5-11-2013

Employee Engagement Construct and Instrument Validation

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Employee Engagement Construct and Instrument Validation

BY

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A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree

Of

Executive Doctorate in Business

In the Robinson College of Business

Of

Georgia State University

GEORGIA STATE UNIVERSITY

ROBINSON COLLEGE OF BUSINESS

2013

ACCEPTANCE

This dissertation was prepared under the direction of the *Hazen Allison Witemeyer* Dissertation Committee. It has been approved and accepted by all members of that committee, and it has been accepted in partial fulfillment of the requirements for the degree of Doctoral of Philosophy in Business Administration in the J. Mack Robinson College of Business of Georgia State University.

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CONTENTS

List of Tables

List of Figures

ABSTRACT

Employee Engagement Construct and Instrument Validation

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April 20, 2013

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Employee engagement is a relatively new construct in academic literature and an increasingly popular idea in practice. Proponents of employee engagement claim a strong positive relationship between engagement and business success, both at the firm and individual levels, and outcomes including retention, productivity, profitability, and customer loyalty and satisfaction. Despite numerous academic and practitioner publications on employee engagement, no consistently-accepted conceptualization of the construct or its sub-dimensions exists, and there is an ongoing debate regarding whether the employee engagement construct is a new idea or a re-hashing of old ideas. Similarly, no consistently-accepted tool to measure employee engagement exists. In the absence of consistent conceptualization and measurement, relationships between employee engagement and its antecedents and outcomes cannot be empirically tested. Drawing on prior literature and practitioner interviews, the present study defines employee engagement as an attitude towards one's work at one's company, comprising feelings of vigor, dedication, and absorption; cognitive appraisals of psychological empowerment; and motivation to act, both within role and extra role, in the service of the organization's goals. In addition, the present study validates a self-report instrument to measure this conceptualization of employee engagement, using construct and scale validation procedures accepted in marketing and information systems literature.

INTRODUCTION

Employee engagement is a relatively new construct in academic literature and an increasingly popular idea in practice. Proponents of employee engagement claim a strong positive relationship between engagement and business success, both at the firm and individual levels, and outcomes including retention, productivity, profitability, and customer loyalty and satisfaction. Corporations including the Cheesecake Factory, Travelport, American Traffic Solutions, Consumer Financial Protection Bureau and Sony have formal roles that include *employee engagement* in the title. Many consulting groups including Towers Watson (formerly Towers Perrin), Pricewaterhouse Coopers, Valtera Corporation, and Watson Wyatt Worldwide offer services to help firms measure and improve employee engagement. Further, numerous professional networking groups on websites such as Linked In cater to *employee engagement* professionals.

Yet despite popular appeal and numerous academic articles, no consensus exists regarding what employee engagement is or how it should be measured (Marcos and Sridevi, 2010, Macey and Schneider, 2008; Attridge, 2009; Cowardin-Lee and Soyalp, 2011; Standar and Rothmann, 2010).

Almost as many definitions of employee engagement exist as there are publications on the subject. Authors attribute the lack of consensus to the ad-hoc way in which the construct has evolved, emerging as much from practitioner experience as from academic study (Macey and Schneider, 2008). Further, no comprehensive academic study has offered both construct and instrument validation encompassing all facets of employee engagement as described in current literature. In the absence of consistent conceptualization and measurement, relationships between employee engagement and its antecedents and outcomes cannot be empirically tested. The present study thus aims to answer the questions, "What is employee engagement and how should it be measured?"

Employee engagement emerged in academic literature in two primary families. The first derived from Kahn's (1990) "personal engagement" construct and emphasized the individual's perception of the work environment as a place to manifest one's "preferred self." Kahn (1990) developed and May et al.

(2004) validated a framework in which engagement correlated to three antecedent psychological attributes: meaningfulness, safety and availability. Kahn (1990) theorized an underlying contractual theme between these attributes and engagement. The second, frequently termed the *burn out* family, is based on Maslach and Leiter (1997) and Schaufeli et al. (2002). It conceptualizes "work engagement" as the positive opposite of psychological burn out. This line of research defines engagement as "a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (pg. 74). Both these families conceived engagement as focused on the individual's work tasks.

Practitioner literature that emerged concurrent with the *burn out* family offered further conceptualizations of employee engagement, including engagement as:

- a level of involvement and enthusiasm (Attridge, 2009; Gallup, 2006);
- a willingness to help the company to succeed and the application of discretionary effort (Towers Perrin, 2003);
- a hierarchy of relationship with their organization similar to Maslow's hierarchy of needs (Penna, 2007; Markos and Sridevi, 2010), and
- extra-role behaviors (Robinson et al., 2004).

Current engagement literature, informed by the original families and subsequent practitioner conceptualizations, incorporates both an organizational focus and an individual focus to employee engagement. For example, some studies characterize the construct as a level of intellectual and emotional commitment to the organization (Saks, 2006; Baumruk, 2004; Richman, 2006; Shaw, 2005), or a positive attitude held by the employee towards the organization and its values (Vaijayanthi et al. 2011; Robinson et al., 2004). Current literature also emphasizes behavior a component or outcome of employee engagement (e.g., Mastrangelo, 2009; Macey and Schneider, 2008). Recent literature points to an ongoing debate regarding whether the employee engagement construct is a unique idea or a re-hashing of old ideas (Saks, 2008).

In a comprehensive recent conceptual review of the construct, Macey and Schneider (2008) partition employee engagement in three categories: trait, state and behavioral engagement. Based primarily on literary dominance, they discuss which potential sub-dimensions of employee engagement should be placed into each category, and which are excluded. In their framework, behavioral engagement is an outcome of the psychological state, and trait engagement is an antecedent. They assert that together, the three comprise employee engagement. However, critics (e.g., Saks, 2008) argue that the *burn out* family has adequately defined and created instruments under the construct "work engagement", and that other constructs are related but do not combine with work engagement into a construct of distinct meaning. Supporting these criticisms is the fact that Macey and Schneider (2008) fail to provide a succinct definition of engagement or instrument to measure it.

The current state of measurement of employee engagement reflects the lack of consensus regarding the construct's definition. Academic instruments exist to measure discrete sub-dimensions of employee engagement, such as the Utrecht Work Engagement Scale (Schaufeli and Bakker, 2003) that measures the vigor, absorption and dedication dimensions of work engagement, but no broadly-accepted tool exists to measure the construct when conceptualized beyond work engagement (Macey and Schneider, 2008; Markos and Sridevi, 2010). Practitioners utilize a variety of tools to measure their conceptualizations of employee engagement, including the Gallup 12-item Worker Engagement Index (Gallup, 2012), the Towers Perrin's Global Workforce Study (2003), and proprietary instruments included in employee engagement consulting offerings from firms such as Valtera Corporation, Hay Group, Pricewaterhouse Coopers, and Silk Road.

The present study integrates insights from existing literature and practitioner interviews to conceptualize employee engagement as an idea broader than work engagement. The present study asserts that, consistent with a tripartite view of attitude theory, employee engagement can be conceptualized as an attitude towards one's work in one's organization comprising feelings of vigor, dedication and absorption; cognitive appraisals of psychological empowerment; and motivation to act both within and extra-role in the service of the organization's goals. As a framework, the concept of attitude covers major

threads described in engagement literature – feelings, thoughts, and intentions – which as a composite drive behavior. The present study further establishes and validates a scale to measure the above definition of employee engagement, using a multi-stage instrument development process following the procedures described in Churchill (1979) and MacKenzie et al. (2011).

The development and validation of a clear conceptualization of employee engagement and self-report measurement scale fills a gap cited in several recent studies (e.g., Cowardin-Lee and Soyalp, 2011; Markos and Sridevi, 2010; Macey and Schneider, 2008) and addresses the debate regarding whether employee engagement is a construct of unique meaning or a re-hashing of old ideas (Saks, 2008). A clear definition of and scale for the employee engagement construct enables further research regarding its relationship with other important factors in management literature, including antecedents such as work-role fit, overlapping constructs such as job satisfaction, related constructs such as organizational and social support, and individual outcomes such as creativity and productivity. A more comprehensive understanding of engagement at the individual level will facilitate the development of firm-level measures and constructs to bridge firm- and individual-level outcomes (Attridge, 2009), including innovation, customer satisfaction and loyalty, and firm financial measures. The present study further provides a means for directly and consistently measuring the engagement of individuals, and might also provide a benchmark for firms evaluating approaches to measuring engagement.

LITERATURE REVIEW

Employee engagement has a complex heritage as a construct, and almost as many definitions of employee engagement exist as there are publications on the subject. Table 1 shows a selection of definitions from practitioner and academic literature on engagement. The definitions differ on many dimensions (as discussed below) and show a lack of agreement as to what employee engagement is. Authors attribute the lack of consensus regarding the definition of engagement to the ad hoc way in which the construct evolved, emerging as much from practitioner experience as from academic study (Macey and Schneider, 2008; Cowardin-Lee and Soyalp, 2011). Further, to our knowledge, no academic study has

offered both a construct and instrument validation encompassing all facets of employee engagement as described in recent literature.

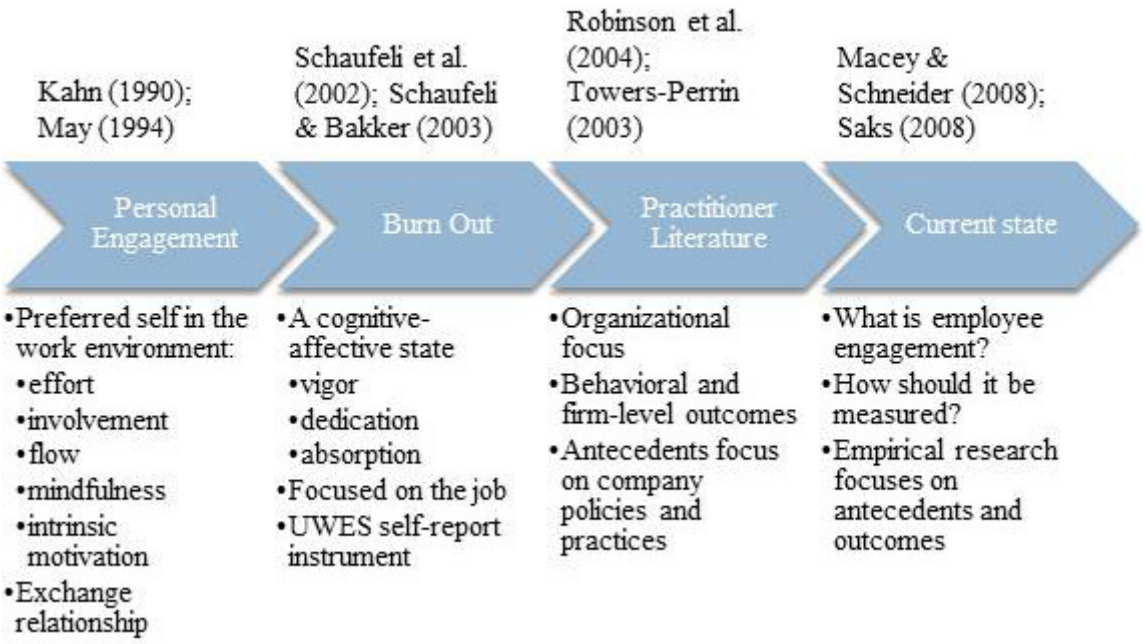
TABLE 1: REPRESENTATIVE DEFINITIONS OF EMPLOYEE ENGAGEMENT

Definition	Source
The simultaneous employment and expression of a person's preferred self in task behaviors that promote connections to work and others, personal presence (physical, cognitive, and emotional), and active full role performances.	Kahn (1990)
Psychological presence including attention, or "cognitive availability and the amount of time one spends thinking about a role" and absorption, meaning "being engrossed in a role and refers to the intensity of one's focus on a role."	Rothbard (2001)
Opposite of burnout; a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption.	Schaufeli et al. (2002)
An individual's involvement and satisfaction with, as well as enthusiasm for, their work.	Harter et al. (2002)
When employees feel positive emotions toward their work, find their work to be personally meaningful, consider their work- load to be manageable, and have hope about the future of their work.	Nelson and Simmons (2003)
Employees' willingness and ability to help their company succeed, largely by providing discretionary effort on a sustainable basis.	Towers Perrin's Global Workforce Study (2003)
A positive attitude held by the employee towards the organization and its value… requires a two-way relationship between employer and employee.	Robinson et al. (2004)
The measure of an employee's emotional and intellectual commitment to their organization and its success	Hewitt Associates (2004)
A measureable degree of an employee's positive or negative emotional attachment to their job, colleagues and organization, which profoundly influences their willingness to learn and perform at work.	Vaijayanthi et al. (2011)

EMPLOYEE ENGAGEMENT IN ACADEMIC AND PRACTITIONER LITERATURE

Figure 1 shows a high-level summary of the evolution of employee engagement in academic and practitioner literature, articulating four key phases of evolution.

FIGURE 1: EVOLUTION OF EMPLOYEE ENGAGEMENT IN ACADEMIC AND PRACTITIONER LITERATURE



PERSONAL ENGAGEMENT

Kahn (1990) first defined "personal engagement" in one's work role as "simultaneous employment and expression of a person's 'preferred self' in task behaviors that promote connections to work and to others, personal presence (physical, cognitive, and emotional), and active, full role performances," (pg. 700). Many of the critical themes underlying subsequent employee engagement definitions are introduced in Kahn's (1990) study. Building on Hackman and Oldham (1980) and Alderfer (1985a), Kahn (1990) asserted that the psychological experience of work drives people's attitudes and behaviors, and that individual, interpersonal, group, and organizational factors affect that experience. Kahn (1990) notes that underlying engagement are ideas including: "effort (Hackman and Oldham, 1980), involvement (Lawler and Hall, 1970), flow (Csikszentmihalyi, 1982), mindfulness (Langer, 1989), and intrinsic motivation (Deci, 1975)" (pg. 700). Kahn further asserts that engagement connotes expression of real identity, thoughts, and feelings. The outcomes of such expression include: "creativity (Perkins, 1981),

the use of personal voice (Hirschman, 1970), emotional expression (Rafaeli and Sutton, 1987), authenticity (Baxter, 1982), non-defensive communication (Gibb, 1961), playfulness (Kahn, 1989), and ethical behavior (Toffler, 1986)" (pg. 700).

Kahn used an ethnographic, grounded theory method involving two in-depth cases to develop a framework in which employee engagement correlated to three antecedent psychological attributes: meaningfulness, safety and availability. Meaningfulness is "the value of a work goal or purpose, judged in relation to an individual's own ideals or standards"; safety is "feeling able to show and employ one's self without fear of negative consequences to self-image, status, or career"; and availability means "an individual's belief that s/he has the physical, emotional or cognitive resources to engage the self at work" (May et al., 2004; Kahn, 1990). May et al. (2004) empirically tested Kahn's framework and found significant relationships between engagement and meaningfulness, safety and availability, respectively. Kahn (1990) explicitly frames these three attributes as contractual in nature, saying:

> *People vary their personal engagements according to their perceptions of the benefits, or the meaningfulness, and the guarantees, or the safety, they perceive in situations. Engagement also varies according to the resources they perceive themselves to have—their availability. This contractual imagery helped make sense of the data on participants' experiences and offered a conceptual structure within which I could link the three psychological conditions.* (pg. 703)

BURN OUT FAMILY

An alternative approach, rooted in positive psychology and frequently termed the *burn out* family, defines "work engagement" as the opposite of psychological burn out (Seppälä et al., 2009; Schaufeli et al. 2002; Maslach and Leiter 1997; Maslach et al. 1996, 2001). Maslach and Leiter (1997) characterized engagement as having sub-dimensions that oppose the three burnout dimensions, exhaustion, cynicism and lack of professional efficacy. Schaufeli et al. (2002) built on this initial frame and defined work engagement as "a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption," referring to it as a "persistent and pervasive affective-cognitive state

that is not focused on any particular object, event, individual, or behavior" (pg. 74). Vigor, defined as "high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence in the face of difficulties", was first conceived as the opposite of emotional exhaustion (pg. 74). The opposite of cynicism is dedication, defined as "a sense of significance, enthusiasm, inspiration, pride, and challenge" (pg. 74). Dedication is similar to job involvement and includes high levels of psychological identification with one's job; however it goes beyond traditional conceptions of involvement as a cognitive state to include an affective state or a strong feeling of involvement. Absorption, not a direct opposite of a burnout dimension, is "being fully concentrated, happy, and deeply engrossed in one's work whereby time passes quickly," and "difficulty detaching oneself from work" (pg. 75). Absorption, which is conceived as relatively stable, is distinguished from the similar but more complicated concept of flow, which is an optimal, short-term peak experience comprising a state of focused attention, clear mind, effortless concentration, control, loss of self-consciousness, distortion of time, and intrinsic enjoyment, (Schaufeli et al. 2002; Csikszentmihalyi, 1990). Researchers in the *burn out* family have developed an instrument to measure vigor, dedication and absorption called the Utrecht Work Engagement Scale (UWES), further discussed below (Schaufeli and Bakker, 2003).

PRACTITIONER LITERATURE

Employee engagement gained footing in practitioner literature concurrent with the emergence of the *burn out* family in academic literature, and practitioner publications offer further conceptualizations of employee engagement, often incorporating an organizational focus as well as an individual focus to the construct. For example, Towers Perrin's Global Workforce Study (2003) defines engagement as a willingness to help the company to succeed and the application of discretionary effort, and looks at emotional, rational and motivational factors influencing the work experience. The Institute for Employment Studies (IES) worked with its practitioner partners to define engagement as "a positive attitude held by the employee towards the organization and its values. An engaged employee is aware of business context, and works with colleagues to improve performance within the job for the benefit of the

organization. The organization must work to develop and nurture engagement, which requires a two-way relationship between employer and employee" (Robinson et al., 2004, pg 1). Consistent with Kahn's (1990) insights regarding an underlying contractual agreement, IES notes their clients see engagement as a two-way reciprocal exchange relationship, similar to the psychological contract, exemplified by employees understanding where they fit in the larger organizational context (Robinson et al. 2004). Penna (2007) developed a hierarchy of engagement similar to Maslow's hierarchy of needs, in that basic needs must be satisfied for engagement to manifest. Engagement, defined as a desired state of common purpose and shared meaning at work, is generated when employees are satisfied with pay and benefits; perceive opportunities for development, and align with corporate values (Markos and Sridevi, 2010; Penna, 2007).

Several influential practitioner publications define employee engagement, at least in part, by the behaviors engaged employees demonstrate. For example, the Gallup Organization (2006) describes engaged employees as those who, "work with a passion and feel a profound connection to their company" and "drive innovation and move the organization forward." On behalf of IES, Robinson et al. (2004) say that behaviors of engaged employees include: "belief in the organization; desire to work to make things better; understanding of business context and the 'bigger picture'; respectful of, and helpful to, colleagues; willingness to 'go the extra mile'; and keeping up-to-date with developments in the field" (pg. 3). In other words, behavioral outcomes are inextricably linked to employee engagement.

