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The Impact of a Supportive Feedback Environment on Attitudinal and Performance Outcomes

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Outcomes

by

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Abstract

While the positive outcomes of feedback in the workplace have been supported in

previous research, there is still a lack of theoretical unity explaining how and why

feedback may be advantageous. In addition, previous studies examining the effects of

feedback have resulted in mixed findings. Two studies were conducted to clarify the

conditions for valuable feedback by proposing and empirically testing two models

examining relationships between feedback environments and outcomes. The first study

examined performance outcomes related to a supportive feedback environment while the

second study examined attitudinal outcomes associated with a supportive feedback

environment. Results of both studies indicate that a feedback environment is related to

several positive performance and attitudinal outcomes, as well as mediating variables.

Taken together, these results provide evidence for the strength of supportive feedback

environments.

Keywords: feedback environment, feedback context, feedback orientation, feedback

seeking, job satisfaction, self-efficacy, role clarity, perceived organizational support,

performance

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A recent issue of *Industrial and Organizational Psychology: Perspectives on Science and Practice* (Pulakos & O'Leary, 2011) dealt with the issue of feedback and generated a variety of opinions, highlighting the lack of consensus in the organizational sciences regarding the value of feedback and what effective feedback consists of. What was clear from the focal article and the majority of responses is that there is a great deal of room for improvement in both the feedback and performance management domains. The issue was also a reminder that performance management and feedback are still areas of great interest to many researchers and practitioners.

The role that feedback plays in influencing employee performance and other outcomes of interest has been researched for decades (Arps, 1920). While studies have resulted in some mixed findings (Kluger & DeNisi, 1996), feedback has been found to relate to several positive work outcomes, such as job satisfaction, role clarity, affective commitment, supervisor-rated task performance, leader-member exchange (LMX), and lower perceptions of politics (Dahling & O'Malley, 2011). The positive effects of feedback are not always realized, however. A recent review and meta-analysis found that feedback only had a moderately positive effect on task performance rating and more than 38% of these effects were negative (Kluger & DeNisi, 1996). Clearly, more work is needed to help clarify under what conditions feedback will lead to positive outcomes. The purpose of the current study is to address this need by proposing and testing a model that identifies the mechanisms through which feedback, as operationalized by the contextual

variable of feedback environment, will lead to positive performance and attitudinal

outcomes. Specifically, it is the argument of this paper that implementing a supportive

feedback environment, in short, an environment where supervisors encourage others to

seek feedback and provide timely, constructive, and high quality feedback, will result in

several positive attitudinal and performance outcomes.

Defining Feedback

Feedback intervention research dates back over 100 years (Kluger & DeNisi,

1996) and has become an increasingly complex phenomenon. Feedback has been defined

in a number of different ways including: (a) information given concerning the quantity or

quality of performance (Prue & Fairbank, 1981), (b) information following a specific

performance episode (Sulzer-Azaroff & Mayer, 1991), (c) information that indicates to

individuals how well they are doing (Rummler & Brache, 1995), and (d) information that

allows an individual to adjust his or her performance (Daniels, 1994). There is clearly a

lack of consensus regarding what feedback exactly is (Alvero, Bucklin, & Austin, 2001).

It may be more useful to take a step back and operationalize feedback in a more general

manner, as a form of communication in which a sender conveys a message to a recipient

containing information about the recipient's performance (Ilgen, Fisher, & Taylor, 1979).

The sender of the feedback, also called the source, can exist in one of three forms. First,

the source of the feedback can be an individual who has observed certain behaviors of the

recipient and is in a position to evaluate those behaviors. A second source of feedback

comes from the task environment itself. For example, if you work in information

technology for an organization and keep receiving a computer error message, you know

your current behavior is not appropriate for the situation and you try to solve the problem

in another way. Third, feedback can also come from the individual. We form our own judgments concerning the quality of our behavior and how much we rely on those judgments is partially determined by personal characteristics, such as self-confidence (Ilgen et al., 1979). The current study is primarily concerned with feedback from individuals who observe the behavior of feedback recipients and are in a position to evaluate those behaviors.

It is important to note that feedback extends beyond the planned messages organizations send their employees. In fact, a probable reason why there remains a lack of theoretical clarity is the nature of feedback itself. For all the elements that can be defined as feedback, they share the defining quality of conveying some degree of information to the recipient about past behaviors, but they all share little else in common (Ilgen et al., 1979).

While the field of performance feedback is still lacking in theoretical agreement, as no theory exists that is fully dedicated or can fully explain the effects of feedback, there are several popular theories used to account for the effects of feedback on performance and other employee outcomes. Thorndike's (1927) law of effect is such a theory, which posits that feedback, whether positive or negative, should improve performance. Positive feedback should reinforce desired behavior and negative feedback should punish undesired behavior. While the theory is tempting in its simplicity, it does suffer from lack of empirical support. Most notably, it fails to account for the complex and variable nature of feedback interventions given that they vary in effectiveness (Kluger & DeNisi, 1996). Goal-setting theory (Locke & Latham, 1990) is a more recent

example and has found more support in research, but also fails to explain all feedback processes.

Examining Past Findings

Providing employee feedback is regarded as a critical step for maintaining and improving employee motivation and satisfaction (Hackman & Oldham, 1976; Lam, Yik, & Schaubroeck, 2002), so it should come as no surprise that feedback interventions (FIs) have been of particular research interest (Kluger & DeNisi, 1996). Early research into FI s found that knowledge of results (KR) interventions, which provide factual information concerning performance around certain tasks (e.g., your average typing speed is 90 words per minute), lead to increased task performance (Arps, 1920; Book & Norvell, 1922; Brown, 1932; Thorndike, 1927). As was pointed out by past researchers (Kluger & DeNisi, 1996) many of these studies suffered from major methodical limitations such as small sample sizes and poor variable manipulation. Kluger and DeNisi also pointed out that FIs have in some instances produced negative, but largely ignored, effects on performance.

Feedback inquiry. One of the more significant discoveries in feedback research has been the realization that individuals are not simply passive recipients of feedback, but active seekers as well. A significant amount of research has been dedicated to feedback inquiry, also termed feedback seeking. It has been found that individuals will engage in less inquiry when performance expectations are low (Northcraft & Ashford, 1990). The ego defense argument has been cited as a possible reason. Simply put, negative feedback is psychologically threatening, therefore, individuals may avoid negative feedback to protect their self-esteem (Northcraft & Ashford, 1990). In practice, this is problematic.

We have known for some time that people do not particularly enjoy giving or receiving negative performance reviews and therefore may avoid doing so of their own volition (Murphy & Cleveland, 1995). The individuals with poor performance expectations, who probably have these expectations for a legitimate reason (i.e., they recognize to some degree that something is wrong with their performance), need feedback the most, but are less likely to seek it and supervisors are less likely to give it. The result may be a continuation of poor performance that harms the individual and the organization.

Individual differences. Certain researchers have argued that differences unique to the individual, such as locus of control, self-esteem, social anxiety, age, and need for achievement, could be the key to the feedback-performance relationship (Ilgen et al., 1979). A review examining factors that influence the feedback process summarized several individual differences that are likely to influence feedback interactions and noted the importance of modifying the nature of feedback to take into these into account (Ilgen et al., 1979). Although a complete review of individual differences is out of the scope of the current study, there are findings worth noting from this line of research. Through an examination of previous literature, Ilgen and colleagues found that those high in personal needs that can be fulfilled through performance of the task itself (e.g., those with internal locus of control, high self-esteem, or high need for achievement or independence) need feedback that conveys competence and control over the task in order to satisfy their needs. However, individuals oriented toward needs best satisfied by factors external to the task (e.g., those with external locus of control or high need for affiliation) will focus on what feedback offers in terms of extrinsic rewards (Ilgen et al., 1979).

Interestingly, there are certain conditions where positive feedback has been shown to decrease performance (Cianci, Schaubroeck, and McGill, 2010; Van Dijk & Kluger, 2011). In accordance with regulatory focus theory, positive feedback can decrease motivation and performance for those working on prevention tasks, or tasks characterized by a focus on an avoidance of punishment, with a short-term perspective, or with sensitivity to social pressures (Van Dijk & Kluger, 2010). Additionally, those with a learning goal orientation improve in performance after negative feedback, but not positive feedback (Cianci, Schaubroeck, and McGill, 2010). These findings may seem contradictory to other research that found a negative relationship between negative feedback and self-efficacy and, as a result, a negative relationship between negative feedback and performance (Butler, 2000; Dweck, 1986; Dweck & Leggett, 1988). However, Van Dijk and Kluger (2011) reasoned that negative feedback, when received under a prevention focus, may decrease the expectancy of future success but increase the value of future success. In support of the ego defense argument, individuals with low self-esteem, or with low performance expectations as discussed earlier, have also been found to seek less performance feedback (Northcraft & Ashford, 1990). They also evaluate their own performance less favorably and interpret raters as evaluating their performance less favorably than those with high self-esteem (Jussim, Colemam, and Nassau 1987). Self-esteem has been found to influence the rater as well in that it is correlated with confidence in appraisal (Tziner, Murphy, & Cleveland, 2005). In addition, raters with low self-efficacy may lack adequate motivation or may consciously distort their ratings in favor of their own political goals (Tziner, et al., 2005).

Contextual factors. Examining the effects of the feedback context also reveal interesting findings. When raters believe the performance appraisal will be used for administrative purposes, such as promotion, they are more motivated (Murphy & Cleveland, 1995), lenient (Landy & Farr, 1980; Murphy & Cleveland, 1991, 1995), and attentive (Steers & Lee, 1983). A possible reason may be that the direct relationship between ratings and rewards for the ratees increases the raters belief that performance ratings matter (Murphy & Cleveland, 1995). The alternative, assigning performance appraisals for purely developmental purposes, does not automatically guarantee improved rater performance, however. When raters do not see direct, tangible results from their performance appraisals, they may begin to view the entire process as a waste of time.

The setting in which feedback is delivered may also influence how ratees react. When feedback is delivered publicly, individuals are less likely to engage in feedback inquiry (Northcraft & Ashford, 1990). Impression management theories have been used to support this finding. Inquiring about feedback could be interpreted by observers as a sign of insecurity (Schoeneman, 1981) and, therefore, individuals may avoid doing so. Public inquiry represents an even greater threat for individuals with low performance expectations as they anticipate receiving negative feedback information (Northcraft & Ashford, 1990).

New Directions in Research

Potential reasons why feedback may fail to produce positive outcomes have been described. Another reason may be how supervisors and managers have previously viewed feedback. Traditionally, the formal performance appraisal has been considered the standard platform on which to give employees feedback concerning their performance

(Murphy & Cleveland, 1995). More often than not, these appraisals are probably held on an annual or bi-annual basis and mostly involve the supervisor reviewing performance of the employee over a long period of time. Among the problems with this system of feedback is that many, if not most, employees dislike the performance appraisal process (Murphy & Cleveland, 1995) and reasons cited often include problems such as: lack of managerial understanding and skill in giving negative feedback, lack of clarity around the purpose for the performance appraisal process, and lack of managerial reward and recognition for employee development (London, 1997). Therefore, it should not come as a surprise that the majority workers do not like formal performance appraisals. In addition, most raters do not like giving negative feedback in general. It is uncomfortable, especially if you believe the employee is not expecting it. Managers have reported feelings of anxiety when faced with the prospect of telling direct reports negative information concerning their performance (Baron, 1993). To avoid this uncomfortable situation, many raters have a preference to avoid giving feedback or to actively distort the feedback (Benedict & Levine, 1988). These attitudes and behaviors can lead raters to discount the performance appraisal altogether or provide more lenient ratings (Villanova, Bernardin, Dahmus, & Sims, 1993). Most ratees are nervous about the process as well, because being evaluated can be a threat to an individual's self-image. Not many people look forward to discussing problem behaviors they may have exhibited.

Additional problems include the fact that the supervisor and the employee can have very different purposes for the appraisal meeting (Culbert, 2008). While the supervisor needs to discuss where there is room for performance improvement, the employee may want to discuss such issues as promotion opportunities and a pay increase.

This can cause the two individuals involved to talk over each other. In addition, the performance appraisal is often disguised as a function to determine pay among employees (Culbert, 2008). While the pay for performance model may seem logical, this practice ignores the fact that market forces can determine pay more so than performance. Also, there is a long-standing debate whether it is even possible for raters to be objective in their performance ratings and if it is really fair or helpful to use the same rating scale across all employees (Murphy & Cleveland, 1995). There is also reason to wonder how comfortable employees can feel working with their supervisors for their personal development under the traditional performance appraisal model. In order for a supervisor to help an employee, that employee would benefit from discussing performance areas in which he/she is particularly weak. Many employees may feel revealing such information may not be a politically strategic option, since their supervisor is the one who will end up rating them on these performance dimensions at a later date.

The traditional model of performance appraisal does not seem to be the answer for increasing employee satisfaction or curing organizational ills. (Longnecker, Sims, & Goia, 1987; Culbert, 2008). So what can be done? Recently, researchers have been making the argument for placing more focus and attention on developing a strong organizational culture that supports feedback and employee learning (Anseel & Lievens, 2007; London & Smither, 2002).

When employees were given the opportunity to make suggestions to improve the feedback process they mentioned that managers (a) make themselves more readily accessible, (b) increase knowledge of their performance so they are better able to provide informative feedback, (c) clarify expectations concerning work performance, (d) put

more emphasis on employee development, (e) avoid dwelling on negative information, (f) provide more ongoing feedback, and (g) increase two-way communication (Longnecker & Nykodym, 1996). These suggestions imply that there are behavioral changes that supervisors can make to increase the satisfaction employees receive from feedback. The suggestions are also consistent with the developing literature on feedback environment (Anseel & Lievens, 2007). The feedback environment emphasizes that the feedback source should be credible and readily available, provide feedback that is high in quality and balanced between favorable and unfavorable feedback, and promote feedback seeking.

Feedback Environment

In order to understand the feedback process in organizations, it is essential to first understand the environment in which this feedback occurs. The feedback environment refers to the contextual aspects of daily feedback processes, not a formal performance appraisal (Steelman, Levy, & Snell, 2004). The majority of past research has treated contextual effects as something to simply ignore even though they can have significant effects on feedback outcomes (Murphy & Cleveland, 1995).

Early research that examined the feedback environment relied on lab studies and observed the effects of feedback after a single performance episode (Chapanis, 1964; Erez, 1977). Researchers that followed that line of study were quick to point out the lack of external validity and emphasized that employees have usually have continuous access to feedback from a number of different sources and that this feedback extends far beyond an objective performance episode that researchers may experience in the lab (Ashford, 1993; Ashford & Cummings, 1983; Herold & Parsons, 1985). Among the first studies to

examine the feedback environment empirically have focused on the quantity, sign, and

source of the feedback provided (positive vs. negative feedback as provided by

supervisors, peers, direct reports; Greller & Herold, 1975; Herold & Parsons, 1985), how

important employees viewed the feedback they received (Ashford, 1993; Greller, 1980),

and the relationship between feedback environment perceptions and employee

performance (Becker & Klimoski, 1989).

More recently, researchers studying the feedback environment have emphasized

the development of an environment that is supportive of feedback (Levy & Williams,

2004; London & Smither, 2002) while focusing much less on classifying and

categorizing available feedback information. Instead of narrowly defining feedback

through the lens of the formal performance review, many researchers have defined the

feedback environment as encompassing the contextual aspects of the daily feedback

processes that occur between supervisors and subordinates and between coworkers

(Steelman et al., 2004).

To help clarify the feedback environment that exists in organizations, a new

construct and measure was developed and validated (Steelman et al., 2004). The feedback

environment scale (FES), as compared to previous conceptualizations, is more

comprehensive and relevant for the workplace and leaders of today (Steelman et al.,

2004). The FES has been shown to relate to motivation to use feedback, satisfaction with

feedback, and feedback-seeking (Steelman et al., 2004). The FES has been shown to

relate to organizational citizenship behaviors as partially mediated by affective

commitment (Norris-Watts & Levy, 2004) and perceptions of politics (Rosen, Levy, &

Hall, 2006). The FES has also been shown to relate to job satisfaction as mediated by

LMX (Anseel & Lievens 2007) and perceptions of politics (Rosen et al., 2006).

Additionally, the FES has been shown to relate to task performance as mediated by

perceptions of politics (Rosen et al., 2006).

The FES has been validated and a two-factor model, with seven facets within each

factor, was supported. The two factors are supervisor and coworker sources of feedback

and the seven facets are (a) source credibility, (b) feedback quality, (c) feedback delivery,

(d) frequency of favorable feedback, (e) frequency of unfavorable feedback, (f) source

availability, and (g) promoting feedback seeking (Steelman et al., 2004). Employees

receive feedback from other sources besides their immediate supervisor (Greller, 1980;

Morrison, 1993) and the addition of the coworker facet is an attempt to capture

contextual effects from those additional sources. While coworker feedback is

undoubtedly an integral part of a supportive feedback environment, and capturing this

distinction is an incredibly important move forward for the feedback literature, the

current study will only measure the supervisor facet of the feedback environment. This

allows the current study to remain focused on the two hypothesized models of interest,

given that coworker feedback may very well lead to positive attitudinal and performance

outcomes through different mediating variables.

Source credibility is defined as the "feedback source's expertise and

trustworthiness" (Giffin, 1967) and includes awareness and familiarity of the feedback

recipient's job requirements and performance, and the ability to accurately judge that

performance (Steelman et al., 2004). Trustworthiness represents how much the feedback

recipient trusts the feedback source to provide accurate feedback (Giffin, 1967; Ilgen et

al., 1979). It stands to reason that feedback from sources who (a) have observed on the

job behavior and performance, (b) are able to evaluate it, and (c) have trustworthy motives for providing honest feedback will have more of a positive impact on the attitudes and behavior of the recipient than feedback from sources who are not perceived to be competent or trustworthy in evaluating recipient performance (Albright & Levy, 1995; Ilgen et al., 1979; Makiney & Levy, 1998).

Feedback quality refers to the consistency and usefulness of the feedback (Greller, 1980). Feedback that is consistent, specific, and useful will be considered higher in quality than feedback that may vary for little to no reason (London, 1997). How valuable, informative, and useful the recipient finds the feedback is an important is a significant factor in whether the recipient will accept and act on the feedback (Ilgen et al., 1979).

