects that increased pay information would have on employees. An experiment with a pre-post test design with a control group was utilized. The sample consisted of sales employees from one organization with multiple branches. Although the organization's original pay communication approach (perhaps complete or moderate pay secrecy) before the experiment is not explicitly described, the experimental group experienced a change to complete pay openness where some pay information was automatically provided to all participants (such as individual low, high, and average pay levels for the different organizational tenure groups and pay raises) and all pay information could be obtained upon request (such as individual pay levels and individual performance evaluations). Both groups were surveyed a month before the change in pay communication occurred and a year after the change was implemented in the experimental group.

The analyses showed that there were statistically significant differences between the participants in the experimental group and control group for pay satisfaction, job performance, and several facets of job satisfaction (such as with superiors and work characteristics). Specifically, the participants in the experimental group experienced higher levels of pay satisfaction, promotional policies satisfaction, superior satisfaction, work satisfaction, and five factors of job performance (product knowledge, coverage of territory, human relations ability, activity reporting, overall job performance) when the pay openness approach was implemented. However, superior satisfaction (or satisfaction with bosses) decreased after the implementation of the pay openness practice. Additionally, co-worker (peer) satisfaction was not influenced by the change to a pay openness system as there was no significant difference between the experimental and control group. The results suggest that pay secrecy hampers employee motivation, performance, pay satisfaction and various facets of job satisfaction. Additionally, the results support Lawler's (1966) supposition that a pay openness practice will provide a high pay-for-performance link which, in turn, will increase employee motivation, job performance, and pay satisfaction.

Cappelli and Sherer's (1988) Two-Tier Study. After the airline industry underwent a period of restructuring for employment conditions, Cappelli and Sherer (1988) surveyed employees of a unionized airline about pay and job satisfaction. Pay levels for each occupation (such as pilot or flight attendant) were available since unionization was present for each one, thereby representing a pay openness system throughout the organization. The organization's reformation entailed all occupations enduring wage concessions. Specifically a two-tier plan was implemented with the second tier employees (newer hires) receiving about 25 percent less than those in the first tier (those hired before a certain date) and after a certain period of time (five to fifteen years, depending on the agreement) the second tier employees would receive pay equality with those in the first tier.

Surprisingly, the employees in the second tier were significantly more satisfied with their pay and job than those in the first tier. The authors argued that pay satisfaction may have been higher for those in the second tier because they were relatively new to the industry and therefore, did not classify themselves as being as experienced as those in the first tier. Additionally, Cappelli and Sherer (1988) argued that the differences in job satisfaction may be due to the employees in the two tiers having different work standards (such as those in the second tier may have lower standards than those in the first tier) or referents used for comparisons (such as those in the second tier may use external referents for comparisons). These results demonstrate how pay inequities may, to some extent, not only be tolerable under pay openness conditions, but also beneficial to enhance different facets of satisfaction (such as pay and job) in employees. Furthermore, this contradicts some organization's justification for utilizing pay secrecy practices in that pay inequities are hidden (whether intentional or not) and conflict and jealousies among employees are avoidable (Bierman and Gely 2004).

Martin and Lee's (1992) Extended Two-Tier Study. Following the work of Cappelli and Sherer (1988), Martin and Lee (1992) extended the two-tier research by including two pay knowledge variables (prior pay knowledge and current pay knowledge) to assist in predicting pay attitudes and multiple pay referents (such as social and self-referents). The participants were employed in five stores of a retail food organization. The organization had implemented a two-tier wage system where the employees who were hired after the implementation date were placed in the lower tier. Additionally, there was a job-duty tier, which when combined with the wage tier created four tier groups. Pay raises were given until those in the lower tier reached the higher tier. Therefore, several tier groups were available for analysis. Since the employees were unionized, a pay openness approach was being employed.

There was a significantly positive relationship between prior pay knowledge and the pay attitudes (pay satisfaction and pay fairness). However, there was a significantly negative relationship between current pay knowledge and pay attitudes (pay satisfaction and pay fairness). Martin and Lee (1992) argued that the negative relationship between current pay knowledge and pay attitudes was due to the employees basing their current pay knowledge on mainly internal referents. Additionally, those in the lower tier groups who had low prior pay knowledge were more likely to have negative pay attitudes than those who had high prior pay knowledge. Those in the high tier groups who had low and high prior pay knowledge were related to positive pay attitudes. Therefore, low prior pay knowledge was more likely to be related to negative pay attitudes (such as pay satisfaction) for those in the low tier groups than in the high tier groups. These findings suggest that prior pay knowledge was more important in explaining pay attitudes, such as pay satisfaction and pay fairness, instead of current pay knowledge.

Mulvey and Colleagues' (2002) Pay Knowledge Study. Based on organizations adopting different compensation plans in an attempt to increase employee productivity and overall organizational performance, Mulvey et al. (2002) analyzed the impact that pay knowledge had on organizational effectiveness and pay satisfaction. Knowledge of pay involved total pay amount (base pay knowledge and pay raise knowledge) and total pay process (knowledge of pay determination and pay structure determination) and was measured with seven items (e.g., "I understand the basis for periodic adjustments made to base pay ranges" and "I understand how my pay range is determined"). Organizational effectiveness involved employee engagement and was measured by organizational commitment, trust in management, employee retention, employee referrals, and perceptions of pay-for-performance. The participants were employees and managers of multiple U.S. and Canadian organizations across various industries.

The results showed that the participants were more satisfied with pay amounts than pay processes. This may have been due to the participants indicating they did not understand the pay process very well. Additionally, pay knowledge positively influenced pay satisfaction and organizational effectiveness. Furthermore, the findings indicated that organizations paying less than competitors attained higher levels of organizational effectiveness by providing more pay information, and those organizations paying more than competitors increased employee perceptions of organizational worth by providing more pay information. Mulvey et al. (2002) concluded that providing pay information was beneficial for organizations despite paying above or below the market and thus, a pay openness practice should be utilized.

Day's (2006) Referent Study. Following previous research regarding pay secrecy and pay satisfaction (e.g., Thompson and Pronsky 1975), Day (2006) further developed the relationship by arguing that referent choice partially mediates the relationship between pay communication and pay attitudes. The sample consisted of graduate students that provided a variety of organizations and ranges of pay communication practices were included in the sample. A measure of pay communication (pay secrecy and pay openness) was developed specifically for this study since no such scale existed previously. The scale consisted of five items which concentrated on the pay level and structure. Only one item focused on the employee's perception of communication about the lowest and highest pay level for his/her pay grade. The other four items focused on the employee's perception of communication about how pay levels are determined.

The analyses showed that none of the pay satisfaction dimensions (pay level, benefits, raises, and pay administration) were significantly influenced by pay communication practices. Therefore, pay communication (pay secrecy or pay openness) practices had no to little impact on pay satisfaction. Also, pay communication practices did not affect the referent choice in that those who received more pay information (or in a pay openness environment) appeared to choose the same referents as those who received less pay information (or in a pay secrecy environment).Therefore, all of the participants, whether in a pay secrecy or pay openness environment, used the same referents in making pay comparisons. Additionally, referent choice did not significantly predict pay satisfaction. Thus, referent choice did not mediate the relationship between pay communication practices and pay satisfaction. However, participants who indicated they were provided with higher levels of pay information (or who worked in a pay openness environment) were more likely to perceive pay inequity. Overall, these results suggest that increased pay information (or pay openness environment) may have negative effects on employee perceptions, such as pay equity.

Cloutier and Vilhuber's (2008) Procedural Justice Study. Following the work of Leventhal and colleagues (Leventhal 1980; Leventhal et al. 1980), Cloutier and Vilhuber (2008) expanded the procedural justice construct to the context of salary determination. Cloutier and Vilhuber (2008) proposed that there are four dimensions in the salary determination context: system transparency (open pay systems), appeal procedures, and the perceived characteristics of allocation procedures and decision makers. System transparency was tested by developing a scale specifically for the study. The system transparency scale consisted of two items referring to job evaluations and procedure compliance. The participants were Canadian employees of an administrative unit in an energy and natural resource organization. Following the Quebec Pay Equity Act of 1997, which mandated organizations to adopt new job evaluation procedures and methods that produce more equitable pay structures, the organization had recently executed the required procedures for compliance.

All of the dimensions in the salary determination context of procedural justice were significantly correlated with procedural justice. However, the appeal procedures dimension was removed as a distinct dimension since it had weak factor loadings. Additionally, the system transparency dimension (pay openness) did not significantly predict the perception of pay equity (distributive justice), pay satisfaction, or job satisfaction. Further, the dimension of system transparency demonstrated problems as it provided no unique contribution once the other two dimensions were controlled for. This suggests that the system transparency dimension (pay openness) only affects the perception of procedural justice indirectly through the other two dimensions. Thus, the system transparency dimension (pay openness) provides no independent contribution to the procedural justice concept in the salary determination context and does not significantly predict employee attitudes, such as satisfaction and pay equity.

Individual and Organizational Preferences

Another topic briefly examined in the pay communication literature involves employees' and organizations' preferences for the utilization of pay secrecy or pay openness practices (Balkin and Gomez-Mejia 1990; Schuster and Colletti 1973). Additionally, pay system preferences of employees experiencing certain pay communication conditions (such as pay openness practices) has been analyzed (Beer and Gery 1972). For an overview of these findings refer to Table 2.5.

Table 2.5 Prior Research Involving the Preference Outcome

Study	**Sample**	**Pay Communication Practice**	**Main Findings**
Beer and Gery (1972)	Employees in one organization	Measured with six items	Pay openness related to a greater preference for a merit system and a lower preference for a security system
Schuster and Colletti (1973)	Employees in one organization	Measured by whether participants agreed, disagreed, or undecided with pay being kept secret	Those with a graduate degree opposed pay secrecy, while those without a degree or with a bachelor's degree favored pay secrecy; feelings of pay fairness were marginally related to favoring pay secrecy

Table 2.5 (Continued)

Balkin and Gomez-Mejia (1990)	Employees in multiple organizations	Measured by which orgs used a pay openness or pay secrecy	Organizational strategy was related to pay system strategies; pay openness was related to organizations with a single-product strategy or dynamic growth strategy or organic patterns; pay secrecy was related to organizations with a related-product strategy or rationalization/maintenance strategy or mechanistic pattern; organizations with a dominant-product strategy were related with moderate pay secrecy

Beer and Gery's (1972) Pay System Preference Study. Since an organization's pay system is an important and influential part of an organization that evolves over time, Beer and Gery (1972) examined employee attitudes and behaviors towards a new pay system. Several factors were analyzed to determine what influenced employee's preference for a pay system. One of these factors was the openness of the organizational culture or the amount of knowledge of the current pay system. The organizational culture (pay openness environment) was measured with six items created specifically for this study. The six items represented communication about the pay system and addressed knowledge of the employees' pay range (minimum and maximum), pay grade classification, and types, size, and frequency of pay raises available. The sample consisted of employees from a single organization in the manufacturing industry.

The results show that organizational culture (pay openness) was related to pay system preference. Specifically, the employees with more pay knowledge had a greater preference for a merit system (performance-based system) and a lower preference for a security system (a system with annual pay increase based on cost-of-living rather than performance). Additionally, Beer and Gery (1972) argued that this relationship between organizational culture (pay openness) and pay system preference may have effects on employee motivation and satisfaction in that a change to a merit system may increase employee's motivation and satisfaction.

Schuster and Colletti's (1973) Individual Preference Study. Based on the continuing utilization of pay secrecy practices in organizations and managements' strong preference for pay secrecy, Schuster and Colletti (1973) conducted a study identifying different employee characteristics that favor and oppose pay secrecy. Preference for pay secrecy was addressed by the participants responding to whether they agreed, disagreed, or were undecided with base salary pay information being kept secret. There were five characteristics examined: age, education, occupation, pay level, and job performance (rated by superior). The participants were non-managerial employees working in the same organization.

The findings show education to be the only characteristic to demonstrate a statistically significant difference between preferences for pay secrecy. Specifically, participants with a graduate degree (60%) opposed pay secrecy (and favored pay openness), while those without a degree (50%) or with a bachelor's degree (46%) favored pay secrecy. Additionally, there was a positive relationship between pay and performance in that the higher-performers received larger raises than those who were poor-performers. Age, occupation, and pay level had no substantial differences in preference for pay secrecy in that the participants were almost equally divided to favoring and opposing pay secrecy. Additional performance-related perceptions of pay were analyzed for pay secrecy preferences. Feelings of pay fairness were marginally related to favoring pay secrecy. However, self-rated performance levels (effort, productivity, and work quality) showed no significant difference for pay secrecy preference. Participants who identified a pay-for-performance relationship (pay based on effort, productivity, and work quality) were compared with those who identified a non-performance relationship with pay (pay based on education, experience, training, and responsibility); however, there were no significant differences within the two groups in that both groups were nearly equal in those favoring and opposing pay secrecy. Overall, the results demonstrated that there was nearly an equal preference for pay secrecy.

<u>Balkin and Gomez-Mejia's (1990) Organizational Strategy Study.</u> Following the research advocating pay systems be linked to organizational strategies (e.g., Balkin and Gomez-Mejia 1987; Carroll 1987; Lawler 1981), Balkin and Gomez-Mejia (1990) analyzed the impact of organizational strategies (at the corporate and business unit level) on pay system strategies (pay communication practices such as a pay secrecy policy). Corporate strategy referred to the extent to which the organization was diversified. There were three corporate strategies used for analyses: single-product, dominant-product, and related-product (unrelated product was deleted from analysis due to lack of participants in this strategy). Business unit (SBU) strategy referred to the organizations products and market segment. There were two SBUs used for analyses: dynamic growth and rationalization/maintenance (due to lack of participants in the other SBUs several did not qualify for analysis). The participants were employed across 600 business units from different manufacturing organizations.

Organizations with a single-product strategy (not diversified) were associated with low levels of pay secrecy. However, those with a related-product strategy (most diversified) were associated with high levels of pay secrecy. Additionally, those with a dominant-product strategy (semi diversified) experienced moderate levels of pay secrecy which were between the other two corporate strategies. For SBUs, organizations with a dynamic growth strategy were associated with low levels of pay secrecy, whereas those with a rationalization/maintenance strategy were associated with high levels of pay secrecy. Overall, the findings demonstrate that organizational strategy (corporate and business unit) does determine pay system strategies, such as pay secrecy. Organizations with a mechanistic pattern (related-product and rationalization/maintenance strategies) are more likely to employ and benefit from pay secrecy practices. However, organizations with an organic pattern (single-product and dynamic/growth strategies) tend to employ and benefit from pay openness practices.

Reward Allocations

Another variable that has been analyzed to be affected by pay communication conditions involves allocating pay (such as pay raises) to employees (e.g., Kidder, Bellettirie, and Cohn 1977; Leventhal et al. 1972; Trahan, Lane, and Dobbins 1991). The argument contends that under conditions of pay secrecy, pay allocators (or managers) are more likely to appropriately and widely distribute rewards (pay raises) based on individual performance and effort since they will not have to justify their reasoning to lower-performing (and thus, those receiving smaller pay allocations) employees (Burroughs 1982). Furthermore, under pay openness conditions pay allocators are less likely to link pay to performance and reward all employees with similar or slightly distinct pay allocations to avoid conflict and inquiring of their decisions. For an overview of these findings refer to Table 2.6.

Table 2.6 Prior Research Involving the Reward Allocation Outcome

Study	**Sample**	**Pay Communication Practice**	**Main Findings**
Leventhal and Colleagues' (1972) Study 1	Undergraduate students	Experiment; no pay communication practice mentioned	Worst performers allocations was increased at the best performers expense; best performers given a slightly higher pay allocation than the worst performers
Leventhal and Colleagues' (1972) Study 2	Undergraduate students	Experiment; complete pay secrecy and complete pay openness conditions	Under both conditions, majority of allocators dispersed more to the best performers; the difference of pay allocations between the best and worst performers was greater under pay secrecy conditions than the pay openness condition; under the pay openness condition, the smaller difference in pay allocations was at the best performers expense
Kidder and Colleagues' (1977)	Undergraduate students	Experiment; complete pay secrecy and complete pay openness conditions	Under pay openness conditions, women distributed allocations equally, men distributed allocations equitably and allocated more to themselves; under pay secrecy conditions, women distributed allocations equitably and allocated more to themselves, men distributed allocations equally

Table 2.6 (Continued)

Reis and Gruzen (1976)	Undergraduate students	Experiment; experimenter aware/unaware conditions; other participant's aware/unaware conditions	When the experimenter was aware the pay allocations tended to be based on equity than when the experimenter was unaware; when the peers were aware the pay allocations tended to be based on equality than when peers were unaware; smallest allocation differences was when peers were aware and the experimenter was unaware; largest allocation differences was when the experimenter was aware and peers were unaware; participants gave themselves bigger pay allocations when everyone was unaware
Trahan and Colleagues' (1991) Study 1	Undergraduate students	Experiment; complete pay secrecy and complete pay openness conditions	Pay openness did not impact pay allocation distributions
Trahan and Colleagues' (1991) Study 2	Graduate students	Experiment; complete pay secrecy and complete pay openness conditions	Pay openness did impact pay allocation decisions in that there was a greater distinction in the allocations between high and low performers than under the pay secrecy condition; worst performers received larger allocations under pay secrecy conditions than under pay openness conditions

Leventhal and Colleagues' (1972) Pay Allocation Study. Based on previous research showing that pay allocation decisions are influenced by different desires of the pay allocator (such as to decrease power threats; (Leventhal and Bergman 1969)), Leventhal et al. (1972) examined the pay allocators' desire to prevent conflict between employees and between themselves and employees. Two studies were conducted with the method for data collection involving an experiment for both studies. Participants from both studies were undergraduate students.

Study 1 analyzed the participant's (pay allocator's) desire to prevent conflict without a pay communication condition mentioned. The results showed that the participants increased the worst performer's allocations at the best performer's expense even though the best performers were usually given a (slightly) higher pay allocation than the worst performers. This suggests that participants believed that by giving low performers a low reward (although most likely deserved), a bigger conflict formed than high performers receiving lower allocations (although most likely not deserved). Additionally, it appears as though participants presumed that pay openness conditions existed (even though no mention of a specific pay communication practice was mentioned) and attempted to maintain equity in order to reduce conflict.

Study 2 analyzed the impact pay secrecy and pay openness had on the participants' distribution of pay allocations. The participants dispersed pay allocations twice, once under the condition of complete pay secrecy and once under the condition of complete pay openness. The findings show that under both pay secrecy and pay openness conditions, a majority of the participants (42 of 44 and 34 of 44, respectfully) gave the best performers higher pay allocations than the worst performers. Therefore, participants maintained pay equity under both conditions. However, the difference between the pay allocations of the best and worst performers was greater under the pay secrecy condition than in the pay openness condition. As expected, under the pay openness condition, the smaller difference between the pay allocations of the best and worst performers was from a decrease in the best performer's allocation and an increase in the worst performer's allocation. Additionally, the difference between the intermediate performer's pay allocations was significantly greater under the pay secrecy condition than in the pay openness condition. However, there were insignificant findings in identifying whether the intermediate performers with high effort and low performance were given bigger pay allocations than the intermediate performers with low effort and high performance. These findings suggest that under pay secrecy conditions pay allocators are able to distribute pay allocations more equitably without fear of conflict. Overall, both studies show that pay allocator's will attempt to maintain equity with pay allocations. However, pay secrecy conditions offer the pay allocator an opportunity to better disperse pay allocations in proportion to performance while also reducing interpersonal conflict.

Reis and Gruzen's (1976) Equity Versus Equality Study. Following the work of Leventhal et al. (1972), Reis and Gruzen (1976) expanded their research by analyzing pay equality (versus pay equity) under pay openness conditions and the amount of pay allocations when the allocator was included in the distribution. The study was conducted using an experiment with four different forms of pay communication practices: experimenter aware/unaware conditions and other participant's aware/unaware conditions. The participants were undergraduate students who were required to disperse a payment amongst their group including themselves.

The results showed that when participants knew the experimenter was aware of the pay allocation distributions, pay allocations tended to be based more on equity (input factors) than when the experimenter was unaware of the pay allocation distributions. However, when peers (other group participants) were expected to be aware of the pay allocation distributions, pay allocations tended to be based more on equality (all recipients receiving similar portions) than when peers were not aware of the pay allocation distributions. Therefore, the smallest pay allocation difference occurred when the peers were aware and the experimenter was unaware of the distributions, while the largest difference in the pay allocations occurred when the experimenter was aware and the peers were unaware of the distributions. Additionally, participants were found to give themselves bigger pay allocations under complete pay secrecy conditions (when the experimenter and peers were unaware). These findings are similar to those found in Leventhal et al.'s (1972) study in that pay communication practices influenced how pay allocations were distributed.

Kidder and Colleagues' (1977) Gender Disparity Study. Following prior research on gender differences in pay allocations (e.g., Leventhal, Popp, and Sawyer 1973), Kidder et al. (1977) extended the research by examining pay allocation differences with men and women under different pay communication conditions (pay secrecy and pay openness). The pay openness condition entailed the experimenter and other group member being aware of the pay allocation distributions, while the pay secrecy condition involved full anonymity in distributing pay allocations. The participants for all three studies were undergraduate students.

The two studies pertaining to the pay allocations under different pay communication conditions both showed that women distributed pay allocations equally in pay openness conditions and equitably in pay secrecy conditions, while men did the exact opposite and allocated pay equitably in pay openness conditions and equally in pay secrecy conditions. Additionally, women allocated more to themselves under pay secrecy conditions, while men allotted themselves more in the pay openness conditions. The gender of the other group member did not affect pay allocation distributions in that they were the same whether the other person was the same gender or not. Overall, these findings further demonstrate how pay openness conditions influence pay allocation distributions.

Bartol and Martin's (1989) Dependence and Dependency Threat Study. Following previous research showing under pay openness conditions pay allocators distribute pay more evenly (e.g., Leventhal et al. 1972), Bartol and Martin (1989) extended this research by examining the dependence (increase cooperation of subordinates) and dependency threats (many alternative job opportunities) of pay allocations under pay secrecy and pay openness conditions. The research was conducted using an experiment. The pay secrecy condition was implicated in the instructions by stating a security system and information system were installed on the computer which provided privacy protection for employees as well as compliance with the pay secrecy policy. The pay openness condition was also implicated in the instructions by stating there were security problems with the computer systems and all pay-related decisions should be made under the assumption that they would be known to subordinates. The participants for both studies were middle-level bank managers enrolled in a banking school.

Study 1 did not reach significance in the three-way interaction of dependence, dependency threat, and pay secrecy. However, the data suggested there were higher pay allocations when dependence and dependency threat were both high in the pay secrecy condition. Even though the two-way interactions of dependence and dependency threats were not significantly associated with pay secrecy at an alpha level of .05, they were significant at an alpha level of .07. Therefore, a second study was conducted which provided a little more information about a valuable subordinate and his preference for pay equity. Study 2 had the two-way interaction between dependence and pay secrecy and the three-way interaction reach significance. However, the two-way interaction between dependency threats and pay secrecy did not reach significance. The two-way interaction between dependence and pay secrecy showed the only significant difference between pay allocations was under the pay openness condition with higher pay allocations being allotted to the focal person when dependence was high than when dependence was low. Additionally, the focal person was allotted a significantly higher pay allocation in the high dependence and pay openness condition when dependency threat was high than when it was low. Contrary to expectations, the focal person was allotted a higher pay allocation in the high dependence and high dependency threat condition under pay openness than under pay secrecy. Therefore, participants were more generous in pay allocations under high dependence and high dependency threat conditions only under pay openness. Thus, these findings further support the notion that pay allocations are influenced by pay secrecy and pay openness conditions.

Trahan and Colleagues' (1991) Pay Allocation Study. Based on Freedman and Montanari's (1980) model which proposes several influences (such as organizational, managerial, subordinate, and environmental with each one having sub-categories) on pay allocation decisions, Trahan et al. (1991) tested three of the proposed organizational determinants (such as pay communication conditions such as pay openness and pay secrecy) of pay allocation decisions. The pay secrecy and pay openness conditions were identified in the instructions by a statement regarding the policy about pay disclosure. This research was conducted using experiments. The first study consisted of undergraduate students, while the participants in the second study were graduate students.

Contrary to expectations, pay openness did not influence the pay allocation decisions in study 1. Consequently, Trahan et al. (1991) argued that a lack of work experience among the participants may have contributed to the nonsignificance of pay openness on pay allocation decisions and thus, conducted a second study using graduate students who would be more likely to have work experience. The results of study 2 showed the pay openness condition did impact pay allocations in that there was a greater distinction in the allocations between high and low performers than under the pay secrecy condition. Additionally, the employees who were rated low on both performance ratings received larger allocations under pay secrecy conditions than under pay openness conditions. Therefore, when pay openness conditions were utilized, the participants made greater distinctions in pay allocations between high and low performers. The results are consistent with previous findings of pay allocations being based on equity under pay openness conditions. However, the results of study 2 conflict with those of Leventhal et al. (1972) in that their study showed a greater distinction in pay allocation between high and low performers under the pay secrecy condition. The authors argue that the type of participants (undergraduate versus graduate students) may explain this opposition.

Fair Wage-Effort Hypothesis

The fair wage-effort hypothesis is another topic that has been explored in the pay secrecy research. Based on equity theory (Adams 1965) and social exchange theory (Blau 1964), Akerlof and Yellen (1990) proposed the fair wage-effort hypothesis to explain employee behavior. According to the hypothesis, employees have a notion of what constitutes a fair wage and base their level of effort (or performance) on how their actual wage compares to the fair wage. When employee's actual wage exceeds the fair wage, full effort will be exerted. However, when employee's actual wage is below the fair wage they will balance inputs and outputs by withdrawing effort proportionately to correspond with the actual wage. The authors concluded that wage compression was an optimal solution to employee concerns with pay equity.

Danziger and Katz's (1997) Pay Secrecy Convention Extension Article. The fair wage-effort hypothesis was extended to justify the utilization of pay secrecy practices. Danziger and Katz (1997) argued that pay secrecy practices prevented employees from discussing pay information such as their pay level, whether they had received higher pay offers from other employers, and had their current employer matched these offers. Therefore, pay secrecy practices affect organizational performance by effectively reducing labor mobility since employees are unable to identify higher paying organizations. Additionally, this reduction in mobility to some extent embeds or binds employees to their current employer and increases the viability of risk-shifting contracts.

Danziger and Katz (1997) analyzed and compared three different labor market arrangements: pay secrecy convention, binding convention, and a spot market. A binding convention requires employees to stay employed with the organization while the organization pays the employees a specific amount. A pay secrecy convention requires employees to not discuss pay information with other employees. It also requires organizations to pay employees a specific amount, while allowing employees to accept employment elsewhere, but it does hinder employees' ability to identify higher paying organizations or pay offers that their current employer matched for other employees. A spot market has no conventions preventing labor mobility, utilizes pay openness practices, and employees are able to accept employment at a higher paying organization. The authors argue that a pay secrecy convention is preferable to a binding convention since higher levels of utility are expected from employees with a pay secrecy convention. However, a binding convention is preferable to a pay secrecy convention when the organization encounters aggregate shocks (but not relative shocks) due to risk aversion since a pay secrecy convention is expected to yield lower levels of utility from employees than a binding convention. Also, a pay secrecy convention is preferable to a spot market convention since the pay secrecy convention always produces efficient organizational production and provides some insurance. Therefore, a pay secrecy convention is suggested to be the most beneficial convention of the three compared.

<u>Gan's (2002) Extended Model.</u> Akerlof and Yellen's (1990) fair wage-effort hypothesis was expanded by Gan (2002) with the addition of uncertainty to the model and its application to pay secrecy. Gan's (2002) uncertain fair wage-effort hypothesis assumes only the employee knows the fair wage and the employing organization does not; whereas, Akerlof and Yellen's (1990) model assumes that employees and the employing organization know the fair wage. Additionally, Gan (2002) argues that the fair wage varies amongst employees because they differ in their reference groups and the importance of these reference groups in configuring their fair wage. These fair wage variations make it difficult for an organization to identify the fair wage, causing it to be a random variable. Therefore, the organization encounters uncertainty with the employee's fair wage. Gan's (2002) model also assumes the employing organization's set pay (or

wages) is higher than employees' reservation pay and employees adjust effort according to the offered pay. This differs from Akerlof and Yellen's (1990) model since pay is not obtained but speculated as the weighted average of the reference group and the market-clearing wages.

Gan (2002) argued that a lower mean of the uncertain fair wage is likely to result from pay secrecy. Additionally, Gan (2002) argues that the actual wage is probably smaller than the mean of the uncertain fair wage under pay secrecy conditions. Furthermore, the uncertain fair wage is likely to have a larger variance under pay secrecy conditions. Therefore, Gan (2002) claims that pay secrecy is better than pay openness conditions since it is more likely to produce higher profits for employers.

There are two effects of pay secrecy taken into consideration in this model. The misperception effect entails the employee's tendency to overestimate the pay of their peers and underestimate the pay of their superiors. The uncertainty effect involves the employees being uncertain of the reference groups' pay and therefore, placing less weight on it. Additionally, if the reference group consists of the employees' peers, the mean of the uncertain fair wage is probably higher under pay secrecy conditions. Therefore, pay openness conditions should be employed when the reference group is the employees' peers. However, if the reference group is the employees' superiors, the mean of the uncertain fair wage is probably lower under pay secrecy conditions.

<u>Charness and Kuhn's (2007) Empirical Fair Wage-Effort Study.</u> Based on the fair wage-effort hypothesis, its assumptions (such as perceptions of receiving an unfair wage leading employees to withhold effort and fairness perceptions depending on other employees' pay (Akerlof and Yellen 1990)), and its previous utilization to explain wage

compression (e.g., Akerlof and Yellen 1990) and pay secrecy (Gan 2002; Lawler 1990), Charness and Kuhn (2007) conducted an experiment to determine if pay secrecy is the optimal organizational practice for the efficiency wage model. Pay secrecy was employed by only allowing participants to know their own personal pay when determining their effort level. Pay openness was employed by allowing participants to know their wages and the wages of the other worker (or participant) before deciding their effort level. The participants consisted of students.

The results show all of the fifteen wage-offer pairs were chosen under pay secrecy conditions. However, under the pay openness condition all of the pairs were chosen except for the pair offering the highest pay to the low-performing employee and the lowest pay to the high-performing employee. Additionally, the employee's personal pay had a strong and statistically significant effect on effort under both pay secrecy and pay openness conditions. The other employee's pay did not have strong effect on effort under pay secrecy or pay openness conditions. This finding was expected under the pay secrecy condition since the participants were unaware of the other participants' offered pay, but it was not expected under the pay openness condition. Therefore, the argument for pay secrecy being a profit-maximizing policy because it hinders employee's ability to identify others' pay and consequently, reduces effort under pay unfairness perceptions, is not supported.