Practitioner literature also emphasizes drivers and outcomes of engagement. Antecedents discussed include influence in decisions or empowerment (Towers Perrin, 2003; Robinson et al., 2004; DDI, 2005), management concern for worker well-being (Towers Perrin, 2003; Robinson et al., 2004), recognition (DDI, 2005), development opportunities (Penna, 2007, DDI, 2005, Robinson et al., 2004), pay and benefits (Robinson et al., 2004; Penna, 2007), teamwork and cooperation (DDI, 2005; Robinson et al., 2004), immediate management (Robinson et al., 2004), friendships at work (Wagner and Harter, 2006); and family friendliness, fair treatment, health and safety, performance and appraisal, and job satisfaction (Robinson et al., 2004). Outcomes are similarly myriad. Hewitt Associates, LLC (2005) link engagement with profitability through productivity, sales, customer satisfaction and employee retention.

Gallup (2012) links engagement to productivity, profitability, customer-focus, safety, and employee retention. Other literature links engagement to productivity, profitability, and customer loyalty and satisfaction (Markos and Sridevi, 2010; Coffman, 2000; Ellis and Sorensen, 2007; Towers Perrin, 2003; Hewitt Associates, 2004; Heintzman and Marson, 2005).

CURRENT STATE

Recent academic literature builds on the two dominant academic families of employee-engagement conceptualization but is also informed by the practitioner literature, in that it includes an organizational as well as individual focus. Authors commonly characterize engagement as a level of intellectual and emotional commitment to one's job and/or one's organization (Saks, 2006, Baumruk, 2004; Richman, 2006; Shaw, 2005), or a positive feeling held by the employee towards the organization (Vaijayanthi et al. 2011; Robinson et al., 2004).

It may be noted that no consensus exists in literature regarding the object of engagement. As illustrated in Table 1 above, employees are said to engage with tasks and roles (Kahn, 1990); their work (Schaufeli et al., 2002; Harter et al. 2002; Nelson and Simmons, 2003); their organization (Towers Perrin, 2003; Robinson et al., 2004); and jobs, colleagues and organization all together (Vaijayanthi, 2011). Alternatively, Saks (2006) concludes that job engagement and organizational engagement are distinct.

Also consistent with early practitioner conceptualizations of the construct, much recent literature relates employee engagement to behaviors (e.g., Macey and Schneider, 2008; Saks, 2006; Mastrangenlo, 2009; Frank et al., 2004). Behavior is described as a natural consequence of engagement or, on occasion, as a component of engagement (e.g., Macey and Schneider, 2008). Most engagement literature does not explicitly distinguish between actual behaviors and intention or motivation to act.

Macey and Schneider's (2008) article, *The Meaning of Employee Engagement*, is a recent, frequently-cited review that exemplifies the current state of conceptualization. The authors acknowledge an ongoing debate about the precise definition and dimensionality of employee engagement, asserting that the debate indicates that traditional research streams have failed to adequately capture the comprehensive

essence of engagement. They argue that engagement includes well-travelled constructs like organizational commitment, job involvement and empowerment, and newer ideas like vigor; further, the compilation of these ideas into a single construct is meaningful above and beyond its individual components.

Macey and Schneider (2008) partition the idea of employee engagement into three categories: trait, state and behavioral engagement. The three categories together constitute employee engagement. Trait engagement describes personality characteristics or dispositions such as positive trait affect, proactivity and conscientiousness. Psychological state engagement includes a high degree of involvement of the self and relatively stable affect including the energy, identification and absorption dimensions of an employee's relationship with their work – essentially, work engagement. It also includes dimensions of organizational commitment, job involvement, psychological empowerment, and some characteristics of job satisfaction. Behavioral engagement is actions employees take in service to the organization's goals. The actions include extra-role behaviors, adaptivity, role-expansion, initiative and innovation, within or without the formal context of an employee's role. Macey and Schneider (2008) present a conceptual model based on the trait-state-behavior delineation. Behavioral engagement is an outcome of the psychological state, and trait engagement is an antecedent to the psychological state. Transformational leadership, trust in top management, and work attributes are positioned as exogenous variables effecting relationships between trait and state, and state and behavior.

Although Macey and Schneider (2008) have in many ways become the conceptual benchmark for employee engagement, their work has critics. For example, Saks (2008) argues that the central engagement construct has been adequately defined and instrumented in prior literature as work engagement, and that other constructs in Macey and Schneider's (2008) model do not combine with work engagement into a new construct of distinct meaning. Supporting these criticisms is the fact that Macey and Schneider (2008) fail to provide a succinct, measurable definition of engagement and, within the trait-state-behavior framing, provide a bottoms-up rather than theoretically-based rationale for inclusion and exclusion of attributes. Further, they say that engagement comprises all three facets (trait, state and behavior), blurring the meaning of delineating the three in the first place.

A few recent studies frame engagement in terms of an individual's perception of the employment exchange relationship, which builds on Kahn's (1990) insight regarding an underlying contractual arrangement linking antecedents with engagement. For example, based on social exchange theory, Saks (2006) posits that employment relationships evolve over time into trusting, loyal, and mutual commitments provided certain rules of exchange are met, and employee engagement is one way in which employees repay their organizations for providing resources and benefits (Saks, 2006; Cropanzano and Mitchell, 2005). A related but not frequently-discussed idea in employee engagement literature is that of an employee's psychological contract, which Rousseau (1989) defines as "an individual's belief regarding the terms and conditions of a reciprocal exchange agreement between the focal person and another party" (pg. 123). Robinson et al. (2004) note that HR professionals view engagement as similar to the psychological contract, in as much as it is an unwritten two-way relationship, underpinned by trust.

Many recent academic studies acknowledge a lack of definitive consensus on the conceptualization of the employee engagement construct, but seek to contribute in the broader nomological space, testing relationships between employee engagement and:

- personal traits like gender and tenure (Ying, 2009), and emotional intelligence (Ravichandran et al., 2011);
- psychological empowerment and job insecurity (Stander and Rothmann, 2010);
- organizational workflow (Cowardin-Lee and Soyalp 2011);
- creative work process (Haq et al., 2010);
- job satisfaction (Abraham, 2012); and
- organizational citizenship behavior (Saradha and Patrick, 2011).

Other studies have focused not on the core construct but rather on contexts in which it might manifest, for example investigating employee engagement practices in manufacturing and industrial settings (Vaijayanthi et al., 2011; Sarkar, 2011); and technology organizations (Saradha and Patrick, 2011).

PROMINENT CONSTRUCTS IN EMPLOYEE ENGAGEMENT LITERATURE

As described above, no consistent agreement in practitioner or academic literature exists regarding how to define employee engagement or which sub-dimensions to include or exclude (Marcos and Sridevi, 2010, Macey and Schneider, 2008; Attridge, 2009; Cowardin-Lee and Soyalp, 2011; Standar and Rothmann, 2010). To further explicate the relationship between many pre-existing constructs and employee engagement, Table 2 summarizes constructs contained in or closely related to employee engagement in literature, and where in relationship to the "core" idea of employee engagement these constructs are positioned. A discussion of the heritage of each construct in the employee engagement context follows.

TABLE 2: PREVALENT CONSTRUCTS IN EMPLOYEE ENGAGEMENT LITERATURE

Construct (factors)	Antecedent	Core	Outcome	Overlapping	Moderator
Work engagement • Vigor • Dedication (~job involvement) • Absorption		X			
Psychological empowerment • Meaning • Competence • Self determination • Impact	X	X			
Organizational commitment		X		X	
Job satisfaction	X	X		X	
Organizational citizenship behavior		X	X		
Psychological Contract Fulfillment	X			X	
Trust in Top Management	X				X
Recommendability			X		

Work Engagement: Vigor, Dedication and Absorption

Work engagement is the conceptualization of employee engagement developed by the *burn out* family, defined as vigor, dedication and absorption, and described above. Most recent literature positions work engagement or its component sub-dimensions as a core component of employee engagement (Macey and Schneider, 2008; Saks, 2008). Further, Macey and Schneider (2008) position vigor as a key differentiator of employee engagement relative to alternative literature streams such as job satisfaction and organizational commitment.

Components of work engagement are conceptually equated to other constructs in some employee engagement literature. For example, job involvement, defined as the degree to which an employee psychologically relates to their work (Cooper-Hakim and Viswesvaran, 2005), is similar to dedication (Schaufeli et al., 2002). Macey and Schneider (2008) include job involvement in state engagement. Absorption is similar to flow (Schaufeli et al., 2002). Finally, organizational commitment has been equated to dedication (e.g., Salanova et al., 2005).

Psychological Empowerment

Psychological empowerment has been described as a cognitive appraisal an employee makes regarding themselves in relation to their work role, and an intrinsic motivation to act in response to the appraisal (Stander and Rothmann, 2010; Spreitzer, 1995). Spreitzer (1995) identified four sub-components of empowerment: meaning, which is a sense of purpose about one's work; competence (sometimes equated to self-efficacy in the employee engagement context), which is believing one's self capable of succeeding; self-determination, which is a perception of freedom about how work gets done; and impact, which is the belief one can influence the larger system. Stander and Rothmann (2010) validated this four-factor composition of empowerment in an employee engagement context. Meaning appeared as one of the original drivers for employee engagement in Kahn (1990), and meaning is referenced in measurement items in the dedication construct in the UWES. Kahn's (1990) availability construct (another antecedent of employee engagement) is highly similar to competence. Macey and

Schneider (2008) include empowerment as a core component of the employee engagement construct. Recent empirical research has demonstrated a positive relationship between empowerment and work engagement (e.g. Stander and Rothmann, 2010; Pati and Kumar, 2010).

ORGANIZATIONAL COMMITMENT

Organizational commitment references an employee's sense of attachment to an organization (Allen and Meyer, 1990). In the Mowday et al. (1979) conceptualization, commitment is an attitude towards one's organization described in three related facets: "(1) a strong belief in and acceptance of the organization's goals and values identification; (2) a willingness to exert considerable effort on behalf of the organization effort; and (3) a strong desire to maintain membership in the organization " (p. 226), which can be termed identification, effort and attachment respectively. The 15-item Organizational Commitment Questionnaire (OCQ) measures this conceptualization (Mathieu et al., 2000; Mowday et al., 1979). Allen and Meyer (1990) describe a more behavioral conceptualization of the construct and three alternate sub-dimensions: affective commitment, meaning the degree to which an individual identifies with and participates in the group; continuance commitment, or the employee's intent to remain with organization due to high costs of leaving; and normative commitment, meaning the employee's intent to remain with an organization due to obligation. Salanova et al. (2005) equate organizational commitment to sub-components of the dedication construct. Macey and Schneider (2008) consider the attitudinal conceptualization of organizational commitment part of employee engagement.

JOB SATISFACTION

Job satisfaction is the degree to which an employee is content with his/her job, comprising an attitude, emotional state or affective reaction (Weiss, 2002). Macey and Schneider (2008) argue that the sub-dimensions of job satisfaction related to energy, enthusiasm, and positive affect fit in the engagement construct, but not satiation. Fernandez (2007) argues that in as much as job satisfaction is a transitory response to one's recent experience of employment exchange (e.g., compensation and benefits), job satisfaction does not reflect a stable affect and thus is distinct from employee engagement. Penna (2007)

researchers view satisfaction as a necessary condition to be satisfied in order for engagement to occur; meaning job satisfaction is an antecedent to employee engagement.

Organizational Citizenship Behavior (OCB)

Organ (1988) first defined organizational citizenship behavior (OCB) as work-related behaviors that are discretionary, not directly measured by the formal organizational reward system, that promote the effective functioning of the organization. Macey and Schneider (2008) assert that extra-role behavior, defined as "behavior that attempts to benefit the organization and that goes beyond existing role expectations" (Organ et al., 2006, pg. 33) and including OCB, is the essence of behavioral engagement. Constructs such as job satisfaction and organizational commitment (Organ and Ryan, 1995), and personality traits including conscientiousness and positive affectivity (Podsakoff et al., 2000) have been shown to be antecedents to OCB, suggesting OCB and employee engagement are nomologically related. Recent studies conceptually frame OCB models in terms of social learning (Bommer et al., 2003) and social exchange (Ozer, 2011) theories. Employee engagement literature to date has largely considered the action of OCB as opposed to motivation to act.

Psychological Contract Fulfillment

Rousseau (1989) defines the psychological contract as "an individual's belief regarding the terms and conditions of a reciprocal exchange agreement between the focal person and another party. A psychological contract emerges when one party believes that a promise of future returns has been made, a contribution has been given and thus, an obligation has been created to provide future benefits" (pg. 123). The psychological contract is a form of equity theory not explicitly discussed in most engagement literature; however, the concept of an exchange agreement appears in many discussions of employee engagement (e.g., Saks, 2006; Kahn, 1990; Robinson et al., 2004). The psychological contract offers a construct by which to characterize an individual's perception of the employment exchange relationship, and the degree to which an individual's psychological contract is being fulfilled arguably describes a two-way relationship underpinning employee engagement. Thus while not a direct component of employee

engagement; fulfillment of the psychological contract may be included as an antecedent in engagement's nomological network.

Trust in Top Management

Trust in top management references how an employee views their organization's leadership, comprising sub-dimensions of perceived openness, honesty, competence and concern for others' interests. Trust in top management has been positively related to organizational commitment (Spreitzer and Mishra, 2002). In Macey and Schneider's (2008) framework, trust in top management appears as an exogenous variable moderating the relationship between trait and state, and state and behavioral engagement. Thus while not a direct component of employee engagement; trust in top management may be included as a theorized moderating variable in its nomological network.

Recommendability

Recommendability references an employee's likelihood of recommending their company as an employer, and has been cited in literature as an expected outcome of employee engagement (e.g., Robinson et al., 2004; Markos and Sridevi, 2010; Attridge, 2009).

Current State of Measurement

The current state of academic measurement of employee engagement reflects the incomplete state of the construct conceptualization overall: namely, instruments exist to measure discrete sub-constructs, but no broadly-accepted tool exists to measure the construct as a whole when conceptualized more broadly than work engagement (Macey and Schneider, 2008). Further, debate exists as to whether such an instrument is even needed: if employee engagement has been adequately conceptualized in prior literature, existing instruments are sufficient (Saks, 2008).

Many empirical studies have adopted academic scales at hand, acknowledging the limitations of doing so in the absence of a clear conceptual definition (e.g., Cowardin-Lee and Soyalp, 2011; Standar and Rothmann, 2010; Ravichandran et al., 2011; Vaijayanthi et al., 2011). Other researchers have

developed their own instruments to measure engagement (e.g., May et al., 2004; Robinson et al., 2004; Sarkar, 2011). Many have utilized the UWES (Schaufeli and Bakker, 2003), a measure of vigor, dedication and absorption as defined by the *burn out* family.

The UWES is the most accepted instrument in the literature to date. It was developed from Schaufeli et al.'s (2002) study to understand if engagement was the opposite of burnout. In that study, a seventeen-item instrument was developed measuring three highly correlated factors: vigor, dedication, and absorption. Schaufeli and Bakker (2003) codified two versions of the UWES, a seventeen-item and a nine-item version, confirming convergent validity and a three-factor structure for each instrument. Seppälä et al. (2009) again tested the factor structure of the UWES and its group- and time-invariant properties using confirmatory factor analysis. Their study involved multiple samples from various occupational groups, including a longitudinal component. Their results confirmed that work engagement can be considered a three- or one-dimensional construct, based on high correlations between vigor, dedication and absorption. Although the UWES has a strong legacy, to our knowledge, no studies demonstrating the face or content validity of the UWES have been published.

Practitioner literature describes a variety of tools to measure employee engagement. Gallup considers quantitative and qualitative measures of employee perceptions of management practices in their 12-item Worker Engagement Index (Attridge, 2009; Demovsek, 2008). Towers Perrin's Global Workforce Study (2003) considers rational, emotional and motivational dimensions of employee engagement. Several other firms including Valtera Corporation, Hay Group, Pricewaterhouse Coopers, and Silk Road provide employee engagement consulting services with a proprietary measurement component. For example, Pricewaterhouse Coopers (2012) describes:

> *"PwC Saratoga is a full-service employee engagement survey provider - we conduct several hundred employee engagement surveys every year and have a unique capability in linking survey results to business outcomes by leveraging our world-class and industry leading benchmarking database…Beyond simply measuring employee satisfaction, engagement intelligence provides a statistical approach for measuring levels and drivers of employee engagement and establishing*

linkages to organizational performance measures. Survey results become a business intelligence platform with multi-dimensional data describing your workforce, customer, financials and business data."

Other companies develop internal instruments to measure engagement, many using familiar concepts such as recommendability and job satisfaction.

Practitioner literature suggests companies are using measures of employee engagement to influence a variety of management practices. For example, Ford redesigned employee benefits based on employee feedback on management and human resources practices affecting work-life issues, and National City Bank reframed retention policies based on engagement drivers and customer relations (Bates, 2003). Several companies including Pitney Bowes survey employees, present results to senior management and develop action plans to address feedback (Attridge, 2009).

THE BOTTOM LINE: EMPLOYEE ENGAGEMENT REMAINS ELUSIVE

Clearly, there is a lack of consensus regarding the definition and components of employee engagement (Cowardin-Lee and Soyalp, 2011; Markos and Sridevi, 2010; Saks, 2008; Macey and Schneider, 2008). In practice and, to some degree, in research, the term employee engagement is used to describe a variety of topics regarding individual employee traits, attitudes and performance-related behaviors (Macey and Schneider, 2008). Logically following, no consensus exists regarding how to measure employee engagement. While Macey and Schneider (2008) call for a new instrument to measure a broader conceptualization of employee engagement, Saks (2008) argues no new instrument is needed because no broader conceptualization is called for.

Markos and Sridevi (2010, pg. 91) summarize the fundamental issue:

"If looked at the available literatures on measuring employee engagement, one would get surprisingly several measurement items to the extent that it seems different constructs are being measured (Robinson et al., 2004; Cohen and Higgins, 2007; Perrin, 2003; Ellis and Sorenson,

2007; Demovsek, 2008). Future researches are expected to come up with clear definition and dimensions of employee engagement on basis of which the level of engagement can be measured thereby pointing out to managers the roadmap for fully engaging employees in their job. As the old saying goes 'what you can't measure, you can't manage'. Thus, there is a call for future researches, as suggested by Endres and Mancheno-Smoak (2008), to define engagement in clear terms to avoid interpretation by subsequent users giving to the construct different meanings."

The present study seeks to create a succinct, theoretically-framed and practice-grounded definition of employee and instrument to measure it, filling this gap and answering the question, "what is employee engagement and how should it be measured?"