Feedback delivery can be understood as how the recipient perceives of the source and his or her intentions when providing feedback. These perceptions have been shown to affect reactions and responses to the feedback (Fedor, Eder, & Buckley, 1989). When the source is considerate in giving feedback, the recipient is more likely to accept and respond to the feedback. Consideration during feedback is positively related to positive perceptions of the feedback session environment, helpfulness of the feedback, and satisfaction with the feedback (Ilgen, Peterson, Martin, & Boeschen, 1981).

A common research finding is that favorable and unfavorable feedback occur relatively independently (Geller & Parsons, 1992). Favorable feedback is defined as the perceived frequency of positive feedback when, from the recipient's perspective, his or her performance warrants that feedback. Similarly, unfavorable feedback is defined as the perceived frequency of negative feedback when, from the recipient's perspective, his or her performance warrants that negative feedback (Steelman et al., 2004). These

conceptualizations go beyond whether the recipient simply likes the feedback or not. These definitions reflect whether the recipient feels the feedback *accurately* reflects his or her performance.

Source availability is conceptualized as the perceived amount of contact between the recipient and his or her supervisor and how easy the recipient perceives they can obtain feedback (Steelman et al., 2004). The annual formal performance appraisal will probably not be sufficient for most employees to receive feedback from their supervisor and coworkers to be considered useful. To meet goals throughout the entire year, employees must rely on daily feedback information made available through informal daily communications and interactions with their peers, team members, and leaders (Ashford & Cummings, 1983).

Feedback-seeking promotion is defined as how supportive the environment is of feedback-seeking. In other words, it is the degree employees are made to feel comfortable, encouraged, and rewarded for seeking feedback (Steelman et al., 2004). Research has explored numerous potential antecedents of feedback-seeking, many of which are individual differences (ex. Park, Schmidt, Scheu, & Deshon, 2007). The extent to which managers actually promote feedback-seeking in their employees, encouraging them to seek feedback when needed or desired, may be one important determinant of feedback-seeking (Williams, Miller, Steelman, & Levy, 1999) and will add to the literature by examining contextual effects rather than individual differences.

It will be the argument of this paper that a supportive feedback environment can function as a powerful driver of positive feedback outcomes and help clarify how feedback leads to positive outcomes. As noted by previous researchers (Ilgen et al, 1979)

the feedback process cannot be examined thoroughly without consideration of individual differences. An individual difference variable that is particularly important in the feedback process is feedback orientation (London & Smither, 2002).

Feedback Orientation

Feedback orientation is defined as "an individual's overall receptivity to feedback" (London & Smither, 2002, p. 81) and is composed of several dimensions including enjoying feedback and the process of getting feedback, tendency to seek feedback, cognitive propensity to process feedback thoughtfully and thoroughly, awareness and sensitivity to others' views of self, belief in the value of feedback, and high accountability to act on feedback. If an individual is high on feedback orientation, feedback is more highly valued, feedback is more attuned to in the environment, and feedback is more likely to be acted upon. If an individual is low on feedback orientation, there is a general tendency to resist feedback, ignore or not recognize feedback in the environment, and be less likely to act of feedback. It should be clear, at least at first glance, that individuals who are low on feedback orientation may prove more difficult employees to manage, especially when it comes to performance management and employee development.

As proposed by London and Smither (2002) individuals with high feedback orientation should be more effective at depersonalizing feedback and removing their emotional reactions from the feedback, processing feedback mindfully and thoughtfully without making attribution errors, and effectively leveraging feedback to learn and improve performance. London and Smither (2002) also proposed that an individual's experiences with receiving feedback can alter their feedback orientation if enough time

has passed (e.g. 6-12 months) and they suggested that managers can impact the feedback orientation of their subordinates. Feedback orientation can be thought of as an individual difference variable that remains fairly stable over moderate periods of time but can be shaped by strong and consistent contextual factors (Dahling, Chau, & O'Malley, 2012).

Linderbaum and Levy (2010) developed and validated a multidimensional measure of feedback orientation based on London and Smither (2002) operationalization. The new measure contains four dimensions based on the original dimensions proposed by London and Smither (2002) and includes utility, accountability, social awareness, and feedback self-efficacy (Linderbaum & Levy, 2010). Another dimension, defensiveness, was also proposed, but later removed because it largely overlapped with the dimension feedback self-efficacy. Each dimension will be described below.

Utility is a belief that feedback can help achieve goals and objectives (Linderbaum & Levy, 2010) and is similar to ideas of instrumentality and expectancy in expectancy theory (Vroom, 1964). To review, expectancy theory hypothesizes that ultimate performance is a function of motivation and ability (Vroom, 1964). Expectancy reflects the perception that a given level of effort will result in a certain level of performance while instrumentality reflects the perception that achieving a given performance level will result in certain outcomes (Vroom, 1964). Utility also captures attitudinal beliefs concerning feedback, which influences intentions and behavior as stated in the theory of reasoned action (Ajzen & Fishbein, 1977). Perceived utility of feedback has been found to increase willingness to accept, seek, and use feedback (Brett & Atwater, 2001). Accountability is the sense of obligation an individual perceives to make use of and follow up on the feedback received. Tetlock's (1992) theory of

accountability reasons that individuals who feel a higher level of accountability or responsibility will take action to ensure that others view them positivity. Social awareness is the propensity to utilize feedback as a tool to remain cognizant of how others perceive you and to remain sensitive to these views. As described as Linderbaum and Levy (2010), social awareness can be thought of as external pressures to respond to feedback, whereas as accountability can be thought of as internal pressures to respond to feedback. Lastly, feedback self-efficacy refers to the perceived competence an individual feels when needing to interpret and respond to feedback. The amount of perceived behavioral control has an impact on behavior (Ajzen & Fishbein, 1977) and people are more likely to try to engage in a given activity if they perceive they will be successful.

The current study will seek to clarify how the feedback environment leads to positive outcomes through the use of two separate models; one to clarify performance outcomes and another to clarify attitudinal outcomes. Although the feedback environment can lead to positive performance and attitudinal models through similar mechanisms, the current study does hypothesize different mediating variables in the attitudinal and performance models.

Study 1: Performance Outcomes of a Supportive Feedback Environment

The proposed model will be placed within elements of Social Cognitive Theory (SCT) to provide theoretical clarity to the field of feedback and performance management. Though not yet formalized as a psychological theory, the belief that people learn through the observation can be traced back to the early Greeks (Gibson, 1994). Bandura is generally credited as the dominant theorist in the area of social learning (Hergenhahn & Olson, 1993; Sims & Lorenzi, 1992) as his theory shifted focus to the cognitive processes

involved in observation (Gibson, 1994). Bandura conceptualized learning as knowledge acquired through the cognitive processing of information (Bandura, 1986). Bandura's Social Learning Theory, which was later termed SCT, can be considered both a behaviorist theory, in that it posits that learning involves observation of and imitating behavior, and a cognitive theory, in that it theorizes the human ability "to think, to symbolize, to figure out cause-effect relationships, to anticipate the outcomes of behavior" (Lefrancois, 1999, p.41). An essential mechanism of SCT is self-regulation, which is the cognitive process by which persons gather information from their environment, as well as from their past behaviors, and process this information before selecting a behavior or action among a set of possible choices.

A central theme in SCT is reciprocal determinism, or the idea that "behavior, cognitive and other personal factors, and environmental influences all operate interactively, as determinants of each other" (Bandura, 1986, p. 23). Even though all three factors mutually influence one another, the influence of each will vary based on the specific situation and/or individual. A visual representation, taken from Bandura (1978), is shown in Figure 1.

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The theory of reciprocal determinism is particularly relevant to the feedback process, because it accounts for the traits of the individual, the learning process, and the environment in which the learning takes place. Learning takes place in a social context and is an interaction between the person and the environment (Bandura, 1986). This interaction is reflected in the relationship between feedback environment and feedback

orientation in the proposed model. Feedback orientation, an individual difference variable,

and feedback environment, a characteristic of the social context, are hypothesized to

mutually interact and function as mechanisms through which learning takes place.

London and Smither (2002) proposed that an individual's feedback orientation should be

related to how supportive the organizational culture is of feedback seeking, specifically

on an informal, daily basis. A supportive feedback environment improves the likelihood

that feedback will be welcomed and accepted and it sends the message that learning and

employee development are supported (London & Smither, 2002; Dahling et al., 2012). In

fact, recent research has supported a positive, moderate relationship between supervisor

feedback environment and feedback orientation (Dahling et al., 2012). Therefore, it is

expected that feedback orientation and feedback environment will be positively related.

Hypothesis 1: Feedback orientation will be positively related to perceptions of a

supportive feedback environment.

The hypotheses formulated in the following sections are summarized in Figure 2.

Insert Figure 2 About Here

Self-efficacy. A fundamental component of self-regulation in SCT is self-efficacy,

which can be conceptualized as the judgment of one's personal ability to perform

(Bandura, 1986, p.391). Perceptions of self-efficacy impact the level of effort put forth in

task and, therefore, the effectiveness of our interactions (Lefrancois, 1999). Perceptions

of self-efficacy are influenced by our successes and accomplishments, as well as failures

and disappointments; observations of others performing in similar ways; and the intensity

of one's emotional reaction or arousal (Bandura, 1986). The construct of self-efficacy is

easily applied to performance, as individual perceptions influence an individual's motivation to pursue goals based on confidence that those goals can be achieved (Earley, Gibson, Chen, 1999). It is not surprising that a large number of studies have examined the explanatory power of self-efficacy. If an individual does not have the confidence that a certain performance goal can be achieved, it seems logical that they would not give very much effort into pursuing that goal.

With the relationship between self-efficacy and performance fairly well established (e.g. Stajkvic & Luthans, 1998), the current study seeks to add to the self-efficacy literature by further exploring the influence feedback may have on the self-efficacy-performance relationship. Feedback can be essential in the formation of self-efficacy beliefs for various reasons. For one, it can clarify person-performance contingencies that may be used to revise self-efficacy perceptions (Shea & Howell, 2000). Past studies examining task feedback and self-efficacy have mostly treated feedback as one-way, one-time process in a lab setting (Shea & Howell, 2000) and found that high-quality performance feedback was significantly related to the occurrence of self-corrections in the efficacy-performance relationship. What's more, the authors concluded that vague or ambiguous feedback may damage the efficacy-performance relationship because study participants who received no feedback had lower task performance indicating that their self-efficacy was inflated relative to their actual performance (Shea & Howell, 2000).

Self-efficacy theory states that a person's beliefs about their efficacy can be strengthened in four ways. These include mastery experiences, modeling, social persuasion, and physiological states (Wood & Bandura, 1989). Of particular interest in

the current study is social persuasion and modeling as both can effectively explain the positive relationship between feedback environment and self-efficacy. Modeling occurs by observing competent individuals perform a similar task and being reinforced by it (Stajkovic & Luthans, 1998). Employees may turn to colleagues they view as competent for knowledge of the tasks, needed skills, or help with development for successful performance (Stajkovic & Luthans, 1998). Stajkovic and Luthans (1998) also reasoned that managers could effectively implement efficacy enhancing and skill/strategy building training programs that involves monitoring subordinate behavior and providing feedback. A supportive feedback environment is likely to lead to strengthened self-efficacy beliefs through modeling, because a supervisor and coworkers in a supportive feedback environment are seen as competent, credible sources of information, which may, therefore, lead employees to seek feedback and clarification from them regarding their performance. This feedback and clarification can help the feedback recipient engage in successful modeling, which, in turn, leads to increased self-efficacy.

Social persuasion by someone the employee trusts and sees as competent also serves as another means of strengthening self-efficacy (Stajkovic & Luthans, 1998). It is reasoned that people will be more likely to exert greater effort and become successful if they receive realistic encouragements versus being troubled by self-doubt (Wood & Bandura, 1989). It is important to note that to effectively increase self-efficacy, social persuasion must be realistic and not raise expectations too high. This includes assigning tasks that are likely to bring success and avoid placing employees prematurely in situations in which they are likely to fail (Wood & Bandura, 1989). A supportive feedback environment is likely to lead to strengthened self-efficacy beliefs through social

persuasion, because the feedback provided in a supportive feedback environment contains both positive and negative elements that are perceived as *accurate* and are perceived as high in quality. Managers are not going to provide unrealistically high expectations of subordinates' abilities nor will they constantly provide only criticisms. Recipients should view the feedback as consistent, specific, and useful (Steelman et al., 2004), which should provide the realistic encouragements posited as one of the principled ways to increase self-efficacy beliefs. It is also important to note that in the current study, performance self-efficacy is of interest, not general self-efficacy which is a broader construct. Performance self-efficacy refers to judgment of one's capability to achieve a desired level of job performance.

Hypothesis 2: A supportive feedback environment will be positively related to performance self-efficacy.

As previously discussed, a dimension of feedback orientation is feedback self-efficacy, which is an individual's perceived ability to understand and appropriately respond to feedback. It stands to reason that individuals who feel capable of using feedback to improve their performance will also experience higher performance self-efficacy regarding their overall job performance. Therefore, feedback orientation and performance self-efficacy should exhibit a positive relationship.

Hypothesis 3: Feedback orientation will be positively related to performance self-efficacy.

Expectations of self-efficacy help determine how much effort an individual will be exert and for how long despite encountering setbacks or difficulties (Bandura, 1986). Individuals with high self-efficacy will sustain sufficient effort that, if well executed, will

produce high performance while individuals will low self-efficacy are likely to stop

exerting much effort early in the task and fail (Bandura, 1986). The positive relationship

between self-efficacy and task performance has been well established through several

meta-analyses (Judge & Bono, 2001; Sadri & Robertson, 1993; Stajkovic & Luthans,

1998). This relationship has been also been supported in the work environment (Harrison,

Rainer, Hochwarter, and Thompson, 1996). It is hypothesized that self-efficacy and task

performance will be positively related in the current study. Given the hypothesized

positive relationship between a supportive feedback environment and self-efficacy and

also between self-efficacy and task performance, it is also hypothesized that self-efficacy

will mediate the positive relationship between a supportive feedback environment and

task performance.

> *Hypothesis 4:* Performance self-efficacy will be positively related to task
>
> performance.

> *Hypothesis 5:* Performance self-efficacy will mediate the relationship between a
>
> supportive feedback environment and task performance.

Feedback seeking. The introduction of feedback seeking as a theme in the

feedback literature has introduced the perspective that individuals are active seekers of

feedback information (Ashford & Cummings, 1983; Steelman et al., 2004). Employees

frequently report a desire for feedback (Ashford, 1989), but are often reluctant to actually

ask for feedback (Levy et al., 1995). One potential reason for this reluctance could be the

extent to which managers promote feedback seeking (Williams et al., 1999), which is

defined as the extent to which the environment is supportive of feedback seeking

(Steelman et al., 2004). In other words, it is the extent to which employees are encouraged to seek feedback and how comfortable they feel asking for feedback.

Research has shown that feedback-seeking can result in beneficial outcomes, such as job satisfaction, learning, and motivation (Hackman & Oldham, 1976; Murphy & Cleveland, 1995; Wanberg & Kammeyer-Mueller, 2000).   There are several areas in the feedback-seeking literature in need of further development and investigation, however. For example, previous research has resulted in conflicting findings regarding the effectiveness of feedback-seeking (Anseel, Lievens, & Levy, 2007). One study found that attempts to get feedback failed to influence or even increased stress levels (Ashford, 1988). These results should be taken with caution as there was no effort made to determine whether the feedback employees sought was positive or negative. More recent work has shown that individuals who use self-verifying feedback-seeking behaviors, which are behaviors that try and confirm existing notions concerning their performance, demonstrated greater levels of psychological and physical health, because self-verifying feedback increases one's sense of control and stability (Swann & Pelham, 2002). More recently, researchers have pointed out the lack of research around the contextual antecedents of feedback-seeking behavior (Ashford, Blatt, & Vandewalle, 2003; Levy & Williams, 2004; Murphy & Cleveland, 1995; Steelman et al., 2004).

The influence of context during feedback-seeking, which is simply understood as the environment in which the feedback-seeking occurs (Levy et al., 1995) has been primarily studied through laboratory studies and manipulation around the privacy of the feedback-seeking environment (Ashford & Northcraft, 1992; Levy et al., 1995; Northcraft & Ashford, 1990). These studies have largely found that individuals prefer

more a private context versus a public context and are more likely to seek feedback when they perceive the context will be private (VandeWalle, Ganesan, Challagalla, & Brown, 2000). The influence of the leader has been more recently studied as a component of feedback-seeking context. Leader consideration, which is defined as the degree to which a leader builds relationships based on mutual trust, respect for subordinates' opinions and suggestions, and consideration for their thoughts and feelings, has been found to have a strong negative relationship with perceived costs of seeking feedback (Fleishman & Peters, 1962). Leader initiation of structure, which is defined as the degree to which a leader provides direction, structure, and clear expectations, has been found to have a positive relationship with perceived value of seeking feedback (Fleishman & Peters, 1962). These findings suggest that feedback context can impact likelihood to seek feedback and supervisors can have significant influences on the feedback context.

Supportive feedback environments should be positively related to feedback seeking. Past research has suggested that the relationship employees hold with their supervisor will have a significant impact on the probability of seeking (Hays & Williams, 2011). Employees who perceive individualized support from their supervisor tend to trust their supervisor to a greater degree than those who do not perceive such support (Podsakoff, MacKenzie, & Bommer, 1996). Recent work has also shown that contextual influences on feedback-seeking behavior may differ across feedback sources (Steelman et al., 2004) and subordinates who perceive a supportive feedback environment display increased feedback seeking (Whitaker, Dahling, & Levy, 2007). These findings together help to form the following hypothesis:

Hypothesis 6: A supportive feedback environment will be positively related to feedback seeking.

The current study will also examine the relationship between feedback orientation and feedback seeking. London and colleagues have explained that individuals with a high feedback orientation are more likely to seek feedback frequently to maintain a high level of performance (London & Maurer, 2004; Sessa & London, 2006). The most immediate, and perhaps obvious, outcome of high feedback orientation should be increased feedback-seeking behavior (Dahling et al., 2012).

Hypothesis 7: Feedback orientation will be positively related to feedback seeking.

Yet another recent attempt in the feedback-seeking literature has been to clarify the relationship between feedback-seeking and job performance. Despite the instrumental motive, which states that employees' should feel encouraged to seek feedback due to the perceived informational value of feedback and feedback should actually increase performance due to increased self-regulation, the research remains mixed (Ashford & Black, 1996; Morrison, 1993). While research does not consistently support a direct relationship between feedback seeking and task performance, there is evidence that feedback-seeking may increase role clarity, and therefore increase job performance (Dahling et al., 2007).