Additional Outcomes

There have been several more recent studies analyzing pay communication's influence on additional employee attitudes and behaviors (such as trust in management

(Noy 2007)) and organizational outcomes (such as performance (Tremblay and Chênevert 2008)). An overview of these findings can be found in Table 2.7.

Table 2.7 Prior Research Involving Additional Outcomes

Study	Sample	Pay Communication Practice	Main Findings
Noy (2007)	Employees and managers in multiple organizations	Measured pay secrecy with fourteen items	Developed POPS scale; POPS was not related to management trust, distributive justice, procedural integrity, or interpersonal justice but was negatively related to informational justice and was positively related to procedural voice and only managerial trust for non-managers
Tremblay and Chênevert (2008)	Managers in multiple organizations	Measured pay communication by six items	High-technology orgs are less likely to use a pay openness approach than low-technology organizations; pay openness was not related to higher organizational performance in high-technology organizations; pay openness was negatively related employees' discretionary efforts and market performance and positively related to work climate
Bamberger and Belogolovsky (2010)	Undergraduate students	Experiment; complete pay secrecy and extreme pay openness conditions	Pay secrecy not related to employee task performance; inequity tolerance moderated the relationship between pay secrecy and employee task performance, pay secrecy and perceptions of instrumentality, and the pay secrecy-instrumentality perceptions-employee task performance relationship for those with a lower tolerance of inequity

Noy's (2007) Organizational Justice and Trust Study. Following Burrough's (1982) proposal of a pay secrecy continuum, Noy (2007) conceptualized pay secrecy into two separate dimensions: individual and organizational pay secrecy. Organizational pay secrecy (OPS) originates and is upheld by the organization and its strategies and structure. Individual pay secrecy (IPS) is initiated and sustained by the employees and their norms, intentions, and motives. As part of his dissertation requirements, Noy (2007) developed a perceived OPS (POPS) measure and analyzed its relationship with organizational justice dimensions (such as distributive and procedural justice) and trust. Participants were employees and managers of multiple U.S. organizations across various industries.

The POPS scale consisted of three sub-dimensions: policy and rules, enforcement, and organizational norms. The entire scale was comprised of fourteen items (such as "my company has rules against discussing employee pay with others" and "discussing pay at my company is something you can be reprimanded for"). A confirmatory factor analysis was conducted on the POPS measure using Structural Equation Modeling (SEM). The results showed all of the measurement models for the three sub-dimensions and the overall measurement model for POPS fit well according to the values of the fit indices. Additionally, each of the sub-dimensions significantly predicted POPS. The Cronbach's alpha coefficients for the overall POPS scale and the three sub-dimensions signified good reliability (all were above .88). Although the perceived IPS (PIPS) measure was not analyzed as part of his dissertation, Noy (2007) did anticipate two sub-dimensions (social norms and personal preference) and generated fourteen items for the overall scale.

The analyses revealed that POPS was not related to management trust, distributive justice, interpersonal justice, or procedural integrity (a sub-dimension of procedural justice). However, POPS was significantly negatively related to informational justice. Contrary to expectations, POPS was significantly positively related to procedural voice (a sub-dimension of procedural justice). Noy (2007) suggested several explanations for the positive relationship between POPS and procedural voice, such as privacy needs, fear of identifying employees who are paid more, and previous involvement with pay secrecy practices yielding a growing personal expectation of such a practice being presently employed. Although not significantly related to managerial trust, POPS was significantly positively related to managerial trust for employees who had no managerial responsibilities but not for employees who had managerial responsibilities. Therefore, the positive relationship between POPS and managerial trust is significantly stronger for non-managers, while the relationship between POPS and managerial trust is insignificant (near zero) for managers.

<u>Tremblay and Chênevert's (2008) Organizational Performance Study.</u> Following previous studies examining the compensation systems correspondence with organizational strategies in high-technology organizations, Tremblay and Chênevert (2008) extended this research by analyzing the relationship between prior disregarded dimensions of compensation systems (pay openness and pay secrecy) and organizational performance (such as productivity and market performance). Pay information transparency analyzed the pay secrecy dimensions and was measured by six items specifically generated for this study (such as "we try to discourage nonmanagement employees from disclosing their pay to coworkers," and "Managers are really well

informed about wage policies"). The longitudinal study consisted of human resource managers employed across various industries in Canada.

The results showed that high-technology organizations are less likely to utilize a pay openness approach to compensation systems than low-technology organizations. Additionally, a pay openness approach was not related to higher organizational performance in high-technology organizations. Contrary to expectations, a pay openness approach negatively influenced employee's discretionary efforts and market performance, while it positively impacted work climate (relationship between employees and other employees or management). These findings demonstrate that pay openness may not be beneficial for organizations, even though employee relations are increased, since employees appear to reduce their discretionary effort and organizational performance is decreased.

<u>Bamberger and Belogolovsky's (2010) Employee Performance Study.</u> Based on Colella et al.'s (2007) proposal of pay secrecy having a negative impact on employee motivation and ultimately their performance, Bamberger and Belogolovsky (2010) analyzed the relationship between pay secrecy and employee task performance. Following additional suggestions by Colella et al. (2007), the researchers examined several variables (such as instrumentality, procedural and informational justice) that may assist in explaining the relationship between pay secrecy and employee task performance. Additionally, tolerance for inequity was analyzed to moderate the relationships between pay secrecy and task performance and the mediating variables (such as instrumentality, procedural and informational justice). The study was conducted using an experiment involving undergraduate students. The pay secrecy condition entailed the participants

receiving only their own personal performance level and pay. The pay openness condition involved the participants receiving the same information as the pay secrecy condition as well as the pay of their other group members.

The results show that although the relationship between pay secrecy and employee task performance was nonsignificant, it was in the predicted negative direction. Thus, tests of mediation for this relationship were not performed. However, tolerance for inequity did moderate the relationship between pay secrecy and employee task performance in that the relationship was more negative for the participants with a lower tolerance for inequity. Additionally, the relationship between pay secrecy and perceptions of instrumentality was moderated by tolerance for inequity in that the relationship was more negative for those with a lower tolerance for inequity. The pay secrecy-instrumentality perceptions-employee task performance relationship was also moderated by tolerance for inequity in that the mediated relationship was intensified for those with a lower tolerance for inequity. These findings showed that instrumentality perceptions mediate the negative relationship between pay secrecy and employee task performance for those with a lower tolerance for inequity. Overall, the results demonstrate the unfavorable outcomes (such as reduced employee performance) pay secrecy has for employees with a low inequity tolerance and the organizations that employ them.

Discussion

Although limited, the previous pay communication research has shed some light on the effects of pay secrecy and pay openness practices. The scant literature demonstrates how pay secrecy practices may harm or benefit employees and organizations. For instance, the research shows that pay secrecy practices do negatively impact the accuracy of pay estimations (e.g., Lawler 1965a, 1967; Milkovich and Anderson 1972). Overall, pay secrecy practices influenced pay estimations such that employees (including managers) overestimated subordinates' and peers' pay while underestimating superiors' pay (except in Mahoney and Weitzel 1978). These inaccurate pay estimations were manifested at two levels away (e.g. Lawler 1967). Additionally, the accuracy of pay estimations was associated with higher levels of pay dissatisfaction (e.g., Milkovich and Anderson 1972). Even though the research shows a mediated relationship between pay secrecy, pay estimations, and pay dissatisfaction, the direct relationship between pay secrecy and pay satisfaction/ dissatisfaction is inconclusive due to contradicting results in that studies have shown a negative relationship between pay secrecy and pay satisfaction (Thompson and Pronsky 1975) and a positive relationship between pay information (pay openness practices) and pay satisfaction (e.g., Futrell and Jenkins 1978; Mulvey et al. 1992), while others have found no relationship to exist (e.g., Cloutier and Vilhuber 2008; Day 2006). The stream of research examining the impact pay communication practices have on pay allocation distributions is also inconclusive and conflicting with some studies showing pay secrecy conditions to elicit a better pay-for-performance distribution (e.g., Leventhal et al. 1972) and other studies showing pay openness conditions to elicit an equity-based distribution (e.g., Trahan et al. 1991).

Conclusion

The pay communication literature is scarce and underdeveloped. Over the past fifty years, pay secrecy and/or pay openness practices have only been studied in relation to a few outcomes. More recently there have been additional outcomes examined, however, there have only been a select few and each has only been tested once. Even though this lack of research is a limitation of the pay communication literature, it does offer ample opportunities for future research.

Future Research

There are many directions the pay communication literature can extend into to make worthwhile contributions. First, a definitive pay communication (pay secrecy and pay openness) scale needs to be developed in order to elicit research. The majority of past research has either conducted their study in a specific organizational setting where the type of pay communication approach utilized by the organization is the one studied or by utilizing an experiment where the pay communication approach is manipulated. A validated measure of pay communication (pay secrecy and pay openness) will allow the results to extend to all levels of pay secrecy or pay openness on the continuum, rather than just one or two specific levels of pay communication. Several scholars have created a measure of pay communication specifically for their studies (e.g., Day 2006; Cloutier and Vilhuber 2008); however, most of them have not been properly validated or extended to additional studies. Noy's (2007) POPS scale is the only pay secrecy and pay openness measure that has undergone the appropriate steps of development, but it has not been extended beyond the original dependent variables of Noy's study (organizational justice and trust). Additionally, Noy's (2007) POPS scale may require refinement due to its sub-dimensions possibly causing confliction within the scale itself. For instance, due to the Enforcement sub-dimension, if the organization does not actually enforce the rule of not discussing pay with other employees then the overall pay secrecy level is lowered even though the organization may practice complete pay secrecy by not providing any pay information. Therefore, a more refined measure of pay communication (pay secrecy and pay openness) is needed to advance the literature.

Another future direction is to analyze additional dependent variables that pay secrecy or pay openness practices may impact. For instance, some organizational outcomes that may potentially be influenced by pay communication practices are organizational commitment, workplace deviance, and organizational citizenship behaviors. Additionally, some previously examined organizational outcomes that were found to not be significantly impacted by pay secrecy or pay openness practices may deserve another examination using different methods. For instance, trust in management, the organizational justice dimensions (such as distributive and procedural justice), and employee and organizational performance should definitely be reanalyzed. Also, the previous streams of pay communication research involving pay estimations, pay satisfaction, and pay allocation outcomes may need to be reexamined since the majority of those studies were conducted several decades ago.

CHAPTER 3

DEVELOPMENT OF A PAY COMMUNICATION (PAY SECRECY AND PAY OPENNESS) MEASURE

Employees have indicated that their compensation is an important job factor (Gerhart and Rynes 2003; Opsahl and Dunnette 1966). Compensation represents many different things to employees, such as achievement or recognition (Ackley 1993; Goodman 1974; Lawler 1966, 1971; Lawler and Porter 1967), and organizational value (Lawler 1966, 1971), among other things. Additionally, compensation has the ability to influence employee behavior which, in turn, can affect organizational effectiveness (Beer and Gery 1972; deCarufel 1986; Lawler 1981). Despite its importance, compensation is a sensitive issue and discussions regarding it are typically avoided altogether, whether the communication is between the organization and employees or amongst employees.

Pay communication, an aspect of an organization's compensation system, refers to the organizational practice that determines when, how, and which pay information (such as pay ranges, pay raises, pay averages, individual pay levels, and/or the entire pay structure) is distributed and communicated to employees and possibly outsiders. Pay communication practices function to support organizations in their attainment of their compensation systems' goal and objectives (Gely and Bierman 2003), such as attracting more qualified applicants or increasing organizational performance. Therefore, the needs of the organization determine the pay communication practices.

Pay communication is an important concept that unfortunately has a limited and underdeveloped literature. The scarce literature may be due to the lack of a valid and comprehensive pay communication scale. Therefore, the purpose of this paper is to develop a pay communication scale that is inclusive by encompassing all practices. Three multistage studies accomplish this goal, yielding a 22-item Pay Communication scale comprised of four sub-dimensions: Pay Policy Existence, Pay Structure, Organizational Norms, and Employee Norms.

Literature Review

Pay communication is the compensation practice that determines when, how, and which pay information (such as pay ranges, pay raises, pay averages, individual pay levels, and/or the entire pay structure) is distributed and communicated to employees (and possibly outsiders) and whether discussions involving pay information are permitted amongst employees (and possibly with outsiders). The purpose of pay communication practices are to support organizations in achieving their compensation systems' goals and objectives (Gely and Bierman 2003), such as increased performance.

Pay communication practices differ among organizations as the degree of these practices vary by the amount and type of pay information provided or withheld to employees (Gomez-Mejia and Balkin 1992; Milkovich and Newman 2005). Therefore, pay communication practices exist along a continuum and appear in a variety of forms (Burroughs 1982; Colella et al. 2007; Lawler 1981; Lawler and Jenkins 1992; Patten 1978). The two anchors (or commonly acknowledged practices) of the pay communication continuum are pay secrecy and pay openness. The extent to which a pay secrecy or pay openness practice is utilized depends on the needs and strategic goals of the organization.

Pay openness is the organizational practice that allows employees to discuss their personal pay information with other organizational members (and possibly outsiders). Additionally, pay openness practices may involve the organization distributing most, if not all, pay information to employees on a regular basis (usually at specific time intervals such as yearly) or upon request. Consequently, pay secrecy is the organizational practice that prohibits the organization (and management) from distributing and communicating most, if not all, pay information to employees (Bamburger and Belogolovsky 2010; Colella et al. 2007; deCarufel 1986). Pay secrecy practices may also involve the adoption of an organizational policy (usually referred to as a pay secrecy policy but also labeled as pay confidentiality rules; (Bierman and Gely 2004; Gely and Bierman 2003)) that discourages or forbids employees to discuss their personal pay information with other organizational members and possibly with outsiders (Bamberger and Belogolovsky 2010; Bierman and Gely 2004; Burroughs 1982; Colella et al. 2007; Gely and Bierman 2003; Thompson and Pronsky 1975). A pay secrecy policy practice is usually the most detectable pay communication practice among employees and is expressed either in writing (such as in employee manuals) or verbally (such as during an employee orientation or employee meeting). Organizations may attempt to obtain compliance of a pay secrecy policy practice by compelling employees to sign a pledge stating they will not discuss pay information with other organizational members (and possibly outsiders) or by having policy violators suffer disciplinary consequences (such as termination; (Gomez-Mejia and Balkin 1992)).

A variety of pay communication practices (such as mild pay secrecy or moderate pay openness) reside along the continuum between the complete pay secrecy anchor and complete pay openness anchor. For instance, a mild pay secrecy practice may involve employees being provided with only their personal pay information, and pay range and pay average for their personal pay level, but no more information being freely given. Additionally, there may be no existence of a formal pay secrecy policy with a mild pay secrecy practice; whereas, a moderate pay openness practice may involve employees being supplied with their personal pay information, and pay ranges and pay averages for their pay level and adjacent pay levels in the pay structure.

Legal Issues

Pay secrecy (opposed to pay openness) practices appear to be the preferred pay communication practice for organizations (Balkin and Gomez-Mejia 1985; HRnext.com Survey 2001; Lawler 1981; Scott et al. 2003), managers and employees (Futrell and Jenkins 1978; HRnext.com Survey 2001; Markels and Berton 1996; Schuster and Colletti 1973). However, pay secrecy policy practices have consistently been found to be unlawful by the NLRB and the federal court system for violating the NLRA (specifically, Sections 7 & 8) since these policy practices prohibit employees from discussing certain employment conditions (such as pay information) with other employees (Bierman and Gely 2004; Estlund 2011; Gely and Bierman 2003; King 2003). Regardless of whether pay secrecy policy practices are actually enforced by the organization, their existence is considered unlawful except in two instances. Pay secrecy policy practices are not in violation of the NLRA when they specifically pertain to managers or are worded to be understood as protecting an organizations' confidential information (such as trade secrets or customer information) by prohibiting its' disclosure to unauthorized individuals (including other employees) or entities (King 2003). Even though pay secrecy policy practices are illegal, organizations may use different methods, other than a written pay secrecy policy, that are not as concrete and/or harder to confirm exist, such as verbally expressing a policy practice (such as during an employee orientation or employee meeting) or by engaging in other pay secrecy practices (such as not providing employees with certain pay information).

Prior Research

Despite the pay communication research beginning over fifty years ago, the literature is limited and underdeveloped. Most of the literature has analyzed pay secrecy and/or pay openness practices' impact on only a few outcomes, such as pay estimations (e.g., Lawler 1965a, 1967), reward allocations (e.g., Bartol and Martin 1989; Leventhal et al. 1972), and pay satisfaction (e.g., Cloutier and Vilhuber, 2008; Day 2006). More recently, pay communication practices (specifically, pay secrecy practices) have been examined to influence other outcomes, such as employee task performance (Bamberger and Belogolovsky 2010), organizational justice and trust in management (Noy 2007). Although the literature has expanded within the last few years, there are still only a handful of variables that have been considered to be impacted by pay secrecy and/or pay openness practices. Additionally, the pay communication research has provided somewhat conflicting results (e.g., Cloutier and Vilhuber 2008; Thompson and Pronsky 1975), leading to confusions about pay secrecy's overall efficiency and common practice in the workplace. Nonetheless, the scant literature implies that pay secrecy practices are detrimental for both employees and organizations and thus, should not be utilized (e.g., Bartol and Martin 1989; Lawler 1965a, 1967).

These conflicting and confusing results could mainly be due to the various methodological techniques utilized in these research studies. For instance, the majority of the research conducted in the first several decades involved either collecting data in one or two specific organizations (e.g., Lawler 1965a, 1967) or via a laboratory (scenario) experiment (e.g., Bartol and Martin 1989; Leventhal et al. 1972) where only one or two specific levels of pay communication (e.g., complete pay secrecy and complete pay openness) practices were manipulated. Additionally, those studies conducted in one or two specific organizational environments (which were all of the pay estimation outcome and most of the pay satisfaction outcome studies) occasionally failed to use an organization with the same (or nearly similar) type of pay communication practice as previous studies to properly replicate and/or extend the research. Therefore, the conflicting findings may be due to one study analyzing a complete pay secrecy practice and a second study analyzing a moderate pay secrecy or mild pay openness practice (e.g., Lawler 1967; Milkovich and Anderson 1972). Also, the studies involving one or two specific organizations had a tendency to unsuccessfully indicate or properly describe in detail the exact type of pay communication practice utilized in the organization (e.g., Lawler 1967, 1972), which prevented other scholars from being able to replicate the pay communication practice.

In regards to the studies that conducted an experiment (which were all of the pay allocation outcome studies and the employee task performance outcome study), the majority of them described using complete pay secrecy and complete pay communication manipulations. However, many of these experimental studies did not explicitly describe the conditions that established their complete pay secrecy and complete pay openness. Therefore, one of these experimental studies may have used complete pay secrecy and complete pay openness conditions, while another study used complete pay secrecy and moderate pay openness conditions. Also, these studies did not acknowledge any other forms of pay communication practices, such as moderate pay secrecy or mild pay openness.

Another problem encountered throughout the pay communication literature involves each study having fairly dissimilar samples. Specifically, the pay estimation outcome studies used participants with several different managerial levels. The participants in these studies were classified as lower to middle-level managers (e.g., Lawler 1965a), lower-level managers to top management (e.g., Lawler 1967), or had no specific managerial level indicated (e.g., Lawler 1972). The pay allocation studies, mainly used samples consisting of undergraduate students (e.g., Leventhal et al. 1972); however, some of these studies did use samples comprised of graduate students (e.g., Trahan et al. 1991) or managers (e.g., Bartol and Martin 1989). The pay satisfaction outcome studies mainly used samples of employees (e.g., Thompson and Pronsky 1975); however, managers (e.g., Mulvey et al. 2002) and graduate students (e.g., Day 2006) were also used in several studies. Although under most exploratory research circumstances, different samples are desired for generalizability (or external validity) and research advancement, the pay communication research is still very underdeveloped and some of the samples that have been used are possibly inappropriate or unbefitting for the pay communication research. For instance, samples consisting of managers may be inappropriate since they are not protected under the NLRA and therefore, probably only encounter complete or extreme pay secrecy practices.

Additionally, the student samples (primarily the undergraduate students) are unsuitable because the students most likely have limited work experience which affects the probability of them enduring pay secrecy or pay openness practice effects directly; therefore, they may not have knowingly encountered or properly understood pay secrecy or pay openness practices, or attribute the same importance to their pay as regular employees (Noy 2007; Trahan et al. 1991). For instance, Trahan et al. (1991) argued that their first study's lack of significant results (in that pay communication practices did not influence pay allocation decisions) may have been due to their sample being comprised of undergraduate students who were deficient in work experience. Accordingly, Trahan et al. (1991) conducted a second study using graduate students, who would most likely have work experience, and found pay communication practices did impact pay allocation decisions. However, the findings of the second study conflicted with previous research (e.g., Leventhal et al. 1972). Trahan et al. (1991) again argued that the difference in the samples caused this inconsistency in the findings in that Leventhal et al.'s (1972) study used undergraduate students. Thus, samples comprised of undergraduate students and managers are inappropriate and may potentially bias or corrupt the analyses.

These methodological issues in the literature may be alleviated by a definitive and valid measure of pay communication (pay secrecy and pay openness) practices. An inclusive pay communication scale will eliminate the issue of observing only one or two levels of pay secrecy and/or pay openness practices by allowing multiple levels of these practices on the continuum to be measured. The ability to measure multiple levels of pay communication practices may also resolve the issue of previous studies having conflicting or confusing results. Additionally, a pay communication measure may help further develop the current research while also possibly enticing scholars to extend and advance the pay communication literature.

There is only one pay communication assessment that has been properly developed, Noy's (2007) Perceived Organizational Pay Secrecy (POPS) scale. However, the POPS scale (Noy 2007) was not evaluated for convergent or discriminant validity during its development process. Additionally, the POPS scale has yet to be extended to additional research other than the original variables it was used to analyze (e.g., organizational justice and trust dimensions). There have also been several additional measures of pay communication created for specific studies and analyses (e.g., Cloutier and Vilhuber 2008; Day 2006). However, none of these measures were properly developed and validated nor extended to additional studies outside their original purpose. A thorough evaluation of each of these measures is provided to additionally support the argument of a needed definitive pay communication scale.

Validated Measures

Noy (2007) proposed the pay secrecy concept to be comprised of two separate constructs: organizational and individual pay secrecy. The two types of pay secrecy mainly differ by the manner in which they are created and maintained. Perceived organizational pay secrecy (POPS) is created and upheld by the organization and its structure, strategies, and policies (such as a pay secrecy policy); whereas, perceived individual pay secrecy (PIPS) is formed and sustained by employees through different social and cultural norms (Noy 2007). A three-factor model of POPS was developed, with the three aspects portraying perceptions of (1) policies and rules, (2) enforcement, and (3) organizational norms. Noy's (2007) POPS scale was comprised of fourteen items and all of the measurement models (sub-dimensions and overall POPS models) fit well and had suitable Cronbach's alpha coefficients (refer to Appendix A for a description of the scale and items). The IPS scale, on the other hand, has not yet been substantiated even though Noy (2007) generated fourteen items for its development. Therefore, discriminant validity between the two types of pay secrecy has not been established.

Although Noy (2007) properly substantiated the POPS scale, it may have internal problems and confliction. For example, the Enforcement sub-dimension comprises a third of the total scale items (five items) and focuses on the repercussions employees experience when discussing pay information. However, if the organization does not actually enforce the pay secrecy policy practice by reprimanding employees (such as by terminating employment) for discussing pay with other organizational members then the overall score is reduced. This is a problem since the degree of pay secrecy may be extreme but due to the organization not punishing violations of a pay secrecy policy (given that one exists) the overall score will be minimized and the level of pay secrecy may appear to be moderate, if not low. Additionally, the Enforcement sub-dimension could be argued to be a separate construct, needing to be measured independently from a pay communication scale. For instance, if an organization practices extreme pay secrecy but does not have a formal (written) or informal (verbally expressed) pay secrecy policy prohibiting the discussion of pay then enforcement of obeying a pay secrecy policy is inconsequential. Therefore, the Enforcement sub-dimension may cause the overall pay secrecy score to be reduced and should be considered to be a separate construct requiring its own measurement.

The Policies & Rules sub-dimension has the most items contributing to the overall scale (six items) and focuses on formal (written) and perhaps informal (verbally expressed) pay secrecy policy practices. Even though the existence of a pay secrecy policy is important in a pay communication scale, it should not have such a heavy weight for several reasons. First, an organization may practice extreme pay secrecy but not express a pay secrecy policy due to its unlawfulness and thereby, this dimension causes the overall score to be reduced and the level of pay secrecy practice to appear moderate, if not low. Additionally, organizations having previously encountered court issues, such as NLRB grievances and/or employee lawsuits pertaining to pay secrecy policy practices (such as for wrongful termination due to violating a pay secrecy policy), would most likely not formally or unofficially express a pay secrecy policy but may continue to practice pay secrecy by not providing employees with various pay information. Therefore, items pertaining to other specific practices of pay communication may be better alternatives than pay secrecy policy existence items. Furthermore, some of the items do not specifically identify who represents 'others' in their wording or whom exactly the employees cannot discuss their pay information with. This is a problem as organizations may have a pay secrecy policy practice regarding employees not disclosing their pay information with 'other' employees and/or 'other' people outside of the organization.

The Organizational Norms sub-dimension consists of three items and focuses on pay secrecy practices and informal (verbally expressed) pay secrecy policy practices. As previously argued the items pertaining to specific pay communication practices (such as organization withholds certain pay information from employees) are important and should probably have a heavier weight in the overall pay communication measure. However, these items make up less than a fourth of the overall scale. Additionally, the specific practice items need to address certain types of practices used in organizations, such as type of pay information (e.g., pay ranges and pay averages) provided to or withheld from employees; however, these practice-oriented items only pertain to whether the employing organization is secretive in regards to pay.

Non-Validated Measures

The additional assessments of pay communication were not properly substantiated and they were designed (and worded) specifically for certain studies. Consequently, these measures have not been extended to additional studies outside of their original purpose, most likely due to their specificity and inability to apply to multiple occupations and/or organizations. For a description of these pay communication measures and items refer to Appendix B.

Beer and Gery (1972) were the first scholars to measure pay communication practices with specific items. They used an 'organizational culture' measure which analyzed the openness of the culture in regards to the organization providing or withholding certain pay information. The six items focused on specific pay communication practices by analyzing the employee's knowledge of certain pay information (such as pay range and pay raises). The items were analyzed individually, rather than collectively as a scale. Consequently, a Cronbach's alpha coefficient was not provided.

Mulvey et al. (2002) created a seven-item measure to represent knowledge of pay. The measure specifically focused on pay communication practices by analyzing the employee's knowledge of certain pay information. Specifically, the items referred to pay grades, pay raises, pay ranges, and the processes used to determine their pay. Even though the items were collectively combined to produce an overall pay knowledge scale, a Cronbach's alpha coefficient was not provided.

Day (2006) generated a five-item measure of pay communication with higher levels representing pay openness practices rather than pay secrecy practices. The items focused on the employee's perception of communication concerning pay level determination and pay range information. The items were analyzed against other variables collectively as a scale and produced a Cronbach's alpha coefficient of .75. However, almost half (41%) of the variance was accounted for by one item. Additionally, Day (2006) asserted that the pay communication scale she created may not adequately measure "the breadth and depth of issues" a pay communication scale should identify and assess (p. 757).

Cloutier and Vilhuber (2008) created a two-item measure of system transparency. The items pertained to pay openness practices and focused solely on whether procedures used to determine pay levels and pay raises were followed. This measure produced a Cronbach's alpha coefficient of .80.

Tremblay and Chênevert (2008) generated a six-item measure of pay information transparency. The items pertained to pay openness practices and focused on employee's knowledge of the pay process, pay policies, and disclosure of pay information. However, only half of the questions were concerned with employees, while the other half referred to managers. In fact, there were only three completely different items and each item was reworded to pertain to employees in one and managers in the other. Additionally, four of the items were reverse-coded. The measure produced a Cronbach's alpha coefficient of .84.

All of these non-validated pay communication assessments evaluate important aspects of pay communication (pay secrecy and pay openness). However, most of these measures only include one or two of these essential pay communication aspects. An inclusive pay communication assessment needs to encompass these practices but also other specific practices. Therefore, a measure with a broader scope of pay communication (pay secrecy and pay openness) practices is needed for a high-quality research and knowledge advancement.

Based on the above arguments and descriptions of the current pay communication scales, a more comprehensive assessment of pay communication (pay secrecy and pay openness) practices is needed in the management literature to further develop the research. Although these assessments offer a good starting point, a more refined and definitive measure of pay communication is urgently needed. Therefore, the purpose of this paper is to produce a pay communication scale that includes all of the important aspects of pay communication (pay secrecy and pay openness) practices.

Three multistage studies were conducted to properly develop and validate a pay communication (pay secrecy and pay openness) scale. The scale development process was adapted from the procedures and stages proposed by Hinkin (1995) and Schwab (1980). Each study was individually approved by Louisiana Tech University's Internal Review Board (refer to Appendix C for a copy of the approval letters). The first study consisted of generating a pool of 79 items pertaining to pay communication practices and having a panel of experts review and assess these items, resulting in 42 items. Study 2 involved further refining the items by analyzing the inter-item correlations, variances, and factor loadings of each item in an exploratory factor analysis, which resulted in 22 items loading on four distinct factors. In the third study, the proposed scale and dimensionality (four sub-dimensions) of the remaining 22 items was confirmed by using confirmatory factor analysis. Additionally, construct validation was determined for the Pay Communication scale by providing evidence of convergent and discriminant validity.

Study 1: Instrument Development

Stage 1: Item Generation

The purpose of this stage was to create a large, inclusive pool of items about pay communication practices, so that together they meet the description of pay communication (pay secrecy and/or pay openness) and encompass the entire domain of pay communication practices.

Procedure 1. Participants were active members of the Society of Human Resource Management (SHRM). Specifically, members of the Northeast Louisiana (Monroe #0207), Central Louisiana (Alexandria #0367), and Imperial Calcasieu Human Resource Management Association (Lake Charles #0402) SHRM chapters participated in this study. An email was sent to each chapter's current President requesting to survey their current members (refer to Appendix D). Once the survey was approved by the Chapter Presidents and their Board of Directors, an introductory email was sent to the potential respondents (SHRM Chapter members) explaining the purpose of the study and inviting them to participate in the study (refer to Appendix E). Participants were given ten to fourteen days to access and complete the survey. A reminder email was sent to the potential respondents (SHRM Chapter members) five days after the introductory email was delivered (refer to Appendix F).