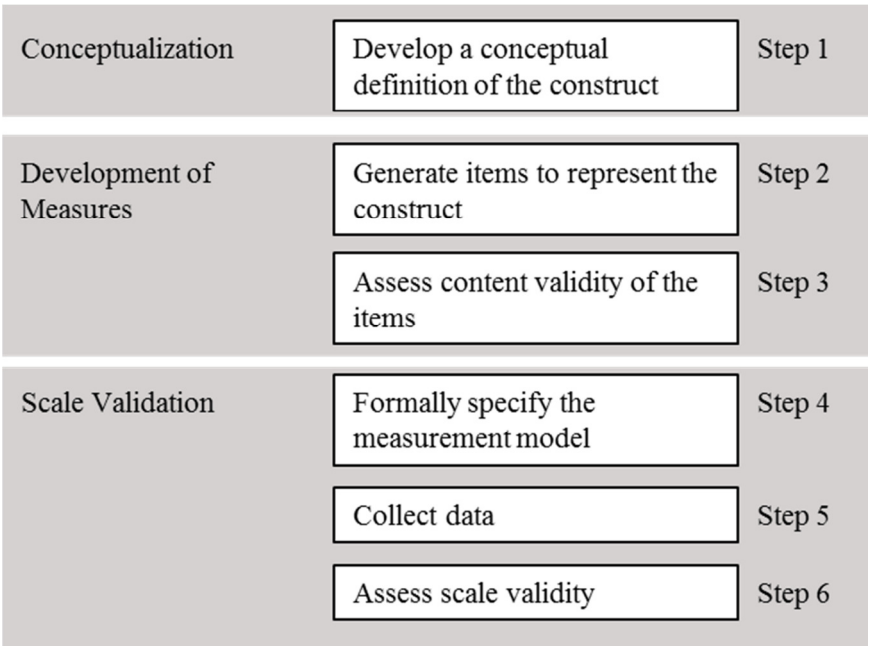
METHOD I: OVERVIEW AND CONCEPTUALIZATION

The task of method in this study is to create and validate a conceptualization of employee engagement and an instrument to measure it. The debate about what employee engagement is and whether it is a re-hashing of old ideas motivates this approach. Fortunately, establishing the legitimacy of a new or revised construct is a known problem in research (Mackenzie et al., 2011; Straub et al., 2004; Straub, 1989), albeit one not comprehensively applied in the evolution of the employee engagement construct to date. Construct and instrument validation is a method by which researchers define and measure their ideas, relate them to other ideas established in the academic community, and argue for their legitimacy. Such methods have a pedigree in many disciplines, including psychology, marketing and information systems (IS) (e.g., MacKenzie et al., 2011; Straub et al., 2004; Churchill, 1979). The present study draws from these literature streams, specifically basing method on the MacKenzie et al. (2011) construct measurement and validation model for IS and behavioral research, which was based on Churchill's (1979) seven-step approach and Straub's (1989) discussion of validity in IS research.

MacKenzie et al. (2011) assert that many studies today are plagued by three procedural problems: failure to adequately define the construct domain; failure to correctly specify the measurement model, and

underutilization of techniques to establish construct validity. One might meaningfully apply these criticisms to the body of employee engagement literature to date, as exemplified by continued debate regarding the core definition of the construct. To address these concerns, they present a 10-step validation model. The present study sequentially presents methods, results and analysis consistent with their approach in three sections: conceptualization, concluding with a proposed definition of employee engagement and research model; instrument development, concluding with an instrument to measure employee engagement as defined, and instrument test, concluding with scale validation results. Figure 2: Validation Model (Adapted from MacKenzie et al., 2011) shows the validation steps utilized in the present study.

FIGURE 2: VALIDATION MODEL (ADAPTED FROM MACKENZIE ET AL., 2011)



CONCEPTUALIZATION

The first tasks in validation are to clarify what the construct is intended to conceptually represent or capture, described clearly and concisely, in a theoretical context; as well as a discussion of how it differs from other constructs (MacKenzie et al., 2011; Nunnally and Bernstein, 1994; Churchill, 1979).

Constructs are, by definition, abstract and latent rather than concrete and observable (MacKenzie et al., 2011; Nunnally and Bernstein, 1994). MacKenzie at al. (2011) suggest several activities to complete conceptualization: examination of the construct in prior research and practice; specification of the nature of the construct's conceptual domain, specifically the property it represents and the entity to which it applies; specification of the construct's conceptual theme, including necessary and sufficient attributes and characteristics; dimensionality; stability across time, situations and cases; and defining the construct in unambiguous terms.

Addressing the first task, the literature review above describes the evolution of the employee engagement construct in academic and practitioner literature. To additionally ground a conceptualization of employee engagement in practice, the first phase of the present study comprised interviewing practitioner-experts regarding their conception of employee engagement and experience with measuring it. Key findings relevant to the conceptualization of engagement and measurement practices are summarized below. A more comprehensive report of the results is in Appendix 1.

RESULTS I: PRACTITIONER INTERVIEWS

Ten practitioner-experts were interviewed. Three interviewees were consultants working for firms offering employee engagement consulting services to other corporations. One was an independent consultant in employee engagement whose prior experience includes running an employee engagement program at a multi-billion dollar software company. Six were senior managers in large global companies whose job responsibilities include employee engagement programs. Industries represented by the interviewees included retail, automotive, consumer products, financial services, and software. Eight practitioners were U.S.-based; two were U.K.-based. Interviews were conducted in a semi-structured format; lasted 60-90 minutes each; and were recorded and transcribed. Analysis of this dataset comprised coding the interview transcripts with an initial coding scheme based on relevant ideas drawn from prior literature, and new codes were developed to capture ideas not previously specified. Interviewees were identified at practitioner conferences, and through personal contacts of the research team.

Definitions of Employee Engagement

Interviews confirmed a lack of consensus regarding a definition of employee engagement. While each interviewee had a personal definition of employee engagement, only one practitioner could cite a definition accepted formally by their corporation. Describing employee engagement as relating to individual employees, practitioners discussed engagement as an employee's positive approach towards their work, firmly rooted in alignment with the corporation's objectives, and associated with motivation and satisfaction. For example, definitions included:

> *"Employee engagement is the level of connection that an associate would feel with their company in terms of certain exhibited behavior or certain connections to the company, how hard they work for the company, what is their belief in the company, all of those kinds of things." – Employee Relations Manager, retail corporation*

> *"Contributions to the company's success on the part of the employee and personal satisfaction in their roles" – V.P., Digital Strategy, consulting firm*

> *"It's the sum of the experiences, all of the things about the work experiences, the social experience, the personal, emotional, social interactions, all of those things that are a result of the job and the elements of the job and the environment that sort of add up to how 'engaged' I am. As most people refer to, we do think that has an impact on the kind of discretionary efforts that people give us… It really is sort of, the net of your emotional disposition and how if you are willing to care about influencing the outcome of the company." – Senior V.P., Employee Engagement & Recognition, consulting firm*

Descriptions of Engaged Employees

Interviewees uniformly described employee engagement as a broad idea containing multiple facets. When asked to describe engaged employees, interviewees said they feel excited to do their work;

they feel empowered and involved. They feel pride in the work they do for their corporations; they have a sense of higher purpose and meaning in their work. They have a sense of well-being in their workplace. They apply energy and effort towards their work in the context of the broader business objectives. They are motivated to: contribute to the business in a positive fashion, perform better, stay extra hours, go the extra mile, support colleagues, collaborate with one another, take personal ownership and initiative for achieving individual and collective goals, and proactively engage in problem solving.

> *"I would say that the profile of an engaged employee is someone who certainly does their job to the best of their ability but regularly looks beyond the parameters of their specific assignment to see (a) how it affects others and (b) how other things affect them; and as a result feels compelled to get engaged in those types of activities and ask questions like: why does it happen this way? And what does the customer really want? And how can we do a better job?" – V.P., Communications, automotive corporation*

Many concepts described by interviewees can be related to prior conceptualizations of employee engagement. Ideas related to vigor included excitement, effort and energy. Related to dedication were loyalty and pride. No interviewees discussed ideas related to absorption. Empowerment-related concepts included meaning, described as purpose at the individual and collective levels, as well as the ability to determine how one performed one's job (self determination). Relating to impact, the ability to influence the larger system was mentioned by one practitioner, and implied in discussion about moving one's job or the business forward by another. Competence was alluded to in one interview in the context of belief in one's self; another referenced self-efficacy, a correlate of competence.

In sum, interviews suggested a conceptualization of employee engagement comprising thoughts, feelings and motivations or actual behavior – a conceptualization which extends beyond the prior concept of work engagement (e.g., vigor, dedication and absorption), consistent with Macey and Schneider (2008)'s assertion that engagement has not been adequately defined and measured in prior literature.

Focus of Employee Engagement

As noted above, no literary consensus exists regarding the focus of employee engagement, and authors position it at multiple levels from individual (e.g., work-related tasks) to organizational (e.g., the corporation and its values). Similarly, interviewees described employees engaging at multiple levels. Specifically, employees can and do engage with: the work they are doing; their physical environment; their peers, work teams or social environments; immediate supervisors; corporate missions, values; objectives and brands; the communications process; customers; and even with themselves.

Most agreed that several levels of engagement would manifest simultaneously in engaged employees. The most common cited were engagement with individual work or roles, one's direct supervisor, one's social environment or peers, and corporate objectives.

> *"You want people to be focused on their job and be engaged in what they are doing but you also want them to have a higher sense of why they are doing it" – Director, Communications, U.S. financial services corporation*

Hence interviews confirmed the recent trend in literature towards defining engagement as having both an organizational and individual-role focus.

Characteristics of Employee Engagement

Inconsistent with prior literature, no consensus existed among interviewees regarding the stability of employee engagement. Some said that they would expect it to remain relatively stable or trend in a particular direction in the absence of significant environmental change. Others discussed the construct as more fluid and sensitive to influences within and outside of the work environment. However, most agreed employee engagement was something that could be influenced positively or negatively by business practices.

Several practitioners discussed engagement as a continuum, comprising a range from disengaged to fully-engaged. At the engaged end of the spectrum, two practitioners described a distinction between

passive and active engagement, where passive engagement might include participation in polls and events, and active engagement is a willingness to take ownership or behave proactively in activities to benefit the company such as collaboration and problem-solving.

Several interviewees described engagement in terms of an ongoing two-way relationship, nurtured by both parties through communication. As described below, and consistent with Robinson et al.'s (2004) findings from practitioners, reciprocity in areas such as trust emerged as a common theme underpinning employee engagement.

"It's a two-way relationship really, between the employee and the employer." – Director, Communications, U.K. financial services corporation

These findings suggest that employee engagement levels can be changed. If employee engagement levels can be improved, then development of a measurement instrument to better understand the construct and its relationship to other constructs is valuable to practice.

Overlap with Other Constructs

Understanding whether or not employee engagement is a rehashing of old ideas requires a discussion of how employee engagement is or is not like these old ideas. Interviewees were asked if employee engagement was the same idea as more established concepts such as job satisfaction and organizational commitment. Most said engagement shared attributes with these ideas but was, in and of itself, a different thing.

Job satisfaction was discussed in terms of satisfaction with one's immediate work tasks, as well as compensation and benefits. One practitioner described it as an antecedent that made engagement easier; two discussed it as one level of engagement. A key distinction cited was that engagement relates to the organization's goals as well as to the individual, whereas job satisfaction is not related to the organization's goals.

"There's a difference between do I find what I'm doing completely satisfying and actually do I do what I do because I know the value that it brings to the company and therefore the ultimate value that it brings to me." – Independent Consultant, Employee Engagement and Communications

Organizational commitment was similarly described: one practitioner saw it as a specific level of engagement; another discussed it as a similar idea but distinct from engagement in as much as it lacks a role-specific component central to engagement.

"There are people who hate their managers and don't perform well, or who hate their environment and thus are not engaged, but they love the company, they love what the company stands for, they love what the company believe in." – Employee Relations Manager, retail corporation

Practitioners discussed a number of other constructs they perceive to be similar to or confused with employee engagement. From the individual perspective, these included morale, defined as a positive emotional state regarding one's work environment, and flow. From the corporate perspective, employee engagement was described as similar to change management.

These findings support Macey and Schneider (2008)'s assertion that employee engagement is a new idea rather than a rehashing of existing constructs.

ANTECEDENTS (DRIVERS) OF ENGAGEMENT

To further understand how employee engagement fits in a nomological network, practitioners were asked about things that lead to employee engagement. Most practitioners referenced multiple drivers or elements leading to engagement: one practitioner described precursors as a "recipe." Elements leading to engagement include: reciprocal trust, two-way organizational communication, recognition, satisfaction with pay and benefits, access to training, support of personal or professional development, strong

communication from line managers, and safety to express one's true self in one's job. These elements are consistent with items cited in prior literature including Kahn (1990) and Robinson et al. (2004).

Several practitioners cited the importance of trust as a precursor of employee engagement. Interviewees referenced trust as a reciprocal relationship working in both directions: employees must trust their employers, and employees must feel trusted by their employers, in order for engagement to manifest, consistent with Saks (2006). Managers, both direct supervisors and senior leaders, are the primary focus of the trust relationship for employees. Many interviewees specifically referenced the importance of two-way organizational communication as a mechanism for facilitating employee engagement. Perceptions of receiving authentic, transparent communications from the organization, as well as a perception of being heard by the organization, are believed to be fundamental to the reciprocal trust relationship underpinning employee engagement.

Recognition was another frequently cited antecedent of employees engaging. Recognition could occur in numerous forms, from large-scale awards to small acknowledgments by managers for a job well done. Job security was also mentioned as a driver for engagement, although many practitioners felt that in many professional contexts, expectations of job security had been reduced due to persistent economic challenges in recent years. Others noted that job security might play a different role in engagement in different job roles or industries.

Practitioners suggested that two additional factors rarely discussed in prior literature might influence engagement: the generation to which employees belong (e.g., Baby Boomer, Gen X, etc.) and whether or not the employee is an executive leader.

Outcomes of Engagement

Interviewees were asked to describe expected outcomes of employee engagement. According to interviewees, engaged employees are likely to exhibit a number of behaviors of potential benefit to their firms. These include: going the extra mile, speaking highly of the company, collaboration, proactive

problem-solving, staying late, putting in extra hours, assisting colleagues, sharing knowledge, offering creativity, participating in organizational dialogue, and more.

> *"They bring new ideas to the table and challenge the status quo; take ownership for results, not just activity; take on responsibility for transforming the business both large and small; communicate openly and debate ideas constructively to increase speed and quality; support one and other; and collaborate as the business warrants for success … If you are engaged you may be doing twelve things. You are more eager to offer up suggestions. You are passionate about your work, and if you have ideas that you think can improve upon a process or a product, you are more likely to share them." – Director, Communications, U.S. financial services corporation*

Interviewees also cited a range of benefits at the firm level. Engaged employees are believed to lead to: goal attainment, customer satisfaction, growth, increased performance, productivity and revenues, business transformation, innovation and retention.

These findings are consistent with practitioner literature (e.g., Attridge, 2009; Gallup, 2012) which assert that employee engagement is important because it results in improved individual and business performance.

MEASUREMENT PRACTICES

Interviewees were asked to describe their experience with measuring employee engagement, to enhance understanding of measurement practice today. All interviewees agreed measuring engagement is important to firms and all had experience with engagement metrics. The six non-consultant interviewees indicated that their firms were measuring employee engagement as part of a survey conducted either every 12 or 18 months. Uniformly, their corporations hired external firms to conduct online, confidential, self-report surveys, ranging from 80-110 questions. Most surveys included a write-in comment field. Some firms offered the survey in multiple languages. Engagement-related items in these surveys included effort, job satisfaction, likelihood of recommending the corporation as an employer, understanding of the

corporate strategy, perception of how employees were being treated by their managers and the business, and development opportunities for individuals.

Surveys are ubiquitous, but many practitioners suggested that additional measures also exist. For several interviewees, the translation of motivation into action or behavior was a key characteristic of engaged employees; in other words, observable in-role and extra-role behaviors are measures of employee engagement as well. Many discussed alternative metrics to survey results and survey participation levels, including: participation in and satisfaction with employee meetings and events; participation in opinion polls and online discussion threads related to critical business issues; social media participation; participation in related programs like recognition programs; 360 degree feedback for leaders; focus groups; and intranet story readership.

Numerous interviewees cited the importance of measurement as a tool that, like other tools, can amplify existing levels of engagement or disengagement, depending on how the company responds to feedback received. Critical components of making measurement amplify engagement are to return results to employees promptly, and communicate plans to respond to the feedback, followed by regular updates on the progress of these plans over time.

> *"In the area of engagement I think the big issue is, the measurement really only matters if you do something about it. That's one of our consults to leadership all the time is that don't measure it if you don't want to do anything with the feedback, because you are only going to exacerbate any issue discovered because they will think something is going to be addressed with things they bring up, and when they find out nothing happens, then you are almost worse off than asking the question to begin with." – V.P., Communications, automotive corporation*

These findings confirm that self-report measures are an accepted tool for measuring engagement in practice, and that there is opportunity to develop additional measurement mechanisms.

DISCUSSION I: REFINING AND DEFINING EMPLOYEE ENGAGEMENT

As discussed above, the first step in validation is to clarify what the construct is intended to conceptually represent or capture, described clearly and concisely, including dimensionality and stability, in a theoretical context; as well as a discussion of how it differs from other constructs (MacKenzie et al., 2011; Nunnally and Bernstein, 1994; Churchill, 1979). This section addresses these steps by synthesizing findings from the literature review and practitioner interviews into a specific definition of employee engagement; relating the conceptualization to theory; and proposing a research model positioning engagement in relationship to other variables.

While no consensus exists in literature (Cowardin-Lee and Soyalp, 2011; Markos and Sridevi, 2010; Saks, 2008; Macey and Schneider, 2008) or in the interview findings regarding the definition of employee engagement, common themes do emerge. Specifically:

1. Employee engagement is a new idea. While some literature (e.g., Saks, 2008) disputes the notion that employee engagement as a construct has meaning beyond established literature streams, many researchers (e.g., Macey and Schneider, 2008; Cowardin-Lee and Soyalp, 2011; Markos and Sridevi, 2010) implicitly or explicitly concur that to a degree employee engagement comprises familiar constructs, but that it is a new idea and that it is more than the sum of its parts. Interviews confirmed this perspective.
2. The focus of employee engagement is both individual and organizational; that is, employees engage with their work in the context of their organization. Table 1 demonstrates that over time, definitions of the construct have evolved to include an organizational as well as individual focus, and interviews confirmed this perspective. Specifically, the present study concludes that engagement occurs with one's work in one's organization.
3. Employee engagement levels can likely be influenced by organizational practice or change. Much academic literature (e.g., Kahn, 1990; Schaufeli et al., 2002; Seppälä et al., 2009) asserts that employee engagement is stable across time and industry, and this is helpful in

distinguishing the construct from other constructs such as job satisfaction. However, interviewees suggested that engagement can fluctuate, particularly in response to large-scale organizational change. Practitioner literature (e.g., Robinson et al., 2004; Towers Perrin, 2003) asserts that employee engagement can be increased by improving organizational policies and practices. The present study weights the practitioner perspective more heavily to conclude that employee engagement is likely to fluctuate over time in response to changes in the organizational environment; however, it is beyond the scope of the present study to test this proposition.

4. Employee engagement is a multi-order construct with emotional, intellectual and motivational sub-dimensions. Literature (e.g., Macey and Schneider, 2008; Schaufeli et al., 2002; Mastrangelo, 2008; Cowardin-Lee and Soyalp, 2011; Markos and Sridevi, 2010) and practitioners agree that engaged employees feel energetic and enthusiastic; they believe in themselves at work; and they are motivated to take actions help their firm succeed. Further, this positive state leads directly to desirable work behaviors and other positive business outcomes.

THEORETICAL POSITIONING

This final commonality suggests that employee engagement can be related theoretically to attitudes. Attitudes are "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (Eagly and Chaiken, 1993, pg. 1). Attitudes contain affective, cognitive and conative dimensions, interrelated but not necessarily through direct linear causality (Lutz, 1991). Affect references the experience of feeling emotion; cognition refers to the ability to process information, apply knowledge, and change preferences; and conation is a directed effort, intention or motivation (Cartwright, 1949; Katz and Scotland, 1959). Attitudes matter because they are predictors of behavior (Lutz, 1991; Fishbein and Ajzen, 1975). The concept of attitude maps to the three components of

employee engagement – feelings thoughts and motivations – described above, which together drive behavior.