Role clarity. A "role" can be defined as a set of expectations applied to an employee by the organization (Banton, 1965). Employees with high role clarity display a clear understanding of these expectations (Whitaker, Dahling, & Levy 2007). Feedback-seeking may clarify the set of responsibilities and performance expectations as outlined by the organization, thus leading to better performance by reducing uncertainty

concerning what feedback information is relevant for effective performance (Taylor, Fisher, & Ilgen, 1984). Recent research hypothesized a direct relationship between feedback-seeking and task performance and found a positive relationship between feedback seeking and supervisor rated task performance (Dahling et al., 2012). While feedback seeking may increase task performance through increased role clarity, it may also be possible supervisors are increasing performance ratings partially because they take note of the feedback seeking behavior itself. Therefore, it is hypothesized that feedback seeking is positively related to task performance as mediated by role clarity.

Hypothesis 8: Feedback seeking will be positively related to role clarity.

Hypothesis 9: Role clarity will be positively related to task performance.

Hypothesis 10: Role clarity will mediate the relationship between feedback seeking and task performance.

A supportive feedback environment should also have a direct positive influence on role clarity as supervisors and coworkers are providing feedback that is perceived as consistent, specific, and useful (Steelman et al., 2004). If feedback has high informational value and is coming from a credible source than any discrepancy in performance would be clarified for the feedback recipient. Given the hypothesized positive relationship between feedback environment and role clarity and the positive relationship between role clarity and task performance, it is also hypothesized that role clarity will mediate the relationship between a supportive feedback environment and task performance.

Hypothesis 11: Feedback environment will be positively related to role clarity.

Hypothesis 12: Role clarity will mediate the relationship between a supportive feedback environment and task performance.

There is also an emerging body of literature linking role clarity and the frequency of organizational citizenship behaviors (OCB's) (Bolino & Turnley, 2005; Podsakoff, MacKenzie, & Bommer, 1996; Podsakoff, Mackenzie, Paine, & Bachrach, 2000). As empirical evidence suggests, managers generally define employee performance to include OCB's (Organ, Podsakoff, & MacKenzie, 2006). Employees may also define their roles to include OCB's (Bolino & Turnley, 2005). Given managers are including OCB's in their definition of performance, they may expect employees to demonstrate certain OCB's for successful performance and, in turn, communicate this expectation. A recent empirical study supported this linkage and the possibility that employees who perceive a supportive feedback environment, engage in more feedback-seeking, experience higher role clarity, and are rated higher in terms of both task performance and OCB's.

Hypothesis 13: Role clarity will be positively related OCB's.

While it is outside the scope of the current study, it is worth noting the conceptual ambiguity that continues to exist when trying to operationalize organizational citizenship behavior and separate the construct from task performance (Chiaburu & Byrne, 2009). In fact, Chiaburu and Byrne (2009) found evidence that employees' relationships with the organization, and in turn their psychological attachment to the organization, are related to how broadly employees define their work roles versus what they consider an OCB.

Study 2: Attitudinal Outcomes of a Supportive Feedback Environment

To review, a supportive feedback environment and feedback orientation are hypothesized to lead to higher performance through their effects on self-efficacy, feedback-seeking, and role clarity. Similarly, in the attitudinal model, a supportive feedback environment and feedback orientation are hypothesized to lead to improved

employee attitudes through their unique effects on performance self-efficacy and

perceived organizational support. That is, supportive feedback environments should

result in higher job satisfaction and affective commitment via performance self-efficacy

and perceived organizational support while feedback orientation should lead to higher job

satisfaction via performance self-efficacy. The hypotheses formulated in the sections

below are summarized in Figure 3.

Insert Figure 3 About Here

The positive relationship between feedback environment and feedback orientation,

feedback environment and performance self-efficacy, along with the relationship between

feedback orientation and performance self-efficacy are hypothesized to be important in

the explanation of how feedback leads to positive performance outcomes. These positive

relationships are also hypothesized to be essential in the explanation for how feedback

leads to positive attitudinal outcomes, and are therefore found in the attitudinal model as

well.

Hypothesis 1: Feedback orientation will be positively related to perceptions of a

supportive feedback environment.

Hypothesis 2: Feedback environment will be positively related to performance

self-efficacy.

Hypothesis 3: Feedback orientation will be positively related to performance self-

efficacy.

Recent research suggests that supportive feedback environments lead to changes

in employee attitudes such as greater leader-member exchange (Anseel & Lievens, 2007),

higher morale (Rosen et al., 2006), higher affective commitment (Norris-Watts & Levy, 2004), higher trust and lower perceptions of politics (Rosen et al., 2006), lower feelings of helplessness which led to lower anxiety and depression (Sparr & Sonnentag, 2008), and higher job satisfaction (Sparr & Sonnentag, 2008). The current study seeks to clarify how exactly supportive feedback environments lead to the positive attitudinal outcomes. One such mechanism, I hypothesize, is through performance self-efficacy.

Performance self-efficacy should positively influence job satisfaction through its relationship with achievement and success on the job (Judge, Locke, & Durham, 1997). Individuals with high performance self-efficacy are better able to deal with barriers and difficulties and persist after experiencing failure (Gist & Mitchell, 1992). From this, those with high performance self-efficacy are more likely to attain desired outcomes and thus be more satisfied from their job (Judge & Bono, 2001). A meta-analysis found a moderate positive correlation between generalized self-efficacy and job satisfaction (Judge & Bono, 2001), providing further empirical support for the relationship. In line with previous research, the current study expects to find a positive relationship between performance self-efficacy and job satisfaction. Given the hypothesized positive relationship between a supportive feedback environment and performance self-efficacy and also between performance self-efficacy and job satisfaction, it is also hypothesized that performance self-efficacy will mediate the positive relationship between a supportive feedback environment and job satisfaction.

Hypothesis 14: Performance self-efficacy will be positively related to job satisfaction.

Hypothesis 15: Performance self-efficacy will mediate the relationship between a

supportive feedback environment and job satisfaction.

In addition to examining performance self-efficacy as a mediator of the feedback-

attitudinal relationship, perceived organizational support (POS) will also be examined.

The feedback one receives from a supportive feedback environment could potentially

influence POS. Eisenberger and colleagues (1986) reasoned that POS could increase

from praise and approval. Other characteristics of feedback may also lead to POS. For

example, discretionary feedback has been found to influence perceptions of fairness

(Conlon & Fasolo, 1990; Cropanzano & Folger, 1989) which is central to POS

(Eisenberger et al., 1986; Eisenberger et al., 1990). That is, feedback that is open conveys

that the feedback source recognizes and values the recipient's contribution. This is a key

message in all forms of support (Allen, 1995). There is also reason to believe that

feedback received under the FES would be discretionary. Two facets of the scale are

promotes feedback seeking and source availability (Steelman et al., 2004). Therefore,

feedback recipients under a supportive feedback environment are encouraged to be active

seekers and participants in the feedback process. Another key antecedent to POS is

supervisor support as employees view their supervisor's treatment and support of them as

indicative of the organization's support (Rhoades & Eisenberger, 2002). A supervisor

who invests extra time in providing quality feedback and remains available for ongoing

feedback may be seen as more supportive.

In addition to the reasons mentioned above, a supportive feedback environment is

hypothesized to lead to increased employee's POS because it signals that extra resources

are being allotted to their individual development. The few studies that have empirically

examined these relationships had promising results as one study found that feedback was positively related to affective commitment indirectly through its effects on employee POS (Hutchison & Garstka, 1996). In addition, a meta-analysis found a strong, positive relationship between POS and affective commitment ($\rho = .65$), while the relationship between POS and continuous commitment was much smaller and negative ($\rho = -.13$; Rhoades & Eisenberger, 2002). POS is hypothesized to positively relate to affective commitment in the current study as well. POS should increase affective commitment on the basis of the reciprocity norm, by creating a felt obligation to care about the organization's welfare and by fulfilling certain socio-emotional needs such as affiliation and emotional support (Armeli et al. 1998; Eisenberger et al., 1986). Given the hypothesized positive relationship between a supportive feedback environment and POS and also between POS and affective commitment, it is also hypothesized that POS will mediate the positive relationship between a supportive feedback environment and affective commitment.

Hypothesis 16: A supportive feedback environment will be positively related to POS.

Hypothesis 17: POS will be positively related to affective commitment.

Hypothesis 18: POS will mediate the relationship between a supportive feedback environment and affective commitment.

Past research has also found a positive relationship between POS and job satisfaction. Job satisfaction refers to "employees' overall affect-laden attitude toward their job" (Witt, 1991). POS should theoretically increase job satisfaction by satisfying socio-emotional needs, as previously described, improving performance-reward

expectancies, and signaling the availability of support when necessary (Rhoades &

Eisenberger, 2002). A meta-analysis reviewing major outcomes of POS found a strong,

positive relationship between POS and job satisfaction (ρ = .59; Rhoades & Eisenberger,

2002). Given the hypothesized positive relationship between a supportive feedback

environment and POS and also between POS and job satisfaction, it is also hypothesized

that POS will mediate the positive relationship between a supportive feedback

environment and job satisfaction.

Hypothesis 19: POS will be positively related to job satisfaction.

Hypothesis 20: POS will mediate the relationship between a supportive feedback

environment and job satisfaction.

Method

Participants

Participants were 560 employed undergraduate students at a Midwestern

university as well as employees at various organizations. All participants were asked to

confirm they work at least 20 hours a week, have an identifiable supervisor, and have

been in their current position for at least 6 months with the same supervisor. Participants

who did not answer positively to any of these items in the survey were removed. For

direct report participants, 560 participated while 539 remained in the final sample size

after data cleaning. For supervisor participants, 236 participated and 202 remained in the

final analysis after data cleaning resulting in a 36.07% matched sample of direct report

and supervisor pairs. The average tenure at their current organization was 4.73 years (*SD*

= 5.74) and the average tenure for their current position was 3.35 years (*SD* = 4.30).

Sixty-one percent (330) of subjects were female, the average age was 29.52 (*SD* = 11.48),

and 59% (320) were Caucasian [21.3% (115) African American, 6.7% (36) Asian, 2.8% (15) Hispanic/Latin American, 0.2% (1) Native American, 3.9% (21) other, and 6.1% (33) chose not to respond].

Measures

All scale items can be found in Appendix A.

Feedback Environment. FES scale (Steelman, Levy, & Snell 2004) was used to assess the feedback environment. The scale contains 32 items and seven facets measured with a 7-point Likert-type scale ranging from *strongly disagree* to *strongly agree*. All seven facets have acceptable internal consistency reliability, ranging from .80 to .92, with a total internal consistency of .96. An example item reads, "My supervisor is generally familiar with my performance on the job."

Feedback Orientation. The feedback orientation scale (FOS; Linderbaum & Levy, 2010) was used to assess feedback orientation. The scale contains 20 items and is based on London and Smither's (2002) construct definition and contains four dimensions including perceived utility of feedback, accountability to use feedback, social awareness, and self-efficacy about dealing with feedback. Internal consistency for the four dimensions ranged from .72 to .88 with an overall alpha of .90. Items were administered using a 5-point Likert-type scale ranging from *strongly disagree* to *strongly agree*.

Performance Self-Efficacy. The occupational self-efficacy scale developed by Schyns and von Collani (2002) was used to measure performance self-efficacy. The scale contains eight items with an example item reading, "Thanks to my resourcefulness, I know how to handle unforeseen situations in my job." Items were assessed on a 6-point

Likert-type scale ranging from *not at all true* to *completely true*. The internal consistency

for the performance self-efficacy scale was $\alpha = .86$.

Feedback-Seeking. Frequency of feedback seeking was measured with four

items adapted from Ashford and Black (1996). A sample item reads, "To what extent

have you sought feedback on your performance after assignments from your supervisor?"

The measure was rated on a Likert-type scale ranging from 1 (*to no extent*) to 5 (*to a

great extent*). The internal consistency for the feedback seeking scale was $\alpha = .86$.

Role Clarity. To measure role clarity in the current study, Sawyer's (1992) 10-

item measure was used to assess the degree of clarity employees perceive regarding their

position. This measure was rated on a 6-point Likert-type scale ranging from *very*

uncertain to *very certain* and contains two facets, clarity of roles and clarity of processes.

Both the goal and process clarity facets showed high internal consistency ($\alpha =. 90$).

Perceived Organizational Support. The current study followed previous studies

in using the eight-item short form (Eisenberger et al., 1997) of the Survey of Perceived

Organizational Support, which has been shown to have high internal reliability and

unidimensionality across many occupations and organizations (SPOS; Eisenberger et al.,

1986, 1990; Shore & Tetrick, 1991; Shore & Wayne, 1993). Items are on a 7-point

Likert-type scale (1 = strongly disagree, 7 = strongly agree) with an example item reading,

"My organization really cares about my well-being." The internal consistency for the

SPOS was $\alpha = .91$.

Task Performance. Task performance was measured with eleven items from

Tsui et al.'s (1997) scale. Tsui and colleagues (1997) developed or selected items that

were generic rather than specific to a particular job. Six items focus on the quantity,

quality, and efficient of employees and are rated on a 7-point scale, ranging from 1 = strongly disagree to 7 = strongly agree. Tsui et al. (1997) also used five additional items adapted from Greenhaus, Parasuraman, and Wormley (1990), which focus on an individual's overall ability, judgment, accuracy, job knowledge, and creativity in performing his or her role. These five items were rated on a seven-point scale, ranging from 1 = unsatisfactory to 7 = excellent. A sample item reads, "Employee's standards of work quality are higher than the formal standards for this job." The internal consistency for the self-rated task performance scale was α = .90, while the supervisor-rated task performance scale was α = .93.

Organizational Citizenship Behavior. OCB was measured with nine items from Tsui et al.'s (1997) scale. Tsui et al. (1997) chose items from a variety of sources that measured citizenship behaviors directed at improving an organization. A sample item reads, "Makes suggestions to improve organization." These items were rated on a 7-point scale, ranging from 1 = strongly disagree to 7 = strongly agree. The internal consistency for the self-rated OCB scale was α = .93, while the supervisor-rated OCB scale was α = .94.

Job Satisfaction. To assess job satisfaction, the measure from Cammann, Fichman, Jenkins, and Klesh (1983) was used. An example item is "In general, I like working here." These items were rated on a 7-point scale ranging from 1 = strongly disagree to 7 = strongly agree. The internal consistency for the job satisfaction scale was α = .95.

Affective Commitment. Six items from Meyer, Allen and Smith's scale (1993, α = .85) were used to assess affective commitment. A sample item reads "I really feel as if

this organization's problems are my own." Items were rated on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). The internal consistency for the affective commitment scale was α=.89.

Demographic Questions. Employee organizational tenure, job tenure, job description, job title, primary job duties, gender, age, and educational level were also be collected.

Procedure

Participants were recruited from management and psychology classes. Students were compensated with course credit at the discretion of the course instructor. The principal investigator visited each participating class to briefly explain the study, what participation involved, and their rights as participants. Participants were then given the opportunity to fill out a paper copy of the survey, though all participants chose to complete the survey online.

For organizational participants, a survey invitation was sent that contained the survey link, which opened with the informed consent form and instructions briefly explaining the study and the rights of participants. Both the paper and online version of the survey were identical in content, though, again, no organizational participants chose the paper version. The survey contained questions for basic demographic and tenure information as well as the feedback environment scale (FES), feedback orientation, performance self-efficacy scale, feedback seeking, role clarity, perceived organizational support, job satisfaction, and affective commitment. Online participants were asked permission for the principal investigator to contact their immediate supervisor in order to collect performance data. If the participant agreed, he/she was asked to provide the name

and email address of their immediate supervisor. Their supervisor was then emailed a

consent form and the supervisor survey. The supervisor survey contains questions for

basic demographic and tenure information as well as the task performance and contextual

performance measures.

Analyses

Prior to conducting the analyses, all variables were examined in SPSS for

accuracy, missing values, and fit of their distributions and the various assumptions of

multivariate analysis. Survey responses that were abandoned before completion, were

missing answers for entire scales, or failed the attention prompt items were deleted.

Given that all variables in both models are in Likert-scale format, univariate outliers were

examined by searching for values outside the minimum and maximum range for each

scale. No univariate outliers were found. Mahalanobis Distance values were calculated to

examine possible multivariate outliers. Responses that exceeded critical values at *p*

< .001 were more closely examined and, if deemed appropriate, deleted from the analysis.

While several responses fell outside the acceptable range, closer examination of the

responses did not reveal any clear response bias or fatigue. After all the data were cleaned,

539 participants remained to examine for the attitudinal model and 202 matched pairs

were left to examine for the performance model.

Item parceling was used in the current study given the large number of scale items

in both models. To parcel, two or more item scores are either summed or averaged. These

parcel scores are then used as indicators instead of the item scores in the SEM analysis.

The practice of item parceling in the structural equation modeling literature has received

increased attention in recent years (Bandalos, 2002; Bandalos & Finney, 2001; Little,

Cunningham, Shahar, & Widaman, 2002; Nasser & Takahashi, 2003). This increased

attention is due in part to the potential parceling offers to help alleviate such data

problems as smaller than desired sample sizes, non-normality and unstable parameter

estimates (Bandalos & Finney, 2001). In the current study, it would be difficult to reach

an appropriate sample size to test the large number of manifest variables in the models.

Item parceling offers a solution by reducing the number of manifest variables and,

therefore, the necessary sample size to achieve power. In a series of studies, Bagozzi and

colleagues found that parceling reduced measurement error (Bagozzi & Heatherton,

1994; Bagozzi & Edwards, 1998) and, therefore preferred parceling over disaggregated

analyses in most cases. However, they also recommend that careful consideration to

validity, unidimensionality, and level of specificity when considering parceling and

constructing item parcels. To determine the most appropriate parceling technique for the

current study, prior research was consulted. As recommended, the dimensionality of the

factors to be parceled was first checked to verify factor structure before parceling was

conducted.