The introductory and reminder emails were delivered to 360 potential participants. Twenty-four currently active SHRM members participated in the survey, yielding a 6.67% response rate. The majority of the participants were female (54.2%), Caucasian (83.3%), working full-time (91.7%), and employed in their organization's human resources department (62.5%). The participants' ages ranged from 27 to 67 with half of the participants being in their forties. The mean age was forty-five. Most of the participants had been with their current employer for one to five years (45.8%). All of the participants who provided a response for the education category possessed at least a bachelor's degree (95.8%). Refer to Table 3.1 for a complete overview of the descriptive statistics for the sample.

Table 3.1 Descriptive Statistics for Sample (Stage 1 of Study 1)

	N	%	Cumulative %
Louisiana SHRM Chapters:			
Alexandria Chapter (Central Louisiana)	5	20.8	20.8
Lake Charles Chapter (ICHRMA)	10	41.7	62.5
Monroe Chapter (Northeast Louisiana)	9	37.5	100.0
Gender:			
Female	13	54.2	54.2
Male	10	41.7	95.9
Not Given	1	4.2	100.0
Age:			
20's	2	8.3	8.3
30's	3	12.5	20.8
40's	12	50.0	70.8

Table 3.1 (Continued)

50's	3	12.5	83.3
60's	2	8.3	91.6
Not Given	2	8.3	100.0
Ethnicity:			
African American	1	4.2	4.2
American Indian	0	0.0	4.2
Asian/Pacific Islander	1	4.2	8.4
Caucasian	20	83.3	91.7
Latino/Hispanic	1	4.2	95.9
Middle Eastern	0	0.0	95.9
Native American	0	0.0	95.9
Other	0	0.0	95.9
Not Given	1	4.2	100.0
Tenure:			
Less than 1 year	2	8.3	8.3
1 to 5 years	11	45.8	54.1
6 to 15 years	8	33.3	87.4
16 to 25 years	2	8.3	95.7
Not Given	1	4.2	100.0
Hours Per Week:			
Less than 10 hours	0	0.0	0.0
10 to 20 hours	0	0.0	0.0
21 to 30 hours (part-time)	1	4.2	4.2
30 (full-time) to 40 hours	7	29.2	33.4
More than 40 hours	15	62.5	95.9
Not Given	1	4.2	100.0
Education:			
Did not complete high school	0	0.0	0.0
High school diploma or GED	0	0.0	0.0
Some college	0	0.0	0.0
Bachelor's degree (e.g., BA, BS)	15	62.5	62.5
Technical college or Trade school	0	0.0	0.0
Associate's degree (e.g., AA, AS)	0	0.0	0.0
Professional degree beyond Bachelor's (e.g., MD)	2	8.3	70.8
Master's degree (e.g., MA, MS, MBA)	6	25.0	95.8
Doctorate degree (e.g., PhD, DBA, EdD)	0	0.0	95.8
Not Given	1	4.2	100.0

Table 3.1 (Continued)

Industry:			
Agriculture, Mining	0	0.0	0.0
Communications, Utilities	2	8.3	8.3
Construction	2	8.3	16.6
Finance, Insurance, Real Estate	2	8.3	24.9
Government	1	4.2	29.1
Health Care	6	25.0	54.1
Internet	0	0.0	54.1
Manufacturing	3	12.5	66.6
Retail, Wholesale	0	0.0	66.6
Services	2	8.3	74.9
Transportation	1	4.2	79.1
Nonprofit	1	4.2	83.3
Other (e.g., Banking, Legal, Education)	3	12.5	95.8
Not Given	1	4.2	100.0
Managerial/Departmental Level:			
Employee (no managerial duties)	3	12.5	n/a
Lower-level management	0	0.0	n/a
Middle-level management	6	25.0	n/a
Higher-level (top) management	7	29.2	n/a
Human Resources department	15	62.5	n/a
Professional (e.g., Instructor, Law Firm Partner)	2	8.3	n/a

Participants were instructed to read an informed consent form approved by the Internal Review Board at Louisiana Tech University and to provide consent by marking a box (refer to Appendix G). Additionally, participants were given the researchers' current description of pay communication (which was based on the management literature), instructions, and requested to openly respond to several five open-ended research questions and eight demographic questions (refer to Appendix H). A deductive approach was used to generate the items. Two research questions requested participants provide and describe at least two examples of practices that their current employer and another organization (such as former employer or spouse's employer) currently utilize or does not utilize pay communication practices in the workplace. Three research questions requested participants identify what pay secrecy means to them personally, to their current employer, and to their current co-workers (such as peers, subordinates, superiors). This procedure generated 142 items.

Procedure 2. The researcher independently edited poorly-written items and eliminated duplicate items. Additionally, the researcher produced 22 distinct items based on the previously published pay communication literature. This created a total of 79 items (refer to Appendix I for an overview of the items).

Stage 2: Item Refinement

The purpose of this stage was to create a manageable representation of pay communication practices by systematically reducing the number of items generated in Stage 1.

Sample. Participants (or judges) were Ph.D. academics and doctoral students in the management discipline with the majority having an emphasis in human resource management and/or organizational behavior. All of the judges were personally known to the researcher. The majority of the participants were male (54.5%), Caucasian (63.6%), and possessed a doctoral degree (54.5%). The participants' ages ranged from 28 to 53 with most of the participants (those who provided a response) being in their thirties (55.6%).The mean age was thirty-eight. Most of the participants have been with their current employer for one to five years (63.6%). Refer to Table 3.2 for an overview of the descriptive statistics for the sample.

Table 3.2 Descriptive Statistics for Sample (Stage 2 of Study 1)

	N	%	Cumulative %
Gender:			
Male	6	54.5	54.2
Female	5	45.5	100.0
Age:			
20's	1	9.1	9.1
30's	5	45.4	54.5
40's	2	18.2	72.7
50's	1	9.1	81.8
Not Given	2	18.2	100.0
Ethnicity:			
African American	1	9.1	9.1
American Indian	0	0.0	9.1
Asian/Pacific Islander	2	18.2	27.3
Caucasian	7	63.6	90.9
Latino/Hispanic	0	0.0	90.9
Middle Eastern	0	0.0	90.9
Native American	0	0.0	90.9
Other	1	9.1	100.0
Tenure:			
Less than 1 year	1	9.1	9.1
1 to 5 years	7	63.6	72.7
6 to 15 years	3	27.3	100.0
Education:			
Master's degree (e.g., MA, MS, MBA)	5	45.5	45.5
Doctorate degree (e.g., PhD, DBA, EdD)	6	54.5	100.0
Position:			
Dissertation Committee Member	3	27.3	n/a
Doctoral Student/Candidate of Management	5	45.5	n/a
Management Professor at Louisiana Tech University	3	27.3	n/a
Management Professor at Other University	4	36.4	n/a

Procedure. Potential judges were requested to participate in the study by email. Participants were instructed to read an informed consent form approved by the Internal Review Board at Louisiana Tech University and to provide consent by marking a box on the first page of the electronic survey (refer to Appendix G). The eleven judges rated and reviewed each of the 79 items based on several criteria: (the degree to which each item has): consistency with the pay communication description (either pay secrecy or pay openness), generalizability to a wide variety of organizations and occupations, and clarity and conciseness (editing of items was allowed). The items were investigated based on the three criteria using a 5-point Likert-type scale ranging from 1 (strongly disagree or not at all) to 5 (strongly agree or highly). The judges were also given the opportunity to modify items or request an item be eliminated from further analyses. Additionally, five demographic questions were included at the end of the survey (refer to Appendix J for an overview of the review survey).

Items that received a mean score of 3.0 or less on any of the three rating criteria were eliminated from further analyses. The majority of the items (all but one item) that were suggested to be deleted due to their complexity or difficulty were also eliminated. The one item that was not eliminated was modified. Items that were requested for modification were altered following the judges' comments. This process yielded 42 items for further analysis (refer to Appendix K for an overview of the items).

Study 2: Scale Evaluation

Sample

Seventy-nine participants volunteered to participate after being recruited from a social networking website (e.g., Facebook) and 227 were recruited from an online survey panel (e.g., Qualtrics) which rewarded those who completed the survey with points that could be used for merchandise or money. There were a total of 306 participants. The majority of the participants were male (66.7%), Caucasian (85.9%), working full-time

(96.4%), had no labor union involvement for their job or any jobs in their organization (67.3%), and possessed at least a bachelor's degree (59.8%). The participants' ages ranged from 19 to 69 with a third of the participants (33.3%) being in their thirties. The mean age was forty-one. Most of the participants had been with their current employer for one to five years (33.3%) and were classified as an 'employee' with no managerial duties (44.1%). Refer to Table 3.3 for a complete overview of the descriptive statistics for the sample.

Table 3.3 Descriptive Statistics for Sample (Study 2)

	N	%	Cumulative %
Gender:			
Female	100	32.7	32.7
Male	204	66.7	99.3
Not Given	2	.7	100.0
Age:			
19 to 29	49	16.0	16.0
30's	102	33.3	49.3
40's	67	21.9	71.2
50's	65	21.2	92.4
60's	21	6.9	99.3
Not Given	2	.7	100.0
Ethnicity:			
African American	14	4.6	4.6
American Indian	0	0.0	4.6
Asian/Pacific Islander	13	4.2	8.8
Caucasian	263	85.9	94.7
Latino/Hispanic	12	3.9	95.9
Middle Eastern	1	.3	98.4
Native American	2	.7	98.7
Not Given	4	1.3	100.0
Union Status:			
Yes, job is unionized but not all jobs in organization	24	7.8	7.8
Yes, entire organization is unionized	27	8.8	16.7
No, but other jobs in the organization are unionized	47	15.4	32.0
No, no job in the entire organization is unionized	206	67.3	99.3

Table 3.3 (Continued)

Not Given	2	.7	100.0
Tenure:			
Less than 1 year	30	9.8	9.8
1 to 5 years	101	33.0	42.8
6 to 10 years	79	25.8	68.6
11 to 15 years	46	15.0	83.7
16 to 20 years	18	5.9	89.5
21 to 25 years	16	5.2	94.8
26 years or more	14	4.6	99.3
Not Given	2	.7	100.0
Hours Per Week:			
Less than 10 hours	2	.7	0.7
10 to 20 hours	2	.7	1.3
21 to 30 hours (part-time)	5	1.6	2.9
30 (full-time) to 40 hours	159	52.0	54.9
More than 40 hours	136	44.4	99.3
Not Given	2	.7	100.0
Education:			
Did not complete high school	1	0.3	0.3
High school diploma or GED	45	14.7	15.0
Some college	77	25.2	40.2
Bachelor's degree (e.g., BA, BS)	97	31.7	71.9
Technical college or Trade school	15	4.9	76.8
Associate's degree (e.g., AA, AS)	22	7.2	84.0
Professional degree beyond Bachelor's (e.g., MD)	6	2.0	85.9
Master's degree (e.g., MA, MS, MBA)	31	10.1	96.1
Doctorate degree (e.g., PhD, DBA, EdD)	10	3.3	99.3
Not Given	2	.7	100.0
Managerial/Departmental Level:			
Employee (no managerial duties)	135	44.1	n/a
Lower-level management	52	7.0	n/a
Middle-level management	73	23.9	n/a
Higher-level (top) management	24	7.8	n/a
Human Resources department	7	2.3	n/a
Professional (e.g., Instructor, Law Firm Partner)	15	4.9	n/a
Not Given	3	1.0	n/a

Table 3.3 (Continued)

Industry:			
Agriculture, Mining	8	2.6	2.6
Communications, Utilities	13	4.2	6.9
Construction	19	6.2	13.1
Finance, Insurance, Real Estate	14	4.6	17.6
Government	53	17.3	35.0
Health Care	31	10.1	45.1
Internet	11	3.6	48.7
Manufacturing	40	13.1	61.8
Retail, Wholesale	45	14.7	76.5
Services	45	14.7	91.2
Transportation	11	3.6	94.8
Nonprofit	8	2.6	97.4
Other (e.g., Engineering)	6	2.0	99.3
Not Given	2	.7	100.0
Organizational Size:			
10 employees or less	28	9.2	9.2
11 to 50 employees	49	16.0	25.2
51 to 100 employees	26	8.5	33.7
101 to 500 employees	63	20.6	54.2
501 to 1,000 employees	30	9.8	64.1
1,001 to 5,000 employees	51	16.7	80.7
5,001 to 25,000 employees	20	6.5	87.3
25,001 to 50,000 employees	12	3.9	91.2
50,001 to 100,000 employees	9	2.9	94.1
100,001 employees or more	16	5.2	99.3
Not Given	2	0.7	100.0
Income			
$13,500 or less	9	2.9	2.9
$13,501 to $20,000	18	5.9	8.8
$20,001 to $30,000	37	12.1	20.9
$30,001 to $40,000	52	17.0	37.9
$40,001 to $50,000	55	18.0	55.9
$50,001 to $60,000	46	15.0	70.9
$60,001 to $70,000	21	6.9	77.8
$70,001 to $80,000	18	5.9	83.7
$80,001 to $90,000	12	3.9	87.6
$90,001 to $100,000	8	2.6	90.2
$100,001 or more	28	9.2	99.3
Not Given	2	.7	100.0

Table 3.3 (Continued)

	N	%	Cumulative %
State:			
Alabama	5	1.6	1.6
Arkansas	1	.3	2.0
California	8	2.6	4.6
Colorado	1	.3	4.9
Connecticut	1	.3	5.2
Delaware	1	.3	5.6
Florida	10	3.3	8.8
Georgia	3	1.0	9.8
Illinois	3	1.0	10.8
Indiana	4	1.3	12.1
Iowa	4	1.3	13.4
Kansas	2	.7	14.1
Louisiana	46	15.0	31.0
Maine	1	.3	31.4
Massachusetts	5	1.6	33.0
Michigan	4	1.3	34.3
Minnesota	3	1.0	35.3
Missouri	2	.7	35.9
Nebraska	1	.3	36.3
Nevada	1	.3	36.6
New Hampshire	1	.3	36.9
New Jersey	4	1.3	38.2
New York	4	1.3	39.5
North Carolina	6	2.0	41.5
Ohio	10	3.3	44.8
Oklahoma	2	.7	45.4
Pennsylvania	8	2.6	48.0
South Carolina	2	.7	48.7
Tennessee	6	2.0	50.7
Texas	8	2.6	53.3
Utah	3	1.0	54.2
Virginia	1	.3	54.6
Washington	1	.3	54.9
Wisconsin	1	.3	55.2
Wyoming	1	.3	55.6
Do not live in the U.S. (e.g., Canada)	3	1.0	56.5
Not Given	133	43.5	100.0

Procedure

Participants were instructed to read an informed consent form approved by the Internal Review Board at Louisiana Tech University and to provide consent by marking a box (refer to Appendix G). Additionally, participants were given a description of pay communication including depictions for pay secrecy and pay openness, instructions, and requested to respond to the 42 prospective items that endured Study 1's analyses and 12 demographic questions (refer to Appendix L). Specifically, the participants indicated the extent to which their current employing organization engaged in certain pay communication (pay secrecy and pay openness) practices on a 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Negatively worded items were recoded to match the scale anchors (e.g., pay secrecy representing the high extreme and pay openness representing the low extreme). This analysis yielded 22 items (refer to Appendix M for an overview of the items).

Stage 1: Item Selection Process

Items were evaluated based on item-total correlations and variances. Items demonstrating high inter-item correlations with other items in the same sub-category were selected to be included in the sub-dimensions since a scale should consist of highly interrelated items (DeVellis 2012). Additionally, items with low variances (below 1.5) were eliminated since they do not allow differences between the participants to be established (DeVellis 2012). This process resulted in the elimination of 4 items, yielding 38 items. The means and standard deviations for the remaining 38 items are presented in Table 3.4.

Table 3.4 Means and Standard Deviations of Items (Stage 1 of Study 2)

Item	*M*	*SD*
1. All individual pay information is only known to a select few staff members, such as the HR hiring manager, accountant, and/or CEO.	5.20	1.88
2. An employee could be fired for discussing pay information at my organization.	4.03	2.07
3. An employees' individual pay is strictly confidential at my organization.	4.87	2.04
4. At my organization, all pay information is available to anyone.	5.49	1.94
5. Employees are well informed about pay policies at my organization.	3.08	1.75
6. Employees discover coworkers' pay through the 'grapevine' (gossip) at my organization.	4.35	1.85
7. Even though employees at my organization are not supposed to discuss their personal pay information they do.	4.35	1.75
8. I am provided information only about my individual pay level.	5.17	1.84
9. I am provided the pay average for every job in my organization.	4.41	2.06
10. I am provided my job's pay range.	3.31	2.00
11. I know about the different types, sizes, and/or frequencies of pay increases presently available.	3.60	1.93
12. I know whether my pay is above, below, or equal to the average pay for my job.	3.33	1.83
13. Management openly discusses all employees' individual pay.	5.52	1.74
14. My organization distributes pay ranges for every job in the organization.	4.30	2.05
15. My organization does not allow employees to discuss their own pay with coworkers.	4.24	1.94
16. My organization does not have a policy, procedure, or unwritten standard on discussing pay information.	4.25	1.95
17. My organization does not provide employees with any coworkers' individual pay.	5.54	1.73
18. My organization does not provide employees with the procedures used to establish pay.	3.94	1.86
19. My organization enforces the policy/rule that forbids employees from discussing their pay with each other.	3.64	1.87
20. My organization has a policy forbidding employees from discussing pay information with coworkers.	3.97	2.04
21. My organization has a rule to not share pay information with other employees.	4.28	2.00
22. My organization has a solid pay structure/model that I understand.	3.67	1.87
23. My organization is secretive when it comes to employee pay.	4.62	1.85
24. My organization is very strict in regards to employees not talking about pay.	3.80	1.91

Table 3.4 (Continued)

25. My organization keeps all pay information strictly confidential.	4.91	1.90
26. My organization makes it clear how pay is determined for my job.	3.45	1.88
27. My organization makes it clear that pay should not be discussed under any circumstances.	4.05	1.97
28. My organization makes the entire pay structure/model available.	4.29	2.00
29. My organization provides employees with information with information about how pay is determined.	3.64	1.87
30. My organization requires employees to sign a contractual agreement stating they will comply with the pay secrecy policy by not discussing their individual pay information with coworkers.	2.89	1.97
31. My organization shows its' concern for employees' privacy/confidentiality by not releasing everyone's individual pay level.	4.80	1.83
32. My organization suggests individual pay information should be kept private.	4.89	1.76
33. My organization verbally expresses a pay secrecy policy/rule with employees.	3.95	1.95
34. My organization withholds my job's pay average from me.	3.41	1.74
35. No pay information, other than personal pay level, is disclosed to employees at my organization.	4.46	1.88
36. Only a few employees have access to pay information at my organization.	4.96	1.90
37. There are no negative consequences for discussing pay at my organization.	3.95	1.88
38. There is a statement in my organization's employee handbook/manual stating employees should not discuss their pay with coworkers.	3.85	2.04

Note: Responses ranged from 1 (strongly disagree) to 7 (strongly agree). $N = 306$.

Stage 2: Exploratory Factor Analysis

Items were evaluated on their interrelationships (factor weight and factor loadings) using a principal axis factor analysis with direct oblique rotation. A principal axis factor analysis was used because this type of factor analysis is primarily concerned with the common variance and identifying the underlying dimensions. Additionally, a direct oblique rotation was utilized since the items were expected to be correlated. A factor weight of .40 was used as the minimum cutoff. Additionally, items were only allowed to load on one factor. Therefore, the minimum difference between weights for an item on different factors was more than .10. Items not meeting the criteria were eliminated. This process resulted in 16 items being removed due to not meeting the minimum requirements, yielding 22 items. Additionally, the 22 items loaded on four separate factors, resulting in a potential four-factor model. As shown in Table 3.5, these four factors appear to represent different aspects of pay communication practices. These sub-dimensions were labeled Pay Policy Existence, Pay Structure, Organizational Norms, and Employee Norms.

Table 3.5 Principal Axis Factor Analysis, Oblimin Rotation (Stage 2 of Study 2)

	Factor Loadings			
Item	Pay Policy Existence	Pay Structure	Organizational Norms	Employee Norms
1. An employee could be fired for discussing pay information at my organization.	**.76**		.49	
2. At my organization, all pay information is available to anyone.	.44		**.74**	
3. Employees discover coworkers' pay through the 'grapevine' (gossip) at my organization.				**.76**
4. Even though employees at my organization are not supposed to discuss their personal pay information they do.				**.74**
5. I am provided my job's pay range.		**.70**		
6. I know about the different types, sizes, and/or frequencies of pay increases presently available.		**.74**		
7. My organization does not allow employees to discuss their own pay with coworkers.	**.84**		.58	

Table 3.5 (Continued)

8. My organization enforces the policy/rule that forbids employees from discussing their pay with each other.	**.81**		.43	
9. My organization has a policy forbidding employees from discussing pay information with coworkers.	**.86**		.45	
10. My organization has a rule to not share pay information with other employees.	**.86**		.56	
11. My organization has a solid pay structure/model that I understand.		**.85**		
12. My organization is very strict in regards to employees not talking about pay.	**.89**		.51	
13. My organization keeps all pay information strictly confidential.	.65		**.82**	
14. My organization makes it clear how pay is determined for my job.		**.84**		
15. My organization makes it clear that pay should not be discussed under any circumstances.	**.92**		.59	
16. My organization makes the entire pay structure/model available.		**.75**	.42	
17. My organization provides employees with information about how pay is determined.		**.82**		
18. My organization shows its' concern for employee's privacy/confidentiality by not releasing everyone's individual pay level.	.42		**.72**	
19. My organization suggests individual pay information should be kept private.	.62		**.77**	.47
20. My organization verbally expresses a pay secrecy policy/rule with employees.	**.81**		.61	

Table 3.5 (Continued)

21. Only a few employees have access to pay information at my organization.	.49	**.75**
22. There is a statement in my organization's employee handbook/manual stating employees should not discuss their pay with coworkers.	**.78**	.53

Note: Numbers in boldface indicate dominant factor loadings.

Study 3: Scale Validation

Sample

Participants were recruited using a third party online survey organization (e.g. Mechanical Turk). Those who completed the anonymous survey were compensated one dollar directly by the online survey organization. The respondents were completely anonymous to the researcher. The number of participants was 611. The majority of the participants were female (57.9%), Caucasian (73.6%), working full-time (81.5%), had no labor union involvement for their job or any jobs in their organization (73.3%), and possessed at least a bachelor's degree (70.5%). The participants' ages ranged from 18 to 68 with over 40% of the participants being in their twenties and a third (33.4%) being in their thirties. The mean age was thirty-four. Most of the participants had been with their current employer for one to five years (55%) and were classified as an 'employee' with no managerial duties (62.2%). Refer to Table 3.6 for a complete overview of the descriptive statistics for the sample.

Table 3.6 Descriptive Statistics for Sample (Study 3)

	N	%	Cumulative %
Gender:			
Female	354	57.9	57.9
Male	257	42.1	100.0
Age:			
18 and 19	2	.3	.3
20's	252	41.2	41.6
30's	204	33.4	75.0
40's	78	12.8	87.7
50's	48	7.9	95.6
60's	27	4.4	100.0
Ethnicity:			
African American	33	5.4	5.4
American Indian	28	4.6	10.0
Asian/Pacific Islander	62	10.1	20.1
Caucasian	450	73.6	94.1
Latino/Hispanic	21	3.4	97.5
Middle Eastern	4	.7	98.2
Native American	11	1.8	100.0
Tenure:			
Less than 1 year	88	14.4	14.4
1 to 5 years	336	55.0	69.4
6 to 10 years	117	19.1	88.5
11 to 15 years	45	7.4	95.9
16 to 20 years	15	2.5	98.4
21 to 25 years	4	.7	99.0
26 years or more	6	1.0	100.0
Hours Per Week:			
Less than 10 hours	8	1.3	1.3
10 to 20 hours	24	3.9	5.2
21 to 30 hours (part-time)	81	13.3	18.5
30 (full-time) to 40 hours	291	47.6	66.1
More than 40 hours	207	33.9	100.0
Education:			
Did not complete high school	8	1.3	1.3
High school diploma or GED	35	5.7	7.0
Some college	137	22.4	29.5
Bachelor's degree (e.g., BA, BS)	253	41.4	70.9
Technical college or Trade school	10	1.6	72.5

Table 3.6 (Continued)

Associate's degree (e.g., AA, AS)	60	9.8	82.3
Professional degree beyond Bachelor's (e.g., MD)	14	2.3	84.6
Master's degree (e.g., MA, MS, MBA)	88	14.4	99.0
Doctorate degree (e.g., PhD, DBA, EdD)	6	1.0	100.0
Industry:			
Agriculture, Mining	13	2.1	2.1
Communications, Utilities	22	3.6	5.7
Construction	14	2.3	8.0
Finance, Insurance, Real Estate	47	7.7	15.7
Government	101	16.5	32.2
Health Care	76	12.4	44.7
Internet	31	5.1	49.8
Manufacturing	34	5.6	55.3
Retail, Wholesale	84	13.7	69.1
Services	151	24.7	93.8
Transportation	15	2.5	96.2
Nonprofit	22	3.6	99.8
Other	1	0.2	100.0
Organizational Size:			
10 employees or less	65	10.6	10.6
11 to 50 employees	112	18.3	29.0
51 to 100 employees	72	11.8	40.8
101 to 500 employees	115	18.8	59.6
501 to 1,000 employees	59	9.7	69.2
1,001 to 5,000 employees	71	11.6	80.9
5,001 to 25,000 employees	51	8.3	89.2
25,001 to 50,000 employees	16	2.6	91.8
50,001 to 100,000 employees	14	2.3	94.1
100,001 employees or more	36	5.9	100.0
Union Status:			
Yes, job is unionized but not all jobs in organization	45	7.4	7.4
Yes, entire organization is unionized	48	7.9	15.2
No, but other jobs in the organization are unionized	70	11.5	26.7
No, no job in the entire organization is unionized	448	73.3	100.0
Managerial/Departmental Level:			
Employee (no managerial duties)	380	62.2	n/a
Lower-level management	102	16.7	n/a
Middle-level management	103	16.9	n/a
Higher-level (top) management	11	1.8	n/a
Human Resources department	20	3.3	n/a

Table 3.6 (Continued)

Professional (e.g., Medical Doctor)	9	1.5	n/a
Income			
$13,500 or less	96	15.7	15.7
$13,501 to $20,000	73	11.9	27.7
$20,001 to $30,000	124	20.3	48.0
$30,001 to $40,000	99	16.2	64.2
$40,001 to $50,000	74	12.1	76.3
$50,001 to $60,000	47	7.7	84.0
$60,001 to $70,000	31	5.1	89.0
$70,001 to $80,000	26	4.3	93.3
$80,001 to $90,000	13	2.1	95.4
$90,001 to $100,000	6	1.0	96.4
$100,001 or more	22	3.6	100.0
State:			
Alabama	8	1.3	1.3
Arkansas	17	2.8	4.1
California	8	1.3	5.4
Colorado	52	8.5	13.9
Connecticut	14	2.3	16.2
Delaware	6	1.0	17.2
Florida	1	.2	17.3
Georgia	31	5.1	22.4
Illinois	21	3.4	25.9
Indiana	4	.7	26.5
Iowa	5	.8	27.3
Kansas	22	3.6	30.9
Louisiana	15	2.5	33.4
Maine	2	.3	39.3
Maryland	5	.8	40.1
Massachusetts	12	2.0	42.1
Michigan	15	2.5	44.5
Minnesota	9	1.5	46.0
Mississippi	9	1.5	47.5
Missouri	15	2.5	49.9
Montana	4	.7	50.6
Nebraska	5	.8	51.4
Nevada	5	.8	52.2
New Hampshire	2	.3	52.5
New Jersey	17	2.8	55.3
New Mexico	4	.7	56.0
New York	38	6.2	62.2
North Carolina	23	3.8	66.0

Table 3.6 (Continued)

Ohio	30	4.9	70.9
Oklahoma	7	1.1	72.0
Oregon	7	1.1	73.2
Pennsylvania	21	3.4	76.6
Rhode Island	3	.5	77.1
South Carolina	13	2.1	79.2
South Dakota	2	.3	79.5
Tennessee	14	2.3	81.8
Texas	51	8.3	90.2
Utah	4	.7	90.8
Virginia	20	3.3	94.1
Washington	15	2.5	96.6
West Virginia	4	.7	97.2
Wisconsin	15	2.5	99.7
Wyoming	1	.2	99.8
Other (e.g., Washington, D.C.)	1	.2	100.0

Procedure

Participants were instructed to read an informed consent form approved by the Internal Review Board at Louisiana Tech University and to provide consent by marking a box (refer to Appendix G). The participants could not proceed with the survey until they had marked the box and pressed next. Participants were given instructions and requested to respond to the 22 prospective items that endured Study 2's analyses and 12 demographic questions (refer to Appendix N for an overview of the survey). Specifically, the participants indicated the extent to which their current employing organization engaged in certain pay communication (pay secrecy and pay openness) practices on a 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). Additionally, participants responded to other pay communication scales (e.g., Day 2006; Mulvey et al. 2002; Noy 2007) and a High Performance Work Practices measure (e.g., Huselid 1995) for construct validation.

Negatively worded items were recoded to match the scale anchors (e.g., pay secrecy representing the high extreme and pay openness representing the low extreme).

<u>Stage 1: Dimensionality</u>

A confirmatory factor analysis (CFA) using Amos 20 was conducted to evaluate the fit of the measurement model (e.g., the relationship between the items and the factors) and to cross-validate the dimensionality of the scale. A CFA was performed on each sub-factor (or first-order latent variables) of the Pay Communication model as proposed in the EFA solution. Additionally, a second-order CFA using all four extracted pay communication dimensions was conducted to examine whether all four identified dimensions actually refer to a superordinate pay communication construct. The fit of the four-factor model was also compared to the fits of 1-factor, 2-factor, and 3-factor models.

First, the four sub-factors of the Pay Communication model were analyzed independently using several Model Fit indices (e.g., RMSEA) and Cronbach's alpha coefficient (Cronbach 1951). The Comparative Fit Index (CFI), Normative Fit Index (NFI), and Goodness of Fit Index (GFI), Root Mean Square Error of Approximation (RMSEA), and χ^2 indices were used to evaluate the fit of each sub-factor. The CFI, NFI, and GFI indicate a well-fitting model when values are closer to 1.0; whereas, the Root Mean Square Error of Approximation indicates a well-fitting model when values are below .08 (Hair, Black, Babin, and Anderson 2010). The results of the independent sub-factor indices are presented in Table 3.7. Each sub-factor demonstrated reliability by having suitable Cronbach's alpha coefficients of above .70 (Hair et al. 2010). The fit indices for each sub-factor measurement model (except for the Employee Norms sub-factor) indicated that each sub-factor demonstrated a moderate or well fit. The Employee

Norms sub-factor was unable to be analyzed independently because it only consists of two measured items and therefore, is an underidentified model.