Research in attitudes in general demonstrates that attitude stability can be domain-dependent (Schwartz, 1977). Job attitudes in particular can be either subject to change based on environmental factors, or dispositional and persistent (Staw and Ross, 1985; Locke, 1976). Thus relating employee engagement to attitudes helps explain the apparent contradiction in which academic literature expects employee engagement to be steady over time, whereas practitioners interviewed expected it to be subject to the influence of organizational change. Although no academic study has yet specifically described employee engagement in the tripartite definition of attitudes, there is some precedent for this framing as Towers Perrin Global Workforce Study (2003) articulates rational, emotional and motivational components of engagement. Summary discussion on affect, cognition and conation as related to employee engagement follows.

Every significant discussion of employee engagement concurs affect is a critical component of the construct. Vigor, absorption and the inspiration, enthusiasm and pride components of dedication are affects. However, a specific clarification of the cognitive component of interest in employee engagement is appropriate. In the employee engagement context, the cognitive component of interest is a cognitive appraisal of the self in relationship to work, as opposed to a cognitive evaluation of the external work environment. Cognitive appraisals regarding one's self in relationship to one's work environment include psychological empowerment and portions of dedication. These are often considered components of engagement (e.g., Macey and Schneider, 2008; Schaufeli et al., 2002). Cognitive appraisals of the work environment independent of an evaluation of one's self, such as perceived organizational support (Pati and Kumar, 2010) and trust in top management (Macey and Schneider, 2008) are considered outside of the core conceptualization of employee engagement. This distinction, which has evolved in employee engagement literature perhaps more by chance than by theoretical design, is justifiable in that it builds of Kahn's (1990) conceptualization of engagement as a function of the self in relationship to one's work.

Motivation is seldom explicitly discussed in employee engagement literature, with the exception of Towers Perrin Global Workforce Study (2003). However, many recent studies position behavior as a component (e.g., Macey and Schneider) or an outcome (e.g., Saks 2006) of employee engagement. It may be inferred that a motivation to act precedes such behavior; thus motivation may be considered part of employee engagement. Further, interviewees heavily emphasized a motivational component in descriptions of engagement. Because a specific motivational construct has not been defined explicitly for measurement purposes in prior literature, the present study establishes a construct termed "Citizenship Motivation," derived from the newer (e.g., Organ, 1997) conceptualization of organizational citizenship behavior. Citizenship motivation is here defined as "the motivation to act, both within role and extra-role, in service of the organization's goals." This conceptualization is similar to Macey and Schneider's (2008) conceptualization of the activities comprising the behavioral engagement construct, although focused on conation instead of behavior.

Relating employee engagement to attitude theory provides a more compelling rationale for inclusion and exclusion of sub-dimensions of the construct than some theories previously discussed in employee engagement literature, namely social exchange theory (SET) and Macey and Schneider's (2008) trait-state-behavior framework. Researchers positioning engagement in SET assert engagement is one way in which employees repay their organizations for providing resources and benefits (Saks, 2006; Cropanzano and Mitchell, 2005). This theory points to the degree to which the expectations of the employment relationship are met being a potentially important antecedent of engagement, and it provides a potential mechanism for relating engagement to other constructs nomologically. However, such positioning fails to provide a description of construct or a rationale for including or excluding sub-dimensions. Thus SET does not provide a sufficient theoretical base for defining employee engagement. Similarly, by articulating the trait-state-behavior delineation, Macey and Schneider (2008) offer a preliminary psychological framework for further clarification of the employee engagement construct. However, the trait-state-behavior framework fails to provide theoretically-grounded guidelines for inclusion and exclusion of attributes; instead the authors base inclusion and exclusion on dominance in

prior literature. Further, Macey and Schneider (2008) provide no succinct, measurable definition of engagement. Instead, they propose that engagement comprises all three categories (trait, state and behavior), which calls into question the benefit of delineating the three in the first place.

DEFINITION

Synthesizing common themes from prior literature and practitioner interviews, and positioning employee engagement consistent with attitude theory, the present study defines employee engagement as follows:

> *Employee engagement is an attitude regarding one's work within one's organization, comprising a perception of psychological empowerment; feelings of vigor, absorption, and dedication; and motivation to act, both within and extra-role, in the service of the organization's goals.*

The dimensionality of employee engagement is thus tautological: employee engagement is a multi-dimensional construct comprising a cognitive appraisal of psychological empowerment; affects of vigor, absorption, and dedication; and citizenship motivation. No assertion regarding temporal stability is included in this definition as practitioner interviews and prior academic literature do not agree upon this subject, and it is beyond the scope of the present study to test longitudinal propositions.

It may be noted that the above definition of employee engagement distinguishes the construct from prior, established constructs. Organizational commitment defined in the Allen and Meyer (1990) behavioral conceptualization comprises affects such as identification, conations such as intention to stay with the organization, and cognitive appraisals of the employment and social environment not related to the conceptualization of the self, such as the availability of alternative employment opportunities. Because it includes cognitive appraisals of the external environment, this conceptualization of organizational commitment does not map cleanly into the present study's definition of employee engagement but rather is an overlapping construct. Similarly, organizational commitment defined per Mowday et al. (1979) as an attitude towards one's organization containing identification, effort and

attachment is also subtly distinct from this study's proposed definition of engagement. Identification is conceptually related to citizenship motivation in as much as both constructs reference a positioning towards organizational goals. The effort sub-dimension of organizational commitment is similar to citizenship motivation in that it references a willingness to act in a way desirable to the corporation, as well as to vigor, which references heightened energy and resilience in the work context, and to dedication, which references inspiration However, the attachment sub-dimension of organizational commitment, which describes a strong desire to maintain membership in the organization, is not clearly subsumed in the present study's definition. Further, the focus of organizational commitment is one's organization, whereas the focus of employee engagement is one's work in one's organization. Hence, the attitudinal conceptualization of organizational commitment is also classified as an overlapping construct. As noted above, most practitioner interviewees distinguished organizational commitment from employee engagement.

Job satisfaction is also distinct from employee engagement because, as practitioner interviewees noted, it fails to capture the organizational level of engagement. Macey and Schneider (2008) assert that components of job satisfaction related to energy, enthusiasm, and positive affect are included in the engagement construct; and the essence of these feelings is already captured in the above definition. Therefore job satisfaction as a cohesive unit is an overlapping construct but not a core component of employee engagement.

RESEARCH MODEL

The generation of a theoretical model that positions the construct of interest in relationship with related constructs is another step in defining and validating a construct; namely, it is advisable to test relationships with at least one each antecedent, outcome, moderating variable and overlapping construct (MacKenzie et al., 2011). As a result, the researcher is in a position to rule out rival hypothesis and establish nomological validity.

Described by Straub et al. (2004), nomological validity is a form of construct validity emerging from a well-developed theoretical research stream, sometimes called a "nomological network". Nomological validity establishes the validity of constructs through demonstrating consistent strength of relationships between constructs using different measurement methods. However, it is arguable that as a research stream, employee engagement is not well developed. Hence, in the present study, nomological validity is assessed by testing whether employee engagement is significantly related to other constructs in its nomological network in expected directions rather than comparing the strengths of relationships between variables, because no prior study has established empirically the strength of relationships between the present study's definition of employee engagement and other constructs.

Several hypotheses placing employee engagement in relationship with other variables follow.

ANTECEDENTS

Prior literature and practitioner interviews posit a range of possible antecedents to employee engagement. Macey and Schneider's (2008) framework discusses proactive personality, autotelic personality, trait positive affect and conscientiousness as antecedents to state engagement. Burke (2008) proposed knowledge and skills as an antecedent. Ying (2009) demonstrated that engagement levels varied by gender and tenure with a particular organization. Penna (2007) researchers and some practitioner interviewees asserted that job satisfaction is a necessary condition for engagement to manifest. Pati and Kumar (2010) empirically demonstrated organizational support is an antecedent to work engagement. Practitioner-interviewees placed a high value on the notion of a reciprocal relationship underpinning employee engagement. As discussed above, the fulfillment of the psychological contract, or the implicit and explicit expectations of exchange in the employment relationship, is one appropriate construct by which to capture exchange-based expectations underpinning employee engagement. Thus the following relationship is proposed:

H1: Psychological contract fulfillment will positively explain employee engagement.

Outcomes

Outcomes of employee engagement posited in prior literature at the individual and firm levels include extra-role and organizational citizenship behavior, innovative behavior, proactivity or personal initiative, adaptivity, and role expansion (Macey and Schneider, 2008); however, such behaviors may be conflated in measurement with the citizenship motivation sub-dimension proposed in the present study. Instead, consistent with practitioner literature (e.g., Robinson et al., 2004) and interviews, likelihood of recommending the firm as an employer is included as an expected outcome.

H2: Employee engagement will positively explain recommendability.

Moderating Variables

Macey and Schneider (2008) include in their model three exogenous variables that influence the relationships between traits, state and behavior: work attributes, transformational leadership and trust in top management. Such variables are clearly related nomologically to engagement, and thus it is appropriate to include one in the present study. Trust in top management is selected as it was discussed in practitioner interviews as well as prior literature; specifically, Macey and Schneider (2008) theorize that trust in top management acts as a moderator between psychological state engagement and its outcome, behavioral engagement.

H3: The interaction effect between trust in top management and employee engagement will positively explain recommendability (e.g., high trust will enhance the effect of employee engagement on recommendability).

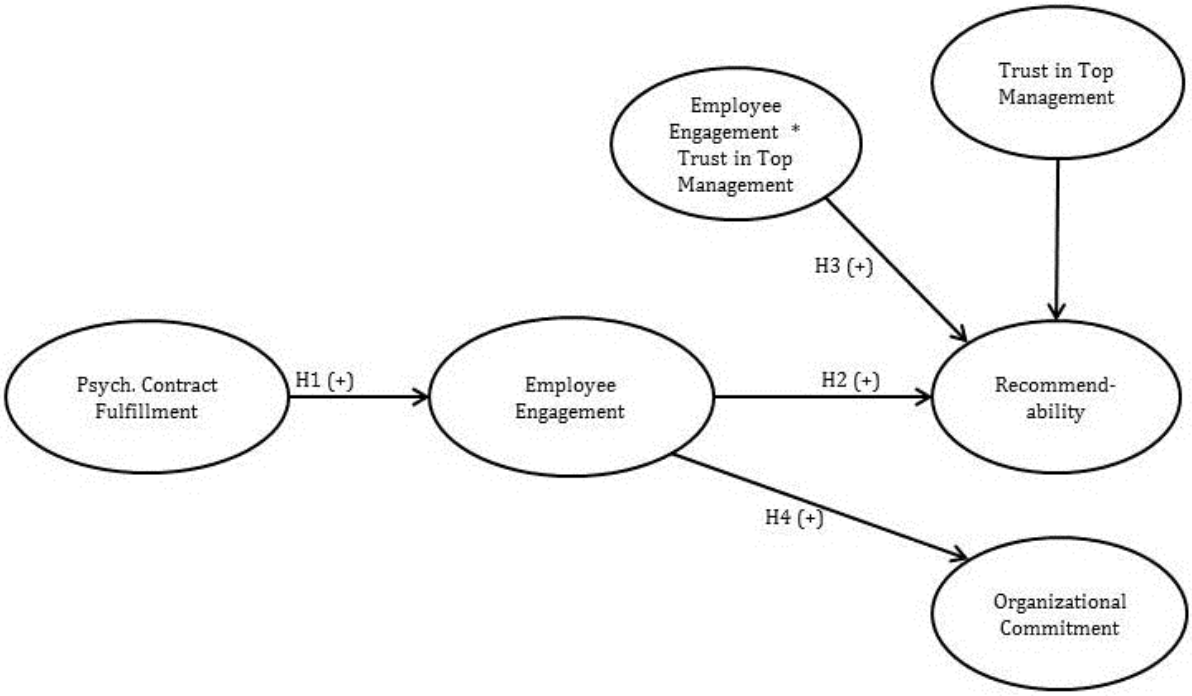
Overlapping Constructs

It is argued above that both the attitudinal and behavioral conceptualizations of organizational commitment are overlapping but not equivalent constructs to employee engagement. In the present study, a relationship with the attitudinal conceptualization of organizational commitment as an overlapping construct is proposed:

H4: Employee engagement will be positively related to organizational commitment with a correlation between .40 and .70.

Figure 3 graphically displays the hypothesized relationships above and serves as the research model tested in present study.

FIGURE 3: RESEARCH MODEL



KNOWN GROUPS COMPARISON

Known groups comparison is another step in scale validation aimed at assessing the degree to which a scale accurately captures the phenomena of interest (MacKenzie et al., 2011). Few studies have explored differences in employee engagement levels across different groups, with the exception of Ying (2009), who demonstrated that engagement levels varied by gender and tenure within a particular organization. It is logical to hypothesize that engagement levels of full-time and part-time employees might differ because these groups possess differing employment contracts and work experiences.

Specifically, part time employees may feel more engaged with their work in their organization because they may feel trusted or empowered by their organizations in that they are offered a non-traditional work schedule, and they may feel more vigorous as a result of working fewer hours than their full-time counterparts. Thus the following known-groups difference is hypothesized:

H5: Part time employees will exhibit higher engagement levels than full time employees.

Table 3 summarizes the present study's hypotheses and their purposes.

TABLE 3: HYPOTHESES

Test	Label	Hypothesis
Nomological validity	H1	Psychological contract fulfillment will positively explain employee engagement
	H2	Employee engagement will positively explain recommendability
	H3	The interaction effect between trust in top management and employee engagement will positively explain recommendability (e.g., high trust will enhance the effect of employee engagement on recommendability).
Discriminant validity	H4	Employee engagement will be positively related to organizational commitment with a correlation between .40 and .70
Known groups comparison	H5	Part time employees will exhibit higher engagement levels than full time employees

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METHOD II: INSTRUMENT DEVELOPMENT

Development of items to measure a construct is the next step in validation. The goal of measures is to fully and accurately represent the conceptual domain of the construct, while minimizing "contamination," meaning overlap with concepts outside the construct (MacKenzie et al., 2011). Specific items should be worded simply and precisely, and can derive from various sources including measures established in prior studies, deduction, suggestions from experts, and interviews with members of the population (MacKenzie et al., 2011; Churchill, 1997; Haynes et al., 1995; Nunnally and Bernstein, 1994).

ITEM GENERATION

A preliminary list of items to measure sub-dimensions of employee engagement was assembled from prior literature. Six items each representing vigor and absorption, and five items representing dedication come from the UWES instrument (Schaufeli and Bakker, 2003). With some phrasing adapted to the employee engagement context, three items each measuring the meaning, competence, impact and self-determination sub dimensions of psychological empowerment came from Spreitzer's (1995) empowerment scale. Fourteen items to measure citizenship motivation were adapted from Lee and Allen's (2002) OCB items; and Robinson et al.'s (2004) engagement indicator. These items were adapted to reflect motivation to act rather than literal demonstration of behavior. Two new items were generated to suggest citizenship behavior both in- and extra-role. Consistent with MacKenzie et al. (2011), two new items each were generated as reflective indicators of the multi-order constructs psychological empowerment and employee engagement.

EXPERT EVALUATION OF ITEMS

Once items have been generated, they should be assessed for content validity, meaning "the degree to which items in an instrument reflect the content universe to which the instrument will be generalized" (Straub et al., 2004, pg. 424). A structured rater review process in which expert judges assess the correspondence between items and the theoretical definition of the construct and its sub-dimensions, followed by an analysis to assess the degree to which items measure what they claim to, is recommended (Hinkin and Tracey, 1999; Yao et al., 2008; MacKenzie et al., 2011).

The present study's rater review process was conducted in two stages. The first comprised a sorting exercise in which raters were given a list of constructs and their definitions. The constructs comprised the proposed sub dimensions of employee engagement, as well as the three sub-dimensions of organizational commitment (identification, effort and attachment) and psychological contract fulfillment. The purpose of including overlapping and antecedent constructs in the exercise was to confirm

discriminant validity between these constructs and employee engagement. Raters were given 66 measurement items. Representing the first-order sib-dimensions of employee engagement were 45 items (discussed above). Also included were two reflective items to measure the second-order of the psychological empowerment, four psychological contract fulfillment items and 15 organizational commitment items. Organizational commitment items were derived from the OCQ instrument (Mathieu et al., 2000; Mowday et al., 1979), and psychological contract fulfillment items were adapted from Rousseau (2000). Raters were asked to place each item into the construct bucket to which it most closely mapped. An "other" bucket was included for any items that a rater assessed did not fit in any construct bucket. Five raters comprising researchers with expertise in scale generation and validation and doctoral candidates in business participated in the bucketing exercise. The principal investigator sat with each rater during the sorting task.

The second phase of rater reviews comprised evaluation of the degree to which individual items represent the intended construct. Reviewers were given construct definitions and items to measure the construct. They were asked to rate on a scale of one to five, with one being not at all representative and five being highly representative, the degree to which each item captured the conceptual intent of the construct. The constructs comprised the first-order sub dimensions of employee engagement, organizational commitment and psychological contract fulfillment. Overlapping and antecedent constructs were included to improve the quality of measurement of the overall research model. The instrument included 64 items – the same items as the sorting exercise minus the two second-order empowerment reflective items. 17 raters comprising practitioners with responsibility for employee engagement, researchers with expertise in scale generation and validation, and doctoral candidates in business participated. Reviewers completed the exercise through an online survey tool. In addition to the rating scales, reviewers were given the option to include comments on constructs and their items.

RESULTS II: RATER REVIEWS

SORTING EXERCISE

Five reviewers participated in the sorting exercise. Observations of their comments during the exercise are summarized here. Two raters explicitly noted multiple foci of the items, namely that some referenced one's individual work and others one's organization. This observation reinforces the necessity of specifying of the focus of engagement as both individual and organizational in construct validation. Only one rater classified an item into the other bucket: an item from the vigor construct. This suggests that items fit well into the nomological space described by the constructs evaluated. In the empowerment category, which contained items from each sub-dimension of empowerment as well as reflective items mapping to the second-order construct of empowerment, items were misclassified across the construct levels (e.g., second-order items were classified in first-order buckets and vice-versa). Not surprisingly, an item from the dedication construct describing meaning was misclassified consistently as belonging to the meaning construct. Two raters verbally noted the overlap between identification and citizenship motivation, which were expected to overlap due to common reference to organizational goals. Several item misclassifications across reviewers confirmed this overlap. A number of items were misclassified between identification and attachment, and attachment and citizenship motivation, pointing to additional issues of discriminant validity between these constructs.

A variety of decision rules exist in prior literature to eliminate items during a scale validation exercise based on sorting tasks (Hardesty and Bearden, 2003; Bearden and Netemeyer, 1999). For example, Unger and Kernan (1983) utilized ten judges and eliminated items receiving 3 or more incorrect categorizations. Studies including Tian and Bearden (2001), and Bearden et al. (1989) have required correct categorization by four out of five judges. However, the inclusion of items intentionally representing overlapping constructs in such a scale validation exercise is not widely described in these examples of prior literature, although it was undertaken in the present study. Thus decision rules were

created to address conflation between items in expected overlapping constructs. Where a rater classified items into the correct first-order construct bucket, the items were given a score of two. Where a rater classified an item into not the correct first-order construct but another expected overlapping first order construct (e.g., meaning and dedication; and citizenship motivation and identification), the item received a score of one. All other classifications received a score of zero. Building on these adaptations and a synthesis of rules from the above-mentioned studies, items receiving a total score of 7 (out of 10 possible) were considered to be included in the final instrument. 40 out of 66, or 61% of items, met the criteria. Scores from this exercise are included in Appendix 2.