According to Little et al. (2002), unidimensional and multi-dimensional scales are

parceled using different techniques. In the current study, Feedback Environment Scale

(FES), Feedback Orientation Scale (FOS) and goal clarity are multidimensional and show

second-order factor structures. Confirmatory factor analyses were conducted for all three

scales. The first and second-order factor models fit the data equally well. The first order

factor structure resulted in a better overall model fit than the second order factor structure

and, therefore, was used in all subsequent analyses. Creating parcels using the first order

factor structure is defensible for the current study both because it fit the data equally well

as the second order factor structure but also because all the hypotheses were based at the highest level of the latent variables for the FOS, FES and goal clarity. Therefore, the theoretical rational was in line with the structural model. To form the actual parcels, composites were calculated based on the means of items using both the balancing approach and random assignment as outlined by Little et al. (2002).

Both models proposed in the current study and the resulting hypotheses were tested with SEM using AMOS 23. A two-step structural equation modeling procedure was used (Anderson & Gerbing, 1988; Schumacker & Lomax, 2004). The first step in the two-step SEM approach is to assess the fit of the measurement model, which was done by conducting confirmatory factor analysis (CFA) in which all latent variables were allowed to correlate. Maximum likelihood estimation was used to estimate the hypothesized model. Fit was evaluated with several different fit indices including the comparative fit index (CFI), the root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR). The CFI statistic is based on the non-centrality parameter and compares the null model with the proposed model; values above .95 indicate a good fit to the data (Schumacker & Lomax, 2004). The RMSEA is also based on the non-centrality parameter, and values below .08 indicate acceptable fit (Schumacker & Lomax, 2004; Hu & Bentler, 1995). The SRMR is an absolute measure of fit, with values less than .08 considered good fit, and reflects the standardized difference between the observed and predicted correlation (Schumacker & Lomax, 2004).

The hypothesized structural model was evaluated as the second step in the modeling process. Fit was examined with the fit indices listed previously for the measurement model. Hypotheses were individually tested by examining goodness-of-fit

indices and standardized beta weights for each hypothesized parameter in the structural model. The overall structural model should indicate acceptable fit and the standardized beta weights should be significant and in the hypothesized direction in order in support the hypotheses.

Given that a number of predictor and criterion relationships in the attitudinal model are measured from the same source, post-hoc analyses were conducted to estimate the potential influence of common method bias. The potential effects of common method bias and what researchers should do to deal with this issue are still debated (Conway & Lance, 2010). However, there are steps researchers can take to reduce the effects of common method bias, such as collecting the predictor and criterion variables from different sources and guaranteeing response anonymity (Conway & Lance, 2010; Podsakoff et al., 2003). While supervisors rated the performance measures, direct reports rated other criterion variables such as job satisfaction and affective commitment. To statistically test for method bias, the Comprehensive CFA marker technique as proposed and outlined by Williams, Hartman, and Cavazotte (2010) was conducted. Results from these analyses will provide potential evidence for whether method effects have changed the structural path estimates. A significant step involved in this technique is choosing a marker variable, which is a variable that should not be theoretically related to any of the model variables and captures one or more of the sources of bias (Williams, Hartman, & Cavazotte, 2010). The most likely sources of potential method bias in the current study come from having a common rater including social desirability, which refers to the tendency of participants to respond to items more as a result of their social acceptability rather than a reflection of their actual attitudes or perceptions; consistency motif, which

refers to the propensity for participants to try and maintain consistency in responding; and implicit theories, which refers to participants' preconceived beliefs about the relationships and associations among specific traits, behaviors, and/or outcomes (Podsakoff et al., 2003). The marker variable to test for these potential sources of method variance will be the morality/ethics scale from the short form of the Multidimensional Work Ethic Profile (MWEP-SF; Meriac et al., 2013). Phase I of this technique tests for the presence of method effects and, if present, the equality of method effects associated with the chosen marker variable. Phase II investigates how the method effects impacts the measurement of the latent variables in the model. Phase III implements a sensitivity analysis, in which varying estimates of method variance are used in conjunction with the partial correlation approach (Williams, Hartman, & Cavazotte, 2010).

More specifically, in Phase I, a CFA model was conducted that allowed for all variables, including the marker variable, to freely correlate. This model simply provided the factor loadings and error variance estimates for the latent variables in the model, which were used for subsequent model testing. Next, the Baseline Model was evaluated, in which the factor loadings and error variances obtained from the CFA were input as fixed values in the model. This model served as a baseline comparison since all subsequent models would only focus on method variance factor loadings. To test if method variance is constrained or unstrained, Model-C and Model-U were evaluated. Model-C and Model-U are identical to the Baseline model, but have added factor loadings from the latent marker variable to the rest of the model indicators. These factor loadings are forced to be equivalent in Model-C. A significant chi-square difference test between the Baseline Model and Model-C indicates the presence of method variance,

which a significant chi-square difference test between Model-C and Model-U indicates

that the method effects are not equal across the substantive variables in the model. Finally,

the Method-R Model was performed which used the latent variable factor correlations

obtained from the Baseline model as fixed values in either Model-C or Model-U,

depending on which model was supported. This model provided a test for whether the

latent variable correlations were significantly biased by the method effects from the

marker variable (Williams, Hartman, & Cavazotte, 2010).

In Phase II, the impact of method variance on reliability estimates was evaluated.

To decompose and assess reliability estimates, latent variable factor loadings and error

variances were obtained from the Baseline model and the following formula taken from

Werts, Linn, and Joreskog (1974) was used:

(1) $R_{tot} =$ (sum of factor loadings)^2 / [(sum of factor loadings)^2 + sum of error

variances]

Next, two additional equations were ran using the substantive and method standardized

factor loadings and error variances from either the Method-C or Method-U (depending on

which is supported in Phase I) to partition the overall systematic variance in substantive

variance (R_{sub}) and method variance (R_{meth}):

(2) $R_{sub} =$ (sum substantive factor loadings)^2 / [(sum substantive factor loadings)^2

+ (sum method factor loadings)^2 + sum error variances]

(3) $R_{meth} =$ (sum method factor loadings)^2 / [(sum substantive factor loadings)^2 +

(sum method factor loadings)^2 + sum error variances]

By decomposing the reliability estimates into substantive and method variance components, the impact of method variance on the measurement of the latent variables can be better understood (Williams, Hartman, & Cavazotte, 2010).

Finally, in Phase III, effects of sampling error on method variance estimates due to the marker variable were more closely evaluated. To do this, the unstandardized factor loadings for the marker variable found in either the Method-C or Method-U Model (whichever is supported from Phase I) are used as fixed values in the Method-S Model. A few different versions of the Method-S Model are run, each with the factor loadings for the marker variable fixed at values greater than the estimates obtained from the Method-C/Method-U Model. Changes in latent variable correlations were examined and, if correlations were not significantly different, concerns about sampling error were lessened as a result.

Separate analyses were conducted to test the mediation hypotheses. Although structural equation modeling provides basic information regarding effects in mediation, it does not provide the detail necessary for assessing specific indirect effects (Brown, 1997). This is important in the analysis of the current mediation models, because it allows for a more thorough understanding of what paths are accounting for the majority of the mediating effects. Although there exist several methods of testing mediation, the most common technique remains the causal steps strategy popularized by Judd and Kenny (1981) and Baron and Kenny (1986; Preacher & Hayes, 2008). Criteria for establishing mediation include (a) the mediator should be correlated to the independent variable, (b) the mediator should be related to the dependent variable, and c) when the path between the independent variable and the mediator variable and the path between the mediator

variable and the dependent variable are controlled for, the relationship between the

independent and the dependent variable should be significantly reduced (Brown, 1997).

Although attractive in its simplicity and approachability, the causal steps approach suffers

from significant limitations, including below expected Type I error rates, very low power,

and the possibility to obtain paradoxical effects (see Preacher & Hayes, 2008 for a more

in-depth explanation of limitations). Of the alternative methods of testing mediation,

which include partial correlation strategies, differences in coefficients strategies, nested

model strategy, and distribution of the product strategies, bootstrapping seems to suffer

the least from limitations (Preacher and Hayes, 2008) and was, therefore, utilized in the

current study.

Bootstrapping an indirect effect involves generating an empirical approximation

of the sampling distribution of the product of the independent variable to the mediator (a)

and the mediator to the dependent variable (b). This is done by taking a new sample of a

set size with replacement from the available sample and estimating products a and b.

Each time a new sample is drawn from the original sample, that smaller sample is put

back into the original sample. The estimates of products a and b are used to calculate ab*,

the indirect effect in a single sampling of the original sample. This process is repeated

over and over again, k number of times, preferably at least 1000 times. The result is the

distribution of k number of values of ab* that serves as an empirical approximation of the

sampling distribution of ab. Confidence intervals are produced by sorting the k values of

ab* from low to high. If the confidence interval does not contain zero, it can be

concluded that the indirect effect is different from zero and mediation exists.

One of the major advantages bootstrapping provides is that it does not assume the sampling distribution of the indirect effect is normal. While large sample sizes help researchers to reach such assumptions, statisticians have called for methodologies that do not rely on assumptions that are, sometimes, unrealistic. Another advantage of bootstrapping is that assumptions are not made concerning the sampling distribution characteristics. In addition, bootstrapping has been found to be superior in terms of power and Type I error rates (MacKinnon, Lockwood, & Williams, 2004). The limitations of bootstrapping include the need of raw data to conduct the analyses (cannot conduct bootstrapping with just correlational or covariance matrices), the inability to obtain the same exact confidence intervals if the same sample is subjected to bootstrapping multiple times, bootstrapping is only useful to the extent that the sample distribution resembles the population distribution, and only a limited number of software applications currently implement bootstrapping (Preacher & Hayes, 2008).

Results

Descriptive statistics and correlations can be found in Table 1. The results are presented in two parts: Study 1 (i.e., the performance model) and Study 2 (i.e., the attitudinal model).

Study 1: Performance Model

The relationships between the predictors of supportive feedback environment and feedback orientation and the criterion variables of task performance and organizational citizenship behaviors were examined using two-step SEM in AMOS. The measurement model showed acceptable fit (χ^2_{278} = 460.49, $p < .05$, SRMR = .05, RMSEA = .06, CFI = .96). Given the close fit of the measurement model, the second step of the SEM

procedure was performed by testing the structural model. Factor loadings and parameter

estimates for the hypothesized structural model are reported in Appendix B. The

hypothesized structural model resulted in acceptable fit (χ^2_{289} = 603.97, p <.05, SRMR

=.14, RMSEA = .073, CFI = .93; See Figure 4). A closer examination of the regression

weights revealed potential causes of poor fit.

Insert Figure 4 About Here

Hypothesis testing. For Hypothesis 1, the correlation for the feedback

environment-feedback orientation relationship was significant (ϕ = .49, p < .001).

Standardized beta weights were examined to test the remaining hypotheses. For

Hypothesis 2 and Hypothesis 3, supportive feedback environment (γ = .16, p = .05) and

feedback orientation (γ = .35, p < .001) were found to be positively related self-efficacy.

For Hypothesis 4, self-efficacy was found to be positively related to task performance (β

= .19, p = .01), while Hypothesis 5 (p < .001with self-efficacy mediating the relationship

between supportive feedback environment and task performance was also supported.

However, the majority of the hypotheses involving feedback seeking and role clarity

were not supported. Neither supportive feedback environment (γ = .16, p=.07) nor

feedback orientation (γ = .10, p = .25) were significantly related to feedback seeking,

leading to the rejection of Hypothesis 6 and Hypothesis 7. Feedback seeking was not

significantly related to role clarity, leading to the rejection of Hypothesis 8 (β = -.10, p

= .19). The relationships between role clarity and task performance (β = -.03, p = .69) and

organizational citizenship behaviors (β = - .07, p = .37) were also found to be non-

significant and in the opposite direction than hypothesized, therefore Hypothesis 9 and
Hypothesis 13 were rejected.

Revised performance model. Given the unsupported hypotheses involving the
role clarity, it was decided to drop the variable and re-examine the performance model.
Instead of hypothesizing that feedback seeking is related to role clarity, which is related
to the criterion variables of task performance and OCB, the revised performance model
simply hypothesized that feedback seeking was directly related to the criterion variables
(See Figure 5). The revised hypotheses can be found in Table 7.

Insert Figure 5 About Here

The revised measurement model had a close fit to the data ($\chi^2_{215} = 352.63$, $p < .001$,
SRMR =.05, RMSEA = .06, CFI = .97) as did the structural model ($\chi^2_{222} = 390.10$, p
$< .001$, SRMR =.08, RMSEA = .06, CFI =.96; See Figure 6).

Insert Figure 6 About Here

For Hypothesis 1, the correlation for the feedback environment-feedback
orientation relationship was significant ($\phi = .49$, $p < .001$). Standardized beta weights
were examined to test the remaining hypotheses. While the relationship between
supportive feedback environment and self-efficacy did not reach significance (Hypothesis
2; $\gamma = .15$, $p = .07$), feedback orientation was found to be positively related self-efficacy
(Hypothesis 3; $\gamma = .39$, $p < .001$). For Hypothesis 4, self-efficacy was found to be
positively related to task performance ($\beta = .18$, $p = .01$), even though the mediating
relationship of self-efficacy between supportive feedback environment and task

performance did not reach significance (Hypothesis 5). Both Hypotheses 6 and 7, which

stated that supportive feedback environment (γ = .18, p = .70) and feedback orientation (γ

= .11, p = .20), respectively, would be positively related to feedback seeking, did not

reach significance. Hypotheses 21-24, which stated that feedback seeking would be

positively related to task performance (β = .37, p < .001), OCB's (β = .39, p < .001), and

would mediate the relationship between supportive feedback environment and the

criterion variables were all supported. Post-hoc power analyses revealed that a slightly

higher sample size (228 vs, the actual sample size of 202) would be necessary to detect

significance with the effect sizes found in the relationships that did not reach significance

in this revised performance model.

Study 2: Attitudinal Model

Assessing for common method bias. To test for common method bias in the

attitudinal model, a series of nested models were compared as described above. The

model fit results can be found in Table 3. A comparison of the Baseline Model and

Method-C Model tested the null hypothesis that the marker variable factor loadings,

which were assumed to be equal for Method-C Model, were not related to the substantive

indicators. The chi-square difference test supports the rejection of this null hypothesis,

indicating the presence of method effects. As seen in Table 3, the comparison between

the Baseline and Method-C Model resulted in a chi-square difference of 136.61 with one

degree of freedom, which exceeds the 0.05 chi-square critical value of 3.84 for one

degree of freedom. The Method-C Model was then compared the Method-U Model to test

the null hypothesis that the marker variable factor loadings were equal. As seen in Table

3, this comparison yielded a significant chi-square difference of 60.57 with 22 degree of

freedom, which exceeds the chi-square critical value of 33.92 at α = .05. Therefore, the

Method-U Model, in which the influence of the marker variable is not assumed to be

equal across the substantive variables in the study, fits the data best and is the best model

to explain the marker variance. The Method-U Model was used for the structural model

as well to control for common method bias (Williams, Hartman, & Cavazotte, 2010).

   The standardized factor loadings for the Method-U Model are displayed in Table

4. As can be seen, all latent variable indicators load significantly at the α = .05 level on

the constructs they were intended to measure. For the method factor loadings from the

Method-U Model, 24 of the 27 loadings were significant, indicating that the item was

contaminated by method variance of some form. To test for marker variable effects on

factor correlation estimates, the Method-R Model was performed using the fixed

correlation values obtained from the Baseline Model. A comparison between the Method-

U Model and the Method-R Model yielded a significant chi-square difference of 297.57

with 15 degree of freedom, which exceeds the chi-square critical value of 24.99 at α = .05.

This indicates the method effects of the marker variable significantly biased the latent

variable correlations. However, the attitudinal measurement and structural model will be

examined through the Method Model-U, which helps to statistically control for common

method bias by including effects of the marker variable.

   Next, the reliability coefficients were decomposed to examine the extent of

influence the method effects had on the reliability of the latent variables in the study. The

values for total, substantive, and method reliability can be found in Table 5. All latent

variables exhibit acceptable reliability, while feedback orientation, affective commitment,

and self-efficacy were the most affected by method effects with method component

values of .15, .14, and .13 respectively. That is, the reliabilities of these three latent variables were slightly more artificially elevated due to method bias. However, even taking method bias into account, all latent variables show acceptable reliability.

Model fit. The relationships between the predictors of supportive feedback environment and feedback orientation and the criterion variables of job satisfaction and affective commitment were examined using two-step SEM in AMOS (Anderson & Gerbing, 1988). The attitudinal measurement model, including the marker variable, showed good fit ($\chi^2_{215} = 430.94$, $p < .001$, SRMR = .03, RMSEA = .04, CFI = .98). Given the good fit of the measurement model, the second step of the SEM procedure was performed by testing the structural model. The hypothesized structural model, including the marker variable, also resulted in good fit ($\chi^2_{294} = 621.36$, $p < .001$, SRMR = .04, RMSEA = .05, CFI = .97). Factor loadings and parameter estimates for both the hypothesized measurement and structural model are reported in Figure 7.

Insert Figure 7 About Here

Hypothesis testing. For Hypothesis 1, the correlation between feedback environment and feedback orientation relationship was found to be significant ($\phi = .45$, $p < .001$). Standardized beta weights were examined to test the remaining hypotheses. Hypothesis 2, which stated that supportive feedback environments would be positively related to self-efficacy was not supported ($\gamma = .05$, $p = .41$). Therefore, hypothesis 15, stating that self-efficacy will mediate the relationship between supportive feedback environments and job satisfaction, was not supported. The rest of the hypotheses were supported, including the positive relationships between feedback orientation and self-

efficacy ($\gamma = .22$, $p < .001$), self-efficacy and job satisfaction ($\beta = .12$, $p < .001$), supportive feedback environments and perceived organizational support ($\gamma = .59$, $p < .001$), perceived organizational support and affective commitment ($\beta = .74$, $p < .001$), and perceived organizational support and job satisfaction ($\beta = .74$, $p < .001$). Additionally, through the bootstrap methods outlined earlier, hypotheses 18 and 20 were found to be significant with perceived organizational support mediating the relationship between a supportive feedback environment and affective commitment as well as mediating the relationship between a supportive feedback environment and job satisfaction.