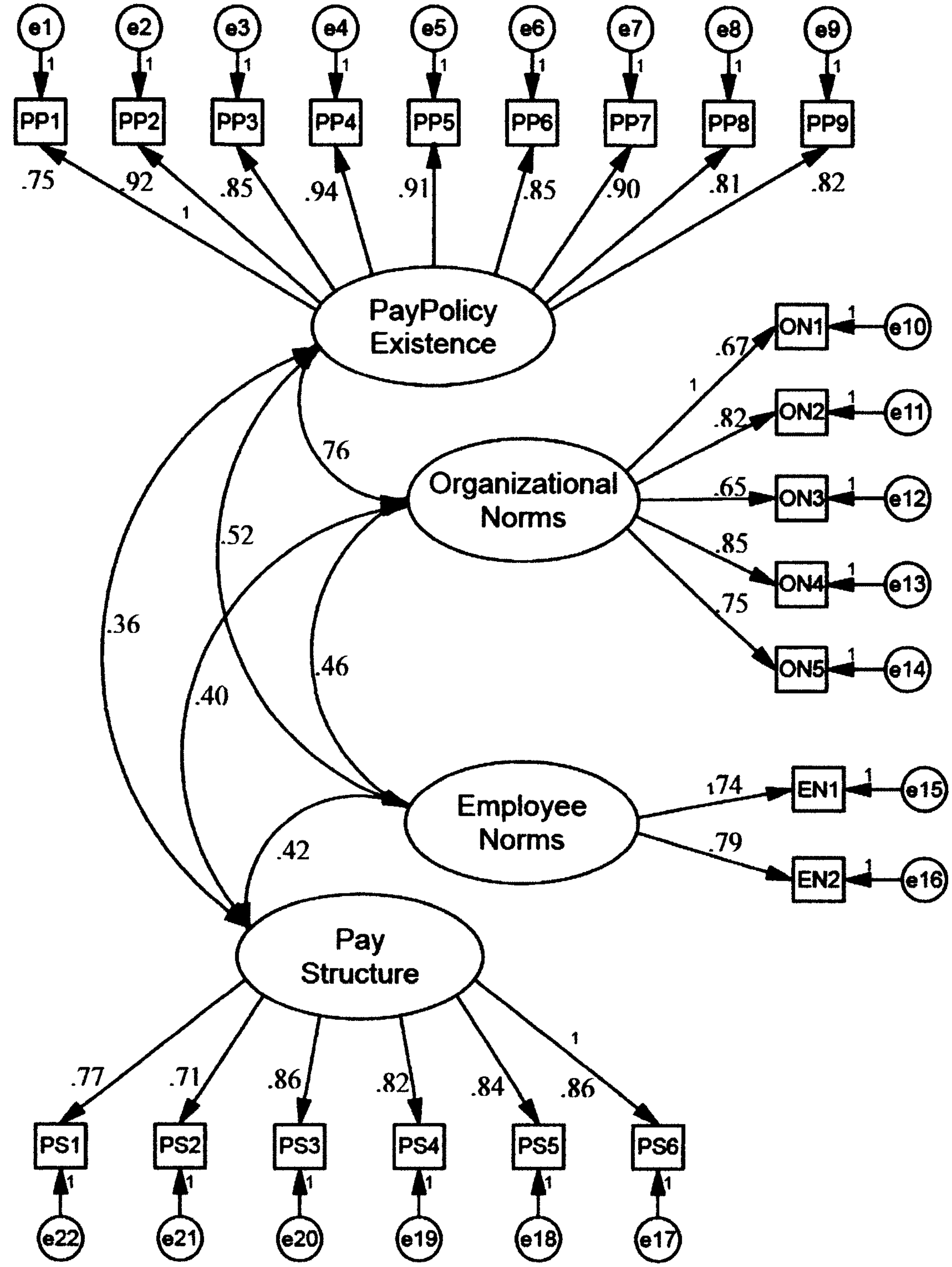
Table 3.7 Pay Communication Model Fit Indices from Amos (Study 3)

Measurement Model	χ^2	df	CFI	NFI	GFI	RMSEA	AVE	Cronbach's α
Pay Policy Existence sub-factor	311.76	27	.95	.95	.89	.13	74%	.96
Pay Structure sub-factor	70.32	9	.98	.97	.96	.11	66%	.92
Organizational Norms sub-factor	13.77	5	.99	.99	.99	.05	57%	.87
Employee Norms sub-factor	-	-	-	-	-	-	59%	.74
1-factor model	4000.54	209	.67	.66	.51	.17	67%	.98
2-factor model	1878.10	208	.86	.84	.74	.12	67%	.98
3-factor model	1669.67	206	.87	.86	.76	.11	67%	.98
4-factor model	1143.85	205	.92	.90	.85	.09	67%	.98

Note: $N = 611$.

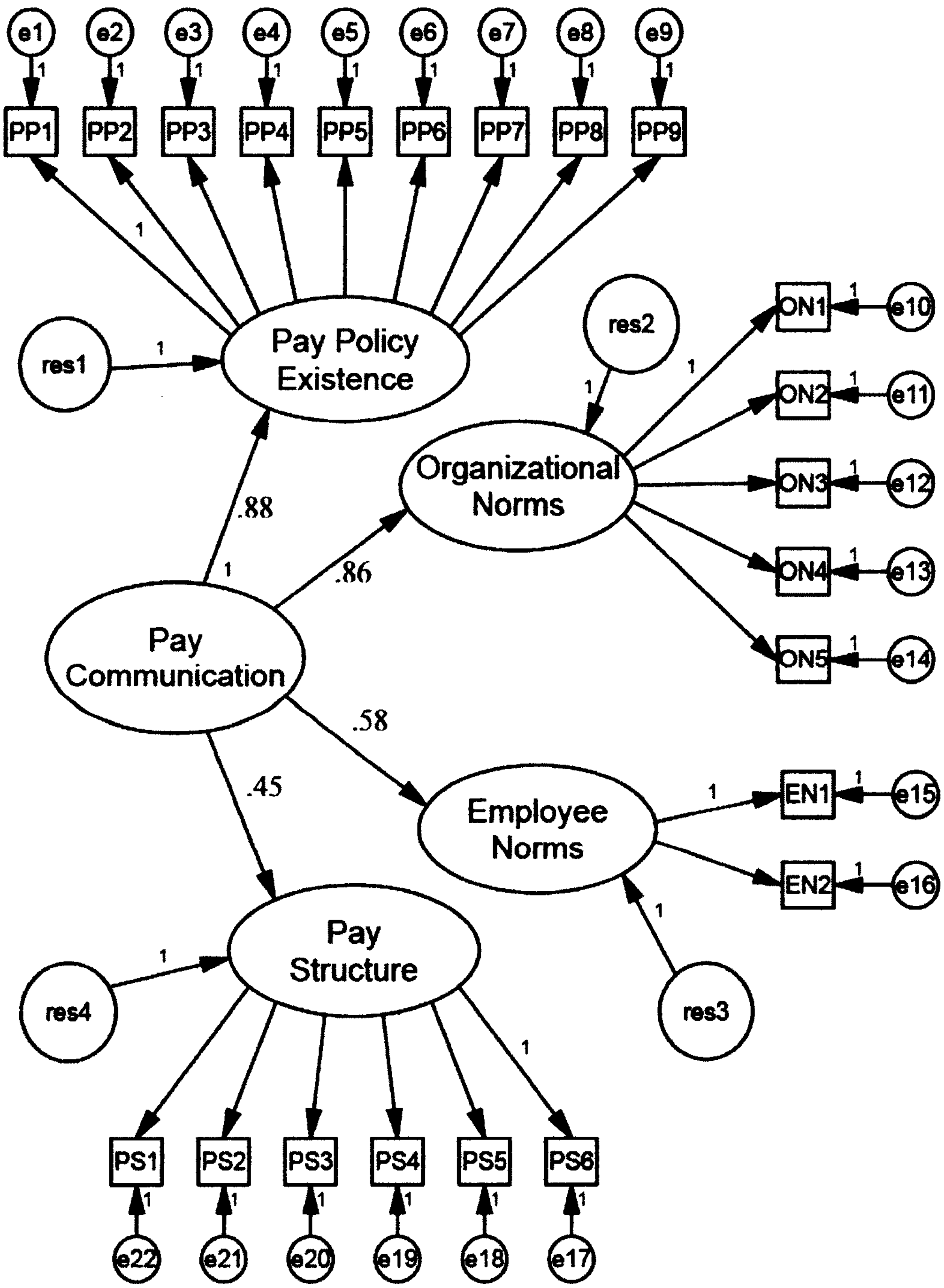
Convergent validity, the extent to which the items of a construct share a high proportion of variance in common, for each sub-factor was determined. Three methods were used to establish convergent validity: item or factor loadings (at least .5 or higher), Average Variance Extracted (AVE; at least 50% or higher), and reliability by means of Cronbach's alpha coefficient (at least .70 or above). Each sub-factor's item loadings are shown in Figure 3.1, while the AVE's and Cronbach's alpha coefficients are shown in Table 3.7. Each sub-factor had significant item loadings of .65 or higher with only two items loading below .70. Additionally, the AVE for the sub-factors ranged from .57 to .74 and the Cronbach's alpha coefficients ranged from .74 to .96. Therefore, each sub-factor exhibits convergent validity.

Figure 3.1 Sub-Factor Correlations and Factor Loadings from Amos (Study 3)



A second-order CFA was conducted to determine whether the Pay Communication construct was better represented by the 4-factor model, 3-factor model, 2-factor model or 1-factor model (where pay communication is a first-order latent variable). The fit of each measurement model was evaluated using the same Model Fit indices (e.g., CFI, NFI, GFI, RMSEA, χ^2) used for analyzing each sub-factor independently. As shown in Table 3.7, the 4-factor model demonstrates a better fit for the second-order latent variable pay communication than the 3-factor model, 2-factor model, and 1-factor model. Additionally, each of the four sub-factors (first-order latent variables) have a significant ($p<0.001$) and positive loading on the second-order latent variable, ranging from .45 to .88 (refer to Figure 3.2). Furthermore, all of the sub-factors have significant ($p<0.001$) correlations with each other (refer to Figure 3.1). Therefore, the four sub-factors demonstrate a convergence on a common underlying construct (Lages, Lages, and Lages 2005), which further suggests a second-order model accounts for the data better than a first-order model (or 1-factor model). Based on these results (e.g., the overall fit indices, the first-order latent variables factor loadings, and the sub-factors correlations), the 4-factor model displays the better fit.

Figure 3.2 Second-Order 4-Factor Model of Pay Communication from Amos (Study 3)



Stage 2: Convergent and Discriminant Validity

Convergent validity exists when a measure covaries with other measures alleging to assess the same or similar construct in that scores on the pay communication scale developed in this paper should be relatively highly correlated with scores on other pay communication, pay secrecy, and pay openness measures. Convergent validity was analyzed by comparing the Pay Communication scale developed in this paper with Noy's (2007) POPS scale, Mulvey et al.'s (2002) Pay Knowledge scale, and Day's (2006) Pay Communication scale.

Specifically, it is expected for each comparison pay communication scale to statistically correlate with the pay communication measure developed in this paper. Additionally, it is predicted that both Day's (2006) and Mulvey et al.'s (2002) scales will have higher correlations with the Pay Structure sub-factor since both of these earlier scales and this scales sub-factor focus on the amount of pay information employees are provided and their understanding of that information. However, the significant correlations between Day's (2006) and Mulvey et al.'s (2002) scales with the Pay Communication scale and its sub-factors are expected to be negative since both Day and Mulvey et al's scales have pay openness representing the larger numbered anchors (the opposite of the Pay Communication scale). Also, Noy's (2007) Organizational Norms sub-dimension is predicted to have a higher correlation with the Organizational Norms sub-factor; whereas, both the Enforcement and Policies and Rules sub-dimensions are expected to have a higher correlation with the Pay Policy Existence sub-factor. An overview of the correlation comparisons are presented in Table 3.8.

Table 3.8 Correlations between Pay Communication, Similar Measures, and Dissimilar Measures (Study 3)

	Observed Correlations				
Comparison Measure	Pay Policy Existence	Pay Structure	Organizational Norms	Employee Norms	Pay Communication (overall)
Noy's POPS scale	.93**	.43**	.72**	.45**	.89**
Noy's Policies and Rules sub-factor	.93**	.39**	.67**	.44**	.86**
Noy's Enforcement sub-factor	.91**	.40**	.64**	.40**	.85**
Noy's Organizational Norms sub-factor	.76**	.47**	.79**	.43**	.83**
Mulvey's Pay Knowledge scale	-.34**	-.84**	-.31**	-.34**	-.58**
Day's Pay Communication scale	-.16**	-.72**	-.29**	-.20**	-.44**
Huselid's HPWP scale	-.10*	-.60**	-.04	-.20**	-.28**
Huselid's Employee Skills and Organizational Structures sub-dimension	-.11**	-.59**	-.06	-.20**	-.29**
Huselid's Employee Motivation sub-dimension	-.04	-.47**	.03	.15**	-.18**

Note: $N = 611$.
$^{*}p < .05$. $^{**}p < .01$.

Results for Convergent Validity. Consistent with expectations, both Day's (2006) and Mulvey et al's (2002) scales are significantly negatively correlated ($p < .01$) with the Pay Communication scale and all four of the sub-factors. Additionally, both Day's (2006) and Mulvey et al's (2002) scales have the highest correlation with the Pay Structure sub-factor as expected.

As predicted, Noy's (2007) POPS scale and each of its sub-dimensions are significantly positively correlated ($p < .01$) with the Pay Communication scale and each of its sub-factors. Furthermore and as expected, both the Enforcement and Policies and Rules sub-dimensions have the highest correlation with the Pay Policy Existence sub-factor. Contrary to expectations, Noy's (2007) Organizational Norms sub-dimension has the highest correlation with the overall Pay Communication scale, with the next highest correlation being the Organizational Norms sub-factor. Thus, evidence of convergent validity is provided for the Pay Communication scale.

Discriminant validity exists when the measure does not covary with other measures alleged to assess different constructs in that scores on a particular scale should either not be related or only slightly correlated with scores on other construct measures. Discriminant validity was analyzed by comparing the Pay Communication scale developed in this paper with a modified adaptation of Huselid's (1995) High Performance Work Practices (HPWP) measure, which consists of two sub-dimensions. The first sub-dimension is referred to as Employee Skills and Organizational Structures and the second is labeled Employee Motivation. This measure was utilized for discriminant validity because it analyzes organizational work practices that are dissimilar from pay communication practices. Therefore, Huselid's (1995) HPWP scale is expected to have low, yet most likely still significant (due to the both scales encompassing organizational practices), correlations with the Pay Communication scale.

Although the correlation comparison method is a common approach in determining discriminant validity, it does not provide strong evidence of discriminant validity as two distinct constructs may be related (e.g., have a high correlation) due to some underlying theoretical reasoning (Hair et al. 2010). Therefore, discriminant validity was also analyzed by comparing the shared variance (e.g., the square of the correlation) among the Pay Communication scale and Huselid's (1995) HPWP scale to each of the scales' AVE. The logic of this notion is that a construct (e.g., Pay Communication or HPWP) should not explain more of the variance it shares with another construct than the average variance extracted from its own scale items. Thus, discriminant validity is demonstrated when the squared correlation estimate of two constructs is less than the AVE of each of those constructs (Fornell and Larcker 1981; Hair et al. 2010).

Results for Discriminant Validity. The results of the correlation comparison between the Pay Communication scale and Huselid's (1995) HPWP scale show that the overall HPWP scale and its two sub-dimensions do significantly correlate with the Pay Communication scale and most of its sub-factors (refer to Table 3.8). Specifically, the overall HPWP scale and the Employee Skills and Organizational Structures sub-dimension significantly negatively correlate with the overall Pay Communication scale ($p < .01$), the Pay Structure sub-factor ($p < .01$), the Employee Norms sub-factor ($p < .01$), and the Pay Policy Existence sub-factor ($p < .05$ and $p < .01$, respectively). The Employee Motivation sub-dimension significantly negatively correlates with the overall Pay Communication scale ($p < .01$) and the Pay Structure sub-factor ($p < .01$), and has a significant positive correlation with the Employee Norms sub-factor ($p < .01$). Neither the overall HPWP scale nor its two sub-dimensions significantly correlate with the Organizational Norms sub-factor. Although the HPWP scale and its sub-dimensions significantly correlate with the Pay Communication scale and most of its sub-dimensions, the correlations are smaller (except for those regarding the Pay Structure sub-factor) than the correlations the Pay Communication scale has with other pay communication measures (e.g., Noy 2007). The larger correlations between the HPWP scale and its sub-dimensions with the Pay Structure sub-factor are not surprising since both the sub-factor and the HPWP scale measure different organizational practices.

The comparison of the shared variance (e.g., the square of the correlation) among the Pay Communication scale and Huselid's (1995) HPWP scale to each of the scales' AVE was also analyzed. As shown in Table 3.9, the squared correlation of each pair (the Pay Communication scale or a sub-factor and the HPWP scale or a sub-dimension) was lower than the AVE for each of the constructs involved. Thus, evidence of discriminate validity is provided for the Pay Communication scale.

Table 3.9 Squared Correlations and Average Variance Extracted (AVE) for Pay Communication and Dissimilar Measures (Study 3)

		Squared Correlations				
Comparison Measure		Pay Policy Existence	Pay Structure	Organizational Norms	Employee Norms	Pay Communication (overall)
	AVE	**74.5%**	**65.9%**	**56.6%**	**58.6%**	**66.6%**
Huselid's HPWP scale	**40.2%**	.01	.36	.00	.04	.08
Huselid's Employee Skills and Organizational Structures sub-dimension	**40.5%**	.01	.35	.00	.04	.08
Table 3.9 (Continued)						
Huselid's Employee Motivation sub-dimension	**39.4%**	.00	.22	.00	.02	.03

Note: Numbers in boldface indicate Average Variance Extracted for that construct. $N = 611$.

Discussion

The purpose of this study was to develop a Pay Communication scale that evaluated all aspects of pay communication practices involving pay secrecy and pay openness. This objective was achieved as the scale development and validation process was followed precisely and the Pay Communication scale and its sub-dimensions demonstrated construct validity.

The stage development and validation process encompassed three multistage studies. Study 1 consisted of two stages. The first stage involved having Human Resource practitioners that were members of the Society of Human Resource Management generate items pertaining to all aspects of pay communication practices (pay secrecy and pay openness). This stage generated 79 items that covered multiple aspects of pay communication practices. The second stage entailed having a panel of experts (both Ph.D.'s and doctoral students) evaluate the items generated in the first stage on three criteria to reduce the items into a manageable representation of pay communication. The evaluations of the generated items were on the extent to which each item was consistent with the pay communication description (either pay secrecy or pay openness), its generalizability to a wide variety of organizations and occupations, and its clarity and conciseness with editing of the items being allowed. This process resulted in 42 items.

Study 2 involved further refining the items over two stages. The first stage analyzed the inter-item correlations and variances of the items. This process resulted in the removal of 4 items, yielding 38 items. The second stage examined the interrelationships (factor weight and factor loadings) of the items in an exploratory factor analysis. A principal axis factor analysis with a direct oblimon rotation was used to evaluate the items. This process yielded 22 items loading on four distinct factors, which were labeled Pay Policy Existence, Pay Structure, Organizational Norms, and Employee Norms.

Study 3 analyzed and confirmed the proposed scale and its dimensionality over two stages. The first stage involved conducting a confirmatory factor analysis of the proposed scale and each sub-dimension. Additionally, the 4-factor model was compared to a 3-factor model, a 2-factor model, and a 1-factor model. This process confirmed that the overall Pay Communication scale along with each sub-dimension demonstrated a good fit and reliability. The 4-factor model was identified as having a better fit than the 3-factor model, the 2-factor model, and the 1-factor model. The second stage entailed the final evaluation of construct validation by providing evidence that the Pay Communication scale has convergent and discriminant validity. Convergent validity was successfully determined by comparing the correlations between the Pay Communication scale and other pay communication scales (e.g., Day 2006; Mulvey et al. 2002; Noy 2007). Evidence of discriminant validity was provided by analyzing the correlations between the Pay Communication scale and a High Performance Work Practice scale (Huselid, 1995). Thus, the Pay Communication scale developed in this paper demonstrated construct validity.

The development of this Pay Communication scale contributes to the literature by providing researchers with an inclusive measure that has the ability to accurately measure many different aspects of pay secrecy and pay openness practices. This scale encompasses all of the aspects that previous pay communication measures have included, even though some of the facets are not represented by many items. Additionally, this scale has a potentially important function in the pay communication research by helping future researchers build on the limited and sometimes conflicting earlier findings of studies of pay communication. A possible reason for the underdevelopment and inconsistency in the existing research may be due to the lack of an inclusive pay communication measure, which this paper hopes to resolve by providing a comprehensive pay communication scale.

Limitations

Although tremendous efforts were taken to strengthen this study's scale development methodology, there are some limitations that need to be discussed. First, the pay communication items generated in Study 1 were produced by members of a Louisiana SHRM chapter. Therefore, microcultural differences may lead to a discrepancy in the terminology, comprehension, and participants' perceptions and reactions to pay communication practices (e.g. pay secrecy and pay openness approaches). Additionally, all of this study's participants worked in their employer's Human Resources department and possessed at least a Bachelor's degree. Therefore, there is a possibility that the phrasing of some items are more complex than someone possessing less education or HR experience would comprehend. For instance, the understanding of certain key words, such as pay structure or model, may be difficult for less educated individuals or those outside of the Human Resources department.

Another limitation may be that the items are based on self-report and the participant's perceptions rather than the actuality of the employing organization's pay communication practices. However, some participants may not have knowledge of certain pay communication practices (such as the existence of a pay secrecy policy or availability of pay information) or a concern for such practices; therefore, reliance on participant's perceptions is considered more necessary and important than gathering actual pay communication practices information from participant's employers.

The possibility that all aspects of pay communication may not be included in the final scale may also be a limitation. For instance, the availability of a job's pay average or median, all of the organizational jobs' pay ranges, and all of the organizational jobs' pay averages are not represented in the final scale. However, the more common forms are presented in the scale.

The fact that the Employee Norms sub-dimension consists of only two items is another limitation. However, the researcher is confident that future studies could exclude this sub-dimension if desired without any problems or difficulties in regards to the models fit or ability to accurately assess pay communication practices. Additionally, future research may further develop this sub-dimension by adding additional items.

The generalizability of this scale to countries outside of the U.S. is also a limitation. Since all of the participants in Study 1 and Study 3 and the majority of the participants in Study 2 were U.S. residents the scale may not have the ability to properly and accurately measure pay communication practices of organizations residing in other countries.

A final limitation is the data collection methods used in this research was completely online. Therefore, this research has an underrepresentation of employees lacking internet access. Nonetheless, the researcher believes this did not affect or bias the scale development process in any manner.

Future Research

Despite these limitations, there are many future directions for the pay communication literature. First, the utilization of this Pay Communication scale should aid the pay communication literature in its further expansion. By having this validated pay communication scale, the literature should flourish and prosper since it will be easier to gather information about pay communication practices. Additionally, this scale should assist in further developing the pay communication literature as it allows researchers to analyze multiple levels of pay communication practices in one study.

Another future avenue involves the comparison between the overall Pay Communication scale and the scale without the presence of the Employee Norms sub-dimension by analyzing both measures' model fit and ability to accurately and successfully predict employee's attitudes and behaviors.

Reanalyzing prior conflicting findings in the pay communication literature, such as those involving the job satisfaction outcome, is also a future route for research utilizing this scale. Since some of the previous studies conflict with one another, this scale could help identify whether pay secrecy has a significantly negative or positive impact on those employee attitudes or behaviors.

The generalizability of this scale to other countries is a final future path that will be discussed. This scale should be tested in multiple countries to identify its usefulness and ability to successfully predict non-U.S. employee outcomes. However, the Pay Communication scale may need to be modified since labor laws differ across countries.

CHAPTER 4

PAY COMMUNICATION AND WORKPLACE DEVIANCE: THE HARMFUL EFFECTS OF AN UNLAWFUL ORGANIZATIONAL PAY PRACTICE

Organizations vary in the pay communication practices they utilize, with the majority of U.S. organizations favoring the pay secrecy approach rather than the pay openness approach (Balkin and Gomz-Mejia 1985; Hrnext.com Survey 2001; Lawler 1981; Scott et al. 2003). However, Lawler (e.g., 1965a, 2003) and other researchers (e.g., Colella et al. 2007) have spent decades attempting to demonstrate the negative effects of pay secrecy by showing how it causes misestimations of others' pay (e.g., Lawler 1965a, 1966), pay dissatisfaction (e.g., Lawler 1967), and reduced performance (e.g., Bamburger and Belogolovsky 2010), among other things.

This objective of this paper is to further demonstrate the negative effects of pay secrecy practices by analyzing the relationship pay secrecy has with workplace deviance. Specifically, pay secrecy is expected to be positively related to workplace deviance. Additionally, the four sub-dimensions of organizational justice (e.g., distributive and procedural justice) along with two forms of trust (e.g., organizational and managerial trust) are anticipated to mediate the relationship between pay secrecy and workplace deviance. Continuance commitment (measured as lack of perceived job alternatives) is predicted to have an interaction effect on the pay secrecy-workplace deviance relationship.

Hypotheses are presented and analyzed using moderated hierarchical regression, yielding support for the direct relationship and mediating relationships. Additionally, partial support was found for the moderating relationship. Limitations and future directions are discussed.

Literature Review

Pay communication is the compensation practice that determines when, how, and which pay information (such as pay ranges, pay raises, pay averages, individual pay levels, and/or the entire pay structure) is distributed and communicated to employees and possibly outsiders (termed organizational restrictions) and whether discussions involving pay information are permitted amongst employees and possibly with outsiders (termed employee restrictions). The goal of pay communication practices are to support organizations in achieving their compensation systems' goals and objectives (Gely and Bierman 2003), such as increased performance.

Pay communication practices differ among organizations as the degree of these practices vary by the amount and type of pay information provided or withheld to employees (Gomez-Mejia and Balkin 1992; Milkovich and Newman 2005). Therefore, pay communication practices exist along a continuum and appear in a variety of forms (Burroughs 1982; Colella et al. 2007; Lawler 1981; Lawler and Jenkins 1992; Patten 1978). The two anchors (or commonly acknowledged practices) of the pay communication continuum are pay secrecy and pay openness. The extent to which a pay secrecy or pay openness practice is utilized depends on the needs and strategic goals of the organization.

Both pay communication (pay secrecy and pay openness) practices consist of two aspects. Pay openness is an organizational practice that generally involves (1) the organization distributing most, if not all, pay information to employees on a regular basis (usually at specific time intervals such as yearly) or upon request, and (2) employees being allowed to discuss their personal pay information with other organizational members (and possibly with outsiders).

Consequently, pay secrecy is an organizational practice that generally (1) prohibits the organization (and management) from distributing and communicating most, if not all, pay information to employees (Bamburger and Belogolovsky 2010; Colella et al. 2007; deCarufel 1986), and (2) involves the adoption of an organizational policy (usually referred to as a pay secrecy policy but also labeled as pay confidentiality rules; (Bierman and Gely 2004; Gely and Bierman 2003)) that discourages or forbids employees to discuss their personal pay information with other organizational members and possibly with outsiders (Bamberger and Belogolovsky 2010; Bierman and Gely 2004; Burroughs 1982; Colella et al. 2007; Gely and Bierman 2003; Thompson and Pronsky 1975). A pay secrecy policy practice is usually the most detectable pay communication practice among employees and is expressed either in writing (such as in employee manuals) or verbally (such as during an employee orientation or employee meeting). Organizations may attempt to obtain compliance with a pay secrecy policy practice by compelling employees to sign a pledge stating they will not discuss pay information with other organizational members (and possibly with outsiders) or by having policy violators suffer disciplinary consequences (such as termination; (Gomez-Mejia and Balkin 1992)). The pay secrecy policy aspect intensifies as the policy becomes more concrete or the violation repercussions become more severe.

A variety of pay communication practices (such as mild pay secrecy or moderate pay openness) reside along the continuum between the complete pay secrecy anchor and complete pay openness anchor. For instance, a mild pay secrecy practice may involve employees being provided with only their personal pay information, and pay range and pay average for their personal pay level, and no existence of a pay secrecy policy; whereas, a moderate pay openness practice may involve employees being supplied with their personal pay information, and pay ranges and pay averages for their pay level and adjacent pay levels in the pay structure.

Despite pay secrecy usually being considered a valuable organizational practice, the NLRB and the federal court system have consistently ruled pay secrecy policy practices to be in violation of the NLRA and thus, illegal (Bierman and Gely 2004; Gely and Bierman 2003). Specifically, a pay secrecy policy practice violates sections 7 and 8 (a)(1) of the NLRA since it prohibits employees from discussing their employment conditions (such as pay information) with other organizational members (King 2003). However, a pay secrecy policy practice does not violate the NLRA when it only pertains to managers or is worded to be understood as protecting an organizations' confidential information (such as trade secrets or customer information) by prohibiting its disclosure to unauthorized individuals or entities.

Pay secrecy has been associated with several undesirable attitudinal and behavioral outcomes, such as lowered pay satisfaction (e.g., Thompson and Pronsky

1975), and reduced motivation (e.g., Lawler 1965a, 1965b, 1967) and performance (e.g., Bamberger and Belogolovsky 2010; Futrell and Jenkins 1978). These findings should come as no surprise since the organization is utilizing an unlawful labor practice and hence demonstrating a disregard for their employees' rights. These organizations are setting a bad example for employees and therefore, they cannot expect their employees to behave ethically and desirably when they are themselves disobeying the rules and behaving selfishly. Therefore, pay secrecy practices may result in undesirable employee behaviors, such as workplace deviance. Deviant behaviors, such as employee theft or withholding effort, may result from employers' modeling of disregard for rules and lack of concern for employees' rights. Workplace deviance has not, to this point, been linked with pay communication practices (specifically, pay secrecy practices). This study attempts to fill that void.

Hypotheses Development

Workplace deviance is defined as purposeful, norm-violating behaviors which have the potential to harm the organization and/or its members (Robinson and Bennett 1995). There are two main types of workplace deviance: interpersonal deviance (deviant acts directed toward organizational members) and organizational deviance (deviant acts directed toward the organization; (Bennett and Robinson 2000; Robinson and Bennett 1995, 1997)). Some examples of interpersonal deviance are blaming colleagues and verbal abuse; whereas, some organizational deviance examples are leaving work early and stealing merchandise or equipment (Bennett and Robinson 2000; Robinson and Bennett 1995). Workplace deviance is an important organizational concept since it is estimated to cost organizations millions, if not billions, of dollars annually (Case 2000;

Harris and Ogbonna 2006). Additionally, prior research suggests that a majority of employees have participated in some form of workplace deviance (Harper 1990; Harris and Ogbonna 2002; Slora 1991), with nearly all organizations having suffered from one of the most costly deviant acts, employee theft (Case 2000; Coffin 2003). For these reasons, identifying the causes of workplace deviance is imperative for organizations and their success.