RATING EXERCISE

17 reviewers took part in the item rating exercise. Means for each item are included in Appendix 2. Six of the reviewers commented on vigor; the majority of these inputs suggesting that the definition combines too many vague or disparate ideas. The overall scoring in the category indicated a corresponding weakness in the items designed to measure vigor. Dedication received six comments, several of which disputed the inclusion of "challenge" in the construct. With respect to absorption, four comments were received, three of which challenged the item relating happiness within absorption. As noted above, prior studies on vigor, dedication and absorption do not include reports of face validity tests, and these finding confirm the need for such review. The only comment on meaning noted overlap with the dedication construct. The only comment on competence suggested competence might be refined to reflect success in the work environment (a more externally-focused cognitive appraisal, hence not appropriate to the present study's conceptualization) rather than belief in one's capabilities. The only comment on self determination offered an alternative definition of the construct. The two comments on impact both suggested that items be worded more precisely. Citizenship motivation received five comments, which suggested fewer items, more distinction between within-role and extra-role motivation, and more precise wording of some items. Within the organizational commitment scale, two reviewers commented on confusion around reverse-scored items. Identification's two comments both argued the

item discussing pride would be better classified elsewhere. Effort's three comments called out overlap with the vigor and dedication constructs. One of attachment's comments recommended wording improvements; another called out overlap with identification; the third emphasized the emotional content of attachment. Psychological contract fulfillment received no comments. Two raters submitted general comments; one noting an absence of items relating to line management and the other questioning the appropriateness of the measures in a self-employment context.

Numerous decision rules also exist in prior literature to eliminate items during a scale validation exercise based on item representativeness rating tasks (Hardesty and Bearden, 2003; Bearden and Netemeyer, 1999). Several studies (e.g., Saxe and Weitz, 1982; Zaichkowsky, 1994; Manning et al., 1995; Bearden et al., 1989) have required that 50-80% of experts classify items as "clearly representative," or the top rating on a three-point scale. Others (e.g., Manning et al., 1995) exclude items that receive the lowest possible ratings. A decision rule regarding eliminating an item for receiving at least one rating of "1 – not at all representative" was impractical in this process as the absorption, impact, and effort constructs would have been left with zero items. Similarly, requiring 50% or more of judges to rate an item "5 – highly representative" proved impractical for this study as the vigor and impact constructs would have been left with zero items. Thus developing a cutoff for mean ratings was determined to be the most appropriate decision rule, and a mean of 4.0 out 5 was selected. 42 out of 64, or 66% of items, met the criteria.

DISCUSSION II: FINAL TEST INSTRUMENT

As noted above, inclusion guides for the sorting exercise addressed expected and non-expected misclassifications. 40 out of 66, or 61% of items, met the criteria. In the rating exercise, 42 out of 64, or 66% of items, met the criteria. In total, 64 common items were included in both rater review processes. Of these, 31 (48%) met both inclusion criteria, and 16 (25%) met neither. The remaining 18 (27%) met inclusion criteria in one but not the other rating exercise. Appendix 2 lists the constructs, items, scores from each review and final inclusion decisions. A summary is in Table 4.

TABLE 4: RATER REVIEW SUMMARY DECISIONS

Construct	Original Items	RRI OR RRII #Items	RRI AND RRII #Items
Vigor	6	4	1
Dedication	5	4	2
Absorption	6	5	4
Empowerment - Meaning	3	3	3
Empowerment - Competence	3	3	2
Empowerment - Self Determination	3	3	3
Empowerment - Impact	3	2	1
Citizenship Motivation	16	13	8
Org Commitment - Identification	3	2	1
Org Commitment - Effort	2	1	1
Org Commitment - Attachment	10	5	3
PC Fulfillment	4	4	2

Conservatively, items that met the criteria of at least one review processes were included in the test instrument. All sub-dimensions of employee engagement proposed in the conceptualization phase are included in the test instrument with at least two items each. Two items each measuring reflectively the second-order empowerment and third-order employee engagement constructs were also included. The items to measure psychological contract fulfillment and organizational commitment justified during the rater review process were included. The final test instrument additionally contained items to measure other constructs hypothesized to relate to employee engagement in the present study's research model. 13 items representing trust in top management, a hypothesized moderator, and were adapted from Mishra and Mishra (1994). Three items representing recommendability, a hypothesized outcome, were adapted from practitioner literature (e.g., Gallup, 2006; Robinson et al., 2004). Additionally, three items to measure intention to stay, another expected outcome; and three single-item measures items designed to capture alternative outcomes (creativity, productivity and proactive problem solving) were included for use in data analysis. Finally, a binary measure to capture employment status (full or part time) was included. Items in the final test instrument are viewable in Appendix 4.

METHOD III: INSTRUMENT TEST

The final activities in construct and instrument validation comprise tests of the instrument to purify it through removal of weak items; assess scale validity; and evaluate discriminant, nomological and convergent validity (MacKenzie et al, 2011). In order to conduct these tests, a formal specification of the measurement model for each level of construct analysis is required.

MODEL SPECIFICATION

Model specification establishes a measurement model that captures expected relationships between indicators and their respective construct (MacKenzie et al., 2011). Constructs can have one or more dimensions; multi-dimensional constructs are those with conceptually distinguishable sub-dimensions. Formative constructs are constructs whose sub-dimensions comprise defining and independent characteristics, such that changing one sub dimension would fundamentally alter the concept defined in the construct, and formative measures offer an approach to conceptualization of diverse and disparate observations (MacKenzie et al., 2011; Cenfetelli and Bassillier, 2009). Reflective constructs are those whose sub-dimensions comprise manifestations of that construct, such that removing one would not necessarily alter the underlying meaning of the construct (MacKenzie et al., 2011). Understanding the nature of the construct dimensionality enables the researcher to select appropriate measurement and analysis techniques to enhance validity.

The heritage of employee engagement as a combination of distinct ideas and the positioning of employee engagement as an attitude comprising distinct sub-dimensions in the present study suggest employee engagement should be modeled as a multi-order, formative construct. Discussion of the measurement model for each sub-dimension of employee engagement follows. Graphical representations of the measurement model for each sub-dimension of employee engagement and employee engagement are found in Appendix 3.

- *Affective components: Vigor, Dedication and Absorption*. In prior validation studies (e.g., Seppälä et al., 2009), items to measure vigor, dedication and absorption have been modeled reflectively as three constructs and reflectively as a single construct. The present study conservatively asserts that these three ideas are distinct, non-interchangeable components of employee engagement; thus each is modeled as a separate, reflectively-measured sub-dimension of employee engagement.
- *Conative component: Citizenship Motivation*. As discussed above, items to measure citizenship motivation were adapted from measures of OCB, and the present study elects to model these items consistent with the modeling of the original scale from which these items derived. Although conceptually OCB was originally characterized in multiple dimensions (e.g., Organ, 1988; Podsakoff et al., 2000), subsequent literature (e.g., Bommer et al., 2003; LePine et al., 2002) provides a precedent for omitting or combining dimensions into a single construct based on nomological similarities and interchangeability of predictors. The present study builds on these later works and elects to model citizenship motivation as a single-factor, reflectively-measured construct.
- *Cognitive component: Psychological Empowerment*. Although psychological empowerment has traditionally in literature (e.g., Spreitzer, 1995; Stander and Rothman, 2010) been modeled reflectively, a face evaluation of the construct suggests that its sub-dimensions of meaning, competence, self determination and impact may not be interchangeable in the employee engagement context. Hence, in the present study, empowerment is modeled as a second-order formative construct. However, items to measure the four empowerment sub-dimensions (meaning, competence, self determination and impact) are modeled reflectively.

All other constructs in the research model are modeled reflectively, consistent with prior literature (e.g., Mishra and Mishra, 1994, for trust in top management; Mowday et al., 1979, for organizational commitment; and Rousseau, 2000, for psychological contract fulfillment).

DATA COLLECTION

MacKenzie et al. (2011) note that for proper scale validation, one's sample should be representative of the entire population for which the instrument is designed. A larger sample size is recommended for studies where factors are weakly determined and communalities are high, arguments which may apply to employee engagement. Large sample sizes provide high statistical power to enable detection of significant and insignificant effects, and help mitigate non-response error, meaning error resulting from a portion of the population being systematically underrepresented in the sample due to a shared disinclination to respond (King and He, 2005).

To facilitate obtaining a large sample, the instrument test was conducted online in a 3236-employee private educational firm in the United States, with full cooperation of the firm's Human Resources department. The survey was conducted over a three-week period in October, 2012. All employees of the firm were invited to participate by the Human Resources team. Participants comprised both part- and full-time employees. To reduce non-response, each employee received four email contacts inviting survey participation (Sivo, 2006; Dillman, 1999).

DATA ANALYSIS

Data analysis should comprise analysis of measures of the focal construct and its sub dimensions to assess psychometric properties and confirm significant relationships; testing of relationships with theoretically related constructs (e.g., antecedents, outcomes and related variables) to assess nomological validity; and testing of correlation to similar constructs that may be confounded with the focal construct (e.g., overlapping constructs) to assess discriminant validity (MacKenzie et al., 2011). Because alternative measures of the focal construct as conceptualized in the present study do not currently exist, the present study does not expressly address convergent validity as recommended by MacKenzie et al. (2011), and

nomological validity is assessed through testing directionality rather than strength of expected relationships.

For first-order sub-dimensions of employee engagement, all of which are measured reflectively, reliability analyses were conducted using SPSS software. A Cronbach's alpha of .70 or above was sought for each reflectively-measured construct. In addition, individual indicators were assessed by evaluating the significance of the relationship between the indicator and its construct via bivariate correlations. Results of these tests are summarized below and reported in more depth in Appendices 4, 5 and 6. Because no reflectively-measured multi-order constructs are hypothesized, factor analysis is not suitable in the present study.

Traditional reliability analysis is not applicable to multi-order formative constructs because the measurement model does not predict correlation among factors (MacKenzie et al. 2011, Bollen and Lennox, 1991; Edwards, 2003). Cenfetelli and Bassilier (2009) recommend six tests to interpret results of measurements of formative indicators, including tests to identify multicollinearity among indicators, indicators with non-significant weights, and co-occurrence of negative and positive indicator weights; and assessment of relative indicator contributions. These tests and criteria for interpretation are in Table5. The Smart PLS (Ringle et al., 2005) and SPSS toolkits were used in combination to test the formative modeling of the empowerment sub-construct and employee engagement as a whole. Details of the procedures are found respectively in Appendices 5 and 6.

Nomological validity was assessed by testing directionality of expected relationships between the employee engagement construct and related variables, specifically the hypothesized antecedent, outcome and moderator. To assess discriminant validity, employee engagement was correlated with the hypothesized overlapping construct (MacKenzie et al., 2011). These tests were conducted in Smart PLS (Ringle et al., 2005), and results are reported below. The known groups comparison was also conducted in Smart PLS (Ringle at al., 2005), consistent with MacKenzie et al. (2011) recommendations for validating measurement tools. Specifically, a dummy variable capturing group status was created and tested in a

causal relationship with employee engagement when measured formatively. Procedures are detailed in Appendix 6.

TABLE 5: CENFETELLI AND BASSILIER (2009) FORMATIVE MEASUREMENT TESTS

Test	Criteria
Significance of path coefficients / item weights	T-value > 1.96 for all path coefficients / item weights in both structural path and formative indicator models.
Low path coefficients / item weights	Where path coefficients / item weights low, consider (1) excluding sub-dimensions / items; or (2) modifying the specified model.
Co-existence of positive and negative path coefficients / item weights	Where positive and negative path coefficients / item weights coexist, consider (1) excluding sub-dimensions / items; or (2) modifying the specified model.
Multicollinearity VIF analysis	Formatively measured indicators should have VIF < 3.33 when regressed together against the focal construct.
Bivariate correlations	Correlations of formatively-measured indicators should be r < .80; correlations between the focal construct and its formative indicators should be significant.
Redundancy analysis	The path coefficient between a formatively-described of a construct and a reflectively-described version of the same construct should be > .80.

The present study seeks to validate a construct and instrument rather than to test hypotheses based on employee engagement levels; hence non-response error in the present study is unlikely to impact results so long as there is sufficient statistical power to detect significant and insignificant effects. Nevertheless, to evaluate whether non-response error was present in the data, a wave analysis was conducted. A wave analysis compares early and late responders, based on an underlying assumption that non-responders are more likely to share characteristics with late responders than early ones (Sivo, 2006; King and He, 2005). If a significant difference is found between the early and late groups, it can be inferred that non-response error is likely. Early responders were defined as those participating between the first and last contact, and late responders were defined as those responding after the final contact and before the survey close. An ANOVA analysis was conducted comparing employee engagement means (represented by a weighted-sum indicator, the calculation of which is described in Appendix 6) of early

and late responders. Next, an analysis was conducted to evaluate observed statistical power of the sample. High statistical power not only ensures that one can detect intended effects, it also helps minimize the impact of non-response error (Sivo, 2006; King and He, 2005). Power calculation procedures are described in Appendix 6. Results of both analyses are reported below.

RESULTS III: SCALE VALIDATION

In addition to describing the sample, the following section reports summary measurement test results for each sub-dimension of employee engagement; employee engagement as a whole; and relationships between employee engagement and other constructs in the research model (e.g., employee engagement in its nomological network).

SAMPLE

The instrument test was conducted online in a 3236-employee private educational firm in the United States over a three-week period in October, 2012. 2342 survey responses were received, constituting a 72% participation rate. Of respondents, 24% held supervisory positions and 76% were full-time (vs. part-time) employees. No additional demographic information was collected, consistent with the firm's commitment to provide anonymity on the survey.

As described above, a one-way ANOVA comparing the early- and late-responder groups was conducted to evaluate the likelihood of non-response error. The mean of early responders was 2.80 (n=1897), the mean of late responders was 2.87 (n=445), and the p-value for the ANOVA was .002. In other words, late responders (and by inference, non-responders) had higher engagement levels than early responders. This result may appear counterintuitive and is further discussed below. The post-hoc power analysis (see Appendix 6) returned observed statistical power greater than 0.99, well above the standard 0.80 threshold, which means that the sample possess adequate power to detect insignificant and significant effects, and that non-response error is unlikely to invalidate the findings in the present study.

SUB-DIMENSIONS OF EMPLOYEE ENGAGEMENT

REFLECTIVE MEASURES

Appendix 4 lists all sample size, means, standard deviations of each item, as well as reliability of each sub-dimension of employee engagement measured reflectively: vigor, dedication, absorption, citizenship motivation, and the four discrete empowerment factors, meaning, competence, self determination and impact. A summary of the reflective measures outputs is in Table 6.

TABLE 6: REFLECTIVE MEASURES SUMMARY

Construct	Definition	Items	Sample	Mean	StDev	Reliability	Source
Employee Engagement (reflective items)	An attitude regarding one's work within one's organization, comprising a perception of psychological empowerment; feelings of vigor, absorption, and dedication; and citizenship motivation.	2	2256	4.25	0.62	0.83	New items developed for the present study
Vigor	High levels of energy and mental resilience in the work context, and willingness to expend to effort and persist in the face of challenges.	4	2255	4.14	0.62	0.78	Schaufeli & Bakker (2003)
Dedication	A sense of significance, enthusiasm, inspiration, pride, and challenge at work.	4	2255	4.29	0.74	0.91	Schaufeli & Bakker (2003)
Absorption	Being fully concentrated, happy, and deeply engrossed in one's work whereby time passes quickly	5	2252	3.90	0.70	0.83	Schaufeli & Bakker (2003)

Construct	Definition	Items	Sample	Mean	StDev	Reliability	Source
Empowerment Reflective Items	A sense of confidence regarding one's self in one's work reflected by four attributes: meaning, competence, self-determination and impact.	2	2177	4.07	0.76	0.66	New items developed for the present study
Empowerment - Meaning	A sense of purpose or personal connection about work	3	2177	4.41	0.67	0.93	Spreitzer (1995)
Empowerment - Competence	Believing one's self is capable of succeeding in one's work.	3	2179	4.45	0.58	0.84	Spreitzer (1995)
Empowerment - Self Determination	A sense of freedom about how one does one's work.	3	2170	3.94	0.92	0.90	Spreitzer (1995)
Empowerment - Impact	A belief that one can influence the larger organization in which she is embedded.	2	2175	3.47	1.07	0.84	Spreitzer (1995)
Citizenship Motivation	A motivation to act, both in- and extra-role, in service of the organization's goals	15	2137	4.30	0.55	0.95	Adapted Lee & Allen's (2002) OCB items; Robinson et al.'s (2004) engagement indicator

FORMATIVE MEASUREMENT OF PSYCHOLOGICAL EMPOWERMENT

Appendix 5 details the procedures and results of the validation of the empowerment construct when modeled formatively. A summary of results with respect to the above-described formative measurement tests is in Table 7.

TABLE 7: PSYCHOLOGICAL EMPOWERMENT FORMATIVE MEASUREMENT VALIDATION TESTS (CENFETELLI AND BASSILIER, 2009)

Test	Threshold	Outcome
T-values for structural path model	t-value > 1.96	All items and paths significant
T-values for formative weighted indicator model	t-value > 1.96	Competence indicator item weight not significant
Low path coefficients / item weights for structural path model	Path coefficient / item weights < .08	All path coefficients and item weights > .08
Low item weights for formative weighted indicator model	Path coefficient / item weights < .08	Competence indicator item weight < .08
Coexistence of positive and negative coefficients / item weights for structural path model	Path coefficient / item weights < 0	All path coefficients and item weights > 0
Coexistence of positive and item weights for formative weighted indicator model	Path coefficient / item weights < 0	All item weights > 0
Multicollinearity VIF analysis	VIF < 3.33	All VIF < 3.33
Bivariate correlations	r < .80 for discrete factors	All correlations between items and their corresponding weighted indicators significant and > .50; correlations between weighted indicators all < .50; correlations between weighted indicators and weighted-sum empowerment between .51 and .83
Redundancy analysis	Path coefficient > .80	Path coefficient = .72 and is significant

Only two anomalies across the test results exist: when modeling empowerment with weighted formative indicators representing each factor (the weights having been derived from a structural path model), the item weight for competence was not significant. However, as competence was significant in the structural path model, its inclusion as a formative indicator is appropriate. Also, the redundancy analysis rendered a path coefficient slightly less than the conservative .80 recommended by Cenfetelli and Bassilier (2009); however, the path coefficient was both large (0 .72) and significant. The above results confirm that a formative measurement model for empowerment is valid in the employee engagement context.

FORMATIVE MEASUREMENT OF EMPLOYEE ENGAGEMENT

Appendix 6 details the procedures and results of the validation of the employee engagement construct, modeled as a multi-order, formative construct comprising vigor, dedication, absorption, citizenship motivation and empowerment (itself a second-order, formative construct). A summary of results with respect to each of the above-described formative measurement tests is in Table 8.

TABLE 8: EMPLOYEE ENGAGEMENT FORMATIVE MEASUREMENT VALIDATION TESTS (CENFETELLI AND BASSILIER, 2009).