As an exploratory analysis, the attitudinal model was tested using just the matched (n = 202) sample data. An overall one-way multivariate analysis of variance (MANOVA), conducted to test whether there were any significant differences on the study variables when comparing the matched and the unmatched sample was significant, F (16, 521.00) = 2.279, p =. 003; Wilks' $\lambda = .935$. When comparing mean differences, four constructs resulted in significant mean differences. These constructs were feedback environment ($M_{Matched} = 5.59$ v. $M_{Self-Only} = 5.46$), perceived organizational support ($M_{Matched} = 5.36$ v. $M_{Self-Only} = 5.18$), job satisfaction ($M_{Matched} = 5.80$ v. $M_{Self-Only} = 5.54$), and affective commitment ($M_{Matched} = 4.73$ v. $M_{Self-Only} = 4.54$) with the matched sample resulting in the higher mean for all the constructs. Considering that the participants in the matched sample took the extra step to put in their supervisor's email and had a supervisor that took the time to complete their survey, it is not surprising that the matched sample had higher mean values when compared to the unmatched sample.

The attitudinal model was examined again with just the matched sample data using two-step SEM in AMOS (Anderson & Gerbing, 1988). The measurement model,

including the marker variable, showed satisfactory fit (χ^2_{303} = 538.42, $p < .001$, SRMR = .06, RMSEA = .06, CFI = .95). The structural model, including the marker variable, also resulted in acceptable fit (χ^2_{294} = 514.38, $p < .001$, SRMR = .05, RMSEA = .06, CFI = .95). Parameter estimates were also examined to determine if any changed in significance. All parameter estimates stayed consistent in significance except the path from feedback orientation to self-efficacy ($\beta_{Self-Only}$ = .22, $p < .001$ v. $\beta_{Matched}$ = .02, p = .860) and the path from self-efficacy to job satisfaction ($\beta_{Self-Only}$ = .12, $p < .001$; $\beta_{Matched}$ = .09, p = .192). While the path from self-efficacy to job satisfaction only decreased by .04, the path from feedback orientation to self-efficacy was a much more significant change. The reasons for this particular change are unclear, although restricted variance on the constructs and reduced power may help to explain this change.

Discussion

While organizations continue to struggle in finding ways to increase the job satisfaction, commitment, performance and organizational citizenship behaviors of their employees, this study adds to the increasing body of literature that supports the power of an environment characterized by simple informal feedback exchanges between leaders and their direct reports. To review, a supportive feedback environment is characterized by a feedback source that is perceived as credible and knowledgeable concerning the direct report's performance, is readily available to provide feedback and promotes feedback seeking; and the feedback itself is perceived as high quality, delivered in a considerate and appropriate manner, and is balanced between both positive and negative feedback, given the appropriateness of the situation (Steelman, Levy, & Snell, 2004). Considering this type of feedback environment, it is not surprising the current study found such a high

correlation between the construct and feedback orientation, which is a person's general receptivity to feedback. While individuals may certainly be more or less open to feedback as a result of certain individual differences, the environment seems to have a significant impact on this receptivity, either nurturing one's curiosity and thirst for feedback and development, or hindering this receptivity by not providing adequate feedback. In fact, Dahling and O'Malley (2015) recently found that feedback motives impact the feedback environment and process. They found that the instrumental motive fully mediated the relationship between feedback environment and feedback seeking, while the positive relationship between feedback seeking and task performance ratings was only significant when image enhancement motive was low (Dahling & O'Malley, 2015).

There has been a lack of understanding concerning what "good" feedback looks like and through what mechanisms feedback leads to positive outcomes (cf. Kluger & DeNisi, 1996). The current study adds to the literature by further supporting the strength of the Feedback Environment Scale as developed by Steelman et al. (2004) and clarifying the ways in which a supportive feedback environment, as operationalized by the supervisor facet, leads to positive outcomes. As recently pointed out by Pulakos and O'Leary (2011), attempts to improve the traditional performance appraisal model have proved disappointing in their operational implementation. There are problems in the traditional model of performance management that remain difficult to fix, such as leniency in ratings and poor attitudes toward the performance appraisal process, with many employees reporting that formal performance management systems fail to provide useful feedback and establish clear guidelines (Culbert, 2008; Pulakos & O'Leary, 2011). By focusing on supervisor-employee relationships and communication, managers may be

able to promote stronger feedback environments. Many of the issues that currently plague the formal performance management system should be less likely to occur under a strong feedback environment. Feedback would no longer be exclusively withheld for annual meetings with a supervisor, but continuous, two-way discussions. In other words, strong feedback environments could be in line with modern views of performance management encouraging more frequent, informal feedback.

Implications for Performance Management Research

In what Austin and Villanova (1992) called the "criterion problem," research has long tried to figure out the reason behind the poor relationship between ratings of job performance and actual job performance, with reasons being a lack of motivation, knowledge, tools, skills and opportunities to observe on the part of the manager (Murphy, 2008). Murphy (2008) argued that a reason for the continuing survival of performance appraisals, despite their lack of accuracy and popularity, is the lack of any better alternatives. The current study provides support for such an alternative. Despite decades of research, the criterion problem has remained as researchers and practitioners continue to struggle to measure performance accurately. Perhaps it is time to stop focusing on what may be a lost cause and instead focus on researching ways to best promote a strong feedback environment. The current study found positive relationships between a supportive feedback environment and feedback orientation, affective commitment and job satisfaction as mediated by perceived organizational support, and task performance and organizational citizenship behaviors as mediated by feedback seeking. While many of these relationships were found in previous research (e.g, Anseel & Lievens, 2007; Dodd & Ganster, 1996; Jawahar, 2010; Linderbaum & Levy, 2010), the current study

clarifies *how* a supportive feedback environment leads to positive attitudinal and performance variables, which is largely through feedback seeking and perceived organizational support.

Implications for Performance Management Practice

A quick web search of the term "performance appraisal" reveals pages and pages of articles disavowing the use of performance appraisals with titles such as "Time to scrap performance appraisals" (Bersin, 2013), "Why employees dislike performance appraisals" (Roberts & Pregitzer), "7 reasons why I hate performance appraisals" (W., 2013) and "The performance appraisal: A workplace evil that must be destroyed like a blood sucking vampire" (Kruse, 2012). It is not hard to see why with the many problems plaguing performance appraisals, such as the criterion problem discussed above, the difficulty managers likely have summarizing and judging a year's worth of an individual performance in one sitting, the need to immediately address performance issues instead of waiting until the formal appraisal, and the discomfort this once-a-year format causes both the supervisor and the direct report given that all feedback is aggregated into the one sit down meeting. Most employees seem to hate receiving annual performance feedback, while managers begrudge having to provide and defend such feedback (Bowman, 1999). However, perhaps the most significant reason performance appraisals are not a popular HR practice is that employees want, or at least certainly need feedback that happens much more often than once a year. Regular, timely feedback can help employees stay aligned with their development and continuous performance improvement, an objective performance appraisals may have difficulty reaching. Additionally, regular feedback may

help capture within-person performance variability, which is largely ignored or treated as error during performance appraisals (Fisher & Noble, 2004; Fisher, 2008).

Some researchers and practitioners have called for a complete moratorium on performance appraisals (Coen & Jenkins, 2000; Deming, 1986). However, it is difficult to imagine a workplace where feedback simply ceased to exist. Building on the feedback literature, especially the research into more informal feedback exchanges, the current study continues to show support for the potential of supportive feedback environments to supplement, improve, and even completely replace the dreaded performance appraisal. This study provides further support for the significant and positive outcomes supportive feedback environments result in, including perceived organizational support, affective commitment, job satisfaction, task performance, and organizational citizenship behaviors. These attitude and performance outcomes are often the very goals of a performance appraisal system.

The clearest takeaway from the current study is the importance of promoting and developing a supportive feedback culture to help support and encourage managers to practice informal feedback on a regular basis. Peterson (2009) offered several recommendations on how to do exactly this, including training managers in the importance and value of feedback as well as how to give and receive feedback, having senior leaders serve as feedback role models, and to make time and reward managers for providing feedback. Organizations cannot simply tell managers to practice informal feedback without actually building supportive feedback into the culture and practicing it at the highest senior levels to demonstrate their commitment.

Limitations and Future Directions

One notable limitation of this study was that the design was cross-sectional in nature. While both models contain directional hypotheses, causation and direction cannot be claimed with a cross-sectional study design. Future studies should examine the effects of feedback in longitudinal designs to determine how feedback is utilized and leads to *changes* in performance. Given the cross-sectional design of the current study, important relationships may have been overshadowed in the feedback model, with respect to performance and attitudinal outcomes. For example, repeated feedback interactions may strengthen the positive attitudinal and performance relationships found or even change the mediating relationships through which feedback environments lead to positive outcomes. Along with changes in attitudes or performance, more specific behaviors and activities associated with performance improvement could be measured. Thus, the specific processes that translate feedback into outcomes should be examined.

A further limitation of the current study that should be noted is common method variance (CMV), or variance that is caused by the measurement method rather than the study variables. CMV may cause systematic measurement error and bias the relationships among the constructs in a model (Podsakoff et al., 2003). Many of the variables in the performance model and all the variables in attitudinal model are self-report measures. While steps were taken to assess and control for CMV in the attitudinal model using the marker variable technique, no such steps were taken in the performance model due to significant problems encountered when attempting to use the marker variable technique. Therefore, CMV may be biasing both the self-reported measures as well as the measures obtained from the supervisor in the performance model. In addition, the present study utilized a non-experimental design. True experimental designs could allow stronger

causal inferences to be drawn on the relationships tested here. Perhaps using simulation studies the feedback environment could be manipulated and participants could be randomly assigned to conditions, though how much this simulation could mirror an actual work environment and reflect the complexity of the supervisor-direct report relationship is unclear. An experimental design would, however, eliminate potential concerns surrounding the need to rate the feedback environment using self-report measures which have their own methodological limitations.

Another limitation with certain relationships in the performance model is the less than ideal sample size. A slightly higher sample size would have resulted in higher power (Schumacker & Lomax, 2004), which may have pushed the rejected hypotheses over to significance. As mentioned previously, a post-hoc analysis revealed that a sample size of closer to 225 would be required to detect several of the relationships in the model.

A clear limitation of the current study is that both models were tested with only the supervisor facet of the Feedback Enviroment Scale (Steelman et al., 2004). Future studies should examine how a supportive feedback environment, as operationalized through the coworker facet, may lead to positive attitudinal and performance outcomes. As noted previously, coworker feedback may lead to positive outcomes through different mediating variables. For example, psychological safety, which refers to a shared belief among coworkers that it is safe to engage in interpersonal risk-taking (Edmondson, 1999), may be an important explanatory variable for such relationships. Individuals who perceive a high level of psychological safety may feel more comfortable asking for and providing feedback to their team members when compared to those that do not perceive a psychological safe environment.

The main objective of the current study was to test a performance and attitudinal model that would help clarify how the feedback environment leads to positives outcomes at work. While the most significant variables from the feedback literature were included, other variables that may have an influence in the feedback process had to be excluded and this is recognized as a limitation for the current study. There have been dozens of variables proposed and tested in feedback process models, such as leader-member exchange (Anseel & Lievens, 2007), self-motives (Anseel, Lievens, and Levy, 2007) organizational entry (Ashford & Black, 1996), team empowerment climate (Chen, Lam, & Zhong, 2007), publicness of feedback (Williams et al., 1999), and regulatory focus (Van-Dijk & Kluger, 2004) to name just a few. While recognizing other variables may have an influence, the current study aimed to create a simplified feedback process model that is based largely in Social Cognitive Theory (Wood & Bandura, 1989) to provide theoretical clarity in the feedback literature and propose a relatively simple method by which supervisors can increase positive outcomes from feedback (i.e. through the feedback environment).

Whereas much of the research discussed in the current study is limited to the field of psychology, cross-disciplinary research would be advantageous to broaden our understanding of the feedback environment construct. An interesting area for future research is examining the effects of a supportive feedback environment through a social network analysis (SNA) lens. Social network analysis focuses on the importance of the social relationships among a set of actors (Wasserman & Faust, 1994). A potential future study could expand the operationalization of feedback environment outside of the

supervisor facet, and even the coworker facet, to examine any and all sources of feedback that may impact the attitudes and performance of employees.

Future research should examine other potential mediating and moderating variables in the proposed feedback models. For example, job complexity could be a potential moderator for several of the relationships proposed. For jobs that are very low in complexity or ambiguity, employees may not benefit from feedback from their supervisor or coworkers and may see no reason to seek it out (Bennet, Herold, & Ashford, 1990). In addition, motives for feedback seeking have recently been shown to have an influence on the relationship between feedback seeking and performance outcomes (Dahling et al., 2015). Specifically, individuals with an image enhancement motive (i.e., to make themselves look better in the eye of the supervisor) realized no link between feedback seeking and performance ratings, but employees with an instrumental motive (i.e., to actually obtain useful feedback) had a strong, positive relationship between feedback seeking and performance. Additional motives and individual differences may also be worth exploring in future research. For instance, Kluger and DeNisi (1996) noted several factors that influence a recipient's locus of attention, in turn impacting whether the intervention will subsequently be effective. They also emphasized the importance of cognitive and affective processes during feedback interventions, noting that such reactions to feedback are triggered by an evaluation of the feedback against self-goals (1996). When feedback fails to align with self-goals, negative affective reactions are likely to result (1996). Individual difference moderators, such as self-esteem, learning orientation, and perseverance would be worth exploring in future studies. Just as the current study proposed and tested perceived organizational support, future studies should

examine the potential role of perceived supervisor support (PSS), which is defined as the perception employees hold regarding how much their supervisors value their contributions and care about their well-being (Eisenberger et al., 2002). Perceived supervisor support may play an important role in clarifying how feedback leads to positive attitudinal outcomes.

Conclusion

In summary, the current study found support for the importance and power of supportive feedback environments as they positively relate to job satisfaction, affective commitment, task performance, and organizational citizenship behaviors. This study is yet another step forward in understanding the ways feedback, when offered correctly, can lead to positive attitudinal and performance outcomes for employees. While making supportive feedback an integral part of the organizational culture may not be quick, or even easy, the potential outcomes are clear and leaders would do well to pay attention to the power of this seemingly simple solution. Moving towards informal feedback is perhaps the best alternative available for broken and unpopular performance management systems.

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Table 1

Means, Standard Deviations, and Variable Intercorrelations

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Feedback Environment	5.46	.96	(.96)												
2. Feedback Orientation	3.89	.51	.47**	(.90)											
3. Performance Self-Efficacy	5.93	.69	.26**	.39**	(.86)										
4. Feedback Seeking	3.02	.86	.40**	.51**	.14**	(.86)									
5. Role Clarity	5.23	.77	.36**	.27**	.47**	.09*	(.93)								
6. Perceived Org. Support	5.18	1.26	.59**	.28**	.21**	.21**	.32**	(.91)							
7. Job Satisfaction	5.54	1.50	.51**	.22**	.23**	.15**	.25**	.70**	(.95)						
8. Affective Commitment	4.54	1.47	.41**	.19**	.16**	.22**	.17**	.66**	.70**	(.89)					
9. Task Performance (Self-Rated)	5.64	.81	.18**	.36**	.61**	.20**	.40**	.15**	.18**	.19**	(.90)				
10. Org. Citizenship Behaviors (Self-Rated)	4.54	1.30	.14**	.23**	.36**	.33**	.15**	.18**	.16**	.27**	.48**	(.93)			
11. Feedback Seeking (Supervisor-Rated)	3.35	.90	.21**	.19**	.00	.21**	-.01	.08	.00	-.01	.02	.00	(.89)		
12. Task Performance (Supervisor-Rated)	5.61	.94	.23**	.20**	.16*	.19**	.09	.07	.11	.07	.21**	.08	.40**	(.93)	
13. Org. Citizenship Behaviors (Supervisor-Rated)	4.86	1.29	.12	.14*	.04	.21**	-.05	-.09	-.07	-.08	.03	.22**	.36**	.50**	(.94)

Note. Internal consistency estimates on diagonal. *An asterisk indicates correlation was statistically significant at *p* < .05.
**Two asterisks indicate correlation was statistically significant at *p* < .001.

Table 2

Model Fit Statistics

Performance Model	χ^2	df	$\Delta \chi^2$	Δdf	SRMR	CFI	RMSEA
Measurement Model	460.49*	278	–	–	.047	.962	.057
Hypothesized Structural Model	603.97*	289	–	–	.138	.934	.073
Revised Measurement Model	352.63*	215	107.86*	63	.047	.967	.056
Revised Structural Model	390.10*	222	213.87*	67	.079	.960	.061

*Note. *An asterisk indicates chi-square value was statistically significant at p < .05. Model 1: Hypothesized performance model without any of the mediated paths. Revised Model: Due to negative relationships, the removal of the latent variable of role clarity.*

Table 3

Model Fit Statistics

Attitudinal Model	χ^2	df	$\Delta\chi^2$	Δdf	SRMR	CFI	RMSEA
Test for Common Method Variance							
1. CFA	547.54*	303	–	–	0.033	0.979	0.039
2. Baseline	715.30*	316	–	–	0.105	0.966	0.048
3. Method-C	578.70*	315	–	–	0.044	0.978	0.039
4. Method-U	518.13*	293	–	–	0.031	0.981	0.038
5. Method-R	815.70*	308	–	–	0.097	0.958	0.055
Chi-Square Model Comparison Tests							
ΔModels							
1. Baseline vs. Method-C	–	–	136.61*	1	–	–	–
2. Method-C vs. Method-U	–	–	60.57*	22	–	–	–
3. Method-U vs. Method-R	–	–	297.57*	15	–	–	–
Measurement Model	430.94*	215	–	–	.033	.981	.043
Hypothesized Model	621.36*	294	–	–	.041	.972	.045

*Note. *An asterisk indicates chi-square value was statistically significant at p<.05*

Table 4

Attitudinal Model: Method-U Model Standardized Factor Loadings

Item	FES	FOS	POS	SE	JS	AC	Marker Variable
FES.1.P	0.89*						0.24*
FES.2.P	0.85*						0.29*
FES.3.P	0.91*						0.28*
FES.4.P	0.86*						0.29*
FES.5.P	0.85*						0.27*
FOS.1.P		0.78*					0.37*
FOS.2.P		0.81*					0.34*
FOS.3.P		0.75*					0.34*
FOS.4.P		0.83*					0.30*
POS.1.P			0.85*				0.29*
POS.2.P			0.70*				0.20*
POS.3.P			0.82*				0.25*
POS.4.P			0.88*				0.27*
Self.Eff.1.P				0.63*			0.45*
Self.Eff.2.P				0.59*			0.44*
Self.Eff.3.P				0.64*			0.50*
Self.Eff.4.P				0.70*			0.48*
JS.1					0.90*		0.24*
JS.2					0.92*		0.20*
JS.3.RS					0.90*		0.14
AC.1.P						0.83*	0.15
AC.2.P						0.84*	0.15
AC.3.P						0.86*	0.21*
MWEP.MOR.3							0.61
MWEP.MOR.27							0.68[a]
MWEP.MOR.23							0.69 [a]
MWEP.MOR.13							0.65 [a]

Note: *p < .05; Factor loadings from the Baseline Model and held constant through the model comparisons are marked with the letter ''a.''