Pay secrecy is expected to be related to workplace deviance for several reasons. First, human instincts tell us that the connotation of a "secret" is that something is wrong or bad and consequently, should have detriments. Therefore, pay secrecy leads to the belief that something is wrong in regards to the compensation system, in that if the compensation system was fair then why is pay information being hidden? According to equity theory (Adams 1965), employees continuously compare their ratios of inputs (such as education, skills, and effort) to outputs (such as pay, benefits, and security) with the perceived ratios of referent others to determine the fairness of their pay. Additionally, equity theory claims that employees are more concerned with the relative value rather than the absolute value of their outcomes (such as pay; (Gerhart and Rynes 2003)). However, pay secrecy interferes with an employees' ability to make accurate pay comparisons since it prohibits the needed pay information from being known. Consequently, pay secrecy causes employees to play a guessing game in where they and others are positioned within the pay structure. An underlying assumption of this pay estimation guessing game is the presence of unfairness due to the possibility of pay discrimination, bias, and/or blatant mistakes (Colella et al. 2007; Lawler 1971, 1990). This unfair assumption arises from thoughts such as "if pay is fair and there is no bias, discrimination, or errors then why am I not provided the information?" Therefore, pay secrecy is likely to cause perceptions of pay unfairness or injustice, particularly under-reward inequity where the employees' ratio is less than (or smaller) than the referent others' ratio. Additionally, employees are more inclined to generate inaccurate estimations of others' pay under pay secrecy conditions due to the required information needed to generate accurate pay estimations being unavailable, hidden, or otherwise unknown (Dornstein 1989; Lawler 1965a, 1965b). For instance, prior research has found that under pay secrecy conditions employees tend to overestimate their subordinates' and peers' pay (Lawler 1965a, 1965b, 1967, 1972; Mahoney and Weitzel 1978; Milkovich and Anderson 1972); thus, escalating the sense of unfairness and pay injustice, specifically inciting perceptions of an under-reward inequity. Equity theory argues that unfairness perceptions (specifically, under-reward inequity) create feelings of tension and anger within employees (Homans 1961; Jaques 1961), which in turn, cause employees to attempt to reduce the dissonance and to restore justice (and equity) by engaging in a variety of cognitive and/or behavioral methods (such as modifying or distorting inputs and outcomes). Feelings of relative deprivation and anger may cause employees to engage in selfish and uncooperative behaviors (such as workplace deviance) in order to restore equity and compensate for the under-reward inequity. Additionally, prior research has demonstrated that employees have a propensity to engage in deviant behaviors when they are reacting to perceptions of unfairness or injustice (e.g., Ambrose, Seabright, and Schminke 2002; Aquino and Douglas 2003; Aquino, Galperin, and Bennett 2004; Aquino, Lewis, and Bradfield 1999; Greenberg 1990a, 1993; Harder 1992; Skarlicki and

Folger 1997; Thau, Crossley, Bennett, and Sczesny 2007; Zoghbi-manrigue-de-lara 2010). Therefore, pay secrecy is expected to be related to workplace deviance.

Another reason for the expected relationship between pay secrecy and workplace deviance is due to feelings of uncertainty. A "secret" creates uncertainty for individuals with whom the information is withheld. Therefore, pay secrecy creates uncertainty for (uninformed) employees since they are unaware of their personal organizational value in comparison to other organizational members. According to uncertainty management theory (Lind and van den Bos 2002; van den Bos and Lind 2002), employees have a natural predisposition to manage or decrease uncertainty by engaging in certain coping mechanisms, such as relying on fairness information and perceptions. These fairness perceptions assist employees in managing the uncertainty because it relieves employee's fears of being taken advantage of in a social exchange with the organization by giving employees confidence that they will obtain desired outcomes (Lind and van den Bos 2002; Thau, Aquino, and Wittek 2007). However, as previously argued, perceptions of pay fairness are likely to be negative, specifically creating an under-reward inequity, under pay secrecy conditions. Additionally, uncertainty management theory asserts that when uncertainty is accompanied with unfairness perceptions, employees will attempt to reduce the uncertainty by taking control of their own future and outcomes through participation in selfish and possibly harmful behaviors and acts (Lind and van den Bos 2002). Therefore, one way employees may react to the enhanced sense of injustice brought on by uncertainty is to engage in workplace deviance (Colella et al. 2007; Lind and van den Bos 2002).Supporting uncertainty management theory, previous research has shown that uncertainty joined with unfairness perceptions increase workplace deviance (e.g., Thau, Aquino, et al. 2007).

Finally, employees (in the U.S.) believe they have the right to free speech (due to the First Amendment to the U.S. Constitution), such as deciding who they discuss their employment conditions (such as pay information) with, and take any intrusion on this privilege personally and find it threatening. Pay secrecy challenges and intrudes on the employee's freedom and privileges (or what they believe their rights to be) by prohibiting employees from discussing their personal pay information with other organizational members (and possibly with outsiders) and thereby, creating a sense of powerlessness. Reactance theory (Brehm 1966) argues that when the employee's autonomy or freedom to engage in a certain behavior (such as discuss pay information) is threatened, reduced, or eliminated, the behavior becomes more enticing. Additionally, reactance theory argues that employees will become motivated to restore their power and freedom, and consequently, engage in a "reactance" (Brehm 1966). Moreover, reactance theory suggests that employees who feel constrained and incapable of improving their powerless situation may become frustrated which, in turn, causes a negative and destructive form of "reactance" to occur, such as workplace deviance (Allen and Greenberger 1980; Mitchell, Vogel, Bennett, and Crossley 2011; Rothbaum, Weisz, and Snyder 1982; Spector 1978). Previous research has demonstrated that perceptions of powerlessness are associated with increases in workplace deviance (e.g., Bennett 1998).

Based on the above arguments, pay secrecy is expected to be associated with higher levels of workplace deviance since employees are attempting to offset negative emotions (such as uncertainty, powerlessness, or anger) or retaliate for perceived injustices. Thus, the following hypothesis is proposed:

Hypothesis 1: Pay secrecy is positively related to workplace deviance.

Being that the relationship between pay secrecy and workplace deviance is to some extent based on fairness perceptions, organizational justice dimensions (such as distributive and procedural justice) may serve as possible mediators.

Mediators

Organizational justice (Greenberg 1987) is a multidimensional construct that attempts to use fairness judgments or perceptions about the organizations' treatment toward the employee (such as pay outcomes or pay process explanations) to explain the employee's engagement in certain organizational attitudes and behavior (Cloutier and Vilhuber 2007; Colquitt 2001; Greenberg 1990b), such as workplace deviance (Cohen-Charash and Spector 2001; Johns 2001). Organizational justice principles suggest that employee attitudes and behaviors are typically exhibited in a reciprocative and complementary manner to that of the organizations' treatment. Therefore, positive judgments or perceptions of fairness suggest a social exchange relationship and are expected to produce cooperative and organizationally beneficial attitudes and behaviors (such as organizational commitment and trust; (Cohen-Charash and Spector 2001; DeConinck 2010)); whereas, negative judgments or perceptions of injustice propose an economical exchange relationship (Organ 1990) and are inclined to incite uncooperative, selfish and potentially harmful attitudes and behaviors (such as workplace deviance;

(Cohen-Charash and Spector 2001; Johns 2001)). There are four distinct organizational justice dimensions (Colquitt 2001; Colquitt et al. 2001): distributive justice (Adams 1965), procedural justice (Leventhal 1980; Leventhal et al. 1980; Thibaut and Walker 1975), and interactional justice (Bies and Moag 1986) which is comprised of informational and interpersonal justice (Greenberg 1990a, 1993). All of the dimensions are expected to mediate the relationship between pay secrecy and workplace deviance.

Distributive justice refers to the fairness perceptions associated with the outcomes (such as pay) distributed (Colquitt 2001; Colquitt et al. 2001; Greenberg 1990a). Distributive justice (or injustice) is determined in the same manner as previously described for equity theory, where employees compare their personal outcomes to the outcomes of referent others. However, pay secrecy prevents employees from knowing the outcomes (or pay) of other organizational members. Thus, pay outcome inferences are based on a guessing game where pay estimations are mainly derived from innuendo and gossip (deCarufel 1986). As previously mentioned, employees have a tendency to make inaccurate pay estimations (such as overestimate peers' and subordinates' pay) under pay secrecy conditions (e.g., Lawler 1965a, 1965b, 1967, 1972; Mahoney and Weitzel 1978; Milkovich and Anderson 1972), which lead to negative pay comparisons and perceptions of unfairness and injustice.

As previously mentioned, equity theory (Adams 1965) states that employees continuously compare their ratios of inputs (such as education, skills, and effort) to outputs (such as pay, benefits, and security) with the perceived ratios of referent others (such as peers or subordinates) to determine the fairness of their pay. However, employees are unable to generate accurate pay comparisons under pay secrecy conditions due to certain pay information about referent others being concealed. Therefore, pay secrecy is likely to generate inaccurate pay comparisons, particularly an under-reward inequity, causing negative perceptions of distributive justice. Additionally, equity theory (Adams 1965) argues that perceptions of injustice (or an under-reward inequity) will cause employees to feel anger, tension, and relative deprivation (Homans 1961; Jaques 1961) which, in turn, leads employees to engage in a variety of cognitive and/or behavioral methods to reduce these negative feelings and restore fairness. These different techniques used to counteract or compensate for the perceived inequity or unfairness are likely to be selfish, deviant, and possibly harmful behaviors, such as workplace deviance (e.g., Ambrose et al. 2002; Aquino and Douglas 2003; Aquino et al. 2004; Aquino et al. 1999; Greenberg 1990a, 1993; Harder 1992; Skarlicki and Folger 1997; Thau, Crossley et al. 2007; Zoghbi-manrigue-de-lara 2010). Therefore, distributive justice is expected to mediate the relationship between pay secrecy and workplace deviance. Thus, the following hypothesis is presented:

Hypothesis 2a: Perceptions of distributive justice mediate the relationship between pay secrecy and workplace deviance.

Procedural justice refers to the perceived fairness associated with the process and procedures used to determine outcome distribution (Colquitt 2001; Colquitt et al. 2001; Greenberg 1990a). There are several criteria (or standards) that a process should possess in order for the process to be perceived as fair or justified: accuracy, consistency, bias suppression or neutrality, representation of all entities affected, comprehensiveness, social morality, and opportunity to correct mistakes (Folger and Konovsky 1989; Leventhal 1980; Leventhal et al. 1980). However, perceptions of procedural justice are likely to be affected by pay secrecy since the existence of the criteria (such as accurate and unbiased) cannot be verified due to a lack of pay information (Noy 2007). Pay secrecy hinders an employees' ability to ensure pay processes use only accurate and all pertinent information and that the same procedures are used for all organizational members (Bamberger and Belogolovsky 2010; Greenberg 1990b). Further, pay secrecy implies that the pay process suffers from bias, errors, or discrimination because pay information is hidden and employees are unable to undoubtedly know the process is free from such blunders (Andersson-Straberg et al. 2007; Bamberger and Belogolovsky 2010; Cloutier and Vilhuber 2008; Colella et al. 2007; Lawler 1971, 1990). Therefore, perceptions of procedural injustice are likely to prevail under pay secrecy conditions since employees cannot determine that the procedures used to determine their outcomes reflect reality and were accurate, unbiased, and consistent with other employees' procedures (e.g., Noy 2007).

Informational justice refers to the amount, quality, and timing of information provided to employees that explain the procedures used to determine outcomes (Bies et al. 1993; Greenberg 1993). Perceptions of informational justice (rather than injustice) are likely to prevail when the information is accurate, complete, and given in a timely manner. Pay secrecy is clearly expected to negatively affect informational justice since it restricts the amount of pay information given to employees. Additionally, informational unfairness perceptions are likely to emerge when the available pay information has flaws (such as inaccuracy, incompleteness, or contains errors) or is given in an untimely manner (such as six months after pay decisions are made).

Interpersonal justice refers to the extent to which employees are treated with politeness, dignity, and respect from the organization (usually from their immediate boss or superiors) when procedures used to determine their outcomes are executed (Greenberg 1990b, 1993). Employees receiving considerate and courteous treatment when being provided pay information are likely to experience positive perceptions of interpersonal justice. Pay secrecy is likely to lead to perceptions of interpersonal injustice since superiors are not allowed to supply pay information which may cause them to appear rude, insensible, or disrespectful to employees and their feelings.

Since pay secrecy practices may have implications for procedural, informational, and interpersonal justice, fairness heuristic theory (Lind 2001) explains how these judgments may play a role in the pay secrecy-workplace deviance relationship. Fairness heuristic theory (Lind 2001) claims that an employees' overall perception of specific organizational fairness judgments (such as overall procedural, informational, or interpersonal justice not necessarily pertaining to pay) will assist employees in making inferences about more specific fairness judgments (such as pay process, pay information, and treatment when receiving pay information) when there is a lack of information regarding these specific judgments. Therefore, employees will use their judgments about other organizational factors (such as procedures, information, and treatment regarding other organizational matters) to create inferences about the pay processes, pay information, and treatment when receiving pay information (such as procedural, informational, and interpersonal justice in regards to pay). Consequently, employees may use fairness perceptions involving promotion or disciplinary processes to generate procedural justice perceptions (in regards to pay). Additionally, informational justice perceptions (in regards to pay) may be created by the employees' perception of available information about promotion opportunities, while treatment during employee meetings may generate interpersonal justice perceptions (in regards to pay).

Furthermore, fairness heuristic theory (Lind 2001) argues that when other organizational factors (such as procedures, information, and treatment regarding other organizational matters) cannot assist in generating inferences about fairness then other justice (dimension) perceptions (such as distributive justice) will assist in making inferences, even when these other justice perceptions do not pertain or relate to the missing fairness judgment. Therefore, when distributive justice is viewed as being unfair (or fair) then procedural, informational, and interpersonal justice will also appear as being unfair (or fair). As previously argued, distributive justice is expected to be negative (or unfair) since pay secrecy is likely to generate inaccurate pay comparisons (such as under-reward inequity). Therefore, the expected perceptions of distributive injustice may lead perceptions of procedural, informational, and interpersonal justice to be negative, resulting in feelings of injustices. Perceptions of injustice are likely to cause employees to feel anger and tension (Homans 1961) which, in turn, may lead employees to engage in deviant behaviors to restore justice. Thus, procedural, informational, and interpersonal justice may mediate the relationship between pay secrecy and employee deviance. Thus, the following hypotheses are presented:

Hypothesis 2b: Perceptions of procedural justice mediate the relationship between pay secrecy and workplace deviance.

Hypothesis 2c: Perceptions of interpersonal justice mediate the relationship between pay secrecy and workplace deviance.

Hypothesis 2d: Perceptions of informational justice mediate the relationship between pay secrecy and workplace deviance.

Along with these fairness perceptions, trust in the organizational setting may also play a role in the pay secrecy-workplace deviance relationship. Trust is defined as the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party (Mayer, Davis, and Schoorman 1995, p.712). The definition of trust involves two parties: the trustor (the trusting party such as the employee) and the trustee (the party to be trusted such as management and the employing organization; (Driscoll 1978; Mayer et al. 1995; Scott 1980)). A trustee needs to be perceived as being "trustworthy" to gain the trustors' confidence (or trust). Trustworthiness is best explained by three characteristics: ability (the skills that gives the trustee influence to achieve the trustors' objective), benevolence (the degree to which the trustee wants to help, instead of just profit from the trustor), and integrity (the trustors' approval regarding the set of principles that the trustee follows; (Mayer et al. 1995)). A trustee is considered "trustworthy" when high levels of all three characteristics are possessed. However, when a trustee is not perceived as "trustworthy," the trustor distrusts the trustee. Trust ranges on a continuum with complete trust and absolute distrust being the opposing extremes on the continuum (Schoorman, Mayer, and Davis 2007). Additionally, trust can be acquired or proffered by individuals, groups, and organizations (Schoorman et al. 2007). Managerial trust refers to the amount of trust an employee has in his/her immediate boss and/or superiors. Organizational trust refers to the amount of trust an employee has in his/her employing organization.

An employees' level of trust is based on past organizational treatment and the likelihood of future treatment being fairly similar (Axelrod and Hamilton 1981; Deutsch 1958). Social exchange theory (Blau 1964; Cropanzano and Mitchell 2005) argues that a source's attitudes and behaviors will be similarly reproduced to those exhibited from the original source during interactions. Therefore, when employees believe that management (such as their immediate supervisor) or their employing organization trusts (or distrusts) them, they will in return trust (or distrusts) management or the organization. Higher levels of (managerial or organizational) trust are likely to motivate employees to partake in certain attitudes and behaviors that are desired by management and/or the organization (e.g., cooperative behaviors such as organizational citizenship behaviors) in hopes of maintaining and further developing the relationship. However, lower levels of (managerial or organizational) trust (or distrust) are likely to cause employees to engage in selfish or uncooperative behaviors, such as workplace deviance (Thau, Crossley, et al. 2007). Pay secrecy implies that the organization (and perhaps management) distrusts their employees since openness (e.g., no secrets) is needed for generating trust (Colella et al. 2007; Lawler 1981; Mayer et al. 1995). Additionally, immediate supervisors may exhibit lower levels of employee trust (or distrust) under pay secrecy conditions when they do not supply employees with additional pay information upon their request. When employees perceive management or the organization to be distrustful due to pay secrecy practices, employees are more likely to engage in workplace deviance since they cannot depend on management or the organization to make fair and sensible decisions involving pay. Therefore, the overall perception of (managerial or organizational) trust is expected to mediate the relationship between pay secrecy and workplace deviance. Thus, the following hypotheses are proposed:

Hypothesis 3a: Perceptions of organizational trust mediate the relationship between pay secrecy and workplace deviance.

Hypothesis 3b: Perceptions of managerial trust mediate the relationship between pay secrecy and workplace deviance.

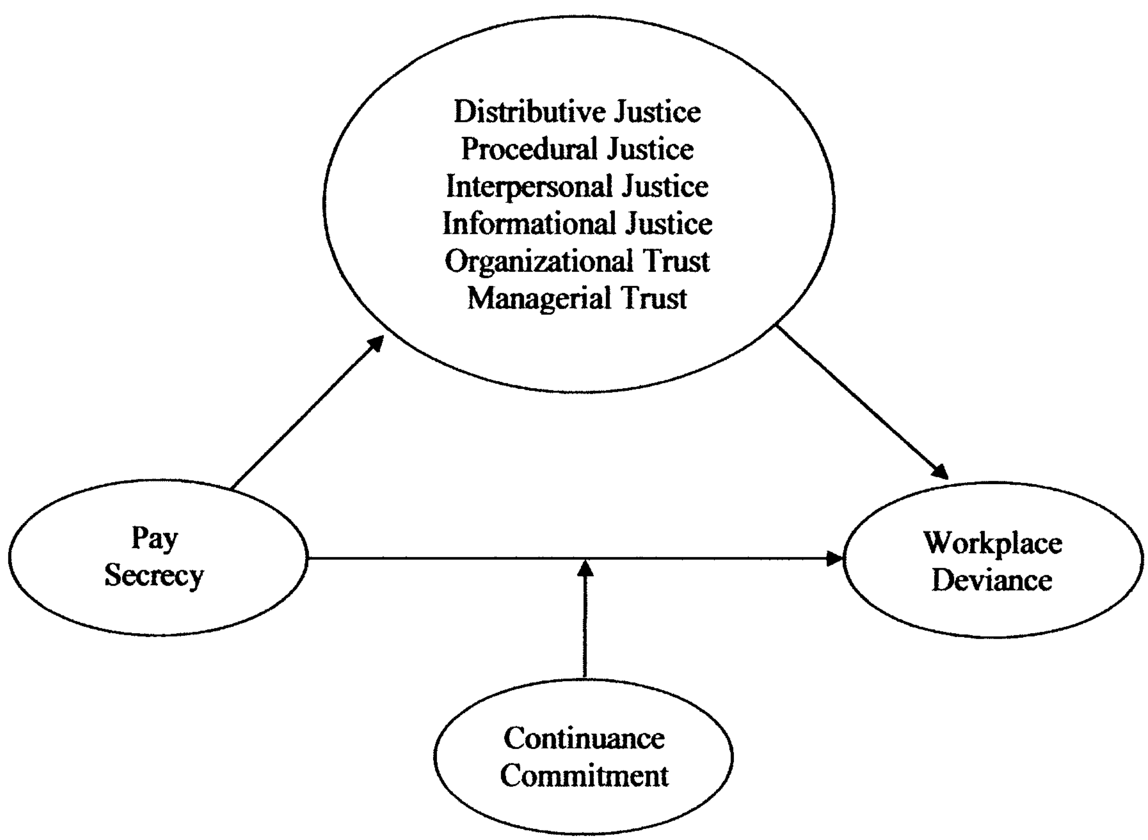
Along with these mediating variables, the relationship between pay secrecy and workplace deviance may be moderated by the employee's continuance commitment. The overall model is shown in Figure 3.1.

Moderator

Even though prior research has not demonstrated a significant relationship between continuance commitment and workplace deviance (e.g., Gill, Meyer, Lee, Shin, and Yoon 2011; Haden, Caruth, and Oyler 2011), continuance commitment may play a significant moderating role in the pay secrecy and workplace deviance relationship.

Continuance commitment is a component of the organizational commitment conceptualization and consists of two aspects: (1) lack of perceived job alternatives, and (2) personal sacrifices or loss of side-bets and investments (Allen and Meyer 1990; Carson and Carson 2002; Taing, Granger, Groff, Jackson, and Johnson 2011). Specifically, the former factor is expected to moderate the relationship between pay secrecy and workplace deviance. The fewer job alternatives perceived by an employee, the stronger the employees' level of continuance commitment to their employing organization. Additionally, employees experiencing higher levels of continuance commitment tend not to perform beyond what is required to maintain their employment (Meyer and Allen, 1997). In addition, employees with only a few job alternatives cannot risk their current employment.

Figure 4.1 Overall Proposed Model



Power dependence theory (Emerson 1972; Molm 2003) explains how continuance commitment may interact with the relationship between pay secrecy and workplace deviance. Power dependence theory argues that in an exchange relationship powerful employees have very little dependence on their partner (Emerson 1972). Consequently, employees who have power or many job opportunities will not be reliant on their current employment and thereby, their willingness to behave cooperatively with their employing organization will more likely be lower than those who are dependent on their job and have fewer job alternatives (Molm, Peterson, and Takahashi 1999). The implication is that employees experiencing lower levels of continuance commitment have the option to leave their job if they want. Additionally, power dependence theory suggests that non-powerful employees (or those who have few job alternatives) will behave rationally and cooperatively (such as by not participating in workplace deviance) since they do not want to put their current employment at risk even under pay secrecy conditions. However, employees experiencing lower levels of continuance commitment under pay secrecy conditions may not engage in deviant behaviors since, as was previously argued, they have multiple job opportunities and thereby, have the ability to quit their employment (and escape the pay secrecy practices) and easily find a different job. Therefore, since employees with many job alternatives have the ability to find new employment and those with few job alternatives cannot endanger their current employment, continuance commitment should mitigate, if not completely eliminate, the relationship between pay secrecy and workplace deviance. Thus, power dependence theory implies that the interaction between pay secrecy and continuance commitment will not impact workplace deviance. Based on this argument, the following hypothesis is proposed:

Hypothesis 4: Continuance commitment moderates the relationship between pay secrecy and workplace deviance such that when continuance commitment is low and pay communication is high (e.g., pay secrecy), workplace deviance will be higher than when both continuance commitment and pay communication are high.

Methods

Sample

Participants were recruited using a third party online survey organization (e.g., Mechanical Turk). Those who completed the anonymous survey were compensated one dollar directly by the online survey organization. The respondents were completely anonymous to the researcher. There were 611 participants. The majority of the participants were female (57.9%), Caucasian (73.6%), workingfull-time (81.5%), had no labor union involvement for their job or any jobs in their organization (73.3%), and possessed at least a bachelor's degree (70.5%). The participants' ages ranged from 18 to 68 with over 40% of the participants being in their twenties and a third of the participants (33.4%) being in their thirties. The mean age was thirty-four. Most of the participants had been with their current employer for one to five years (55%) and were classified as an 'employee' with no managerial duties (62.2%). Refer to table 3.6 for a complete overview of the descriptive statistics for the sample.

Procedures

Participants were instructed to read an informed consent form approved by the Internal Review Board at Louisiana Tech University and to provide consent by marking a box (refer to Appendix G). Additionally, participants were given instructions to answer all scale items and twelve demographic questions. Sixteen attentiveness screening items were also used to ensure participants were paying attention and responding to each question accurately (e.g., "Mark slightly agree for this item").

Measures

Refer to Appendix P for the instructions and list of items associated with each construct's scale.

Independent Variable. Pay communication (pay secrecy and pay openness) was assessed by using the 22-item scale that was developed in the preceding Chapter. This scale has four sub-dimensions: Pay Policy Existence (PPE), Pay Structure (PS), Organizational Norms (ON), and Employee Norms (EN). The overall Pay Communication scale along with each sub-dimension has demonstrated construct validity and appropriate Cronbach's alphas of .98 (Pay Communication), .96 (PPE), .92 (PS), .87 (ON), and .74 (EN). The scale was measured using a 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). Higher overall scores represent pay secrecy practices, while lower overall scores represent pay openness practices.

Dependent Variable. Workplace deviance was measured with Bennett and Robinson's (2000) scale with additional items from Robinson and Bennett's (1995) typology added. This scale was used because previous research has shown it to have construct validity. There were twenty eight workplace deviance items with eleven representing interpersonal deviance (ID) items and seventeen representing organizational deviance (OD). Additionally, Bennett and Robinson's (2000) workplace deviance scale had appropriate Cronbach's alphas of .78 for interpersonal deviance and .81 for organizational deviance in the study used for their development. This study produced Cronbach's alphas of .91 for workplace deviance, .88 for organizational deviance, and .87 for interpersonal deviance. All of the workplace deviance items were measured using a 7-point scale ranging from 0 (never), 1 (once a year), 2 (twice a year), 3 (several times a year), 4 (monthly), 5 (weekly), and 6 (daily).

Mediating Variables. All of the organizational justice dimensions were measured with Colquitt's (2001) organizational justice scale, which subdivided into four scales analyzing the four separate dimensions of justice. Specifically, distributive justice was measured with four items which pertain to the degree of fairness employees perceive about their level of pay. Procedural justice was measured with seven items which pertain to the degree of fairness employees perceive about the processes used to determine their pay level. Informational justice was measured with five items which pertain to the adequacy of pay information communicated to employees, including the explanation of the pay processes. Interpersonal justice was measured with four items which pertain to the quality of treatment employees endure during the process of determining pay and/or communicating pay information. Colquitt's (2001) measures were used because previous research has shown each measure to have construct and predictive validity for important organizational outcomes. Additionally, all of the justice measures had appropriate Cronbach's alphas in the developmental research, ranging from .78 to .92 in the study involving students, and ranging from .90 to .93 in the study involving employees (Colquitt 2001). In this study, the Cronbach's alphas range from .85 to .97. Additionally, all of the justice measures used a 5-point Likert-type scale ranging from 1 (almost never), 2 (to a small extent), 3 (somewhat), 4 (to a large extent), and 5 (always).

Managerial trust was measured using Schoorman and Ballinger's (2006) 7-item scale because it has displayed construct validity throughout previous research with an appropriate Cronbach's alpha of .84 in the developmental research. The items pertain to the degree of trust employees have for their manager who determines their pay. This study produced a Cronbach's alpha of .94. The scale was measured using a 5-point Likert-type scale ranging from 1 (strongly disagree), 2 (somewhat disagree), 3 (neither agree nor disagree), 4 (somewhat agree), and 5 (strongly agree).

Organizational trust was measured using Robinson's (1996) 7-item scale because it has demonstrated construct validity with the developmental research producing appropriate Cronbach's alphas of .82 and .87. The items pertain to the degree of trust employees have for their employing organization. A Cronbach's alpha of .94 was produced for this study. The scale was measured using a 5-point Likert-type scale ranging from 1 (strongly disagree), 2 (somewhat disagree), 3 (neither agree nor disagree), 4 (somewhat agree), and 5 (strongly agree).

Moderating Variable. Continuance commitment was measured using Carson and Carson's (2002) 4-item Low Alternatives (lack of perceived job alternatives) scale because it has demonstrated construct validity. Additionally, the development study produced an appropriate Cronbach's alpha of .74. In this study, a Cronbach's alpha of .85 was established. The items pertain to the extent of job alternatives or other job options employees currently have available. The scale was measured using a 5-point Likert-type scale ranging from 1 (strongly disagree), 2 (somewhat disagree), 3 (neither agree nor disagree), 4 (somewhat agree), and 5 (strongly agree).

Additional Measures. Organizational citizenship behaviors (OCBs) were included in the data collection to counteract the negative effects that may occur due to the unusual and potentially off-putting nature of the dependent variable (workplace deviance). OCBs were measured using an adaptation of Williams and Anderson's (1991) 14-item scale, which encompassed the two sub-dimensions of OCBs: OCBO (OCB-Organizations or generalized compliance) and OCBI (OCB-Individuals or altruism). Williams and Anderson's (1991) scale was used because previous research has shown it to include both sub-dimensions and have construct validity. Additionally, the Cronbach's alphas of the two sub-dimension measures were .88 for OCBI and .75 for OCBO in the study used for the scales development. The nature of the items was adapted to allow the participants to self-report the behaviors. Additionally, one of the OCBO items was reverse-coded. The items were measured using a 7-point Likert-type scale matching that used for the Workplace Deviance scale ranging from 0 (never), 1 (once a year), 2 (twice a year), 3 (several times a year), 4 (monthly), 5 (weekly), and 6 (daily).

Control Variables. Several demographic variables were controlled for in the analyses. Age (measured in categorical years: 1 = 18-19 years, 2 = 20-29 years, 3 = 30-39 years, 4 = 40-49 years, 5 = 50-59 years, 6 = 60-68 years) and gender (female = 2, male = 1) were controlled for since males (Hershcovis et al. 2007) and younger employees (Berry, Ones, and Sackett 2007; Ng and Feldman 2008) have been found to more likely participate in deviant behaviors. Job tenure (measured in categorical years: 1 = less than 1 year, 2 = 1-5 years, 3 = 6-10 years, 4 = 11-15 years, 5 = 16-20 years, 6 = 21-25 years, 7 = 26 years or more) and hours worked per week (measured in categories: 1 = less than 10 hours per week, 2 = 10-20 hours per week, 3 = 21-30 [part-time] hours per week, 4 = 30 [full-time]-40 hours per week, 5 = more than 40 hours per week) were also control variables since both may impact employee's managerial and organizational trust due to having more time and opportunities to develop it (Gilbert and Tang 1998; More and Tzafrir 2009; Schoorman et al. 2007).