Test	Threshold	Outcome
T-values for structural path model	t-values > 1.96	Path coefficients for absorption and citizenship motivation not significant
T-values for formative weighted indicator model	t-values > 1.96	Path coefficient for absorption not significant
Low path coefficients / item weights for structural path model	Path coefficient / item weights < .08	Path coefficients for absorption and citizenship motivation < .08
Low item weights for formative weighted indicator model	Path coefficient / item weights < .08	Item weight for absorption < .08
Coexistence of positive and negative coefficients / item weights for structural path model	Path coefficient / item weights < 0	Path coefficients for absorption and citizenship motivation < 0
Coexistence of positive and item weights for formative weighted indicator model	Path coefficient / item weights < 0	Item weight for weighted citizenship motivation < 0 (due to calculating the weighted item using a negative path coefficient)
Multicollinearity VIF analysis	VIF < 3.33	All VIF < 3.33
Bivariate correlations	r < .80 for formative indicators	All correlations significant. (Absolute value) correlations between weighted indicators all between .53 and .71; (absolute value) correlations between weighted indicators and weighted-sum employee engagement between .61 and .96.
Redundancy analysis	Path coefficient > .80	Path coefficient = .77 and significant

The bivariate correlation and VIF multicollinearity tests were passed without issue, indicating that the defined sub-dimensions of employee engagement do, as expected, measure distinguishable attributes. The redundancy analysis path coefficient (0.77) was significant and only slightly below Cenfetelli and Bassilier (2009)'s conservative .80 threshold. These results support formative modeling of employee engagement.

However, the path coefficient / item weight of the absorption sub-dimension is neither large nor significant in either the structural path or weighted formative indicator model. Cenfetelli and Bassilier (2009) suggest that such items may be measuring something apart from the focal construct and should be evaluated for exclusion. The path coefficient of citizenship motivation appears in the structural path model as negative, small and insignificant. However, in the weighted formative indicator model, its item weight is significant and reasonably sized, and its negative sign is directly attributable to the fact that the calculation of its weighted indicator included the negative path coefficient from the structural model. A possible explanation for this result is that 15 items were used to measure citizenship motivation, and Cenfetelli and Bassilier (2009) suggest that too many items can play a role in low or negative path coefficients / indicator weights.

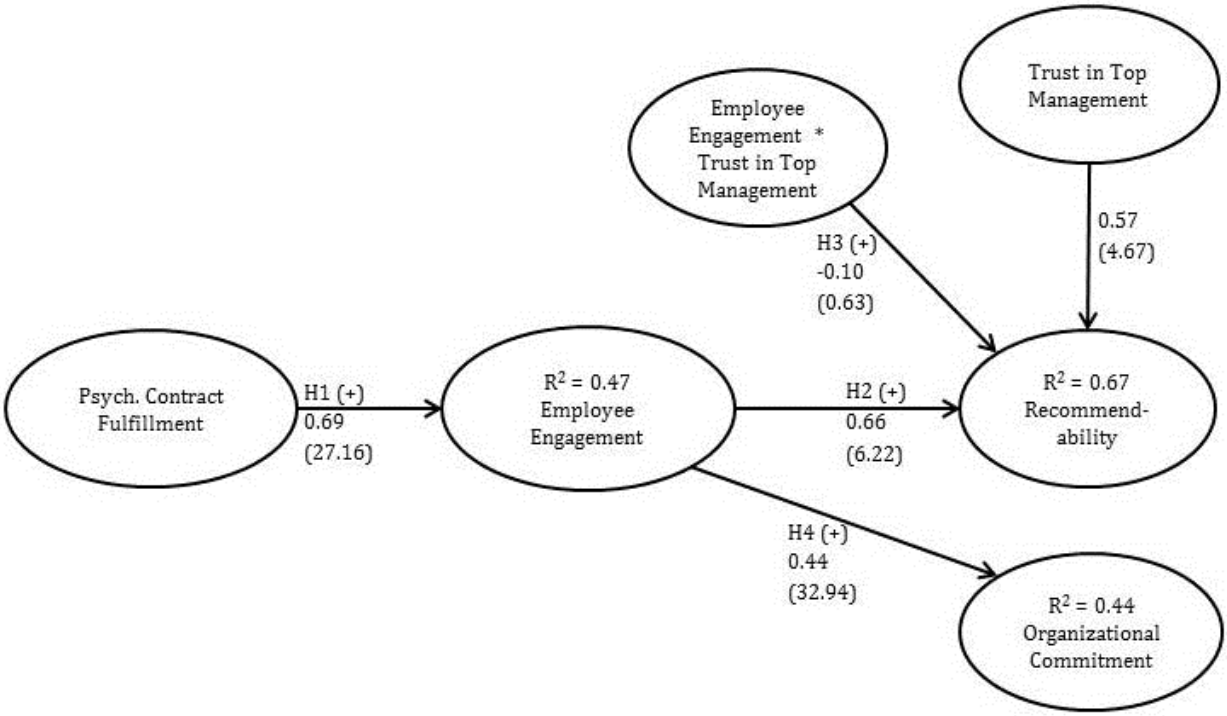
Given the size and complexity of the employee engagement construct, it is not unexpected that some violations of the test criteria exist. Further, as will be described below, the relative importance of employee engagement indicators varies based on the outcome measured. Hence exclusion of the absorption or citizenship motivation sub-dimension is not the logical outcome of these violations. Rather, this is an opportunity for future research: researchers may explore the relative weightings of indicators across a variety of research models, or elect to further refine and reduce the citizenship motivation sub-scale in the employee engagement instrument.

EMPLOYEE ENGAGEMENT IN THE NOMOLOGICAL NETWORK

Nomological validity was studied by testing directionality of relationships between employee engagement and related variables, and discriminant validity was evaluated by examining the correlation

between employee engagement and an overlapping construct (MacKenzie et al., 2011). Figure 4 shows the Smart PLS (Ringle et al., 2005) output of these tests. Explained variance, or R^2, is found in the circles representing the constructs. Path weights are shown along each path, and the t-value for the path weight (indicating whether or not the relationship is a significant one) is shown in parentheses below the path weight. Each relationship hypothesized in the research model is labeled with its expected sign.

FIGURE 4: HYPOTHESES TEST RESULTS



In summary, H1 and H2 are supported, validating that employee engagement is behaving as expected with respect to the recommendability outcome and psychological contract fulfillment antecedent, hence supporting nomological validity.

H3, which hypothesizes a significant interaction effect between employee engagement and trust in top management, is not supported with respect to the recommendability outcome, although each explanatory variable has a significant relationship with the outcome. This is an interesting finding Macey

and Schneider (2008) explicitly theorized but did not test a moderating relationship between employee engagement and trust in top management in explaining outcomes. Additional discussion of this finiding is below.

To further explore nomological validity and enhance understanding of the employee engagement construct in relationship to other constructs, employee engagement was used to explain the variance in additional single-item and multi-item outcome variables. The results of these tests are found in Table 9. Note that although single-item measures inhibit the ability to estimate measurement error, for the purposes of confirming nomological relationships, such measures are acceptable supplements to multi-item measures.

Employee engagement is significantly correlated to each of the outcome measures listed above and explains a notable amount of variance in each. At the same time, the relative weights of the indicators vary depending upon the outcome. In fact, components with low significance in the research model used to generate the relative indicator weights appear as significant when employee engagement is placed in relationship to other outcomes. For example, the item weight for absorption is significant in explaining creativity, but is not in explaining recommendability. This result supports the present study's assertion that employee engagement is meaningful above and beyond its component parts and, when measured as a single construct, employee engagement explains a wider variety of potential outcomes than would any single component or sub-set of its components.

The relationship between organizational commitment and employee engagement is significant and within the correlation hypothesized in H4 (0.40 to 0.70); confirming discriminant validity with the organizational commitment construct. This supports the assertion that employee engagement is different from prior existing constructs.

TABLE 9: EXPLAINED VARIANCE OF ALTERNATIVE OUTCOMES

Outcome Measure	Explained Variance	Path Coefficient / Item Weight (T-stat) (Bootstrapping algorithm, 600 cases, 600 samples)
Recommendability (3-item)	0.53	Path coefficient: 0.73 (32.88) Absorption: 0.04 (0.60) Dedication: 0.45 (6.49) Vigor: 0.14 (2.19) Empowerment: 0.52 (6.73) Citizenship Motivation: -0.04 (0.71)
Intention to Stay (3-item)	0.46	Path Coefficient: 0.68 (28.85) Absorption: 0.10 (1.40) Dedication: 0.56 (6.76) Vigor: 0.18 (2.38) Empowerment: 0.42 (4.92) Citizenship Motivation: -0.04 (0.55)
Creativity (1-item)	0.41	Path coefficient : 0.64 (19.31) Absorption: -0.16 (2.11) Dedication: 0.26 (2.75) Vigor: 0.31 (3.64) Empowerment: 0.20 (2.29) Citizenship Motivation: -0.26 (3.30)
Productivity (1-item)	0.42	Path coefficient : 0.65 (20.29) Absorption: -0.11 (1.40) Dedication: 0.22 (2.02) Vigor: 0.40 (4.48) Empowerment: 0.15 (1.71) Citizenship Motivation: -0.30 (4.00)
Problem-Solving (1-item)	0.36	Path coefficient: 0.60 (18.28) Absorption: -0.10 (1.20) Dedication: -0.04 (0.34) Vigor: 0.41 (4.15) Empowerment: 0.34 (3.62) Citizenship Motivation: -0.37 (4.47)

KNOWN GROUPS COMPARISON

Appendix 6 details the procedures and results of the known-groups comparison test. Results are summarized in Table 10.

TABLE 10: KNOWN GROUPS COMPARISON RESULTS

Input Measure	Explained Variance	Path Coefficient / Item Weight (t-value) (Bootstrapping algorithm, 600 cases, 600 samples)
Employment Status	0.06	Path coefficient: -0.26 (5.29) Absorption: -0.44 (2.02) Dedication: 0.69 (3.03) Vigor: -0.14 (0.57) Empowerment: 1.10 (6.13) Citizenship Motivation: -0.24 (1.07)

H5 hypothesizes that part time employees will have greater engagement levels than full time employees. As the dummy variable created gave full-time employees a value of one and part time employees a value of zero, a negative path coefficient between employment status and employee engagement is expected, and H5 is confirmed.

It is also notable that once again, placing employee engagement in relationship to a new variable produces a different set of indicator weights. This supports the assertion that employee engagement is meaningful above and beyond its component parts and, it can be inferred, when measured as a single construct, employee engagement can be explained by a wider variety of antecedents than would any single component or sub-set of its components.

DISCUSSION III: SCALE VALIDATION

In sum, the results above support the present study's conceptualization of employee engagement and instrument to measure it. Table 11 consolidates the findings from the instrument test.

TABLE 11: SCALE VALIDATION DISCUSSION

Test	Results	Comments
Reflective measures	Reliability > 0.70 Significant and strong correlations	Convergent validity of items confirmed
Empowerment formative validation tests	One violation: competence small and not significant in weighted formative indicator model	Strong results; retain indicator as it appears significant in structural path model
Employee engagement formative validation tests	Absorption small and insignificant in both models; citizenship motivation negative, small and insignificant in structural path model	Not surprising to have violations in complex construct. Violations not cause for removing constructs yet; rather, they are cause for additional analysis
Nomological validity (hypotheses tests H1, H2, H3)	H1, H2 confirmed H3 not confirmed	Expected relationships with antecedent and outcome strongly support nomological validity. Lack of confirmation of moderating hypothesis does not disconfirm validity; rather calls into question the reasoning behind the hypothesis.
Nomological validity (additional outcome measures)	All results significant; indicator weights varied by outcome	Expected relationships with outcome measures support nomological validity. Varying weights of indicators supports retaining all sub-dimensions, and suggests construct meaningful above its component parts.
Discriminant validity (hypothesis test H4)	H4 confirmed	Confirms employee engagement is distinct but overlapping with organizational commitment.
Nomological validity (hypotheses tests H1, H2, H3)	H1, H2 confirmed H3 not confirmed	Expected relationships with antecedent and outcome strongly support nomological validity. Lack of confirmation of moderating hypothesis does not disconfirm validity; rather calls into question the reasoning behind the hypothesis.

Reflective measures are shown to be reliable, which is not surprising as these items were derived from prior research. A formative measurement model for psychological empowerment was validated in the employee engagement context as discussed above. Discriminant validity with organizational

commitment was confirmed. Hypotheses 1 and 2, which aimed at establishing nomological validity by testing directionality of relationships with expected antecedent and outcome measures, were confirmed. These findings support the validation of employee engagement as defined and measured.

However, some unexpected findings were observed. First, not all Cenfetelli and Bassilier (2009)'s formative measurement tests were passed for employee engagement. In particular, the absorption and motivation sub-dimensions appeared as insignificant in one or both of the validation models. As described above, due to the complexity and size of the construct, this finding does not automatically invalidate the scale nor suggest that items or sub-dimensions should be dropped from the construct. Rather, additional results such as the explained variance of alternative outcome measures suggest that all sub-dimensions have a role to play in employee engagement, and that removing one or more would not only change the meaning, but also potentially reduce the explanatory power of the instrument. For instance, both absorption and motivation were significant in explaining creativity. Perhaps these two factors are more relevant in explaining task-related outcomes than in word-of-mouth behaviors. These findings do suggest opportunities for future research including scale refinement, as discussed below.

Also, a moderation effect between employee engagement and trust in top management was not confirmed. The lack of confirmation of this particular hypothesis does not automatically disconfirm validity since all other expected relationships in the research model were confirmed. An alternative explanation is that the untested proposition from Macey and Schneider (2008) on which the hypothesis was based was incorrect. For example, because conceptual confusion between mediation and moderation effects can occur, it is possible that a mediation relationship exists between employee engagement and trust in top management instead of a moderation relationship (Baron and Kenny, 1986). Moderation describes relationships where a third variable affects the directionality or strength of a relationship between an independent and dependent variable, whereas mediation describes relationships where a third variable represents a mechanism through which an independent variable influences a dependent variable. Macey and Schneider (2008) theorize that trust in top management moderates the relationships between employee engagement and its antecedents, as well as between employee engagement and its outcomes.

Since trust in top management may precede employee engagement, a direct effect between the two may exist. To test this logic, moderation and mediation relationships were conducted and compared (see Appendix 7). A significant partial mediation relationship was found between trust in top management and employee engagement in explaining recommendability.

Finally, although the statistical power of the sample mitigates concerns regarding non-response error, the finding that late responders exhibit higher engagement levels than early responders is perhaps counterintuitive. A potential explanation lies in the way in which the weighted sum employee engagement measure was calculated, in that negative weightings were used to generate the absorption and motivation components. Keeping other factors equal, an employee with less motivation will have a higher employee engagement level than a more-motivated counterpart. Less motivated employees may be, well, less motivated to complete a survey. Another potential explanation is that late or non-responders are so engaged with their work that they do not want to interrupt it to complete a survey.

CONCLUSION

KEY FINDINGS

In current literature, no single conceptualization of employee engagement or instrument to measure it exists. Further, debate exists regarding whether employee engagement is a unique and meaningful idea, or whether it has been adequately described by other pre-existing constructs. The present study presents the research question, "what is employee engagement and how should it be measured?" and uses a multi-phase approach based on validation methods accepted in marketing and IS literature to answer this question. Key findings from each phase are reiterated below.

The goal of conceptualization is to deliver a clear, specific and measurable definition of a construct, drawing from both research and practice. A review of academic and practitioner literature was presented, as well as finding from interviews with practitioners in employee engagement. In this phase it was demonstrated that no clear conceptualization or definition of employee engagement exists, and,

logically following, there is not a commonly-accepted measurement instrument for the construct. However, several common themes regarding the character of employee engagement are identified:

1. Employee engagement is a new idea distinguished from other constructs.
2. The focus of employee engagement is both individual and organizational; that is, employees engage with their work in the context of their organization.
3. Employee engagement levels can likely be influenced by organizational practice or change; however, it is beyond the scope of the present study to test this proposition.
4. Employee engagement has emotional, intellectual and motivational facets.

Building on these observations and referencing the tripartite theory of attitudes, this study proposes that employee engagement is an attitude regarding one's work within one's organization, comprising a perception of psychological empowerment; feelings of vigor, absorption, and dedication; and motivation to act, both within and extra-role, in the service of the organization's goals. A research model and hypothesized relationships are presented to establish the construct's position in a nomological network.

Items to measure the sub-dimensions of employee engagement were drawn and adapted from prior literature. These items, along with items from an antecedent and overlapping construct, underwent a rater review process comprising item rating and bucketing exercises. This process resulted in the elimination of 18 of 64 items from the instrument and confirmed a degree of overlap between the organizational commitment construct and employee engagement. Measurement models were specified for each construct. Employee engagement was modeled as a multi-order, formative construct comprising first-order, reflectively-measured constructs of vigor, dedication, absorption and citizenship motivation; and the second-order construct psychological empowerment, itself formatively-comprised of first-order reflectively-measured sub-dimensions: meaning, competence, self determination and impact.

The instrument test was conducted online in a 3236-employee private educational firm in the United States over a three-week period in October, 2012. 2342 survey responses were received,

constituting a 72% participation rate. The SPSS toolkit was used to test reliability of first-order, reflectively measured constructs, and Smart PLS (Ringle et al., 2005) was also used to validate empowerment and employee engagement. Formative measurement was evaluated using six tests recommended by Cenfetelli and Bassilier (2009). Key results, summarized in the text above and detailed in the appendices, include:

1. No individual items were identified as problematic or removed from the instrument.
    a. Reliability scores for all reflectively-measured constructs exceeded 0.70.
    b. Inter-item correlations were all significant.
    c. Item-construct correlations were all significant and exceeded 0.70.
2. A formative measurement model was validated for psychological empowerment in the employee engagement context, with only minor violations of the formative measurement tests observed.
3. A formative measurement model was validated for employee engagement. Although some sub-dimensions failed to pass all of the formative measurement tests with respect to the recommendability outcome, other results suggest that all indicators are meaningful components of employee engagement. As a result, it is concluded that employee engagement is meaningful above and beyond its component parts and, when measured as a single construct, explains a wider variety of potential outcomes than would any single component or sub-set of its components.
4. Nomological validity is supported by confirming hypotheses articulated in the research model; specifically, psychological contract fulfillment positively explains employee engagement, and employee engagement positively explains recommendability. Because trust in top management also positively explains recommendability, the fact that the interaction effect between trust in top management and employee engagement was not found to be significant does not disconfirm validity; it rather suggests that the interaction hypothesized by Macey and Schneider (2008) is incorrect, and that a mediation relationship is more likely.

5. Discriminant validity was established by observing a correlation of 0.44 between employee engagement and organizational commitment, within the expected range of 0.40 to 0.70. This also confirms that employee engagement is not simply a re-hashing of organizational commitment.
6. A known-groups comparison further validated the scale and confirms that part-time employees exhibit greater engagement levels than their full-time counterparts.

In sum, the present study presents and validates a conceptualization of employee engagement and an instrument to measure it. Contributions to research and practice, and suggestions for future research, conclude the present study below.

Contributions to Research and Practice

First and foremost, the present study develops and validates a clear conceptualization of employee engagement and a self-report scale by which to measure it, filling a gap cited in several recent studies (e.g., Cowardin-Lee and Soyalp, 2011; Markos and Sridevi, 2010; Macey and Schneider, 2008). As a byproduct, the present study addresses the debate regarding whether employee engagement is a construct of unique meaning or a re-hashing of old ideas, and demonstrates that the present study's definition of employee engagement as an attitude comprising a perception of psychological empowerment; affects of vigor, dedication and absorption; and motivation to act, both within- and extra-role, in the service of the organization's goals, is a different idea and relevant beyond its component parts.