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Table 5

Attitudinal Model: Reliability Decomposition

Latent Variable	Reliability Baseline Model	Decomposed Reliability Method-U Model		
	Total Reliability	Substantive Reliability	Method Reliability	% Reliability Variable
Feedback Environment	0.96	0.87	0.09	8.98
Feedback Orientation	0.97	0.82	0.15	15.29
Perceived Organizational Support	0.83	0.75	0.07	8.87
Self-Efficacy	0.91	0.84	0.13	14.13
Job Satisfaction	0.88	0.84	0.04	4.42
Affective Commitment	0.76	0.83	0.14	17.77
Marker Variable	0.87	0.87		

Table 6

List of Supported, Partially Supported, and Rejected hypotheses for Performance Model

Hypothesis	Relationship Expected	Result
Hypothesis 1	FO will be positively related to FE.	Supported
Hypothesis 2	FE will be positively related to self-efficacy.	Supported
Hypothesis 3	FO will be positively related to self-efficacy.	Supported
Hypothesis 4	Self-efficacy will be positively related to task performance.	Supported
Hypothesis 5	Self-efficacy will mediate the relationship between a FE and task performance.	Rejected
Hypothesis 6	FE will be positively related to feedback seeking.	Rejected
Hypothesis 7	FO will be positively related to feedback seeking.	Rejected
Hypothesis 8	Feedback seeking will be positively related to role clarity.	Rejected
Hypothesis 9	Role clarity will be positively related to task performance.	Rejected
Hypothesis 10	Role clarity will mediate the relationship between feedback seeking and task performance.	Rejected
Hypothesis 11	FE will be positively related to role clarity.	Supported
Hypothesis 12	Role clarity will mediate the relationship between FE and task performance.	Rejected
Hypothesis 13	Role clarity will be positively related OCB's.	Rejected

Table 7

List of Supported, Partially Supported, and Rejected hypotheses for Revised Performance Model

Hypothesis	Relationship Expected	Result
Hypothesis 1	FO will be positively related to FE.	Supported
Hypothesis 2	FE will be positively related to self-efficacy.	Rejected
Hypothesis 3	FO will be positively related to self-efficacy.	Supported
Hypothesis 4	Self-efficacy will be positively related to task performance.	Supported
Hypothesis 5	Self-efficacy will mediate the relationship between a FE and task performance.	Rejected
Hypothesis 6	FE will be positively related to feedback seeking.	Rejected
Hypothesis 7	FO will be positively related to feedback seeking.	Rejected
Hypothesis 21	Feedback seeking will be positively related to task performance.	Supported
Hypothesis 22	Feedback seeking will be positively related to OCB's.	Supported
Hypothesis 23	Feedback seeking will mediate the relationship between a FE and task performance.	Supported
Hypothesis 24	Feedback seeking will mediate the relationship between a FE and OCB's.	Supported

Table 8

List of Supported, Partially Supported, and Rejected hypotheses for Attitudinal Model

Hypothesis	Relationship Expected	Result
Hypothesis 1	FO will be positively related to FE.	Supported
Hypothesis 2	FE will be positively related to self-efficacy.	Rejected
Hypothesis 3	FO will be positively related to self-efficacy.	Supported
Hypothesis 14	Self-efficacy will be positively related to job satisfaction.	Supported
Hypothesis 15	Self-efficacy will mediate the relationship between FE and job satisfaction.	Rejected
Hypothesis 16	FE will be positively related to POS.	Supported
Hypothesis 17	POS will be positively related to affective commitment.	Supported
Hypothesis 18	POS will mediate the relationship between FE and affective commitment.	Supported
Hypothesis 19	POS will be positively related to job satisfaction.	Supported
Hypothesis 20	POS will mediate the relationship between FE and job satisfaction.	Supported
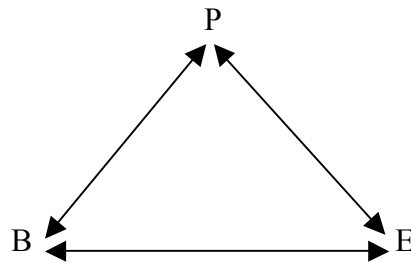
Figure 1. Visual representation of Reciprocal Determinism (B = behavior, P = cognitive and other personal factors, and E = environmental events). Adapted from *Social foundations of thought and action* by A. Bandura, 1986, Englewood Cliffs, NJ: Prentice Hall.
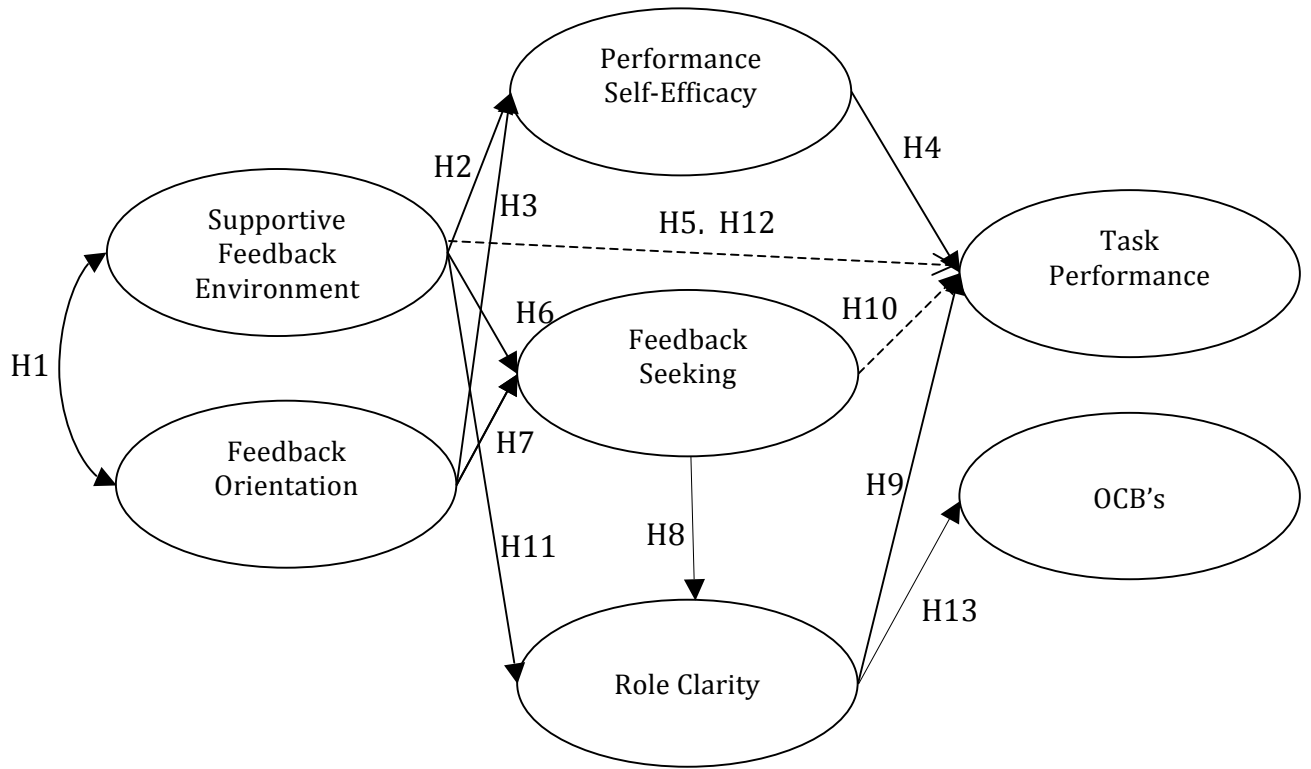
Figure 2. Hypothesized Performance Model
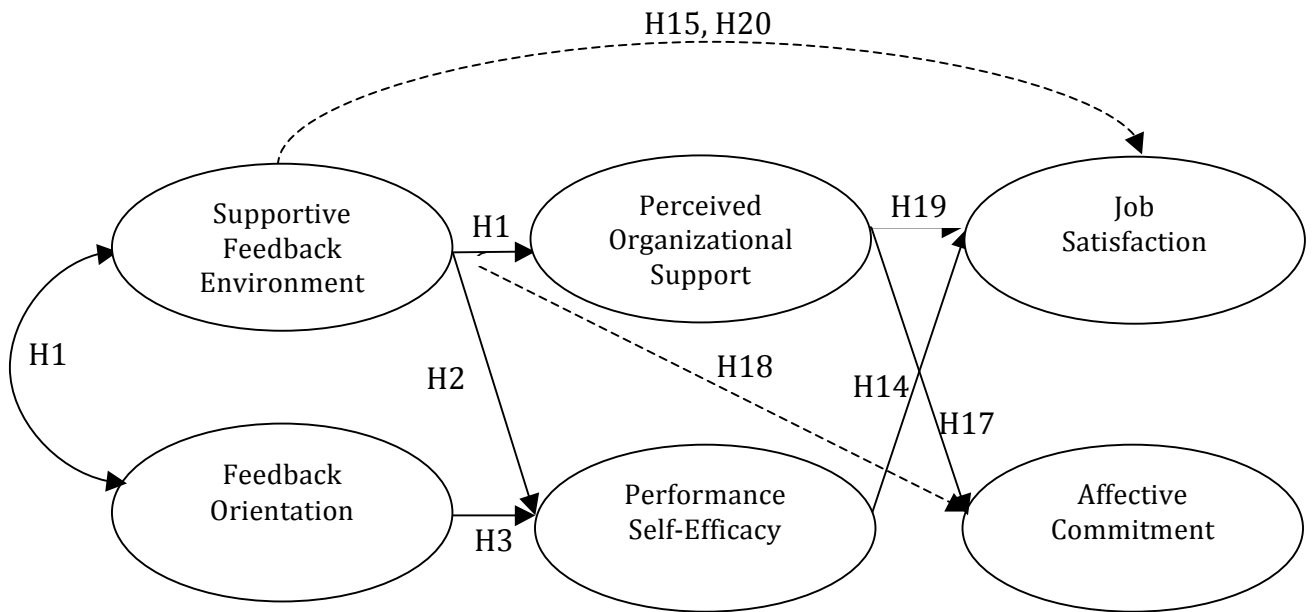
Figure 3. Hypothesized Attitudinal Model.
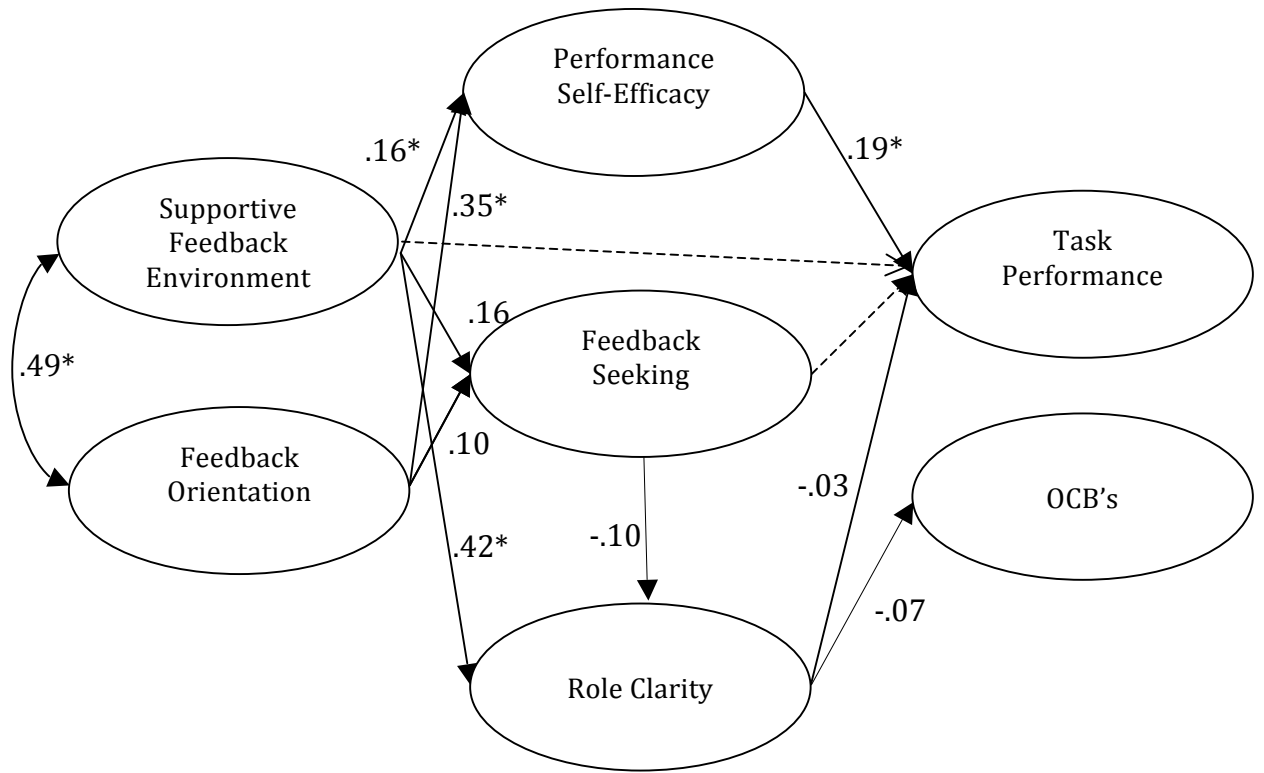
Figure 4. Hypothesized Performance Model with parameter estimates.
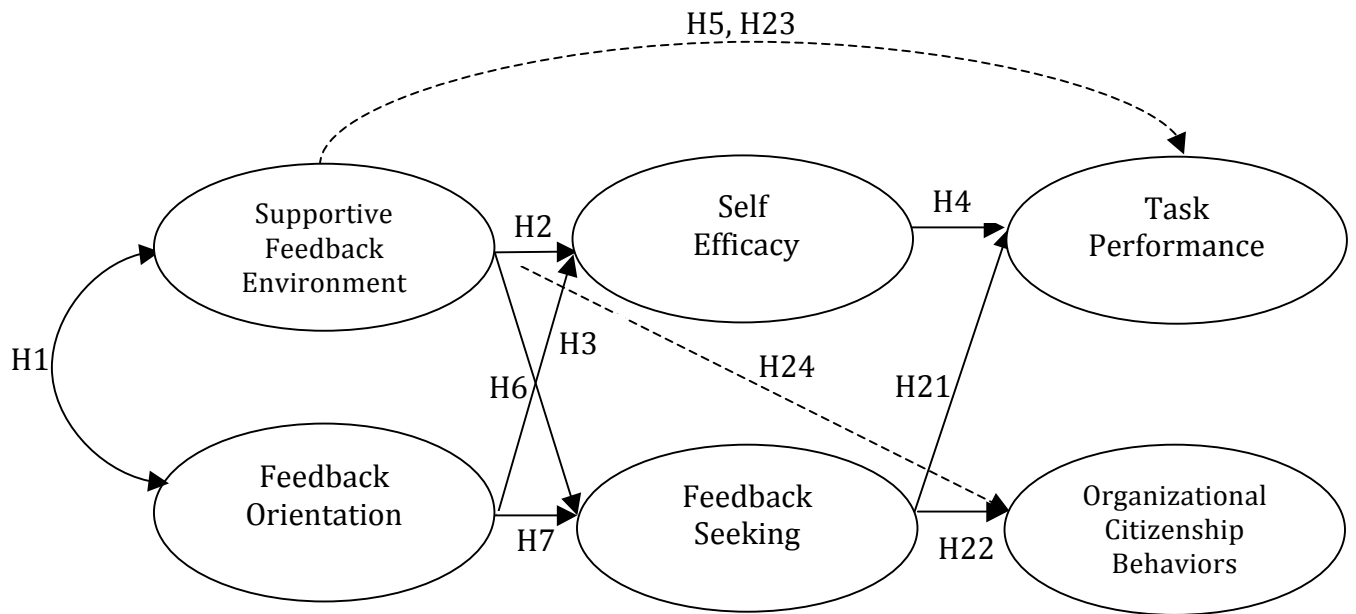
Figure 5. Revised Hypothesized Performance Model.
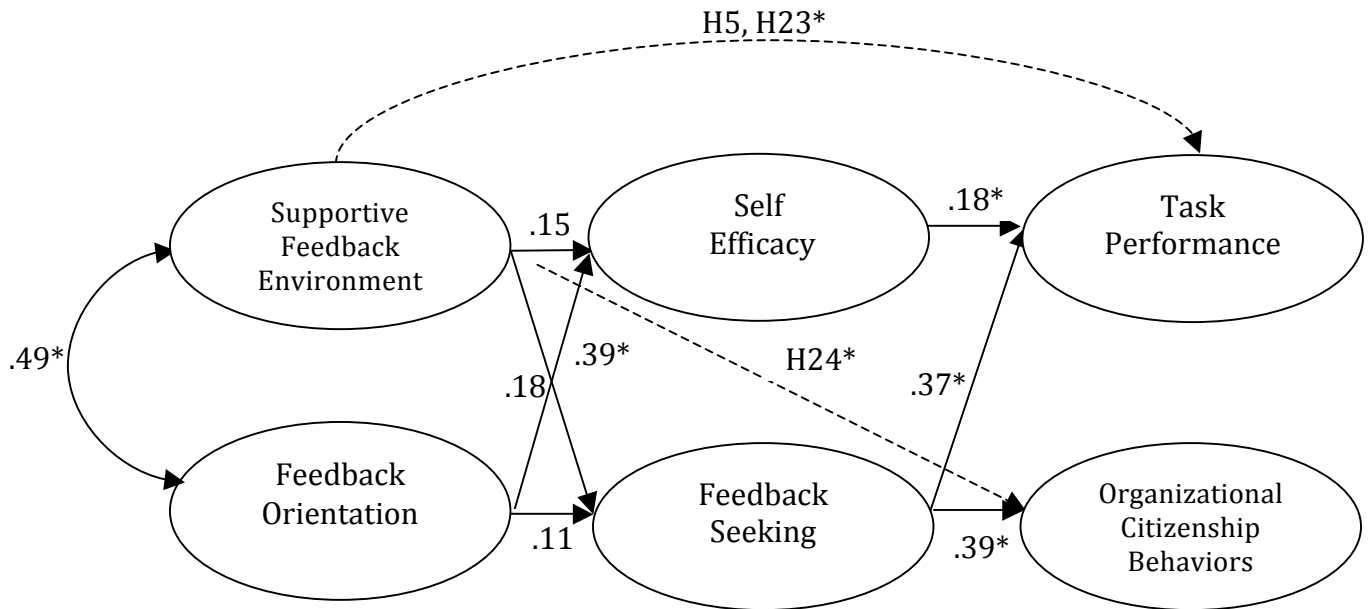
Figure 6. Revised Structural Performance Model with parameters estimates.
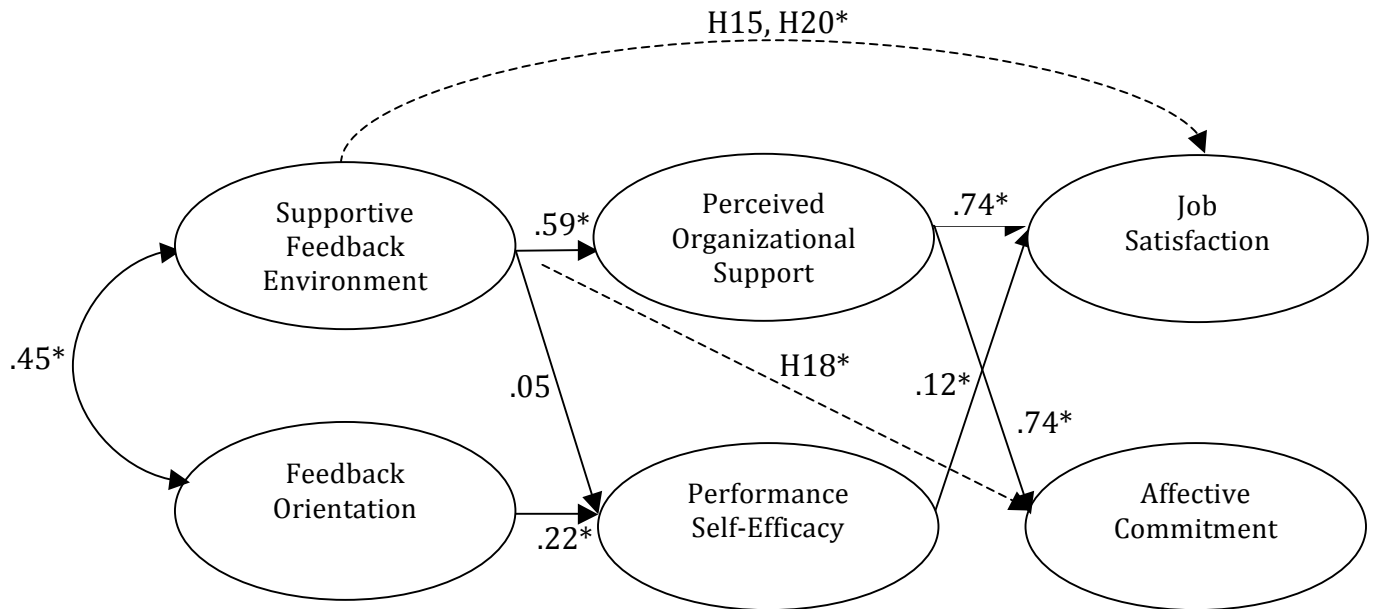
Figure 7. Hypothesized Attitudinal Model with parameter estimates.