Results

The proposed hypotheses were tested utilizing hierarchical regression analysis. The predictor variables (e.g., independent, mediating, and moderating variables) were centered to reduce the effects of non-essential ill conditioning by having the mean represent a meaningful zero point for better result interpretation (Cohen, Cohen, West, and Aiken 2003). Additionally, a confirmatory factor analysis (CFA) using Amos 20 was conducted on each scale independently prior to testing the hypotheses to evaluate the fit of each scale's measurement model (e.g., the relationship between the items and the factors). Several Model Fit indices (e.g., CFI, NFI, GFI, RMSEA, and χ^2) were used to evaluate the fit of each measure. The CFI, NFI, and GFI indicate a well-fitting model when values are closer to 1.0; whereas, the RMSEA indicates a well-fitting model when values are below .08 (Hair et al. 2010). Additionally, Cronbach's alphas above .70 demonstrate reliability (Hair et al. 2010). The majority of the scales demonstrated a well-fitting model with a few having a moderately-fitting model (refer to Table 4.1).

Table 4.1 Measurement Model Fit Indices from Amos

Measurement Model	χ^2	df	CFI	NFI	GFI	RMSEA	AVE	Cronbach's α
Pay Communication	1143.85	205	.92	.90	.85	.09	67%	.98
Pay Policy Existence	311.76	27	.95	.95	.89	.13	74%	.96
Pay Structure	70.32	9	.98	.97	.96	.11	66%	.92

Table 4.1 (Continued)

Organizational Norms	13.77	5	.99	.99	.99	.05	57%	.87
Employee Norms	-	-	-	-	-	-	59%	.74
Distributive Justice	1.14	2	1.00	.99	.99	.00	80%	.79
Procedural Justice	225.78	14	.88	.87	.89	.16	46%	.86
Interpersonal Justice	11.93	2	1.00	.99	.99	.09	73%	.91
Informational Justice	19.08	5	.99	.99	.99	.07	58%	.87
Organizational Trust	186.22	14	.95	.95	.91	.14	71%	.95
Managerial Trust	145.37	14	.86	.84	.93	.12	31%	.74
Continuance Commitment	56.79	2	.95	.95	.95	.21	59%	.85
Workplace Deviance	3185.75	350	.61	.55	.61	.12	29%	.92
Organizational Deviance	972.59	119	.76	.73	.80	.11	31%	.88
Interpersonal Deviance	520.92	44	.84	.83	.86	.13	43%	.89

Note: $N = 611$

The summary statistics, bivariate correlations, and Cronbach's alphas are shown in Table 4.2. The results of the regression analyses for each hypothesis are shown in separate tables.

Table 4.2 Correlations, Means, Standard Deviations, and Cronbach's Alpha Reliabilities

Variable	*M*	*SD*	1	2	3	4	5
1. Gender	1.58	.49	-				
2. Age	3.00	1.13	.10*	-			
3. Tenure	2.34	1.04	.00	.47**	-		
4. Hours worked per week	4.09	.86	-.19**	.03	.22**	-	
5. Pay Communication	3.86	1.19	.07	.04	-.05	.03	(.94)
6. Pay Policy Existence	3.55	1.76	.03	.04	-.02	.10*	.89**
7. Pay Structure	3.82	1.71	14**	-.01	-.10*	-.07	.67**
8. Organizational Norms	4.53	1.61	-.01	.06	.01	.01	.82**
9. Employee Norms	4.33	1.71	.01	.01	-.02	.03	.37**
10. Distributive Justice	2.46	1.18	-.18**	-.02	.09*	.11**	-.28**
11. Procedural Justice	2.92	.93	-.17**	-.05	.03	.03	-.34**
12. Interpersonal Justice	3.85	1.05	-.02	-.03	.05	-.01	-.30**
13. Informational Justice	3.20	1.02	-.11**	-.01	.09*	.09*	-.36**
14. Organizational Trust	3.41	1.08	-.10*	-.07	.03	-.01	-.38**
15. Managerial Trust	3.04	.69	-.07	-.02	.07	.00	-.29**

Table 4.2 (Continued)

16. Continuance Commitment	3.13	1.01	.09*	.09*	.02	-.10*	.21**
17. Workplace Deviance	.96	.78	-.16**	-.23**	-.04	.08*	.10*
18. Organizational Deviance	1.12	.87	-.10*	-.20**	-.07	.05	.11**
19. Interpersonal Deviance	.71	.89	-.21**	-.21**	-.01	.11**	.05

Variable	6	7	8	9	10	11	12
6. Pay Policy Existence	(.96)						
7. Pay Structure	.34**	(.92)					
8. Organizational Norms	.68**	.38**	(.87)				
9. Employee Norms	.43**	.34**	.35**	(.74)			
10. Distributive Justice	-.16**	-.48**	-.10*	-.29**	(.94)		
11. Procedural Justice	-.21**	-.60**	-.08	-.35**	.75**	(.85)	
12. Interpersonal Justice	-.23**	-.46**	-.05	-.29**	.51**	.70**	(.91)
13. Informational Justice	-.23**	-.61**	-.09*	-.35**	.67**	.82**	.78**
14. Organizational Trust	-.31**	-.55**	-.09*	-.40**	.62**	.73**	.66**
15. Managerial Trust	-.25**	-.39**	-.11**	-.33**	.46**	.59**	.62**
16. Continuance Commitment	.13**	.25**	.13**	.07	-.23**	-.24**	-.16**
17. Workplace Deviance	.10*	.10*	.05	.16**	-.07	-.12**	-.16**
18. Organizational Deviance	.08*	.14**	.07	.14**	-.09*	-.15**	-.15**
19. Interpersonal Deviance	.10*	.02	.01	.15**	-.03	-.05	-.14**

Variable	13	14	15	16	17	18	19
13. Informational Justice	(.87)						
14. Organizational Trust	.71**	(.94)					
15. Managerial Trust	.60**	.66**	(.74)				
16. Continuance Commitment	-.25**	-.26**	-.24**	(.85)			
17. Workplace Deviance	-.14**	-.19**	-.17**	.05	(.91)		
18. Organizational Deviance	-.13**	-.19**	-.19**	.07	.93**	(.88)	
19. Interpersonal Deviance	-.11**	-.13**	-.10*	.00	.82**	.54**	(.87)

Note: N = 608. Cronbach's alpha coefficients (reliabilities) are shown on the diagonals in parentheses. Control variables were measured by self-reports and categorical variables. * $p < .05$. ** $p < .01$.

Hypotheses Tests

Hypothesis 1 proposed that pay secrecy (represented by higher levels of pay communication) is positively related to workplace deviance. The correlation between pay communication and workplace deviance is positive and significant ($p < .05$), showing that workplace deviance is related to pay secrecy rather than pay openness. This hypothesis was tested utilizing Model 2 of Table 4.3, which shows that pay secrecy is significantly positively related to workplace deviance (β = .11, $p < .01$). Thus, Hypothesis 1 is supported.

Table 4.3 Results of Hierarchical Regression Analysis for Hypothesis 1

	Workplace Deviance			
	Model 1		Model 2	
Variable	ΔR^2	β	ΔR^2	β
Step 1: Control Variables	$.07^{**}$			
Age		$-.22^{**}$		$-.23^{**}$
Gender		$-.14^{**}$		$-.15^{**}$
Step 2: Independent Variable			$.01^{**}$	
Pay Communication				$.11^{**}$
Total R^2		.09		
Total F Value (*df* regression, residual)		18.97^{**} (3, 607)		

Note: $N = 611$. Standardized beta coefficients are shown. ΔR^2 is based upon variables included in each step.
$^{*}p < .05$. $^{**}p < .01$.

The four dimensions of organizational justice were predicted to mediate the relationship between pay secrecy and workplace deviance. Specifically, hypothesis 2a predicted distributive justice to mediate the pay secrecy-workplace deviance relationship, while hypothesis 2b involved procedural justice, hypothesis 2c entailed interpersonal justice, and hypothesis 2d anticipated informational justice. The results for these hypotheses are presented in Model 3 of Tables 4.4, 4.5, 4.6, and 4.7. As shown in Table 4.4., distributive justice significantly mediates the relationship between pay secrecy and workplace deviance ($p < .05$). However, since the pay secrecy-workplace deviance relationship is reduced from a β of .11 (shown in Model 2) to .09 (shown in Model 3) but still significant when distributive justice enters the model, only partial mediation is demonstrated. Thus, hypothesis 2a is supported.

Table 4.4 Results of Hierarchical Regression Analysis for Hypothesis 2a

	Workplace Deviance					
	Model 1		Model 2		Model 3	
Variable	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1: Control Variables	$.08^{**}$					
Age		$-.22^{**}$		$-.23^{**}$		$-.23^{**}$
Gender		$-.14^{**}$		$-.15^{**}$		$-.16^{**}$
Step 2: Main Effect			$.01^{**}$			
Pay Communication				$.11^{**}$		$.09^{*}$
Step 3: Mediating Effect					$.01^{*}$	
Distributive Justice						$-.08^{*}$
Total R^2		.09				
Total F Value (*df* regression, residual)		615.27^{**} (4, 606)				

Note: $N = 611$. Standardized beta coefficients are shown. ΔR^2 is based upon variables included in each step.
$^{*}p < .05$. $^{**}p < .01$.

Table 4.5 Results of Hierarchical Regression Analysis for Hypothesis 2b

	Workplace Deviance					
	Model 1		Model 2		Model 3	
Variable	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1: Control Variables	.07**					
Age		-.22**		-.23**		-.23**
Gender		-.14**		-.15**		-.17**
Step 2: Main Effect			.01**			
Pay Communication				.11**		.07
Step 3: Mediating Effect					.02**	
Procedural Justice						-.14**
Total R^2		.10				
Total F Value (df regression, residual)		17.22** (4, 606)				

Note: $N = 611$. Standardized beta coefficients are shown. ΔR^2 is based upon variables included in each step.
* $p < .05$. ** $p < .01$.

Table 4.6 Results of Hierarchical Regression Analysis for Hypothesis 2c

	Workplace Deviance					
	Model 1		Model 2		Model 3	
Variable	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1: Control Variables	.07**					
Age		-.22**		-.23**		-.23**
Gender		-.14**		-.15**		-.14**
Step 2: Main Effect			.01**			
Pay Communication				.11**		.07
Step 3: Mediating Effect					.02**	
Interpersonal Justice						-.15**
Total R^2		.11				
Total F Value (*df* regression, residual)		18.20** (4, 606)				

Note: $N = 611$. Standardized beta coefficients are shown. ΔR^2 is based upon variables included in each step.
* $p < .05$. ** $p < .01$.

Table 4.7 Results of Hierarchical Regression Analysis for Hypothesis 2d

	Workplace Deviance					
	Model 1		Model 2		Model 3	
Variable	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1: Control Variables	.07**					
Age		-.22**		-.23**		-.22**
Gender		-.14**		-.15**		-.16**
Step 2: Main Effect			.01**			
Pay Communication				.11**		.06
Step 3: Mediating Effect					.01**	
Informational Justice						-.13**
Total R^2		.10				
Total *F* Value (*df* regression, residual)		16.79** (4, 606)				

Note: $N = 611$. Standardized beta coefficients are shown. ΔR^2 is based upon variables included in each step.
$^{*}p < .05$. $^{**}p < .01$.

Tables 4.5 to 4.7 show that procedural justice, interpersonal justice, and informational justice significantly mediate the pay secrecy-workplace deviance relationship (p < .01).Since the relationship between pay secrecy and workplace deviance becomes nonsignificant once the mediating variable (e.g., procedural, interpersonal, and informational justice) is included in the model, full mediation is displayed. Thus, hypothesis 2b, 2c, and 2d are supported.

Two forms of trust were also expected to mediate the pay secrecy-workplace deviance relationship. Specifically, organizational trust (in hypothesis 3a) and managerial trust (in hypothesis 3b) were predicted to mediate the relationship between pay secrecy and workplace deviance. Job tenure and hours worked per week were initially included in the hypothesis testing; however, due to their nonsignificance, both were removed and the hypotheses were tested without them. Model 3 of Tables 4.8 and 4.9 reveal that organizational trust and managerial trust significantly mediate the pay secrecy-workplace deviance relationship ($p < .01$). Additionally, organizational trust and managerial trust fully mediate the relationship between pay secrecy and workplace deviance since the relationship is not statistically significant once the mediating variable (e.g., organizational and managerial trust) is added to the model. Thus, hypothesis 3a and 3b are supported.

Table 4.8 Results of Hierarchical Regression Analysis for Hypothesis 3a

	Workplace Deviance					
	Model 1		Model 2		Model 3	
Variable	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1: Control Variables	$.07^{**}$					
Age		$-.22^{**}$		$-.23^{**}$		$-.24^{**}$
Gender		$-.14^{**}$		$-.15^{**}$		$-.16^{**}$
Step 2: Main Effect			$.01^{**}$			
Pay Communication				$.11^{**}$		.04
Step 3: Mediating Effect					$.03^{**}$	
Organizational Trust						$-.20^{**}$
Total R^2		.12				
Total F Value (df regression, residual)		20.64^{**} (4, 606)				

Table 4.8 (Continued)

Note: $N = 611$. Standardized beta coefficients are shown. ΔR^2 is based upon variables included in each step.
$^{*}p < .05$. $^{**}p < .01$.

Table 4.9 Results of Hierarchical Regression Analysis for Hypothesis 3b

	Workplace Deviance					
	Model 1		Model 2		Model 3	
Variable	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1: Control Variables	.07**					
Age		-.22**		-.23**		-.22**
Gender		-.14**		-.15**		-.15**
Step 2: Main Effect			.01**			
Pay Communication				.11**		.06
Step 3: Mediating Effect					.02**	
Managerial Trust						-.16**
Total R^2		.11				
Total *F* Value (*df* regression, residual)		18.54** (4, 606)				

Note: $N = 611$. Standardized beta coefficients are shown. ΔR^2 is based upon variables included in each step.
$^{*}p < .05$. $^{**}p < .01$.

Hypothesis 4 anticipated continuance commitment moderating the pay secrecy-workplace deviance relationship such that workplace deviance will be higher when continuance commitment is low and pay communication is high (e.g., pay secrecy) than when both continuance commitment and pay communication are high. As shown in Table 4.10, the interaction effect is not significant.

Table 4.10 Results of Hierarchical Regression Analysis for Hypothesis 4

	Workplace Deviance					
	Model 1		Model 2		Model 3	
Variable	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1: Control Variables	$.07^{**}$					
Age		$-.22^{**}$		$-.23^{**}$		$-.23^{**}$
Gender		$-.14^{**}$		$-.15^{**}$		$-.15^{**}$
Step 2: Main Effect			$.02^{**}$			
Pay Communication				$.10^{*}$		$.10^{*}$
Continuance Commitment				.06		.06
Step 3: Interaction Effect					.00	
Pay Communication x Continuance Commitment						-.02
Total R^2		.09				
Total F Value (*df* regression, residual)		11.91^{**} (5, 605)				

Note: $N = 611$. Standardized beta coefficients are shown. ΔR^2 is based upon variables included in each step.
$^{*}p < .05$. $^{**}p < .01$.

However, being that both the pay communication and workplace deviance constructs are comprised of sub-dimensions, pairs consisting of a pay communication sub-dimension (e.g., pay policy existence, pay structure, organizational norms, and employee norms) with the workplace deviance sub-dimensions (e.g., organizational and interpersonal deviance) were analyzed to identify whether continuance commitment has a significant interaction effect for a portion of the pay secrecy-workplace deviance relationship. Continuance commitment was found to significantly moderate only one relationship, the pay structure-interpersonal deviance relationship ($p < .10$). Refer to Table 4.11. The interaction is plotted in Figure 4.2. Additionally, a simple slope analysis was conducted to confirm the significance of the interaction effect. The results of the simple slope of workplace deviance involving high levels of pay structure (e.g., pay secrecy) and low levels of continuance commitment is significant (simple slope -.102), $t(605) = 3.226$, $p < .001$. The simple slope of workplace deviance when both pay communication and continuance commitment levels are high is nonsignificant (simple slope -.032), $t(605) = -1.012$, $p < .312$. Thus, there is some support for hypothesis 4.

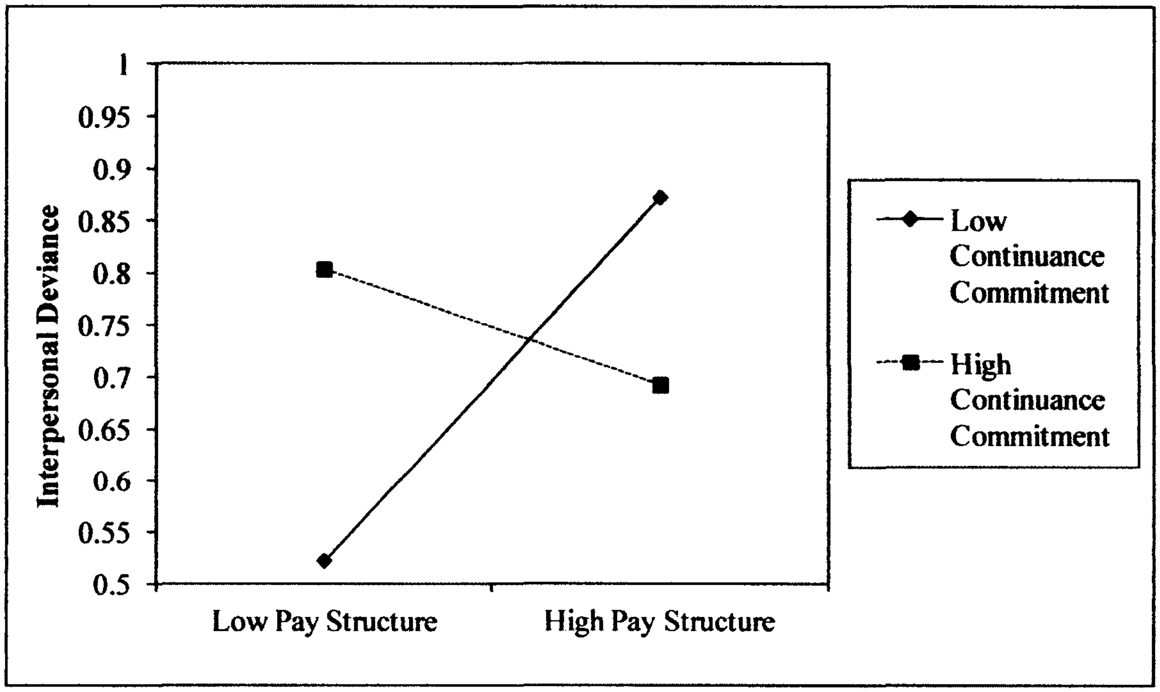
Table 4.11 Additional Hierarchical Regression Analysis for Hypothesis 4

	Interpersonal Deviance					
	Model 1		Model 2		Model 3	
Variable	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1: Control Variables	.08**					
Age		-.20**		-.20**		-.20**
Gender		-.20**		-.20**		-.20**
Step 2: Main Effect			.00			
Pay Structure				.04		.04
Continuance Commitment				.03		.03
Step 3: Interaction Effect					.01†	
Pay Structure x Continuance Commitment						-.07†
Total R^2		.09				
Total F Value (df regression, residual)		11.97** (5, 605)				

Table 4.11 (Continued)

Note: $N = 611$. Standardized beta coefficients are shown. ΔR^2 is based upon variables included in each step.
$^{\dagger}p < .10$. $^{*}p < .05$. $^{**}p < .01$.

Figure 4.2 Plot of Interaction Effect between Pay Structure and Workplace Deviance



Discussion

This study contributes to two different management fields: pay communication and workplace deviance. These findings contribute much needed empirical data to the underdeveloped pay communication literature by demonstrating that pay secrecy can have a negative effect on employee behavior, other than performance (e.g., Bamberger and Belogolovsky 2010) and attitudes (e.g., satisfaction: Cloutier and Vilhuber 2008). Additionally, the discovery of the significant mediating effect of the organizational justice sub-dimensions (e.g., distributive, procedural, interpersonal, and informational justice), and organizational and managerial trust on the pay secrecy-workplace deviance relationship assists both researchers and organizations in understanding why pay secrecy practices may lead employees to engage in deviant behaviors. Additionally, the finding of continuance commitment (or the lack of perceived job alternatives) impacting a portion of the pay secrecy-workplace deviance relationship (through the pay structure and interpersonal deviance sub-dimensions) demonstrates that there are factors outside of the organizations' control that can influence the relationship even though the pay communication practice (e.g., pay secrecy) is within control of the organization.

The findings of this study also contribute to the workplace deviance literature by showing that a common organizational practice such as pay secrecy can be associated with higher levels of deviant acts. Interestingly, the participants of this study were rather honest as 98.5% of the sample (602 of 611 participants) admitted to engaging in some deviant act within the past six months. This extreme honesty, which is most likely due to the complete anonymity guaranteed to all participants, helps researchers and organizations better understand the amount of deviant behaviors occurring in the workplace.

Limitations

Although tremendous efforts were taken to strengthen the methodology of this study, there are several limitations. First, the research design is cross-sectional and therefore, causal inferences are not warranted.

Additionally, the data collection being self-report is another potential limitation. However, the nature of the constructs being measured (e.g., perceptions of the pay communication practices utilized by the employing organization, attitudes towards organizational justice and trust, and participation in deviant behaviors) required the use of self-report data since only the employee can accurately respond to items pertaining to their perceptions, attitudes, and behaviors. Also, employees tend to keep their engagement of deviant behaviors secret from other organizational members (Spector, 1992), thereby making self-report data necessary.

Social desirability bias is another potential limitation. However, the guarantee of anonymity to all participants and the finding of 98.5% of the sample admitting to engaging in some type of deviant behavior in the past six months shows that social desirability is unlikely to be an issue in this study.

Another potential limitation is common method variance. However, the guarantee of anonymity to all participants (Podsakoff, MacKenzie, Lee, and Podsakoff 2003; Siemsen, Roth, and Oliveira 2010) and the finding of a statistically significant interaction (Evans 1985) show this study most likely does not suffer from common method variance.

The scale used to measure continuance commitment may be another limitation. Being that only one aspect of continuance commitment (e.g., lack of perceived job alternatives) was used to measure the overall construct, additional and/or more significant findings of continuance commitment moderating the pay secrecy-workplace deviance relationship may have resulted if the other aspect (e.g., personal sacrifices or loss of side-bets and investments) was included in the measure.

A final limitation of this study is the external validity of the results. The findings may not be generalizable to countries other than the U.S. since the sample was comprised of U.S. residents.

Future Research

There are several directions future research may pursue. First, analyses determining whether and how each pay communication sub-dimension is significantly related to workplace deviance and each of its sub-dimensions are warranted. The relationship of pay secrecy (higher levels of the pay communication sub-dimensions) being more significantly positively associated with organizational deviance than interpersonal deviance is expected since pay communication practices are within the control of the organization; however, it is unknown which pay communication sub-dimension (e.g., Pay Policy Existence versus Pay Structure) will have higher associations with each workplace deviance sub-dimension.

Another future direction is the inclusion of other moderators impacting the pay secrecy-workplace deviance relationship. Specifically, moderating variables that are within the organizations' control should be investigated to show the organizations that are utilizing pay secrecy practices how they could potentially minimize workplace deviance. Also, continuance commitment should be reanalyzed as a moderating variable but with both aspects of continuance commitment being analyzed.

Finally, generalizing these findings to countries other than the U.S. is another future path. Even though the labor laws may differ between countries, employee compensation and the organizational pay practices (e.g., pay communication practices) used in different countries may resemble that of the U.S, especially in developed countries. Therefore, it may be beneficial to conduct an international study analyzing the relationship between pay communication and workplace deviance.

CHAPTER 5

CONCLUSION

The main purpose of this dissertation was to extend the pay communication literature through a further understanding of pay secrecy and pay openness practices. This objective was achieved by successfully developing a pay communication scale that encompasses all aspects of pay communication and then utilizing the pay communication scale to determine pay secrecy's influence on workplace deviance.

Chapter 3 involved the development of a pay communication scale with pay secrecy and pay openness representing the extremes. Three multistage studies were conducted to properly develop and validate the pay communication scale. The first stage of Study 1 involved having human resources practitioners and the researcher generate a pool of 79 items pertaining to different aspects of pay communication practices. Then a panel of experts reviewed and evaluated the generated items on three criteria (e.g., consistency with the pay communication description, generalizability to a wide variety of organizations and occupations, and clarity and conciseness) in the second stage of Study 1. This process resulted in 42 items.

Study 2 consisted of further refining the generated items by analyzing the inter-item correlations, variances, and factor loadings of each item in an exploratory factor analysis. These procedures yielded 22 items loadings on four distinct factors: Pay Policy Existence, Pay Structure, Organizational Norms, and Employee Norms.

The first stage of Study 3 involved conducting a confirmatory factor analysis to validate the proposed 22-item scale and dimensionality (four sub-dimensions). The 4-factor model demonstrated the overall better model fit in comparison to the 1-factor, 2-factor, and 3-factor models. The second stage of Study 3 verified construct validation for the Pay Communication scale by providing evidence of convergent and discriminant validity. Convergent validity was determined by analyzing the correlations between the developed Pay Communication scale and other pay communication scales (e.g., Noy 2007). Discriminant validity was established by evaluating the shared variance between the developed Pay Communication scale and a High Performance Work Practices scale (e.g., Huselid 1995).

Chapter 4 examined the relationship pay communication has with workplace deviance. Specifically, pay secrecy is expected to positively influence workplace deviance. This prediction is based on equity theory (Adams 1965), uncertaintiy management theory (Lind and van den Bos 2002), and reactance theory (Brehm 1966). Additionally, the relationship between pay secrecy and workplace deviance is anticipated to be mediated by distributive justice (based on equity theory; (Adams 1965)), procedural justice (based on fairness heuristic theory; (Lind 2001)), interpersonal justice (based on fairness heuristic theory; (Lind 2001)), informational justice (based on fairness heuristic theory; (Lind 2001)), organizational trust and managerial trust (based on social exchange theory; (Blau 1964)). Continuance commitment is also predicted to moderate the pay secrecy-workplace deviance relationship (based on power dependence theory; (Emerson 1972; Molm 2003)). A summary of the hypotheses and their results are presented below.

Summary of Hypotheses and Results

Hypothesis 1

It is predicted that pay secrecy is positively related to workplace deviance. *Supported*, pay secrecy is significantly positively associated with workplace deviance ($\beta = .11, p < .01$).

Hypothesis 2a

It is expected that perceptions of distributive justice mediate the relationship between pay secrecy and workplace deviance. *Supported*, perceptions of distributive justice partially mediate the relationship between pay secrecy and workplace deviance ($\beta = -.08, p < .05$).

Hypothesis 2b

It is anticipated that perceptions of procedural justice mediate the relationship between pay secrecy and workplace deviance. *Supported*, perceptions of procedural justice fully mediate the relationship between pay secrecy and workplace deviance ($\beta = -.14, p < .01$).

Hypothesis 2c

It is expected that perceptions of interpersonal justice mediate the relationship between pay secrecy and workplace deviance. *Supported*, interpersonal justice fully mediate the relationship between pay secrecy and workplace deviance ($\beta = -.15, p < .01$).

Hypothesis 2d

It is predicted that perceptions of informational justice mediate the relationship between pay secrecy and workplace deviance. *Supported*, perceptions of informational justice fully mediate the relationship between pay secrecy and workplace deviance ($\beta = -.13$, $p < .01$).

Hypothesis 3a

It is anticipated that perceptions of organizational trust mediate the relationship between pay secrecy and workplace deviance. *Supported*, perceptions of organizational trust fully mediate the relationship between pay secrecy and workplace deviance ($\beta = -.20$, $p < .01$).

Hypothesis 3b

It is expected that perceptions of managerial trust mediate the relationship between pay secrecy and workplace deviance. *Supported*, perceptions of managerial trust fully mediate the relationship between pay secrecy and workplace deviance ($\beta = -.16$, $p < .01$).

Hypothesis 4

It was predicted that continuance commitment moderates the relationship between pay secrecy and workplace deviance such that when continuance commitment is low and pay communication is high (e.g., pay secrecy), workplace deviance will be higher than when both continuance commitment and pay communication are high. *Partially supported*, continuance commitment only had a significant moderating impact on the relationship between the pay structure sub-dimension and the interpersonal deviance sub-dimension ($\beta = -.07$, $p < .10$).

Contributions

This research contributes to the human resource management discipline, specifically the pay communication literature, by providing a validated pay communication measure that has successfully extended the scarce pay communication research by demonstrating pay secrecy's influence on workplace deviance. The development of an inclusive Pay Communication scale should make it easier for future researchers to analyze the impact that pay secrecy and/or pay openness has on different organizational and employee outcomes.

Additionally, the significant findings regarding the relationship between pay secrecy and workplace deviance expand the employee outcomes (e.g., attitudes and behaviors) that have been associated with pay communication practices. Despite pay secrecy's pervasiveness as an organizational practice, these findings demonstrate the negative impact pay secrecy has on employee behaviors (e.g. workplace deviance), and consequently on the organization's overall well-being

APPENDIX A

VALIDATED MEASURES

Noy's (2007) Perceived Organizational Pay Secrecy (POPS) scale

Policies & Rules ($\alpha = .963$)

1. My company has rules against discussing employee pay with others.
2. This company has a formal policy that employees should not disclose their pay levels to other employees.
3. My company forbids employees from discussing their pay with others.
4. Employees are not allowed to discuss their pay at my company.
5. The company makes it clear that pay should not be discussed.
6. My organization has a written policy concerning pay secrecy. (For example, written into the employee manual, offer letter, contract, etc.)

Enforcement ($\alpha = .955$)

1. You can get in trouble if you get caught discussing your pay with others.
2. This company is very strict about not talking about your pay with other employees.
3. I would get into trouble if my superiors found out that I had disclosed my pay to others.
4. This organization enforces the rule that employees not discuss their pay with each other.
5. Discussing pay at my company is something you can be reprimanded for.

Organizational Norms ($\alpha = .890$)

1. My company likes to keep employee pay amounts secret.
2. At my company, there is an unwritten rule that pay is not discussed.
3. My company is secretive when it comes to employee pay.

Overall POPS scale ($\alpha = .965$)

Items were measured using a 5-point Likert-type scale ranging from 1 (strongly disagree), 2 (disagree), 3 (neither agree nor disagree), 4 (agree), and 5 (strongly agree).