A clear definition of and scale to measure the engagement construct enables further research regarding its relationship with other important factors in management literature, including antecedents such as recognition programs, overlapping constructs such as job satisfaction, related constructs such as organizational and social support, and individual outcomes such as creativity and productivity. A more comprehensive understanding of engagement at the individual level also facilitates the development of

constructs to bridge individual engagement levels and firm-level measures (Attridge, 2009), including innovation, customer satisfaction and loyalty, and financial measures.

To our knowledge, the present study is the first to empirically link employee engagement and psychological contract fulfillment. It is also the first to test components of Macey and Schneider's (2008) theoretical framework for employee engagement. As a result, it is demonstrated that the relationship between engagement and trust in top management in explaining outcomes is mediation rather than moderation.

To our knowledge, the present study is the first to model the psychological empowerment construct formatively in the employee engagement or any other behavior sciences context.

For practice, the present study provides a benchmark for firms evaluating approaches to measuring engagement. While some companies are currently measuring engagement, many are not (Attridge, 2009), and this study serves as a foundation for directly and consistently measure the engagement of individuals. Finally, practitioners may reference findings described in Appendix 1 as best practices in employee engagement.

SUGGESTIONS FOR FUTURE RESEARCH

Several opportunities for future research emerge from the present study:

1. Although the present study asserts that employee engagement levels can likely be influenced by organizational practice or change, temporal stability of employee engagement must be assessed in a longitudinal fashion. It is recommended that future research pursue a longitudinal analysis of employee engagement as defined and measured in the present study to assess both its temporal stability and the factors which might influence its change.
2. It is recommended that the instrument be tested in multiple experimental settings, and across a variety of firm-sizes and industries, to both assess stability and to strengthen the scale. Specifically, such tests will enable (1) cross-validation of the scale and (2) establishment of scale norms (MacKenzie et al., 2011).

3. Additional refinement of the citizenship motivation sub-scale may strengthen the formative measurement model of employee engagement. Reducing items may also make the instrument easier to use and potentially increase participation rates. Ives et al. (1983) provides a guide.
4. The present study's analysis techniques are likely too complicated to be used in most practical settings. Establishing a simpler scale and analysis approach based on the present study's definition of employee engagement will facilitate direct and non-proprietary measurement of employee engagement by practitioners.
5. Several ideas emerged from practitioner interviews regarding potential future studies enabled by the development of an instrument to measure employee engagement, including relationships with potential antecedents such as an employee's generation and whether or not the employee is an executive leader. Similarly, although full-time vs. part-time employment status explained some variance, perhaps other known groups will demonstrate more substantial differences in engagement scores. Finally, although employee engagement is generally discussed as a positive attribute, future research should explore whether there are contexts in which employee engagement is detrimental to individuals or firms.
6. Additional studies should explore other potential moderator variables that effect employee engagement's relationship with outcomes.
7. Additional investigation of potential overlap between the vigor and citizenship motivation constructs may be appropriate as vigor describes a level of energy and motivations in theory reference a directed energy.

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APPENDIX 1: PRACTITIONER INTERVIEWS

Ten practitioners in employee engagement were interviewed for the present study. Practitioners were identified based on attendance at professional employee engagement conferences and personal knowledge of the research team. Interviews were conducted with consent via telephone, ranging from 60 to 90 minutes apiece. Interviews were semi-structured in format, probing definitions of employee engagement, descriptions of engaged employees, characterizations of the construct such as stability over time, relationships to overlapping constructs and measurement.

Three interviewees were consultants working for firms offering employee engagement consulting services to other corporations. One was an independent consultant in employee engagement whose prior experience includes running an employee engagement program at a multi-billion dollar software company. Six were senior managers in large global companies whose job responsibilities include employee engagement programs. Industries represented by the interviewees included retail, automotive, consumer products, financial services, and software. Eight practitioners were U.S.-based; two were U.K.-based. Findings regarding key areas of interest are summarized below, and illustrative quotations included.

DEFINITION OF EMPLOYEE ENGAGEMENT

Interviews confirmed a lack of consensus regarding a definition of employee engagement. While each interviewee had a personal definition of employee engagement, only one practitioner could cite a definition accepted formally by their corporation.

Describing employee engagement as relating to individual employees, practitioners discussed engagement as an employee's positive approach towards their work, firmly rooted in alignment with the corporation's objectives, and associated with motivation and satisfaction.

> *"My view is it's an employee's understanding of what the company they work for is trying to achieve and the role that they play in helping the company achieve that ambition; and therefore*

putting in any effort that is required to help deliver that because of the reward that they get at the end of it which is more fulfilling job, probably more money, a secure job, and an environment that they're proud to work in." – Independent Consultant, Employee Engagement and Communications

"For employees, it's about feeling part of something – what the direction of the business is, where the business is going, what it needs to do to get to where it needs to be in two, three, five years' time -- whatever subject it might be, and what the employee's role in that actually is. The employee can then get a sense of involvement, feel part of the decision making maybe within the organization, and I think that then brings motivation and satisfaction at work." – Director, Communications, U.K. financial services corporation

"It's when people, when employees feel motivated to do their best because they feel ownership in the company and in its brand and that they feel that that there is a two way communication as they could be heard so they feel that they can make a difference ... To really give your whole self to your organization, that's what engagement means." – Director, Communications, U.S. financial services corporation

"Contributions to the company's success on the part of the employee and personal satisfaction in their roles" – V.P., Digital Strategy, consulting firm

"Engagement is motivation." – Director, consulting firm

"It's the sum of the experiences, all of the things about the work experiences, the social experience, the personal, emotional, social interactions, all of those things that are a result of the job and the elements of the job and the environment that sort of add up to how 'engaged' I am. As

most people refer to, we do think that has an impact on the kind of discretionary efforts that people give us… It really is sort of, the net of your emotional disposition and how if you are willing to care about influencing the outcome of the company." – Senior V.P., Employee Engagement & Recognition, consulting firm

"Employee engagement is the level of connection that an associate would feel with their company in terms of certain exhibited behavior or certain connections to the company, how hard they work for the company, what is their belief in the company, all of those kinds of things." – Employee Relations Manager, retail corporation

Perhaps because of their formal roles in facilitating employee engagement, two practitioners defined employee engagement from the perspective of the corporation. They discussed employee engagement in terms of organizational processes such as communication and organizational change.

"Engagement is moving people and providing a new sort of experience that creates new beliefs that drive new actions and generate new results." – Senior Manager, Communications, consumer products corporation

"It's designed to get employees to support the direction of the company and be engaged in the day to day business activities of the company in a positive way… In my view it's just another word for something we have always tried to do, which is drive employees to take action in support of the company." – V.P., Communications, automotive corporation

Focus of Employee Engagement

Many practitioners described employees engaging at multiple levels. According to practitioners, employees can and do engage with: the work they are doing; their physical environment; their peers, work teams or social environments; immediate supervisors; corporate missions, values; objectives and brands;

the communications process; customers; and even themselves. Most agreed that several levels of engagement would manifest simultaneously in engaged employees. The most common cited were engagement with individual work or roles, their direct supervisor, their social environment, and corporate objectives.

> *"The first thing they are engaging with is their job responsibilities" – V.P., Communications, automotive corporation*

> *"You want people to be focused on their job and be engaged in what they are doing but you also want them to have a higher sense of why they are doing it" – Director, Communications, U.S. financial services corporation*

> *"The first line of site for any employees is manager; their manager will make or break their experience in a work place." – Senior Manager, Communications, software corporation*

> *"How engaged am I in my overall work experience -- more and more we are really seeing it as a social system because you know people do business with people." -- Senior V.P., Employee Engagement & Recognition, consulting firm*

DESCRIPTIONS OF ENGAGED EMPLOYEES

According to interviewees, engaged employees feel excited to do their work; they feel empowered and involved. They feel pride in the work they do for their corporations; they feel a sense of higher purpose and meaning in their work. They have a sense of well-being in their workplace. They apply energy and effort towards their work in the context of the broader business objectives. They are motivated to: contribute to the business in a positive fashion, perform better, stay extra hours, go the extra

mile, support colleagues, collaborate with one another, take personal ownership and initiative for achieving individual and collective goals, and proactively engage in problem solving.

> *"I would say that the profile of an engaged employee is someone who certainly does their job to the best of their ability but regularly looks beyond the parameters of their specific assignment to see (a) how it affects others and (b) how other things affect them; and as a result feels compelled to get engaged in those types of activities like ask questions like: why does it happen this way? And what does the customer really want? And how can we do a better job?" – V.P., Communications, automotive corporation*

Conversely, disengaged employees exhibit disconnection and disenchantment with their roles, workgroups and peers, for example through body language.

> *"I was just in a meeting this morning where I looked around the table, and I can tell you exactly who is interviewing for another job. It's body language. It's the way people behave and act around each other when they're no longer involved." – Senior Manager, Communications, software corporation*

In sum, most of the proposed dimensions and sub-dimensions of engagement were explicitly discussed by practitioners. As noted above, motivation was a common descriptor of engaged employees. Concepts described that were related to vigor included excitement, effort and energy. Related to dedication were loyalty and pride. No interviewees discussed ideas related to absorption. Empowerment-related concepts included meaning, described as purpose at the individual and collective levels, as well as the ability to determine how one performed one's job (self determination). Relating to impact, the ability to influence the larger system was mentioned by one practitioner, and implied in discussion about moving one's job or the business forward by another. Competence was alluded to in one interview in the context of belief in one's self; another referenced self-efficacy, a correlate of competence.

CHARACTERISTICS OF EMPLOYEE ENGAGEMENT

No consensus existed among interviewees regarding the stability of employee engagement. Some said that they would expect the construct to remain relatively stable or trend in a particular direction in the absence of significant environmental change. Others discussed the construct as more fluid and sensitive to influences, both within and outside of the work environment. Most agreed employee engagement was something that could be influenced positively or negatively by business practices.

> *"I think it should be something which is stable over time. If a company has employee engagement as part of its DNA so, you know, it's 'engaged employees is the way we do business around here'." – Independent Consultant, Employee Engagement and Communications*

> *"You have two sides, some people stay engaged with the business and move forward [from change] quite quickly and others will go through that process of assessing everything and then hopefully move back into the engage box again... I think people have to go through that process sometimes before they move back into that area within themselves. But businesses can make that process easier or quicker." – Director, Communications, UK financial services corporation*

> *"I don't think there is any doubt that it fluctuates, and I think that's one of the reasons that we are looking a little bit more at core values and what kinds of things are most relevant to people based on the value system because it's a little less variable." – Senior V.P., Employee Engagement & Recognition, consulting firm*

Several practitioners discussed engagement as a continuum, comprising a range from disengaged to fully-engaged. At the engaged end of the spectrum, two practitioners described a distinction between passive and active engagement, where passive engagement might comprise participation in polls and events, and active engagement comprises willingness to take ownership or behave proactively in activities to benefit the company such as collaboration and problem-solving.

"You have a lot of different stratifications in terms of where you are in the employee engagement scale … when you don't have a fully engaged employee their levels of engagement might be in flux on a daily, weekly or monthly basis and it could be if they love their boss that week or they feel like they are stressed out. So I think that middle area of engagement is constantly in flux." – V.P. Digital Strategy, consulting firm

"It goes from passive to active engagement on a scale. So passive engagement I would put in the categories of responding to a poll, offering an opinion on a blog, sharing your thoughts with someone else in some other format. To me that that's somewhat passive, it's still engaged but it's somewhat passive. Active engagement is taking on responsibility for the problem or issue and solution, and actively engaging with others in the company to drive to a solution." – V.P., Communications, automotive corporation

Several interviewees described engagement in terms of an ongoing two-way relationship, nurtured by both parties through communication. As will be described below, and consistent with Robinson et al.'s (2004) findings from practitioners, reciprocity in areas such as trust emerged as a common theme underpinning employee engagement.

"It's a two-way relationship really, between the employee and the employer." – Director, Communications, U.K. financial services corporation

ORGANIZATIONAL CONTEXTS AND EMPLOYEE ENGAGEMENT

Several practitioners discussed organizational contexts that influence levels of or changes in employee engagement. Organizational factors seen as potentially influencing levels of engagement included: industry, company size, geographic distribution of team members, and the local country or regional culture in which the operation resides.

"There is a lower expectation in terms of employee commitment and engagement in a highly regulated environment because there is an understanding amongst associates that there is only so much we can do in a highly regulated environment … Employee engagement was kind of pumped up, pumped down by virtue of the industry that these companies found themselves in. Also, we worked with a lot of pharmaceuticals where there is a lot of mergers and acquisition going on. That kind of flux really disrupts any consistent view of short term or long term when it comes to employee engagement, because they realize that the future is not predictable." – V.P. Digital Strategy, consulting firm

The most frequently cited context was that of organizational change. Practitioners who discussed change uniformly indicated that in the absence of proactive efforts on the part of the corporation, change would result in a decrease in employee engagement. Organizational changes mentioned were: executive leadership change, mergers, acquisitions and divestitures, redundancies, bankruptcy, and hard economic times.

"So as much as there essentially is going to be change, that's when your engagement messages have to get stronger or have to adjust with the times because it's absolutely self-perpetuating. If you don't continue to nourish it and water that plant it's not going to grow." – Director, Communications, U.S. financial services corporation

"I have found that there are a couple of things that can dramatically impact engagement negatively in particular. When you sell a piece of your business, or your business merges, or you have a CEO change, or you have significant layoff events." – Senior Manager, Communications, consumer products corporation

However, practitioners also suggested that engagement is not completely dependent upon the organizational context. While engagement may be easier in a more stable context, many emphasized that engagement is not only applicable during good times.

> *"People can be engaged even if they're not happy about something. For example, say during a redundancy, there was a certain team or an area … people may see colleagues leaving their jobs. But if they understand why their jobs were eliminated and what the long-term outlook for the organization is, they may still be engaged with the organization because they know the rationale for the decision-making, and they can have a voice and say what they want to in the business if they like, and there is facilitation for that. But they wouldn't be satisfied or happy." – Director, Communications, U.K. financial services corporation*

> *"The outcomes of engagement are positive, but it doesn't necessarily always mean that the employee feels positively about the engagement. But the end result of the engagement is positive -- by that I mean in a typical feedback loop you might be getting. If you get good engagement, you may get negative feedback on the direction of company. But through the discussion that would ensure you could make adjustments to that direction and have a positive outcome for the company based on that engagement." – V.P., Communications, automotive corporation*

OVERLAPPING CONSTRUCTS

Interviewees were asked if employee engagement was the same idea as older concepts such as job satisfaction and organizational commitment. Most said engagement shared attributes with these ideas but was, in and of itself, a different idea. Job satisfaction was discussed in terms of satisfaction with one's immediate work tasks, as well as compensation and benefits. One practitioner described it as an antecedent that made engagement easier; two discussed it as one level of engagement. A key distinction cited was that engagement relates to corporate objectives, whereas job satisfaction is not related to them.

"There's a difference between do I find what I'm doing completely satisfying and actually do I do what I do because I know the value that it brings to the company and therefore the ultimate value that it brings to me." – Independent Consultant, Employee Engagement and Communications

Organizational commitment was similarly described: one practitioner saw it as a specific level of engagement; another discussed it as a similar idea but distinct from engagement and missing a role-specific component central to engagement.

"There are people who hate their managers and don't perform well or who hate their environment and thus are not engaged, but they love the company, they love what the company stands for, they love what the company believe in." – Employee Relations Manager, retail corporation

Although no interviewees specifically referenced organizational identification, a component of organizational commitment, several discussed the related idea of alignment with corporate values as associated with engagement.

Practitioners discussed a number of other constructs they perceive to be similar to or confused with employee engagement. From the individual perspective, these included morale, defined as a positive emotional state regarding one's work environment, and flow. From the corporate perspective, employee engagement was described as similar to change management.

ANTECEDENTS (DRIVERS) OF ENGAGEMENT

Most practitioners referenced multiple drivers or elements leading to engagement: one practitioner described precursors as a "recipe." Elements leading to engagement include: reciprocal trust, two-way organizational communication, recognition, satisfaction with pay and benefits, access to

training, support of personal or professional development, strong communication from line managers, and safety to express one's true self in one's job.

Several practitioners cited the importance of trust as a precursor of employee engagement. Interviewees referenced trust as a reciprocal relationship working in both directions: employees must trust their employers, and employees must feel trusted by their employers, in order for engagement to manifest. Managers, both direct supervisors and senior leaders, are the primary focus of the trust relationship for employees.

> *"Trust is fundamental. Employees need to trust that their employer is doing the right thing by them in terms of the vision and the strategy and the direction that the company's going. They have to trust that the leadership knows the right things to do. They have to trust their line manager in terms of the lineman knowing that their line manager is being open and candid with them about what's going on in the company or their division or what they're doing. And, it's a one to one with their colleagues: they have to be able to trust each other. Because if there's no trust then everybody's working in a silo, protecting themselves and you've got no guarantee that everybody's then going in the same direction. And in fact they're actually working against each other rather than working with each other. And I think it has to be shown to come from the top." – Independent Consultant, Employee Engagement and Communications*

> *"You have to trust your employee: that's another engagement piece… It's like a two-way relationship. You can't be in a one-way relationship. Because eventually you're going to realize this – this individual doesn't care about me and in the case of the corporation, they don't care about me." – Senior Manager, Communications, software corporation*

> *"I know my manager believes in me; therefore, I believe in myself. I work hard because I don't want to let my manager or myself down." – Director, consulting firm*

When asked directly, most practitioners saw trust and safety as highly related. For example, one practitioner discussed safety to express one's preferred self as a byproduct of trusting managers or the corporation to honor corporate values, such as a commitment to diversity.

> *"At many of our stores we have associates that are transgender and that can be a very daunting process just in of itself, but then in terms of how does that person get treated at work, do they feel okay to go to work outside of even their immediate managers, because I think this is a part of where the company has a very strong part to play in what it will and won't tolerate." – Employee Relations Manager, retail corporation*

Many interviewees specifically referenced the importance of two-way organizational communication as a mechanism for facilitating employee engagement. Perceptions of receiving authentic, transparent communications from the organization, as well as a perception of being heard by the organization, are believed to be fundamental to the reciprocal trust relationship underpinning employee engagement.

> *"Employees need to feel that there are multiple ways for them to provide feedback and channels to speak out to make that engagement a little bit more concrete." – Director, Communications, US financial services corporation*

Organizational communications tools utilized to promote trust and engagement include: executive communications, feedback polls and surveys, focus groups, celebratory events, and intranet stories highlighting engaged employees. Two consultants further described social media technologies as tools that their clients use to enable enhanced engagement. However, several interviewees clarified that communications technologies and other engagement tools would not generate engagement; rather, technologies are likely to amplify engagement levels which already exist. Whether the tool improves engagement is dependent upon how the company uses it.