Appendix A

Measures Used in Study

Feedback Environment (based on Steelman, Levy, & Snell 2004)

Source credibility

1. My supervisor is generally familiar with my performance on the job.
2. In general, I respect my supervisor's opinions about my job performance.
3. With respect to job performance feedback, I usually do not trust my supervisor. (R)
4. My supervisor is fair when evaluating my job performance.
5. I have confidence in the feedback my supervisor gives me.

Feedback quality

6. My supervisor gives me useful feedback about my job performance.
7. The performance feedback I receive from my supervisor is helpful.
8. I value the feedback I receive from my supervisor.
9. The feedback I receive from my supervisor helps me do my job.
10. The performance information I receive from my supervisor is generally not very meaningful. (R)

Feedback delivery

11. My supervisor is supportive when giving me feedback about my job performance.
12. When my supervisor gives me performance feedback, he or she is considerate of my feelings.
13. My supervisor generally provides feedback in a thoughtless manner. (R)
14. My supervisor does not treat people very well when providing performance feedback. (R)
15. My supervisor is tactful when giving me performance feedback.

Favorable feedback

16. When I do a good job at work, my supervisor praises my performance.
17. I seldom receive praise from my supervisor. (R)
18. My supervisor generally lets me know when I do a good job at work.
19. I frequently receive positive feedback from my supervisor.
Unfavorable feedback
20. When I don't meet deadlines, my supervisor lets me know.
21. My supervisor tells me when my work performance does not meet organizational standards.

22. On those occasions when my job performance falls below what is expected, my supervisor lets me know.
23. On those occasions when I make a mistake, my supervisor tells me.

Source availability

24. My supervisor is usually available when I want performance information.
25. My supervisor is too busy to give me feedback. (R)
26. I have little contact with my supervisor. (R)
27. I interact with my supervisor on a daily basis.
28. The only time I receive performance feedback from my supervisor is during my performance review. (R)

Promotes feedback seeking

29. My supervisor is often annoyed when I directly ask for performance feedback. (R)
30. When I ask for performance feedback, my supervisor generally does not give me the information right away. (R)
31. I feel comfortable asking my supervisor for feedback about my work performance.
32. My supervisor encourages me to ask for feedback whenever I am uncertain about my job performance.

Feedback Orientation (based on Linderbaum & Levy, 2010)

Utility

1. Feedback contributes to my success at work.
2. To develop my skills at work, I rely on feedback.
3. Feedback is critical for improving performance.
4. Feedback from supervisors can help me advance in a company.
5. I find that feedback is critical for reaching my goals.

Accountability

6. It is my responsibility to apply feedback to improve my performance.
7. I hold myself accountable to respond to feedback appropriately.
8. I don't feel a sense of closure until I respond to feedback.
9. If my supervisor gives me feedback, it is my responsibility to respond to it.
10. I feel obligated to make changes based on feedback.

Social Awareness

11. I try to be aware of what other people think of me.
12. Using feedback, I am more aware of what people think of me.
13. Feedback helps me manage the impression I make on others.

14. Feedback lets me know how I am perceived by others.
15. I rely on feedback to help me make a good impression.
Feedback Self-Efficacy

16. I feel self-assured when dealing with feedback.
17. Compared to others, I am more competent at handling feedback.
18. I believe that I have the ability to deal with feedback effectively.
19. I feel confident when responding to both positive and negative feedback.
20. I know that I can handle the feedback that I receive.

Performance Self-Efficacy (based on Schyns & von Collani, 2002)

1. Thanks to my resourcefulness, I know how to handle unforeseen situations in my job.
2. If I am in trouble at my work, I can usually think of something to do.
3. I can remain calm when facing difficulties in my job because I can rely on my abilities.
4. When I am confronted with a problem in my job, I can usually find several solutions.
5. No matter what comes my way in my job, I'm usually able to handle it.
6. My past experiences in my job have prepared me well for my occupational future.
7. I meet goals that I set for myself in my job.
8. I feel prepared to meet most of the demands in my job.

Feedback Seeking (based on Ashford & Black, 1996)

To what extent have you…

1. Sought feedback on your performance after assignments from your supervisor?
2. Solicited critiques from your supervisor?
3. Sought out feedback on your performance during assignments from your supervisor?
4. Asked your supervisor's opinion of your work?

Role Clarity (Sawyer, 1992)
Goal Clarity

1. My duties and responsibilities.
2. The goals and objectives for my job.
3. How my work relates to the overall objectives of my work unit.
4. The expected results of my work.
5. What aspects of my work will lead to positive evaluations.

Process Clarity

6. How to divide my time among the tasks required of my job.
7. How to schedule my work day.
8. How to determine the appropriate procedures for each work task.

9. The procedures I use to do my job are correct and proper.
10. Considering your tasks, how certain are you that you know the best ways to do these tasks?

Task Performance (Tsui, Pearce, Porter, and Tripoli, 1997)

1. Employee's quantity of work is higher than average.
2. The quality of work is much higher than average.
3. The employee's efficiency is much higher than average.
4. Employee's standards of work quality are higher than the formal standards for this job.
5. Employee strived for higher quality work than required.
6. Employee upholds highest professional standards.
7. Employee's ability to perform core job tasks.
8. Employee's judgment when performing core job tasks.
9. Employee's accuracy when performing core job tasks.
10. Employee's job knowledge with reference to core job tasks.
11. Employee's creativity when performing core job tasks.

Organizational Citizenship Behavior (Tsui, Pearce, Porter, and Tripoli, 1997)

1. Makes suggestions to improve work procedures.
2. Expresses opinions honestly when others think differently.
3. Does not keep doubts about a work issue to him/herself, even when everyone else disagrees.
4. Makes suggestions to improve organization.
5. Calls management attention to dysfunctional activities.
6. Makes innovative suggestions to improve department.
7. Informs management of potentially unproductive policies and practices.
8. Is willing to speak us when policy does not contribute to goal achievement of department.
9. Suggests revisions in work to achieve organizational or departmental objectives.

Perceived Organizational Support (based on Eisenberger et al., 1997)

1. My organization cares about my opinions.
2. My organization really cares about my well-being.
3. My organization strongly considers my goals and values.
4. Help is available from my organization when I have a problem.
5. My organization would forgive an honest mistake on my part.
6. If given the opportunity, my organization would take advantage of me. (R)
7. My organization shows very little concern for me. (R)
8. My organization is willing to help me if I need a special favor.

Job Satisfaction (based on Cammann et al., 1983)

1. In general, I like working here.
2. All in all, I am satisfied with my job.
3. In general, I don't like my job. (R)

Affective Commitment (based on Allen, Meyer, and Smith 1993)

1. I would be very happy to spend the rest of my career with this organization.
2. I really feel as if this organization's problems are my own.
3. I feel a strong sense of belonging to my organization.
4. I feel 'emotionally attached' to this organization.
5. I feel like 'part of the family' at this organization.
6. This organization has a great deal of personal meaning for me.