APPENDIX B

NON-VALIDATED MEASURES

Beer and Gery's (1972) Organizational Culture Items

1. His salary grade classification
2. His salary range minimum
3. His salary range maximum
4. Type of increases presently available
5. Size of merit increases presently available
6. Frequency of eligibility for merit increases

No Cronbach's alpha coefficient was provided in the study.

Items were measured using a 2-point scale with the scale points representing no knowledge (1) and knowledge (2).

Mulvey, LeBlanc, Heneman, and McInerney's (2002) Pay Knowledge Scale

1. I know the grade/band/level of my job.
2. I understand the basis for periodic adjustments made to base pay ranges.
3. I know the grades/bands/levels of other jobs in the organization.
4. I understand the rationale for my job being placed in its grade/band/level.
5. I know the average annual base pay increase percentage awarded to employees at my organization.
6. I understand how my base pay increases are determined.
7. I understand how my pay range is determined.

No Cronbach's alpha coefficient was provided in the study.

Items were measured using a 5-point Likert-type scale with the scale points representing strongly disagree (1), somewhat disagree (2), neither agree nor disagree (3), somewhat agree (4), and strongly agree (5).

Day's (2006) Pay Communication Scale

1. My organization has held formal educational sessions in which they explain how pay levels are determined for its jobs.
2. My organization provides employees with written information about how pay levels are determined.
3. My supervisor has explained to me how pay levels are determined for the jobs in my organization.
4. I have asked my supervisor to explain how pay levels are determined for the jobs in my organization.
5. My organization has told me what the minimums and maximums are for the pay grade my job is in.

Overall Pay Communication scale (α = .75)

Items were measured using a Likert-type scale ranging from agree to disagree. The amount of individual scale points were not provided in the study.

Cloutier and Vilhuber's (2008) System Transparency Scale

1. Because all employees can access the information on salary adjustments, the members of the committee are forced to correctly evaluate all jobs.
2. Because the information on the procedures used to establish salaries is posted, the committee members are forced to exactly follow the procedures stipulated by the law.

Overall System Transparency scale (α = .80)

Items were measured using a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree)

Tremblay and Chênevert's (2008) Transparency of Pay Scale

1. Our organization does not disclose the administrative procedures on how pay levels and pay raises are fixed for nonmanagement employees. (R)
2. Our organization does not disclose the administrative procedures on how pay levels and pay raises are fixed for managers. (R)
3. We try to discourage nonmanagement employees from disclosing their pay to coworkers. (R)
4. Nonmanagement employees are really well informed about wage policies.
5. We try to discourage managers from disclosing their pay to colleagues. (R)
6. Managers are really well informed about wage policies.

Overall Transparency of Pay scale (α = .84)

Items were measured using a 5-point Likert-type scale ranging from 1 (completely disagree) to 5 (completely agree).

APPENDIX C

LOUISIANA TECH UNIVERSITY'S INTERNAL REVIEW BOARD APPROVAL LETTERS

Internal Review Board Approval Letter – Study 1

LOUISIANA TECH
UNIVERSITY

OFFICE OF UNIVERSITY RESEARCH

MEMORANDUM

TO: Ms. Shelly Marasi and Dr. Rebecca Bennett

FROM: Barbara Talbot, University Research

SUBJECT: HUMAN USE COMMITTEE REVIEW

DATE: March 27, 2013

In order to facilitate your project, an EXPEDITED REVIEW has been done for your proposed study entitled:

"Development of a Pay Secrecy Scale"

HUC 1076

The proposed study's revised procedures were found to provide reasonable and adequate safeguards against possible risks involving human subjects. The information to be collected may be personal in nature or implication. Therefore, diligent care needs to be taken to protect the privacy of the participants and to assure that the data are kept confidential. Informed consent is a critical part of the research process. The subjects must be informed that their participation is voluntary. It is important that consent materials be presented in a language understandable to every participant. If you have participants in your study whose first language is not English, be sure that informed consent materials are adequately explained or translated. Since your reviewed project appears to do no damage to the participants, the Human Use Committee grants approval of the involvement of human subjects as outlined.

Projects should be renewed annually. ***This approval was finalized on March 27, 2013 and this project will need to receive a continuation review by the IRB if the project, including data analysis, continues beyond March 27, 2014.*** Any discrepancies in procedure or changes that have been made including approved changes should be noted in the review application. Projects involving NIH funds require annual education training to be documented. For more information regarding this, contact the Office of University Research.

You are requested to maintain written records of your procedures, data collected, and subjects involved. These records will need to be available upon request during the conduct of the study and retained by the university for three years after the conclusion of the study. If changes occur in recruiting of subjects, informed consent process or in your research protocol, or if unanticipated problems should arise it is the Researchers responsibility to notify the Office of Research or IRB in writing. The project should be discontinued until modifications can be reviewed and approved.

If you have any questions, please contact Dr. Mary Livingston at 257-2292 or 257-5066.

A MEMBER OF THE UNIVERSITY OF LOUISIANA SYSTEM

P.O. BOX 3092 • RUSTON, LA 71272 • TELEPHONE (318) 257-5075 • FAX (318) 257-5079
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Internal Review Board Approval Letter – Study 2

LOUISIANA TECH
UNIVERSITY

OFFICE OF UNIVERSITY RESEARCH

MEMORANDUM

TO: Ms. Shelly Marasi and Dr. Rebecca Bennett

FROM: Barbara Talbot, University Research

SUBJECT: HUMAN USE COMMITTEE REVIEW

DATE: June 18, 2013

In order to facilitate your project, an EXPEDITED REVIEW has been done for your proposed study entitled:

"Development of a Pay Secrecy Scale"

HUC 1103

The proposed study's revised procedures were found to provide reasonable and adequate safeguards against possible risks involving human subjects. The information to be collected may be personal in nature or implication. Therefore, diligent care needs to be taken to protect the privacy of the participants and to assure that the data are kept confidential. Informed consent is a critical part of the research process. The subjects must be informed that their participation is voluntary. It is important that consent materials be presented in a language understandable to every participant. If you have participants in your study whose first language is not English, be sure that informed consent materials are adequately explained or translated. Since your reviewed project appears to do no damage to the participants, the Human Use Committee grants approval of the involvement of human subjects as outlined.

Projects should be renewed annually. ***This approval was finalized on June 18, 2013 and this project will need to receive a continuation review by the IRB if the project, including data analysis, continues beyond June 18, 2014.*** Any discrepancies in procedure or changes that have been made including approved changes should be noted in the review application. Projects involving NIH funds require annual education training to be documented. For more information regarding this, contact the Office of University Research.

You are requested to maintain written records of your procedures, data collected, and subjects involved. These records will need to be available upon request during the conduct of the study and retained by the university for three years after the conclusion of the study. If changes occur in recruiting of subjects, informed consent process or in your research protocol, or if unanticipated problems should arise it is the Researchers responsibility to notify the Office of Research or IRB in writing. The project should be discontinued until modifications can be reviewed and approved.

If you have any questions, please contact Dr. Mary Livingston at 257-2292 or 257-5066.

A MEMBER OF THE UNIVERSITY OF LOUISIANA SYSTEM

P.O. BOX 3092 • RUSTON, LA 71272 • TELEPHONE (318) 257-5075 • FAX (318) 257-5079

AN EQUAL OPPORTUNITY UNIVERSITY

Internal Review Board Approval Letter – Study 3

LOUISIANA TECH
UNIVERSITY
MEMORANDUM

OFFICE OF UNIVERSITY RESEARCH

TO: Ms. Shelly Marasi and Dr. Rebecca Bennett

FROM: Barbara Talbot, University Research

SUBJECT: HUMAN USE COMMITTEE REVIEW

DATE: August 9, 2013

In order to facilitate your project, an EXPEDITED REVIEW has been done for your proposed study entitled:

"Development of a Pay Communication Scale"

HUC 1115

The proposed study's revised procedures were found to provide reasonable and adequate safeguards against possible risks involving human subjects. The information to be collected may be personal in nature or implication. Therefore, diligent care needs to be taken to protect the privacy of the participants and to assure that the data are kept confidential. Informed consent is a critical part of the research process. The subjects must be informed that their participation is voluntary. It is important that consent materials be presented in a language understandable to every participant. If you have participants in your study whose first language is not English, be sure that informed consent materials are adequately explained or translated. Since your reviewed project appears to do no damage to the participants, the Human Use Committee grants approval of the involvement of human subjects as outlined.

Projects should be renewed annually. ***This approval was finalized on September 9, 2013 and this project will need to receive a continuation review by the IRB if the project, including data analysis, continues beyond September 9, 2014.*** Any discrepancies in procedure or changes that have been made including approved changes should be noted in the review application. Projects involving NIH funds require annual education training to be documented. For more information regarding this, contact the Office of University Research.

You are requested to maintain written records of your procedures, data collected, and subjects involved. These records will need to be available upon request during the conduct of the study and retained by the university for three years after the conclusion of the study. If changes occur in recruiting of subjects, informed consent process or in your research protocol, or if unanticipated problems should arise it is the Researchers responsibility to notify the Office of Research or IRB in writing. The project should be discontinued until modifications can be reviewed and approved.

If you have any questions, please contact Dr. Mary Livingston at 257-2292 or 257-5066.

APPENDIX D

LETTER SENT TO SHRM CHAPTER PRESIDENTS

(STAGE 1 OF STUDY 1)

Dear Mr/s. (full name of current President),

Hello. My name is Shelly Marasi and I am a SHRM member in Louisiana. I am also a doctoral student at Louisiana Tech University pursuing a Doctor of Business Administration in Management. In order to meet the requirements for my degree, I must complete a dissertation which includes conducting a research study entitled "Development of a Pay Communication Scale." The purpose of this research is to develop a pay communication (pay secrecy and pay openness) measure and determine whether pay secrecy impacts employee behavior. This research is important as it seeks to fill a gap in the current management literature by advancing the pay secrecy research, which is quite scarce and underdeveloped. Specifically, the management literature is in need of a pay communication scale that measures all aspects of the practice. Additionally, this measure is needed to identify the extent to which pay secrecy influences employee attitudes and behavior. We both have an interest in ensuring that HR professionals have the appropriate knowledge to assist organizations in achieving their maximum effectiveness. Therefore, I am requesting that you assist this research by having your organizations' members access a short survey for the purposes of developing a pay communication scale.

I am seeking to survey individuals who are currently employed in a HR position. I need your assistance and the help of the members of (name of SHRM Chapter) to conduct this research. It is vital to this research's meaningfulness and success that the survey be completed by HR professionals. Both your and the (name of SHRM Chapter) members assistance would be greatly appreciated.

Attached is a copy of the survey that I intend to use. A few important points are:

- Participants can be assured of anonymity and confidentiality as neither their names nor their employer's names will be collected.
- The survey will be conducted online and should take no longer than 15 minutes to complete.
- Demographic information is requested only to determine if there are meaningful differences between groups.
- The survey will be available for 10 days only. Therefore, there is only a small time frame in which your members will need to be involved. (If your organization agrees I am hoping to conduct the survey in April 2013)
- The results of the surveys will be published in summary form only, not by individual responses.
- Once the dissertation is completed the results of the survey may be presented to your membership, if desired.

Should your organization agree to assist me, there are two options that we may take in conducting the survey:

1. Your organization may provide me with a list of member email addresses (no names are necessary). An introductory email will be sent to all listed members asking for their assistance and providing the web address where they can complete the survey. Five days

later a reminder email will be sent. The email list will remain confidential and will not become part of the published dissertation.

2. Your organization may send out both the introductory email and five days later the reminder email with the web address where they can conduct the survey. If this option is selected I will need to know how many individuals were on the email list in order to determine the response rate as this has a great impact on the statistical significance of the results.

Both the introductory and reminder e-mail that will be presented to your members are a shorter version of this e-mail.

Please let me know if your organization is willing to participate in my dissertation research. If you have any questions or concerns, I may be contacted at (cellular phone number) or (email). My dissertation chair, Dr. Rebecca Bennett, may also be contacted at (office phone number) or (email). I hope to hear from your soon.

Sincerely,

Shelly Marasi
Doctoral Candidate
Louisiana Tech University

APPENDIX E

INTRODUCTORY LETTER SENT TO POTENTIAL PARTICIPANTS (STAGE 1 OF STUDY 1)

Dear (name of SHRM Chapter) member,
Hello. My name is Shelly Marasi. I am a SHRM member in Louisiana and also a doctoral student at Louisiana Tech University. In order to meet the requirements for my Doctor of Business Administration in Management degree, I must complete a dissertation which includes conducting a research study entitled "Development of a Pay Communication Scale." The purpose of this research is to develop a pay communication (pay secrecy and pay openness) measure and determine whether pay secrecy impacts employee behavior. This research is important as it seeks to fill a gap in the current Management literature by advancing the pay secrecy research, which is quite scarce and underdeveloped. I am requesting that you assist this research by participating in a short survey for the purposes of developing a pay communication scale.

A few important points about the survey are:

- The survey is completely anonymous and confidentiality will be strictly kept.
- The survey should take no longer than 15 minutes to complete.
- The survey is online and available for 10 days.
- The results of the surveys will be published in summary form only, not by individual responses.
- Once the dissertation is completed the results of the survey will be made available upon request.

Your assistance in advancing this research is greatly appreciated. Should you choose to participate in this research, the direct link to the survey is:

<< URL link to survey >>

If you would like to contact me with questions or concerns, I may be contacted at (email). My dissertation chair, Dr. Rebecca Bennett, may also be contacted at (email).

Sincerely,

Shelly Marasi
Doctoral Candidate
Louisiana Tech University

APPENDIX F

REMINDER LETTER SENT TO POTENTIAL PARTICIPANTS (STAGE 1 OF STUDY 1)

Dear (name of SHRM Chapter) member,
As a reminder, I am conducting a dissertation research study entitled "Development of a Pay Communication Scale" in order to meet the requirements for my Doctor of Business Administration in Management. The purpose of this research is to develop a pay communication (pay secrecy and pay openness) measure and determine whether pay secrecy impacts employee behavior. This research is important as it seeks to fill a gap in the current Management literature by advancing the pay secrecy research, which is quite scarce and underdeveloped. I am requesting that you assist this research by participating in a short survey for the purposes of developing a pay communication scale.

A few important points about the survey are:

- The survey is completely anonymous and confidentiality will be strictly kept.
- The survey should take no longer than 5-15 minutes to complete.
- The survey is online and available for 10 days.
- The results of the surveys will be published in summary form only, not by individual responses.
- Once the dissertation is completed the results of the survey will be made available upon request.

Your assistance in advancing this research is greatly appreciated. Should you choose to participate in this research, the direct link to the survey is:

<< URL link to survey >>

If you would like to contact me with questions or concerns, I may be contacted at (email). My dissertation chair, Dr. Rebecca Bennett, may also be contacted at (email).

Sincerely,

Shelly Marasi
Doctoral Candidate
Louisiana Tech University

APPENDIX G

HUMAN SUBJECTS CONSENT FORM

(STUDY 1, 2, AND 3)

The following is a brief summary of the project in which you are asked to participate. Please read this information before signing the statement below.

TITLE OF PROJECT: Pay Secrecy in the Workplace

PURPOSE OF STUDY/PROJECT: To develop a further understanding of pay secrecy and create a pay communication (pay secrecy and pay openness) scale

PROCEDURE: Voluntary completion of anonymous survey. Please check the box below to "sign" the consent form. After "signing" the consent form, read the instructions for each part and respond to the best of your abilities.

INSTRUMENTS: Survey

RISKS/ALTERNATIVE TREATMENTS: The participant understands that Louisiana Tech is not able to offer financial compensation nor to absorb the costs of medical treatment should you be injured as a result of participating in this research.

BENEFITS/COMPENSATION: None.[1]; At the end of the survey participants will enter their 'employee' identification number provided to them by the online organization in order to receive an online payment of $1.[2]

SAFEGUARDS OF PHYSICAL AND EMOTIONAL WELL-BEING: This study involves no treatment or physical contact. All information collected from the survey will be held strictly confidential. No one will be allowed access to the survey other than the researchers.

CONTACT INFORMATION: The principal experimenters listed below may be reached to answer questions about the research, subjects' rights, or related matters.
Shelly Marasi, Doctoral Candidate (main researcher) sam081@latech.edu
Dr. Rebecca Bennett (Dissertation Chair) rbennett@latech.edu
Members of the Human Use Committee of Louisiana Tech University may also be contacted if a problem cannot be discussed with the experimenters:

Dr. Les Guice (257-3056)
Dr. Mary M. Livingston (257-2292 or 257-4315)

I attest that I have read and understood the following description of the study, "Pay Secrecy in the Workplace", and its purpose and methods. I understand that my participation in this research is strictly voluntary and my participation or refusal to participate in this study will not affect my relationship with Louisiana Tech University or my employer in any way. Further, I understand that I may withdraw at any time or refuse to answer any questions without penalty. Upon completion of the study, I understand that the results will be freely available to me upon request. I understand that the results of my survey will be confidential, accessible only to the principal investigators, myself, or a legally appointed representative. I have not been requested to waive nor do I waive any of my rights related to participating in this study.

MARK THE BOX TO PROVIDE CONSENT.

☐ I confirm that I have read and understand the consent form regarding this study.
I agree to the terms of the consent form.
I am at least 18 years old and am currently employed.
I am a member of the Society for Human Resource Management (SHRM) or one of SHRM's affiliate chapters.[3]
I voluntarily provide consent to participate in the study.

[1] Phrase or statement was only included in the consent form for Study 1 and Study 2.
[2] Phrase or statement was only included in the consent form for Study 3.
[3] Phrase or statement was only included in the consent form for Stage 1 of Study 1.

APPENDIX H

ITEM DEVELOPMENT SURVEY

(STAGE 1 OF STUDY 1)

Part 1

INSTRUCTIONS: Please read the description of pay secrecy and answer the following questions as honestly and open as possible. Each response should be solely based on YOUR personal opinion, experiences, perceptions, and observations. Keep in mind there are no right or wrong answers. Please feel free to take as much space as needed.

DESCRIPTION: Pay Secrecy is an organizational practice or policy prohibiting the distribution and communication of certain pay information to employees and possibly outsiders.

1. What does Pay Secrecy mean to you? Please describe in detail.

2. What do you believe Pay Secrecy means to your current employer? Please describe in detail.

3. If possible, please provide at least two examples of how your current employer does/doesn't apply Pay Secrecy in the workplace. Please describe each example in detail.

4. If possible, please provide at least two examples of how other organizations (such as previous employers or spouse's employer) does/doesn't apply Pay Secrecy in the workplace. Please describe each example in detail.

5. What do you believe Pay Secrecy means to your current co-workers (i.e. subordinates, peers, and/or superiors)? Please describe in detail.

Part 2

INSTRUCTIONS: Please read and respond to the following demographic questions in order for us to better understand the pattern of responses. All information will be kept strictly confidential and responses will only be analyzed at the group level. Please answer all questions by marking the appropriate response and/or by filling in the blanks.

1. Gender:

○ Male ○ Female

2. Age: [ ] years

3. Ethnicity:

□ African American	□ American Indian	□ Asian/Pacific Islander
□ Caucasian	□ Latino/Hispanic	□ Middle Eastern
□ Native Hawaiian	□ Other: ______________	

4. How long have you been with your current employer?

○ less than 1 year	○ 1 – 5 years	○ 6 – 15 years
○ 16 – 25 years	○ over 25 years	○ not currently employed

5. On average, how many hours do you work per week?
○ less than 10 hours per week ○ 10 – 20 hours per week
○ 21 – 30 hours per week (part-time) ○ 30 – 40 hours per week (full-time)
○ more than 40 hours per week ○ not currently employed

6. What is your highest grade completed?
○ Did not complete high school ○ High school diploma or GED
○ Some college ○ Technical college or Trade school
○ Associate's degree (i.e. AA or AS) ○ Bachelor's degree (i.e. BA or BS)
○ Master's degree (i.e. MA, MS, MBA) ○ Doctorate degree (i.e. PhD, DBA, EdD)
○ Professional degree beyond Bachelor's (i.e. MD, DDS, DVM, LLB, JD)

7. What is the principal industry of your current employer?
○ Agriculture, Mining ○ Construction ○ Communications, Utilities
○ Government ○ Health Care ○ Finance, Insurance, Real Estate
○ Internet ○ Manufacturing ○ Retail, Wholesale
○ Nonprofit ○ Services ○ Transportation
○ Other: ____________________ ○ not currently employed

8. What managerial and departmental level best describes your current job position? (check all that apply)
□ Employee (no managerial duties) □ Lower-level management
□ Middle-level management □ Higher-level (top) management
□ Human Resources department □ Professional: ________________
□ Other: __________________

Confidentiality will be kept for all participants in this study. Thank you again for your participation.

APPENDIX I

LIST OF ALL GENERATED ITEMS

(STAGE 1 OF STUDY 1)

1. All pay information is open at my organization.
2. All pay information is public knowledge at my organization.
3. An employee will be fired for discussing pay information at my organization.
4. At my organization, employees have to trust that the organization pays them in the proper pay range.
5. At my organization, pay is only discussed between an employee and the hiring authority at the time of hire.
6. Employee pay levels are confidential internally and externally at my organization.
7. Employees are well informed about pay policies at my organization.
8. Employees at my organization do not know for sure what others are really being paid.
9. Employees basically know what everyone gets paid at my organization.
10. Employees can get in trouble if they get caught sharing pay information.
11. Employees discover individual pay levels through the grapevine at my organization.
12. Employees do not talk about their personal pay information at my organization.
13. Employees do not understand the overall pay structure at my organization.
14. Even though employees at my organization are not supposed to discuss their personal pay information they do.
15. Everyone at my organization is aware that all employees receive the same "across the board" raise at my organization.
16. Everyone at my organization knows that all employees receive a pay raise or bonus at the end of the year.
17. I am aware of the current criteria required for receiving pay increases.
18. I am aware of whether there are standard pay incentives for completion of special training, certification, and/or education.
19. I am only provided information about my individual pay level.
20. I am permitted to freely discuss any of my pay information.
21. I am provided or could easily obtain everyone's individual pay level at my organization.
22. I am provided with my job's pay range and/or pay average.
23. I am unaware of whether my pay level is at the lower, middle, or upper end of the pay range for my job.
24. I disclose my pay level to other employees when they ask.
25. I know about the different types, sizes, and/or frequencies of pay increases presently available.
26. I know the basis for determining my pay raises and/or bonuses.
27. I know whether my pay level is above, below, or equal to the average pay for my job.
28. I recognize that pay levels and/or raises are based on certain things, such as experience, years of service, education, and/or performance/evaluation scores.
29. I speak openly with other employees about my pay.
30. I understand how my pay increases are determined.
31. I understand how my pay level is determined.
32. If an employee requests any type of pay information the organization releases it.
33. Individual pay levels and/or raises of all employees are only known to a select few staff members, such as HR hiring manager, accountant, and/or CEO.
34. It is very common for employees to know what everyone is paid at my organization.

35. My job has been at risk because my employing organization believed I was sharing pay information.
36. My organization distributes pay ranges and/or pay averages for every job in the organization.
37. My organization does not allow employees to converse about their own or other employees' pay.
38. My organization does not disclose other employees' individual pay levels.
39. My organization does not disclose/publish the procedures used to establish pay levels and/or raises.
40. My organization does not have a policy, procedure, or unwritten standard on discussing pay information.
41. My organization does not make the secrecy of pay information an issue.
42. My organization encourages employees not to share pay information with other employees.
43. My organization enforces the policy/rule that forbids employees from discussing their pay with each other.
44. My organization frowns on conduct involving exchanging pay information.
45. My organization has a policy forbidding employees from discussing pay information with coworkers.
46. My organization has a rule to not disclose pay information with other employees.
47. My organization has a very solid pay structure that I understand.
48. My organization has an open culture in regards to pay information.
49. My organization has an unwritten rule that pay is prohibited from being discussed with other employees or outsiders.
50. My organization has the same pay scale for all non-managerial employees.
51. My organization implies that individual pay information should be kept private.
52. My organization is good at explaining how employee pay levels and/or raises are calculated.
53. My organization is not concerned with employees discussing pay information.
54. My organization is pretty open about pay information.
55. My organization is secretive when it comes to employee pay.
56. My organization is very strict about not talking about pay information with other employees.
57. My organization is very worried about employees sharing their personal pay information with outsiders.
58. My organization keeps all pay information strictly confidential.
59. My organization likes to keep employee pay amounts secret.
60. My organization makes it clear how pay levels and/or raises are determined for the jobs in my organization.
61. My organization makes it clear that pay should not be communicated under any circumstances.
62. My organization openly discusses all employees' individual pay levels and/or raises.
63. My organization provides employees with information about how pay levels and/or raises are determined.
64. My organization publishes and/or makes available their entire pay structure.
65. My organization recommends employees keep their pay confidential.

66. My organization requires employees to sign a contractual agreement stating they will comply with the pay secrecy policy and not discuss their individual pay information.
67. My organization respects their employee's confidentiality by not releasing everyone's individual pay level.
68. My organization tries to discourage employees from disclosing their pay to coworkers.
69. My organization verbally expresses a pay secrecy policy with employees during employee meetings or at the time of hire.
70. My organization withholds pay ranges, pay averages, and others' individual pay levels from employees.
71. No pay information, other than personal pay level, is disclosed to employees at my organization.
72. Pay information is only provided on a "need to know" basis at my organization.
73. Pay is the same across the board at my organization.
74. Starting pay ranges are published on job postings.
75. The pay levels for most non-managerial employees are known since they are basically the same for all positions.
76. There are limited employees that have access to pay information in my organization.
77. There are no consequences for discussing pay at my organization.
78. There is a statement in my organization's employee handbook/manual requesting employees keep pay secret.
79. Upon request I can find out other employee's pay information at my organization.

APPENDIX J

ITEM REFINEMENT SURVEY

(STAGE 2 OF STUDY 1)

Listed below are the 79 items that have been generated to develop a pay communication (pay secrecy and pay openness) scale. Future participants will be instructed to indicate the degree to which they agree/disagree with each statement in regards to pay information and their employing organization's actions regarding pay information.

Part 1

INSTRUCTIONS: Please rate each item based on the degree to which it is 1) **CONSISTENT** with the pay communication definition (relating to either pay secrecy or pay openness practices) provided below and 2) **GENERALIZABLE** to a wide variety of organizations and occupations.

DEFINITION: Pay Communication is the organizational practice that involves which, how, and when pay information (such as pay ranges, pay raises, pay averages, individual pay levels, and/or the entire pay structure) is distributed and communicated to employees and possibly outsiders. The two forms of pay communication are pay secrecy and pay openness.

Pay Secrecy (at an extreme level) is an organizational practice, possibly including a pay secrecy policy, prohibiting the distribution and communication of certain pay information to employees and possibly outsiders.

Pay Openness (at an extreme level) is an organizational practice that allows employees to discuss their pay information amongst each other (and possibly outsiders) while the organization distributes most, if not all, pay information to the employees on a regular basis or upon request.

	Consistent with Pay Communication definition (pay secrecy or openness)				**Generalizable to a Wide Variety of Organizations and Occupations**			
	Not at All Consistent	A Little Consistent	Somewhat Consistent	Very Consistent	Not at All Generalizable	Slightly Generalizable	Moderately Generalizable	Highly Generalizable
Item #1	o	o	o	o	o	o	o	o
Item #2	o	o	o	o	o	o	o	o
Item #3, etc.	o	o	o	o	o	o	o	o

Part 2

INSTRUCTIONS: Please rate each item based on the degree to which it is **CLEAR** and **CONCISE** and will be understood by most respondents.

If you choose either 'Not at All Clear & Concise' or 'A Little Clear & Concise,' please rephrase or edit the item in the space provided in the third column. If you believe the item should be deleted from further analysis rather than be edited or modified, please write the phrase 'delete' in the space provided in the third column.

	Clarity and Conciseness				Item Modification/Deletion
	Not at All Clear & Concise	A Little Clear & Concise	Somewhat Clear & Concise	Very Clear & Concise	Rephrase or Delete
Item #1	○	○	○	○	
Item #2	○	○	○	○	
Item #3, etc.	○	○	○	○	

Part 3

INSTRUCTIONS: Please read and respond to the following demographic questions in order for us to better understand the pattern of responses. All information will be kept strictly confidential and responses will only be analyzed at the group level. Please answer all questions by marking the appropriate response and/or by filling in the blanks.

1) Gender:
○ Male ○ Female

2) Age: [ ] years

3) Ethnicity:
□ African American □ American Indian □ Asian/Pacific Islander
□ Caucasian □ Latino/Hispanic □ Middle Eastern
□ Native Hawaiian □ Other: ______________

4) How long have you been with your current employer?
○ less than 1 year ○ 1 – 5 years ○ 6 – 15 years
○ 16 – 25 years ○ over 25 years ○ not currently employed

5) What level best describes your current job position? (check all that apply)
□ Committee Member
□ Doctoral Student/Candidate of Management at Louisiana Tech University
□ Other Doctoral Student/Candidate at Louisiana Tech University: ______________
□ Professor of Management at Louisiana Tech University
□ Professor of Management at Other University: ______________

Confidentiality will be kept for all participants in this study. Thank you again for your participation.

APPENDIX K

LIST OF REFINED ITEMS

(STAGE 2 OF STUDY 1)

1. All individual pay information is only known to a select few staff members, such as the HR hiring manager, accountant, and/or CEO.
2. An employee could be fired for discussing pay information at my organization.
3. An employees' individual pay is strictly confidential at my organization.
4. At my organization, all pay information is available to anyone.
5. Employees are well informed about pay policies at my organization.
6. Employees discover coworkers' pay through the 'grapevine' (gossip) at my organization.
7. Even though employees at my organization are not supposed to discuss their personal pay information they do.
8. I am aware of the current criteria required for receiving pay increases.
9. I am provided information only about my individual pay level.
10. I am provided the pay average for every job in my organization.
11. I am provided my job's pay range.
12. I am unaware of whether my pay is at the lower, middle, or upper end of the pay range for my job.
13. I know about the different types, sizes, and/or frequencies of pay increases presently available.
14. I know whether my pay is above, below, or equal to the average pay for my job.
15. I recognize that pay at my organization is based upon certain things, such as experience, years of service, education, and/or performance/evaluation scores
16. I understand how my pay increases are determined.
17. Management openly discusses all employees' individual pay.
18. My organization distributes pay ranges for every job in the organization.
19. My organization does not allow employees to discuss their own pay with coworkers.
20. My organization does not have a policy, procedure, or unwritten standard on discussing pay information. (RC)
21. My organization does not provide employees with any coworkers' individual pay.
22. My organization does not provide employees with the procedures used to establish pay.
23. My organization enforces the policy/rule that forbids employees from discussing their pay with each other.
24. My organization has a policy forbidding employees from discussing pay information with coworkers.
25. My organization has a rule to not share pay information with other employees.
26. My organization has a solid pay structure/model that I understand.
27. My organization is secretive when it comes to employee pay.
28. My organization is very strict in regards to employees not talking about pay.
29. My organization keeps all pay information strictly confidential.
30. My organization makes it clear how pay is determined for my job.
31. My organization makes it clear that pay should not be discussed under any circumstances.
32. My organization makes the entire pay structure/model available.
33. My organization provides employees with information about how pay is determined.

34. My organization requires employees to sign a contractual agreement stating they will comply with the pay secrecy policy by not discussing their individual pay information with coworkers.
35. My organization shows its' concern for employees' privacy/confidentiality by not releasing everyone's individual pay level.
36. My organization suggests individual pay information should be kept private.
37. My organization verbally expresses a pay secrecy policy/rule with employees.
38. My organization withholds my job's pay average from me.
39. No pay information, other than personal pay level, is disclosed to employees at my organization.
40. Only a few employees have access to pay information at my organization.
41. There are no negative consequences for discussing pay at my organization.
42. There is a statement in my organization's employee handbook/manual stating employees should not discuss their pay with coworkers.

APPENDIX L

STUDY 2 SURVEY

Part 1

INSTRUCTIONS: Please read the description of pay communication in the workplace and rate each statement based on the degree to which you agree or disagree with it in regards to your knowledge of pay information and your current employing organization's actions regarding pay information. Each response should be based on YOUR personal opinion, experiences, perceptions, and observations in your current employing organization.

DESCRIPTION: **Pay Communication** is the organizational practice that involves which, how, and when pay information (such as pay ranges, pay raises, pay averages, individual pay levels, pay processes, and/or the entire pay structure) is distributed and communicated to employees and possibly outsiders. The two main forms of pay communication are pay secrecy and pay openness.

Pay Secrecy (at an extreme level) is an organizational practice, possibly including a pay secrecy policy, prohibiting the distribution and communication of certain pay information to employees and possibly outsiders.

Pay Openness (at an extreme level) is an organizational practice that allows employees to discuss their pay information amongst each other (and possibly outsiders) while the organization distributes most, if not all, pay information to the employees on a regular basis or upon request.

	Strongly Disagree	Disagree	Slightly Disagree	Undecided/ Unsure	Slightly Agree	Agree	Strongly Agree
Item #1	o	o	o	o	o	o	o
Item #2	o	o	o	o	o	o	o
Item #3, etc.	o	o	o	o	o	o	o

Part 2

INSTRUCTIONS: Please read and respond to the following demographic questions in order for us to better understand the pattern of responses. All information will be kept strictly confidential and responses will only be analyzed at the group level in summary form, not by individual responses. Please answer all questions by marking the appropriate response or by filling in the blanks.

1) Gender:

o Male o Female

2) Age: [ ] years

3) Ethnicity:

□ African American □ American Indian □ Asian/Pacific Islander

□ Caucasian □ Latino/Hispanic □ Middle Eastern

□ Native Hawaiian □ Other: ______________

4) How many years have you been employed with your current organization?
○ less than 1 year ○ 11 – 15 years ○ 26 years or more
○ 1 – 5 years ○ 16 – 20 years ○ not currently employed
○ 6 – 10 years ○ 21 – 25 years

5) On average, how many hours do you work per week?
○ less than 10 hours per week ○ 30 (full-time) – 40 hours per week
○ 10 – 20 hours per week ○ more than 40 hours per week
○ 21 – 30 hours per week (part-time) ○ not currently employed

6) What is your highest level of education completed?
○ Did not complete high school ○ High school diploma or GED
○ Some college ○ Technical college or Trade school
○ Associate's degree (i.e. AA or AS) ○ Bachelor's degree (i.e. BA or BS)
○ Master's degree (i.e. MA, MS, MBA) ○ Doctorate degree (i.e. PhD, DBA, EdD)
○ Professional degree beyond Bachelor's (i.e. MD, DDS, DVM, LLB, JD)

7) What is the principal industry of your current employer?
○ Agriculture, Mining ○ Construction ○ Communications, Utilities
○ Government ○ Health Care ○ Finance, Insurance, Real Estate
○ Internet ○ Manufacturing ○ Retail, Wholesale
○ Nonprofit ○ Services ○ Transportation
○ Other: ______________________ ○ Not currently employed

8) How many employees are there currently at your organization?
○ 10 employees or less ○ 11 – 50 employees
○ 51 – 100 employees ○ 101 – 500 employees
○ 501 – 1,000 employees ○ 1,001 – 5,000 employees
○ 5,001 – 25,000 employees ○ 25,001 – 50,000 employees
○ 50,001 – 100,000 employees ○ 100,001 employees or more
○ Not currently employed

9) What managerial and departmental level best describes your current job position? (check all that apply)
□ Employee (no managerial duties) □ Lower-level management
□ Middle-level management □ Higher-level (top) management
□ Human Resources department □ Professional: __________________
□ Other: ___________________ □ Not currently employed

10) Which best describes your organization's status involving unions?
○ Yes, my job is unionized but other jobs in my organization are not unionized.
○ Yes, my job and every job in my organization are unionized.
○ No, my job is not unionized but other jobs at my organization are unionized.
○ No, neither my job nor any job in my organization are unionized.
○ Not currently employed

11) Which category describes your current income?

○ $13,500 or less ○ $13,501 – $20,000 ○ $20,001 – $30,000
○ $30,001 – $40,000 ○ $40,001 – $50,000 ○ $50,001 – $60,000
○ $60,001 – $70,000 ○ $70,001 – $80,000 ○ $80,001 – $90,000
○ $90,001 – $100,000 ○ $100,001 or more ○ Not currently employed

12) Which state do you live in?

○ Alabama
○ Arkansas
○ California
○ Colorado
○ Connecticut
○ Delaware
○ Florida
○ Georgia
○ Illinois
○ Indiana
○ Iowa
○ Kansas
○ Kentucky
○ Louisiana
○ Maine
○ Massachusetts
○ Michigan
○ Minnesota
○ Missouri
○ Nebraska
○ Nevada
○ New Hampshire
○ New Jersey
○ New York
○ North Carolina
○ Ohio
○ Oklahoma
○ Pennsylvania
○ South Carolina
○ Tennessee
○ Texas
○ Utah
○ Virginia
○ Washington
○ Wisconsin
○ Wyoming
○ Do not live in the United States

Confidentiality will be kept for all participants in this study.

APPENDIX M

LIST OF ITEMS (STUDY 2 AND 3)

1. An employee could be fired for discussing pay information at my organization.
2. At my organization, all pay information is available to anyone.
3. Employees discover coworkers' pay through the 'grapevine' (gossip) at my organization.
4. Even though employees at my organization are not suppose to discuss their personal pay information they do.
5. I am provided my job's pay range.
6. I know about the different types, sizes, and/or frequencies of pay increases presently available.
7. My organization does not allow employees to discuss their own pay with coworkers.
8. My organization enforces the policy/rule that forbids employees from discussing their pay with each other.
9. My organization has a policy forbidding employees from discussing pay information with coworkers.
10. My organization has a rule to not share pay information with other employees.
11. My organization has a solid pay structure/model that I understand.
12. My organization is very strict in regards to employees not talking about pay.
13. My organization keeps all pay information strictly confidential.
14. My organization makes it clear how pay is determined for my job.
15. My organization makes it clear that pay should not be discussed under any circumstances.
16. My organization makes the entire pay structure/model available.
17. My organization provides employees with information about how pay is determined.
18. My organization shows its' concern for employee's privacy/confidentiality by not releasing everyone's individual pay level.
19. My organization suggests individual pay information should be kept private.
20. My organization verbally expresses a pay secrecy policy/rule with employees.
21. Only a few employees have access to pay information at my organization.
22. There is a statement in my organization's employee handbook/manual stating employees should not discuss their pay with coworkers.

APPENDIX N

STUDY 3 SURVEY

Pay Communication Scale being Developed	Strongly Disagree	Disagree	Slightly Disagree	Undecided/Unsure	Slightly Agree	Agree	Strongly Agree
1. An employee could be fired for discussing pay information at my organization.	1	2	3	4	5	6	7
2. At my organization, all pay information is available to anyone.	1	2	3	4	5	6	7
3. Employees discover coworkers' pay through the 'grapevine' (gossip) at my organization.	1	2	3	4	5	6	7
4. Even though employees at my organization are not supposed to discuss their personal pay information they do.	1	2	3	4	5	6	7
5. I am provided my job's pay range.	1	2	3	4	5	6	7
6. I know about the different types, sizes, and/or frequencies of pay increases presently available.	1	2	3	4	5	6	7
7. My organization does not allow employees to discuss their own pay with coworkers.	1	2	3	4	5	6	7
8. My organization enforces the policy/rule that forbids employees from discussing their pay with each other.	1	2	3	4	5	6	7
9. My organization has a policy forbidding employees from discussing pay information with coworkers.	1	2	3	4	5	6	7
10. My organization has a rule to not share pay information with other employees.	1	2	3	4	5	6	7
11. My organization has a solid pay structure/model that I understand.	1	2	3	4	5	6	7
12. My organization is very strict in regards to employees not talking about pay.	1	2	3	4	5	6	7
13. My organization keeps all pay information strictly confidential.	1	2	3	4	5	6	7
14. My organization makes it clear how pay is determined for my job.	1	2	3	4	5	6	7
15. My organization makes it clear that pay should not be discussed under any circumstances.	1	2	3	4	5	6	7
16. My organization makes the entire pay structure/model available.	1	2	3	4	5	6	7
17. My organization provides employees with information about how pay is determined.	1	2	3	4	5	6	7

18. My organization shows its' concern for employees' privacy/confidentiality by not releasing everyone's individual pay level.	1	2	3	4	5	6	7
19. My organization suggests individual pay information should be kept private.	1	2	3	4	5	6	7
20. My organization verbally expresses a pay secrecy policy/rule with employees.	1	2	3	4	5	6	7
21. Only a few employees have access to pay information at my organization.	1	2	3	4	5	6	7
22. There is a statement in my organization's employee handbook/manual stating employees should not discuss their pay with coworkers.	1	2	3	4	5	6	7

<u>Noy's POPS scale</u>

Policies & Rules sub-dimension – items 1-6
Enforcement sub-dimension – items 7-11
Organizational Norms sub-dimension – items 12-14

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. My company has rules against discussing employee pay with others.	1	2	3	4	5
2. This company has a formal policy that employees should not disclose their pay levels to other employees.	1	2	3	4	5
3. My company forbids employees from discussing their pay with others.	1	2	3	4	5
4. Employees are not allowed to discuss their pay at my company.	1	2	3	4	5
5. My employer makes it clear that pay should not be discussed.	1	2	3	4	5
6. My organization has a written policy concerning pay secrecy. (For example, written into the employee manual, offer letter, contract, etc.)	1	2	3	4	5
7. I could get in trouble if I get caught discussing my pay with others.	1	2	3	4	5
8. This company is very strict about not talking about my pay with other employees.	1	2	3	4	5
9. I would get into trouble if my superiors found out that I had disclosed my pay to others.	1	2	3	4	5
10. This organization enforces the rule that employees not discuss their pay with each other.	1	2	3	4	5
11. Discussing pay at my company is something I can be reprimanded for.	1	2	3	4	5
12. My company likes to keep employee pay amounts secret.	1	2	3	4	5

13. At my company, there is an unwritten rule that pay is not discussed.	1	2	3	4	5
14. My company is secretive when it comes to employee pay.	1	2	3	4	5

Mulvey's Pay Knowledge scale	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. I know the pay grade/band/level of my job.	1	2	3	4	5
2. I understand the basis for periodic adjustments made to base pay ranges.	1	2	3	4	5
3. I know the pay grades/bands/levels of other jobs in the organization.	1	2	3	4	5
4. I understand the rationale for my job being placed in its grade/band/level.	1	2	3	4	5
5. I know the average annual base pay increase percentage awarded to employees at my organization.	1	2	3	4	5
6. I understand how my base pay increases are determined.	1	2	3	4	5
7. I understand how my pay range is determined.	1	2	3	4	5

Day's Pay Communication scale	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. My organization has held formal educational sessions in which they explain how pay levels are determined for its jobs.	1	2	3	4	5
2. My organization provides employees with written information about how pay levels are determined.	1	2	3	4	5
3. My supervisor has explained to me how pay levels are determined for the jobs in my organization.	1	2	3	4	5
4. I have asked my supervisor to explain how pay levels are determined for the jobs in my organization.	1	2	3	4	5
5. My organization has told me what the minimums and maximums are for the pay grade my job is in.	1	2	3	4	5

<u>Huselid's HPWP scale</u> Employee Skills and Organizational Structures sub-dimension – items 1-9 Employee Motivation sub-dimension – items 10-13	Strongly Disagree	Disagree	Slightly Disagree	Undecided/Unsure	Slightly Agree	Agree	Strongly Agree
1. All employees in my organization are included in a formal information sharing program (i.e., a newsletter).	1	2	3	4	5	6	7
2. Most employees in my company have a formal job description.	1	2	3	4	5	6	7
3. Most non-entry level jobs in this firm are filled when they are open.	1	2	3	4	5	6	7
4. My employer administers employee attitude surveys on a regular basis.	1	2	3	4	5	6	7
5. My organization has quality of work life programs, quality circles, and/or labor management participation teams.	1	2	3	4	5	6	7
6. Employees in my company have access to company incentive plans, profit-sharing plans, and/or gain-sharing plans.	1	2	3	4	5	6	7
7. Most employees in my organization receive training at least every 12 months.	1	2	3	4	5	6	7
8. All employees in this organization have access to a formal grievance procedure and/or complaint resolution system.	1	2	3	4	5	6	7
9. Most employees are administered an employment test prior to hiring in this organization.	1	2	3	4	5	6	7
10. Most employees have their performance appraisals used to determine their compensation.	1	2	3	4	5	6	7
11. All employees of this company receive formal performance appraisals.	1	2	3	4	5	6	7
12. Decisions about promotions in this organization are based mostly on performance, and not on seniority.	1	2	3	4	5	6	7
13. In the most common jobs in this organization, most of the employees are qualified.	1	2	3	4	5	6	7

<u>Part 2</u>

INSTRUCTIONS: Please read and respond to the following demographic questions in order for us to better understand the pattern of responses. All information will be kept <u>strictly confidential</u> and responses will only be analyzed at the group level in summary form, not by individual responses. Please answer all questions by marking the appropriate response or by filling in the blanks.

1) Gender:
○ Male ○ Female

2) Age: [ ] years

3) Ethnicity:
□ African American □ American Indian □ Asian/Pacific Islander
□ Caucasian □ Latino/Hispanic □ Middle Eastern
□ Native Hawaiian □ Other: ______________

4) How many years have you been employed with your current organization?
○ less than 1 year ○ 11 – 15 years ○ 26 years or more
○ 1 – 5 years ○ 16 – 20 years ○ not currently employed
○ 6 – 10 years ○ 21 – 25 years

5) On average, how many hours do you work per week?
○ less than 10 hours per week ○ 30 (full-time) – 40 hours per week
○ 10 – 20 hours per week ○ more than 40 hours per week
○ 21 – 30 hours per week (part-time) ○ not currently employed

6) What is your highest level of education completed?
○ Did not complete high school ○ High school diploma or GED
○ Some college ○ Technical college or Trade school
○ Associate's degree (i.e. AA or AS) ○ Bachelor's degree (i.e. BA or BS)
○ Master's degree (i.e. MA, MS, MBA) ○ Doctorate degree (i.e. PhD, DBA, EdD)
○ Professional degree beyond Bachelor's (i.e. MD, DDS, DVM, LLB, JD)

7) What is the principal industry of your current employer?
○ Agriculture, Mining ○ Construction ○ Communications, Utilities
○ Government ○ Health Care ○ Finance, Insurance, Real Estate
○ Internet ○ Manufacturing ○ Retail, Wholesale
○ Nonprofit ○ Services ○ Transportation
○ Other: ______________________ ○ Not currently employed

8) How many employees are there currently at your organization?
○ 10 employees or less ○ 11 – 50 employees
○ 51 – 100 employees ○ 101 – 500 employees
○ 501 – 1,000 employees ○ 1,001 – 5,000 employees
○ 5,001 – 25,000 employees ○ 25,001 – 50,000 employees
○ 50,001 – 100,000 employees ○ 100,001 employees or more
○ Not currently employed

9) What managerial and departmental level best describes your current job position? (check all that apply)
□ Employee (no managerial duties) □ Lower-level management

□ Middle-level management □ Higher-level (top) management
□ Human Resources department □ Professional: ________________
□ Other: ________________ □ Not currently employed

10) Which best describes your organization's status involving unions?
○ Yes, my job is unionized but other jobs in my organization are not unionized.
○ Yes, my job and every job in my organization are unionized.
○ No, my job is not unionized but other jobs at my organization are unionized.
○ No, neither my job nor any job in my organization are unionized.
○ Not currently employed

11) Which category describes your current income?
○ $13,500 or less ○ $13,501 – $20,000 ○ $20,001 – $30,000
○ $30,001 – $40,000 ○ $40,001 – $50,000 ○ $50,001 – $60,000
○ $60,001 – $70,000 ○ $70,001 – $80,000 ○ $80,001 – $90,000
○ $90,001 – $100,000 ○ $100,001 or more ○ Not currently employed

12) Which state do you live in?
○ Alabama
○ Arkansas
○ California
○ Colorado
○ Connecticut
○ Delaware
○ Florida
○ Georgia
○ Illinois
○ Indiana
○ Iowa
○ Kansas
○ Kentucky
○ Louisiana
○ Maine
○ Massachusetts
○ Michigan
○ Minnesota
○ Missouri
○ Nebraska
○ Nevada
○ New Hampshire
○ New Jersey
○ New York
○ North Carolina
○ Ohio
○ Oklahoma
○ Pennsylvania
○ South Carolina

- o Tennessee
- o Texas
- o Utah
- o Virginia
- o Washington
- o Wisconsin
- o Wyoming
- o Do not live in the United States

Confidentiality will be kept for all participants in this study.

APPENDIX O

FINAL VALIDATED SCALE

AND SUB-DIMENSIONS

Pay Policy Existence sub-dimension

1. An employee could be fired for discussing pay information at my organization.
2. My organization does not allow employees to discuss their own pay with coworkers.
3. My organization enforces the policy/rule that forbids employees from discussing their pay with each other.
4. My organization has a policy forbidding employees from discussing pay information with coworkers.
5. My organization has a rule to not share pay information with other employees.
6. My organization is very strict in regards to employees not talking about pay.
7. My organization makes it clear that pay should not be discussed under any circumstances.
8. My organization verbally expresses a pay secrecy policy/rule with employees.
9. There is a statement in my organization's employee handbook/manual stating employees should not discuss their pay with coworkers.

Pay Structure sub-dimension

1. I am provided my job's pay range. (R)
2. I know about the different types, sizes, and/or frequencies of pay increases presently available. (R)
3. My organization has a solid pay structure/model that I understand. (R)
4. My organization makes it clear how pay is determined for my job. (R)
5. My organization makes the entire pay structure/model available. (R)
6. My organization provides employees with information about how pay is determined. (R)

Organizational Norms sub-dimension

1. At my organization, all pay information is available to anyone. (R)
2. My organization keeps all pay information strictly confidential.
3. My organization shows its' concern for employee's privacy/confidentiality by not releasing everyone's individual pay level.
4. My organization suggests individual pay information should be kept private.
5. Only a few employees have access to pay information at my organization.

Employee Norms sub-dimension

1. Employees discover coworkers' pay through the 'grapevine' (gossip) at my organization.
2. Even though employees at my organization are not suppose to discuss their personal pay information they do.

APPENDIX P

LIST OF ALL SCALES AND ITEMS

Pay Communication

The following items refer to certain organizational pay practices. Please indicate to what extent you agree with the following statements:

1. An employee could be fired for discussing pay information at my organization. (PPE)
2. At my organization, all pay information is available to anyone. (R) (ON)
3. Employees discover coworkers' pay through the 'grapevine' (gossip) at my organization. (EN)
4. Even though employees at my organization are not suppose to discuss their personal pay information they do. (EN)
5. I am provided my job's pay range. (R) (PS)
6. I know about the different types, sizes, and/or frequencies of pay increases presently available. (R) (PS)
7. My organization does not allow employees to discuss their own pay with coworkers. (PPE)
8. My organization enforces the policy/rule that forbids employees from discussing their pay with each other. (PPE)
9. My organization has a policy forbidding employees from discussing pay information with coworkers. (PPE)
10. My organization has a rule to not share pay information with other employees. (PPE)
11. My organization has a solid pay structure/model that I understand. (R) (PS)
12. My organization is very strict in regards to employees not talking about pay. (PPE)
13. My organization keeps all pay information strictly confidential. (ON)
14. My organization makes it clear how pay is determined for my job. (R) (PS)
15. My organization makes it clear that pay should not be discussed under any circumstances. (PPE)
16. My organization provides employees with information about how pay is determined. (R) (PS)
17. My organization provides employees with information about how pay is determined. (R) (PS)
18. My organization shows its' concern for employee's privacy/confidentiality by not releasing everyone's individual pay level. (ON)
19. My organization suggests individual pay information should be kept private. (ON)
20. My organization verbally expresses a pay secrecy policy/rule with employees. (PPE)
21. Only a few employees have access to pay information at my organization. (ON)
22. There is a statement in my organization's employee handbook/manual stating employees should not discuss their pay with coworkers. (PPE)

Workplace Deviance

The following items refer to certain employee behaviors. Please indicate to what extent you have participated in the followed behaviors in the past 6 months:

1. Made fun of someone at work. (ID)

2. Said something hurtful to someone at work. (ID)
3. Made an ethnic, religious, or racial remark or joke at work. (ID)
4. Cursed at someone at work. (ID)
5. Played a mean prank on someone at work. (ID)
6. Acted rudely toward someone at work. (ID)
7. Publicly embarrassed someone at work. (ID)
8. Lost your temper while at work. (ID)
9. Taken property from someone at work (i.e., coworker or customer) without permission. (ID)
10. Sexually harassed someone at work. (ID)
11. Blamed someone at work for mistakes. (ID)
12. Taken property (e.g., equipment, merchandise, or money) from work without permission. (OD)
13. Spent too much time fantasizing or daydreaming instead of working. (OD)
14. Taken an additional or longer break than is acceptable at your workplace. (OD)
15. Come in late to work without permission. (OD)
16. Littered your work environment. (OD)
17. Neglected to follow your boss's instructions. (OD)
18. Intentionally worked slower than you could have worked. (OD)
19. Discussed confidential company information with an unauthorized person. (OD)
20. Used an illegal drug or consumed alcohol on the job. (OD)
21. Put little effort into your work. (OD)
22. Left work early without permission. (OD)
23. Worked on a personal matter instead of work for your employer. (OD)
24. Called in sick when you were not. (OD)
25. Sabotaged equipment or merchandise. (OD)
26. Talked with another employee instead of working. (OD)
27. Misused discount privilege. (OD)
28. Wasted company resources. (OD)

Distributive Justice

The following items refer to the pay you receive at your organization. Please indicate to what extent:

1. Does your pay reflect the effort you have put into your work?
2. Is your pay appropriate for the work you have completed?
3. Does your pay reflect what you have contributed to the organization?
4. Is your pay justified, given your performance?

Procedural Justice

The following items refer to the procedures used to arrive at your pay. Please indicate to what extent:

1. Have you been able to express your views and feelings during those procedures?
2. Have you had influence over the pay arrived at by those procedures?
3. Have those procedures been applied consistently?
4. Have those procedures been free of bias?
5. Have those procedures been based on accurate information?

6. Have you been able to appeal the pay arrived at by those procedures?
7. Have those procedures upheld ethical and moral standards?

Informational Justice

The following items refer to management or your supervisor who performed the procedures used to determine your pay. Please indicate to what extent:

1. Has he/she been candid in his/her communications with you?
2. Has he/she explained the procedures thoroughly?
3. Were his/her explanations regarding the procedures reasonable?
4. Has he/she communicated details in a timely manner?
5. Has he/she seemed to tailor his/her communications to individuals' specific needs?

Interpersonal Justice

The following items refer to your manager who performed the pay procedures. Please indicate to what extent:

1. Has he/she treated you in a polite manner?
2. Has he/she treated you with dignity?
3. Has he/she treated you with respect?
4. Has he/she refrained from improper remarks or comments?

Managerial Trust

The following items refer to your manager who determines your pay. Please indicate to what extent you agree with the following statements:

1. My supervisor keeps my interests in mind when making decisions.
2. I would be willing to let my supervisor have complete control over my future in this company.
3. If my supervisor asked why a problem occurred, I would speak freely even if I were partly to blame.
4. I feel comfortable being creative because my supervisor understands that sometimes creative solutions do not work.
5. It is important for me to have a good way to keep an eye on my supervisor. (R)
6. Increasing my vulnerability to criticism by my supervisor would be a mistake. (R)
7. If I had my way, I wouldn't let my supervisor have any influence over decisions that are important to me. (R)

Organizational Trust

The following items refer to your employer. Please indicate to what extent you agree with the following statements:

1. I believe my employer has high integrity.
2. I can expect my employer to treat me in a consistent and predictable fashion.
3. My employer is not always honest and truthful. (R)
4. In general, I believe my employer's motives and intentions are good.
5. I don't think my employer treats me fairly. (R)
6. My employer is open and upfront with me.
7. I'm not sure I fully trust my employer. (R)

Continuance Commitment

The following items refer to potential job opportunities. Please indicate to what extent you agree with the following statements:

1. One of the few negative consequences of leaving this organization/company would be the scarcity of available alternatives.
2. I would have many options if I decided to change organizations/companies. (R)
3. I am pleased that I have many alternatives available for changing organizations/companies.(R)
4. I feel I have too few options to consider leaving this organization/company.

Organizational Citizenship Behaviors

The following items refer to certain employee behaviors. Please indicate to what extent you have participated in the followed behaviors in the past 6 months:

1. Helped others who had been absent. (OCBI)
2. Helped others who had heavy workloads. (OCBI)
3. Assisted my supervisor with his/her work (when not asked). (OCBI)
4. Took time to listen to co-workers' problems and worries. (OCBI)
5. Went out of my way to help new employees. (OCBI)
6. Took a personal interest in other employees. (OCBI)
7. Passed along information to co-workers. (OCBI)
8. Showed up on time to work. (OCBO)
9. Gave advance notice when unable to come to work. (OCBO)
10. Took work breaks only when instructed. (OCBO)
11. Spent a great deal of free time helping other coworkers. (R) (OCBO)
12. Complimented people at work. (OCBO)
13. Conserved and protected organizational property. (OCBO)
14. Adhered to informal rules devised to maintain order. (OCBO)

Please read and respond to the following demographic questions in order for us to better understand the pattern of responses. All information will be kept strictly confidential and responses will only be analyzed at the group level in summary form, not by individual responses. Please answer all questions by marking the appropriate response or by filling in the blanks.

1) Gender:
○ Male ○ Female

2) Age: ☐ years

3) Ethnicity:

□ African American	□ American Indian	□ Asian/Pacific Islander
□ Caucasian	□ Latino/Hispanic	□ Middle Eastern
□ Native Hawaiian	□ Other: ____________	

4) How many years have you been employed with your current organization?

○ less than 1 year ○ 11 – 15 years ○ 26 years or more
○ 1 – 5 years ○ 16 – 20 years ○ not currently employed
○ 6 – 10 years ○ 21 – 25 years

5) On average, how many hours do you work per week?
○ less than 10 hours per week ○ 30 (full-time) – 40 hours per week
○ 10 – 20 hours per week ○ more than 40 hours per week
○ 21 – 30 hours per week (part-time) ○ not currently employed

6) What is your highest level of education completed?
○ Did not complete high school ○ High school diploma or GED
○ Some college ○ Technical college or Trade school
○ Associate's degree (i.e. AA or AS) ○ Bachelor's degree (i.e. BA or BS)
○ Master's degree (i.e. MA, MS, MBA) ○ Doctorate degree (i.e. PhD, DBA, EdD)
○ Professional degree beyond Bachelor's (i.e. MD, DDS, DVM, LLB, JD)

7) What is the principal industry of your current employer?
○ Agriculture, Mining ○ Construction ○ Communications, Utilities
○ Government ○ Health Care ○ Finance, Insurance, Real Estate
○ Internet ○ Manufacturing ○ Retail, Wholesale
○ Nonprofit ○ Services ○ Transportation
○ Other: ______________________ ○ Not currently employed

8) How many employees are there currently at your organization?
○ 10 employees or less ○ 11 – 50 employees
○ 51 – 100 employees ○ 101 – 500 employees
○ 501 – 1,000 employees ○ 1,001 – 5,000 employees
○ 5,001 – 25,000 employees ○ 25,001 – 50,000 employees
○ 50,001 – 100,000 employees ○ 100,001 employees or more
○ Not currently employed

9) What managerial and departmental level best describes your current job position? (check all that apply)
□ Employee (no managerial duties) □ Lower-level management
□ Middle-level management □ Higher-level (top) management
□ Human Resources department □ Professional: ________________
□ Other: ___________________ □ Not currently employed

10) Which best describes your organization's status involving unions?
○ Yes, my job is unionized but other jobs in my organization are not unionized.
○ Yes, my job and every job in my organization are unionized.
○ No, my job is not unionized but other jobs at my organization are unionized.
○ No, neither my job nor any job in my organization are unionized.
○ Not currently employed

11) Which category describes your current income?

○ $13,500 or less ○ $13,501 – $20,000 ○ $20,001 – $30,000
○ $30,001 – $40,000 ○ $40,001 – $50,000 ○ $50,001 – $60,000
○ $60,001 – $70,000 ○ $70,001 – $80,000 ○ $80,001 – $90,000
○ $90,001 – $100,000 ○ $100,001 or more ○ Not currently employed

12) Which state do you live in?
○ Alabama
○ Arkansas
○ California
○ Colorado
○ Connecticut
○ Delaware
○ Florida
○ Georgia
○ Illinois
○ Indiana
○ Iowa
○ Kansas
○ Kentucky
○ Louisiana
○ Maine
○ Massachusetts
○ Michigan
○ Minnesota
○ Missouri
○ Nebraska
○ Nevada
○ New Hampshire
○ New Jersey
○ New York
○ North Carolina
○ Ohio
○ Oklahoma
○ Pennsylvania
○ South Carolina
○ Tennessee
○ Texas
○ Utah
○ Virginia
○ Washington
○ Wisconsin
○ Wyoming
○ Do not live in the United States

Reverse-scored items are identified by (R) after the item.
Sub-dimensions of scales are identified in parentheses ( ) after the item.

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