Appendix B

AMOS Output for CFA and SEM Analyses
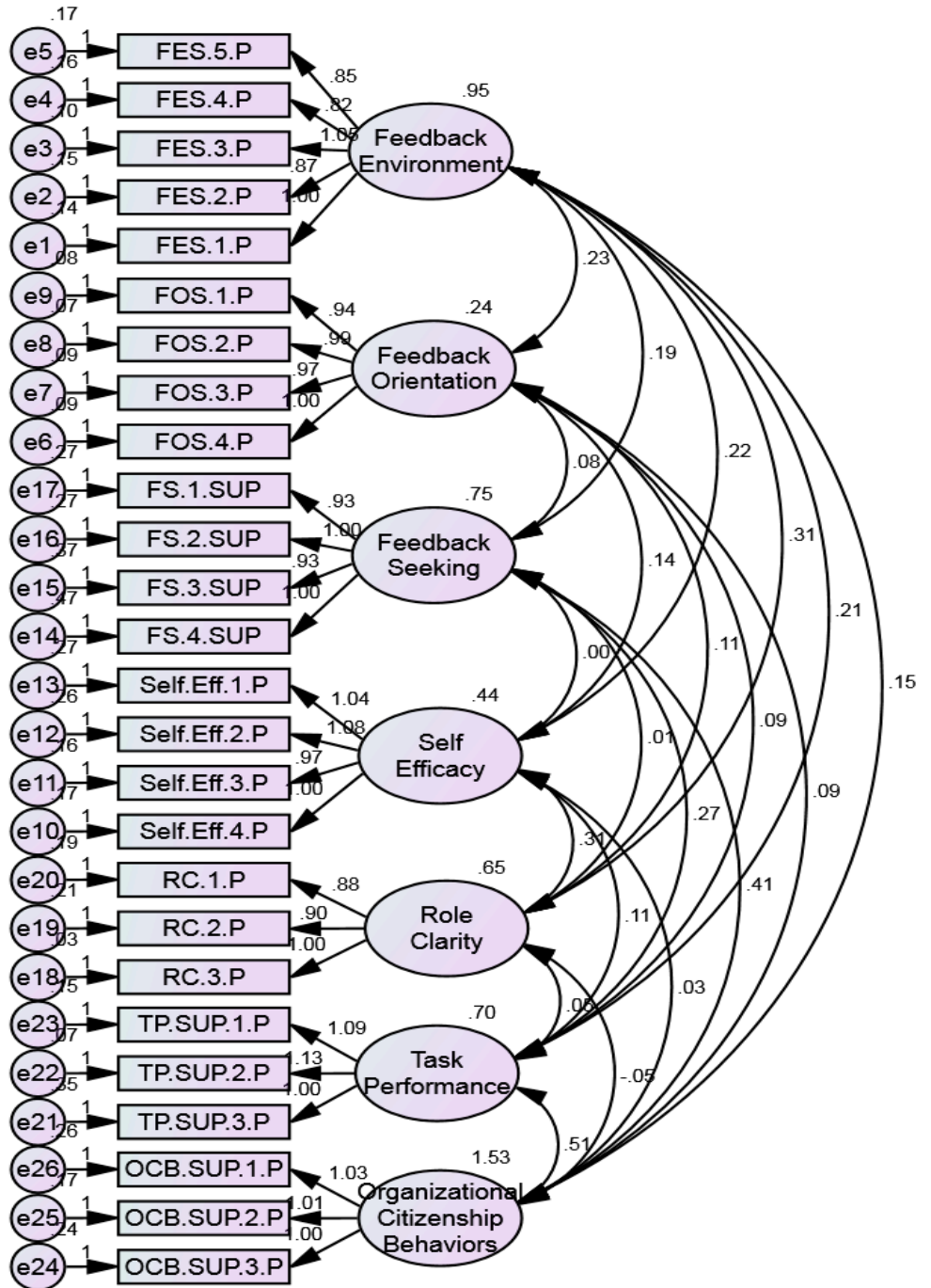
Figure 8. Performance Measurement Model with factor loadings
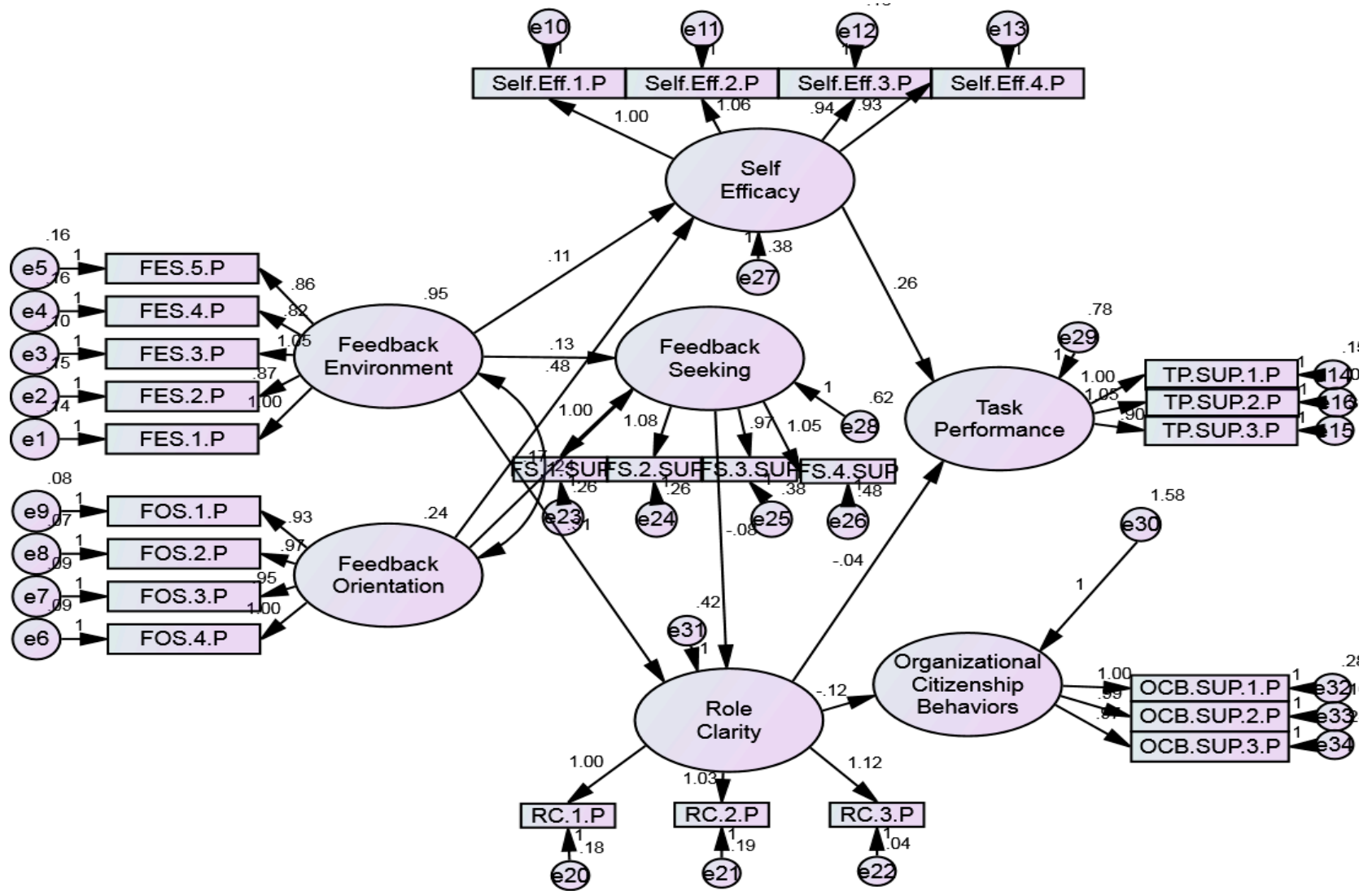
Figure 9. Performance Structural Model
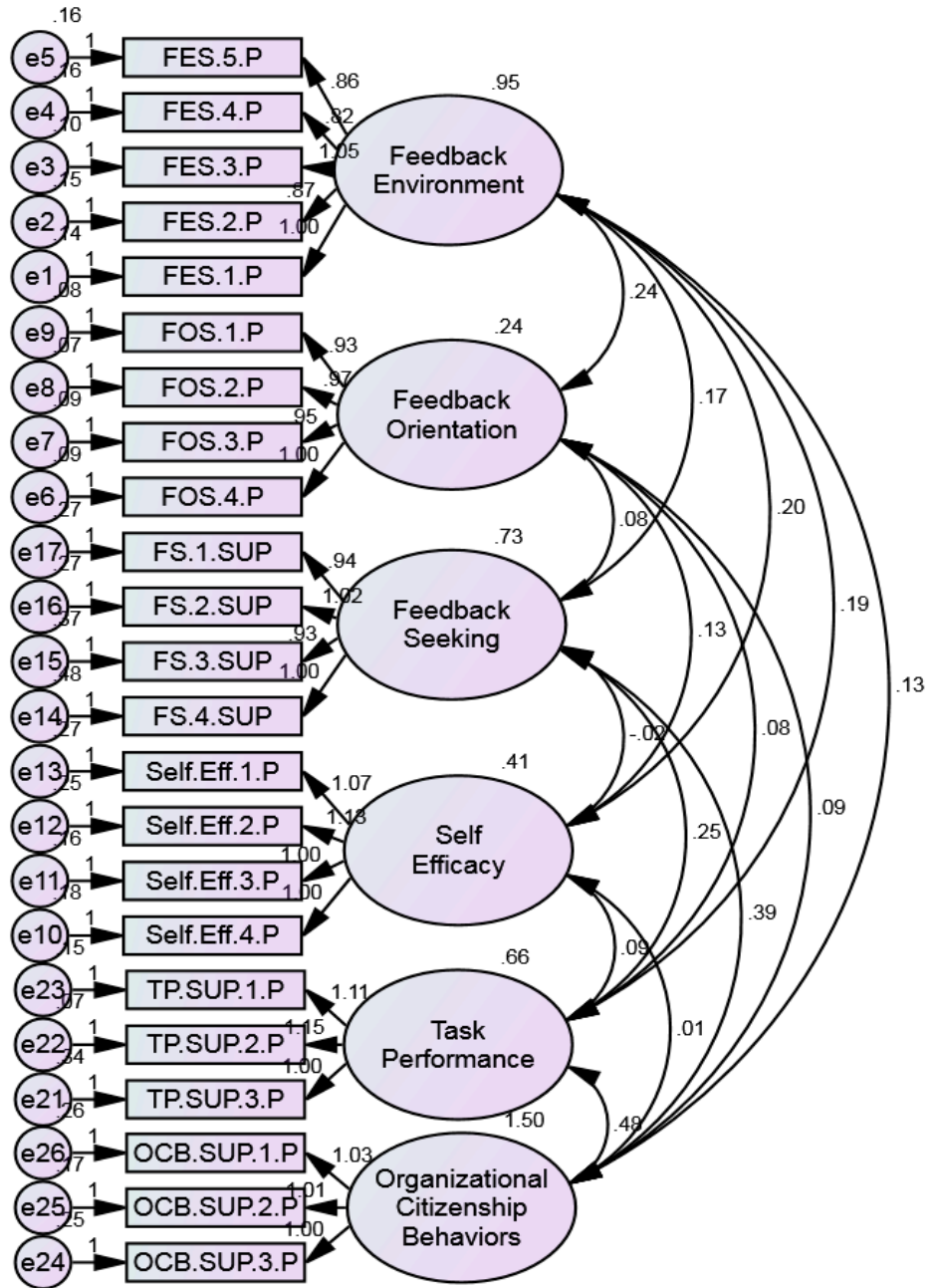
Figure 10. Revised Performance Measurement Model with factor loadings
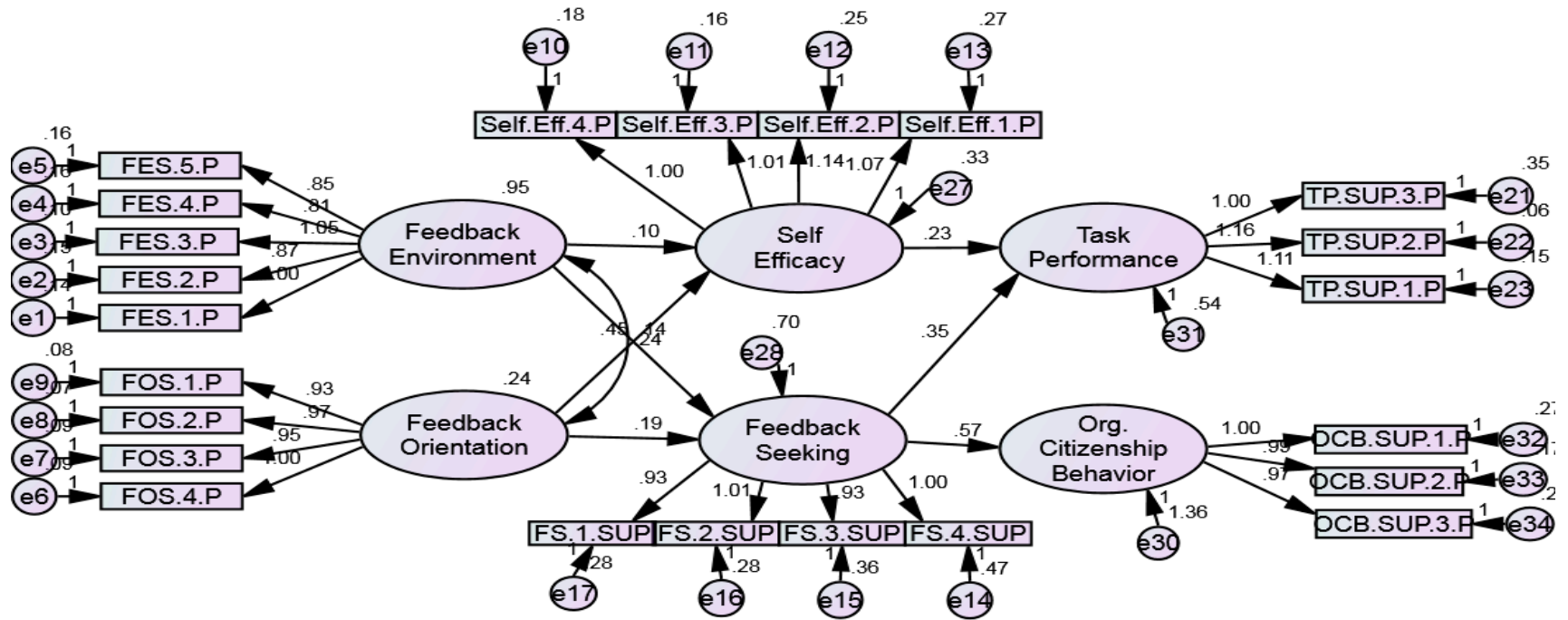
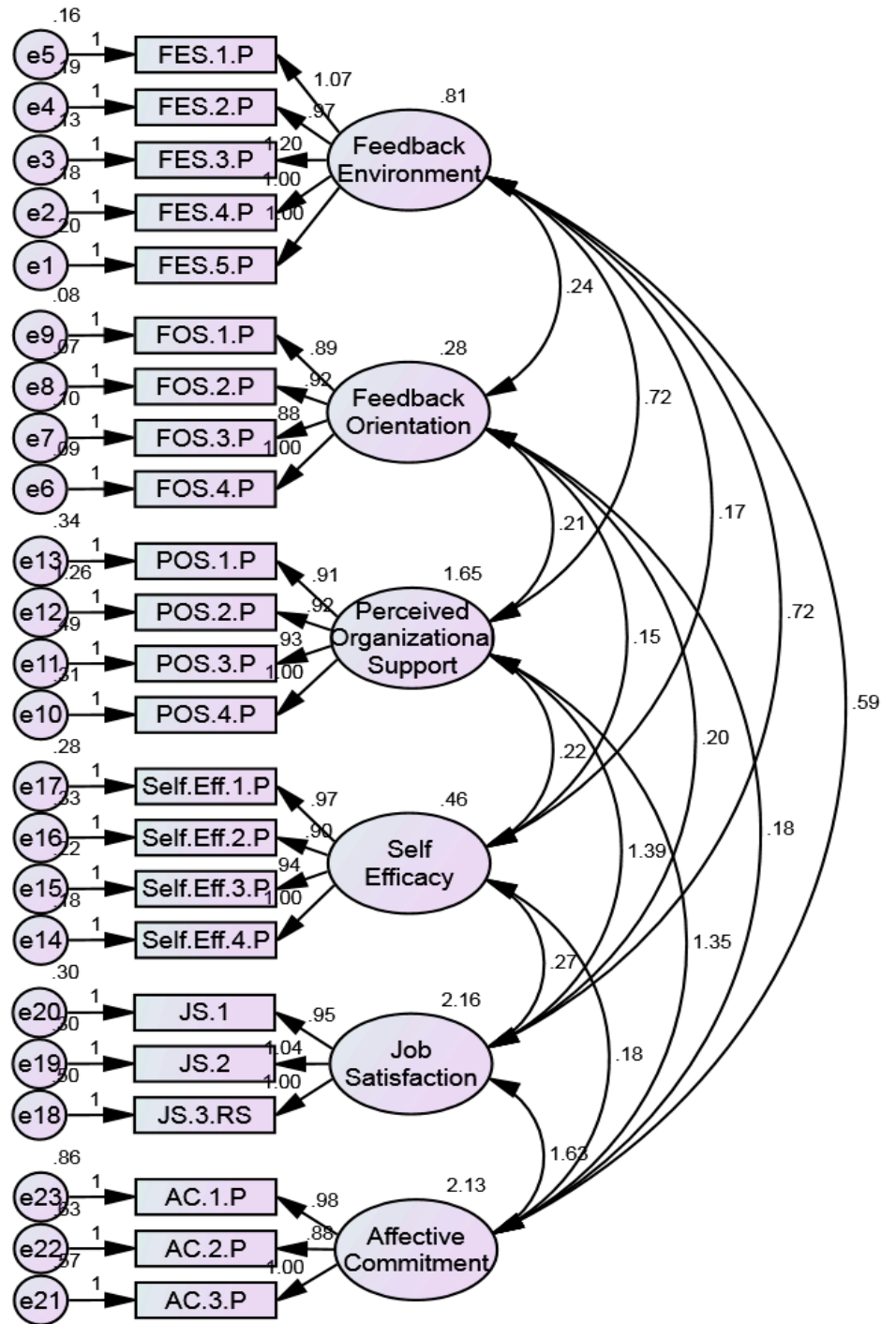*Figure 11.* Revised Performance Measurement Model with factor loadings

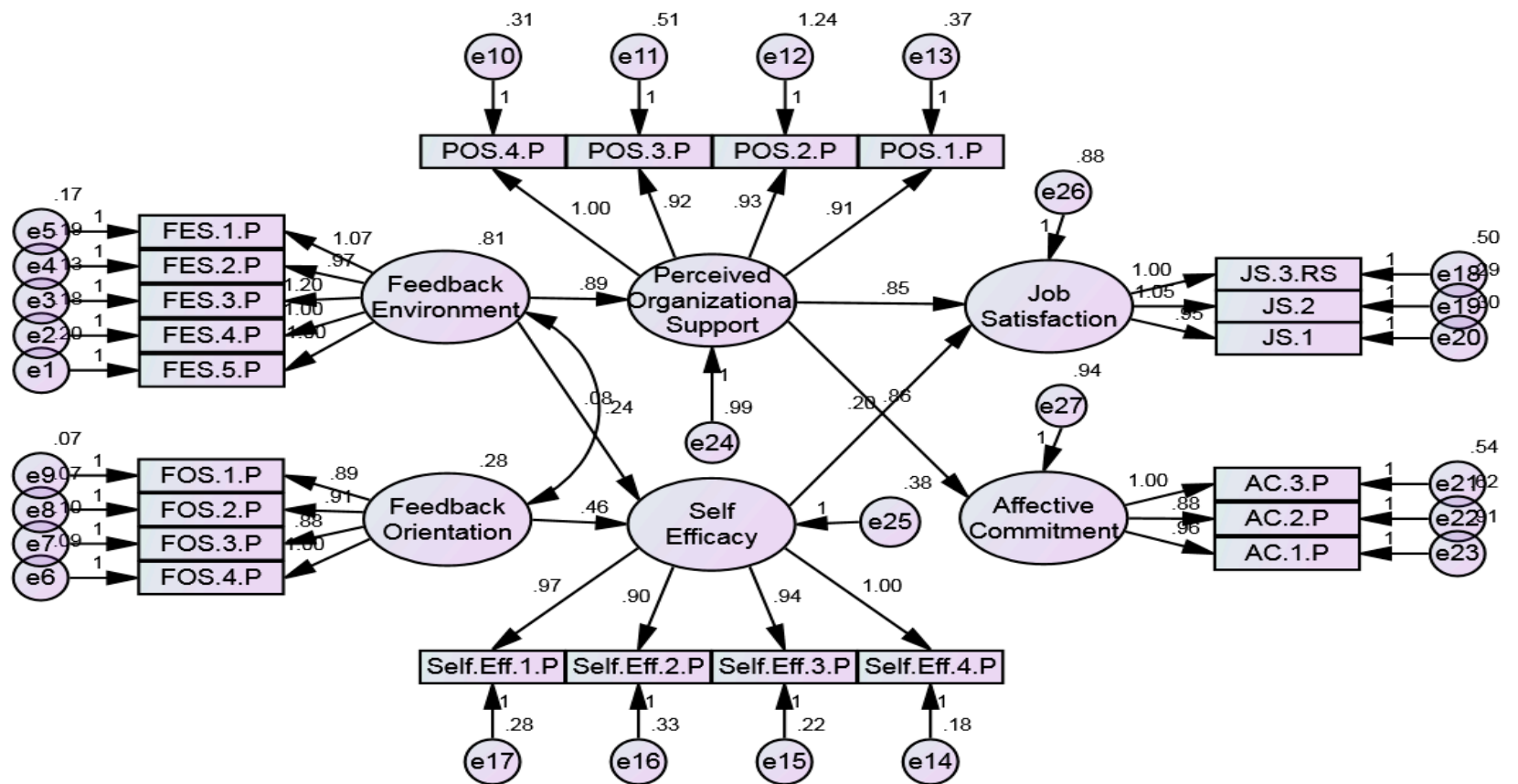*Figure 12*. Attitudinal Measurement Model with factor loadings
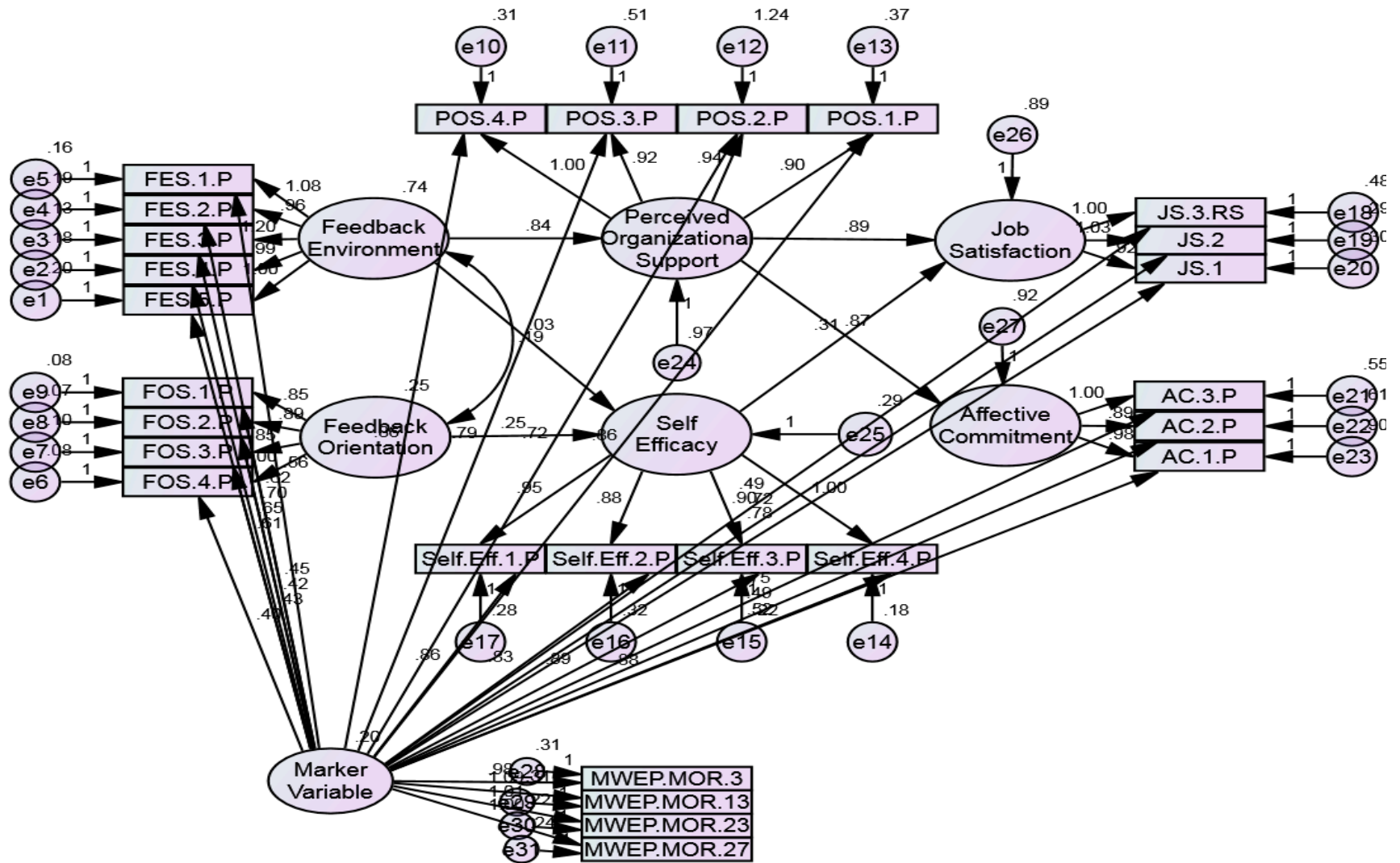
Figure 13. Attitudinal Structural Model

Figure 14. Attitudinal Structural Model with marker variable