"Tools in and of themselves don't create engagement. They amplify the engagement already there. Engaged employees will get excited about videos and watch them. Disengaged employees just think 'why are we wasting money on this' and feel less engaged." Director, consulting firm

"We had a innovation platform and the clients who had control over that medium would say, 'well we are not going to launch any innovation platform unless we really have buy in to take the best ideas and actually implement,' because they were worried that just asking people to come up with great ideas and doing nothing about them was going to actually set them back rather than move them forward." – V.P., Digital Strategy, consulting firm

Recognition was another frequently cited antecedent of employees engaging. Recognition could occur in numerous forms, from large-scale awards to small acknowledgments by managers for a job well done.

"Being recognized and rewarded for their contributions is pretty consistently in most engagement measures and models as one of the top five or so, depending on the survey, indicators of overall engagement. So it's highly correlated with how engaged, by most survey measures, employees are with their jobs." -- Senior V.P., Employee Engagement & Recognition, consulting firm

"Recognition for doing what you've done to me is vital. And it doesn't necessarily have be the chairman's award or the president's award or a bonus or you know, a bloody certificate or whatever it may be. Recognition comes in every single from or guise." – Independent Consultant, Employee Engagement and Communications

"Executives don't have time to tell their employees' everyday how great they are. They don't have daily affirmation session, but their physical environment is the daily affirmation." – Senior Manager, Communications, software corporation

Job security was also mentioned as a driver for engagement, although many practitioners felt that in many professional contexts, the expectations of job security had been reduced due to persistent economic challenges in recent years. Others noted that job security might play a different role in engagement in different job roles or industries.

Notable Employee Populations and Engagement

Some practitioners hypothesized that engagement may differ across different categories of employees. For example, job categorization (e.g., blue collar vs. white collar), job level and generational classification (e.g., Baby Boomer, Gen X, etc.) were mentioned as potential populations where variance in engagement might occur.

> *"There is an engagement model for every population." – Senior Manager, Communications, software corporation*

Four interviewees explicitly discussed leaders as a population of interest, as decision-makers, and as managers both interacting with and setting the tone for other employees.

> *"The executive is engaged in wanting to know what motivates his own people on the floor and what motives the customers to come back in and engage." – V.P., Communications, automotive corporation*

> *"And so to the extent that we can reach out the leaders and help them understand the value of introducing these ideas and driving a particular set of outcomes that we've defined, that leader can create those experiences to build those beliefs to try those actions and generate those results. A lot of the times, they don't feel empowered and we can help them by providing simple avenues of support." Senior Manager, Communications, consumer products corporation*

Three interviewees asserted that generational differences may play a role in how employee engagement manifests. Specifically, generational differences could result in different expectations of the two-way employment relationship that underpins employee engagement. These differences can result in different antecedents of engagement weighting differently.

> *"In the new generation, which I love to call generation me, there is no team, there is all I. What are you going to do to take care of me? What am I going to do to make me special and important, and how am I going to build my personal brand?" – Senior Manager, Communications, software corporation*

> *"Ultimately the goal is to be able to understand what this is and use it to impact business in a positive way. But before you can get there, you have to come up with some way to actually measure it. And what the variables are or the impact on the variables will be different based on generation." – Employee Relations Manager, retail corporation*

OUTCOMES OF ENGAGEMENT

Engaged employees are likely to exhibit a number of behaviors of potential benefit to their firms, according to interviewees. These include: going the extra mile, speaking highly of the company, collaboration, proactive problem-solving, staying late, putting in extra hours, assisting colleagues, sharing knowledge, offering creativity, participating in organizational dialogue, and more.

> *"They go the extra mile. They talk positively about the organization; whether that would be in general or publicly to friends or colleagues, so they are having those positive conversations. They can be huge advocate for the business. They value the brand of the business that they work for. They collaborate with others a lot more than less engaged employees would … They are*

constructive rather than being destructive." – Director, Communications, U.K. financial services corporation

They bring new ideas to the table and challenge the status quo; take ownership for results, not just activity; take on responsibility for transforming the business both large and small; communicate openly and debate ideas constructively to increase speed and quality; support one and other; and collaborate as the business warrants for success … If you are engaged you may be doing twelve things. You know you are more eager to offer up suggestions. You are passionate about your words, and if you have ideas that you think can improve upon a process or a product, you are more likely to share them." – Director, Communications, U.S. financial services corporation

"Engaged people are very authentic in their communications and willing to commit themselves and help out their peers, and reach a higher level performance" – V.P., Digital Strategy, consulting firm

Interviewees also cited a range of benefits related to employee engagement at the firm level. Engaged employees are believed to lead to: goal attainment, customer satisfaction, growth, increased performance, productivity and revenues, business transformation, innovation and retention.

MEASUREMENT

All interviewees agreed measuring engagement is important to firms and had some experience with engagement metrics. The six non-consultant interviewees indicated that their firms were measuring employee engagement as part of a survey conducted either every 12 or 18 months. Uniformly, their corporations hired external firms to conduct on-line, confidential, self-report surveys ranging from 80-110

questions. Some surveys included a write-in comment field. Some firms offered the survey in multiple languages. Items referenced in measurement related to engagement included: self-reported effort, job satisfaction, likelihood of recommending the corporation as an employer, understanding of the corporate strategy, perception of how employees were being treated by their managers and the business, and development opportunities for individuals.

While many counted turnover or self-reported intention to stay with the organization as a measure of engagement, one questioned the metric as too dependent upon economic conditions to adequately track engagement trends.

> *"There are very often questions in there which they'll ask like things like intent to stay. Quite frankly, you can't go round giving yourself a pat on the back as an employer if you get a response that says 85% of our employees have intent to stay in the next two to three years. The job market's shifted. Nobody's going to willingly leave. That doesn't mean that they're engaged and happy employees. It just means that the environment and the market pressures out there are so bad they have no intention of leaving." – Independent Consultant, Employee Engagement and Communications*

Surveys are ubiquitous, but many practitioners agreed that annual engagement surveys may be supplemented with measures of engagement.

> *"We don't really measure engagement I think in such a way that truly gets at the engagement… I think you have to look for engagement in different ways otherwise you'll miss the real value of it. If you only look at results, you miss something… Those results are often financial or business metrics or it's an engagement survey but I think those things lie to you. I'm a big believer in the false positive when it comes to engagement." – Senior Manager, Communications, consumer products corporation*

"I do not think [our survey] is targeted at engagement. I do think it does measure some components of engagement…I do think an overall engagement score could be helpful, if a company could figure out a good way to measure it. I think that a lot of times people take employee surveys inappropriately in my opinion as a measure of engagement… That's what they do at most companies because people haven't really defined the construct well enough to understand that engagement is not just about morale, it's just not about any one group of things. The better measurement you have of it, you can begin to really have some impact on your bottom line. Having a good measurement engagement could be a good way to predict your turn over cost, or if you had a good measure of engagement then you could see if there's a global trend how you are falling short in some particular area… A measure of engagement would be very, very, very useful if companies understood it well enough and were willing to make the leap to do it. So you have your turnover cost that you recoup, you have productivity that could possibly be impacted." – Employee Relations Manager, retail corporation

For several interviewees, the translation of motivation into action or behavior was a key characteristic of engaged employees; in other words, observable in-role and extra-role behaviors are evidence of employee engagement; more reliable than self-reported measures such as surveys.

"I really think there is a difference between filling out a survey and actually taking action." – V.P., Communications, automotive corporation

Many discussed alternative metrics to survey results and participation levels, including: participation in and satisfaction with employee meetings and events; participation in opinion polls and online discussion threads related to critical business issues; social media participation; participation in related programs like recognition programs; 360 degree feedback for leaders; focus groups; and intranet story readership.

"There are other ways that do measure engagement though, whether it is employees showing up at meetings, whether there are a lot of conversations that they have with each other there; we have a social media site that's literally a measure of whether they are getting engaged with each other, they are talking to each other. We also administer weekly surveys where we ask employees questions about the business and their opinions on things … we are not really looking at it as a holistic engagement measure, rather, we tend to look at it are they engaged in the particular topic at the moment... The true measure of engagement is people in discussions with one and other focused on business improvement or selling the products and service that your company is trying to move along." – V.P., Communications, automotive corporation

Numerous interviewees cited the importance of measurement as a tool that, like other tools, can amplify existing levels of engagement or disengagement, depending on how the company responds to feedback received. Critical components of making measurement amplify engagement are to return results to employees promptly, and communicate plans to respond to the feedback, along with regular updates on the progress of these plans over time.

"What they want to see is the ability to say that the management is actually asking for their opinions and actually doing something about it. So what's interesting in a number of studies that we would read and we got involved in is that you can't survey employees about how the organizations can do better, unless you are willing to do something about it... surveying employees about their opinions and keeping with the status quo was worse than actually not you know lead to lower levels of satisfaction than not surveying them at all." – V.P., Digital Strategy, consulting firm

"What's really important with a survey is that if you post the content and what you're going to do with it." – Senior Manager, Communications, software corporation

"By the time everybody's has the data cut this way, that way and the other way, you're six to eight months down the road, and employees have even forgotten they've filled out one of these surveys let alone have any interest at all in what the results are. And information that's six months old is, in this day and age, with the way things move so quickly, actually has no value. The results need to be surveyed immediately in order for the information to be useful and something you can do something with." – Independent Consultant, Employee Engagement and Communications

"In the area of engagement I think the big issue is, the measurement really only matters if you do something about it. One of our consults to leadership all the time is that don't measure it if you don't want to do anything with the feedback, because you are only going to exacerbate any issue discovered because they will think something is going to be addressed with things they bring up, and when they find out nothing happens, then you are almost worse off than asking the question to begin with." – V.P., Communications, automotive corporation

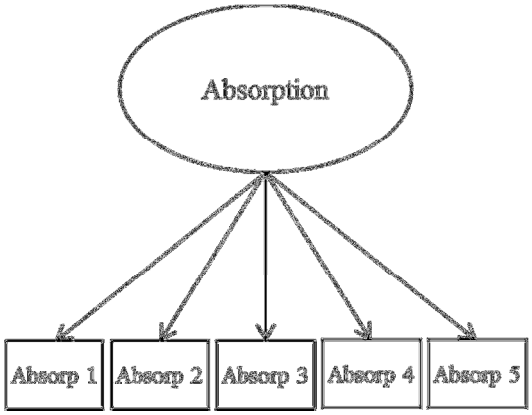
APPENDIX 2: RATER REVIEWS SUMMARY

Item	1st Order Construct	RRI Score	RRII Mean	Decision
Absorption_1	Absorption	10	4.35	Include
Absorption_2	Absorption	10	4.47	Include
Absorption_3	Absorption	10	3.47	Include
Absorption_4	Absorption	10	4.29	Include
Absorption_5	Absorption	8	4.35	Include
Absorption_6	Absorption	2	3.71	Exclude
Dedication_1	Dedication	5	4.00	Include
Dedication_2	Dedication	9	4.00	Include
Dedication_3	Dedication	6	4.24	Include
Dedication_4	Dedication	7	4.35	Include
Dedication_5	Dedication	4	3.47	Exclude
Vigor_1	Vigor	8	3.88	Include
Vigor_2	Vigor	8	4.00	Include
Vigor_3	Vigor	8	3.88	Include
Vigor_4	Vigor	8	3.82	Include
Vigor_5	Vigor	4	3.65	Exclude
Vigor_6	Vigor	2	3.41	Exclude
Motivation_1	Citizenship Motivation	10	4.13	Include
Motivation_2	Citizenship Motivation	5	4.00	Include
Motivation_3	Citizenship Motivation	5	4.47	Include
Motivation_4	Citizenship Motivation	3	4.18	Include
Motivation_5	Citizenship Motivation	8	4.29	Include
Motivation_6	Citizenship Motivation	10	4.41	Include
Motivation_7	Citizenship Motivation	8	3.88	Include
Motivation_8	Citizenship Motivation	8	4.24	Include
Motivation_9	Citizenship Motivation	8	4.18	Include
Motivation_10	Citizenship Motivation	10	4.12	Include
Motivation_11	Citizenship Motivation	10	4.24	Include
Motivation_12	Citizenship Motivation	10	3.76	Include
Motivation_13	Citizenship Motivation	8	4.06	Include
Motivation_16	Citizenship Motivation	5	3.88	Exclude
Motivation_17	Citizenship Motivation	0	3.82	Exclude
Motivation_18	Citizenship Motivation	4	3.82	Exclude
Motivation_19	Citizenship Motivation	4	3.59	Exclude
Competence_1	Empowerment - Competence	6	4.71	Include
Competence_2	Empowerment - Competence	8	4.53	Include
Competence_3	Empowerment - Competence	8	4.65	Include

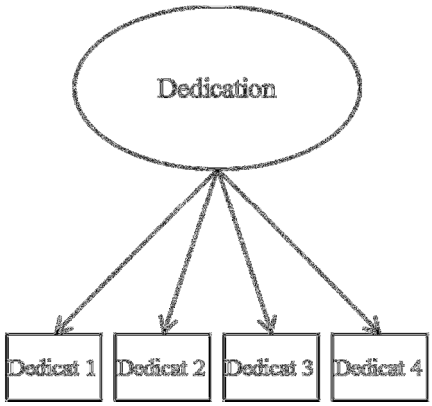
Item	1st Order Construct	RRI Score	RRII Mean	Decision
Impact_1	Empowerment - Impact	10	4.00	Include
Impact_2	Empowerment - Impact	10	3.94	Include
Impact_3	Empowerment - Impact	4	3.76	Exclude
Meaning_1	Empowerment - Meaning	7	4.59	Include
Meaning_2	Empowerment - Meaning	8	4.53	Include
Meaning_3	Empowerment - Meaning	9	4.59	Include
Self_Determ_1	Empowerment - Self Determination	8	4.35	Include
Self_Determ_2	Empowerment - Self Determination	10	4.41	Include
Self_Determ_3	Empowerment - Self Determination	10	4.35	Include
Empower Refl_1	Empowerment	8		Include
Empower Refl_2	Empowerment	7		Include
Attachment_1	Org Commit -Attachment	8	4.12	Include
Attachment_2 (R)	Org Commit -Attachment	6	4.29	Include
Attachment_3 (R)	Org Commit -Attachment	8	4.59	Include
Attachment_4 (R)	Org Commit -Attachment	4	4.59	Include
Attachment_5 (R)	Org Commit -Attachment	8	4.41	Include
Attachment_6 (R)	Org Commit -Attachment	6	4.29	Include
Attachment_7	Org Commit -Attachment	0	3.94	Exclude
Attachment_8	Org Commit -Attachment	4	3.76	Exclude
Attachment_9	Org Commit -Attachment	0	3.76	Exclude
Attachment_10	Org Commit -Attachment	2	3.88	Exclude
Effort_1	Org Commit - Effort	10	4.35	Include
Effort_2	Org Commit - Effort	5	3.35	Exclude
Identification_1	Org Commit -Identification	10	4.53	Include
Identification_2 (R)	Org Commit -Identification	6	4.24	Include
Identification_3	Org Commit -Identification	4	3.82	Exclude
PC Fulfillment_1	Psychological Contract Fulfillment	8	4.12	Include
PC Fulfillment_2	Psychological Contract Fulfillment	10	4.29	Include
PC Fulfillment_3	Psychological Contract Fulfillment	4	4.59	Include
PC Fulfillment_4	Psychological Contract Fulfillment	4	4.59	Include

APPENDIX 3: MEASUREMENT MODELS

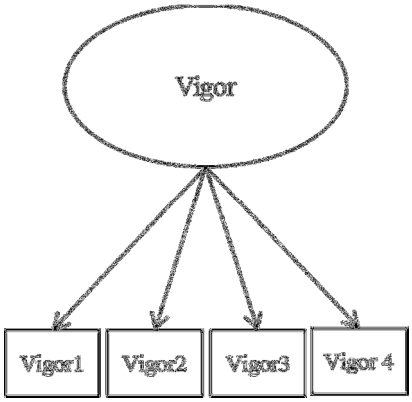
ABSORPTION



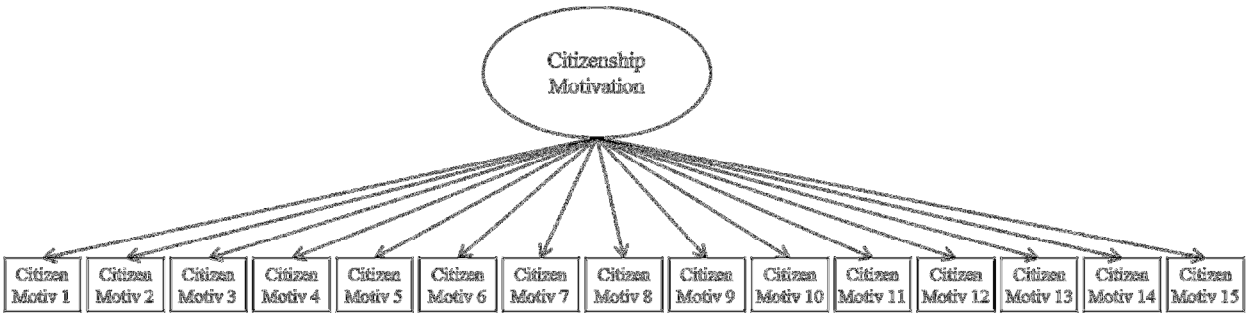
DEDICATION



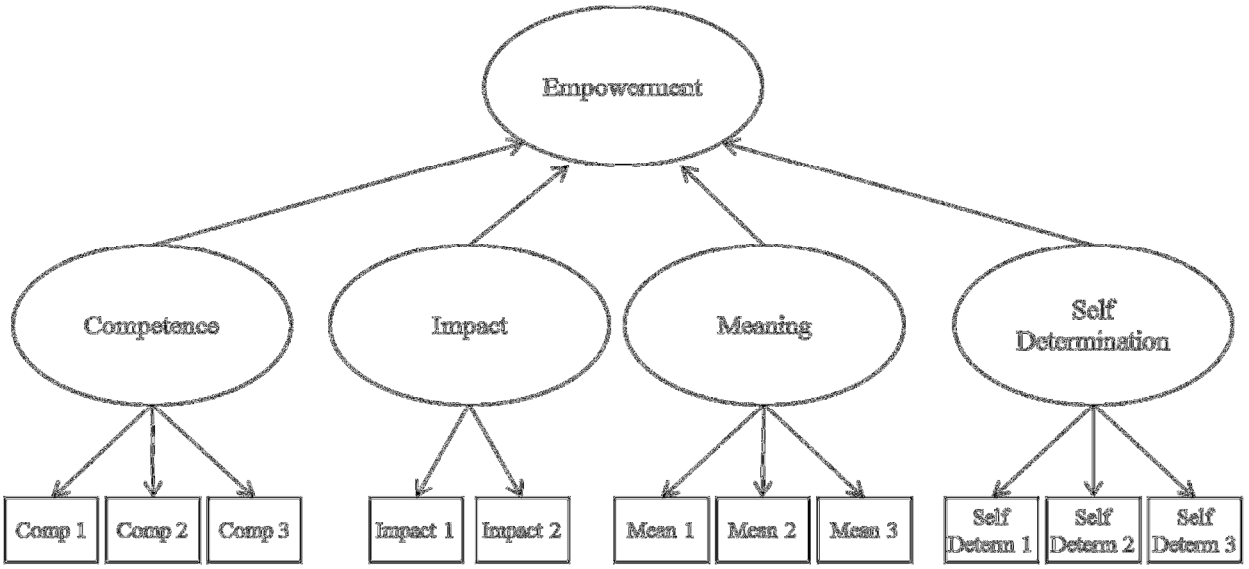
VIGOR



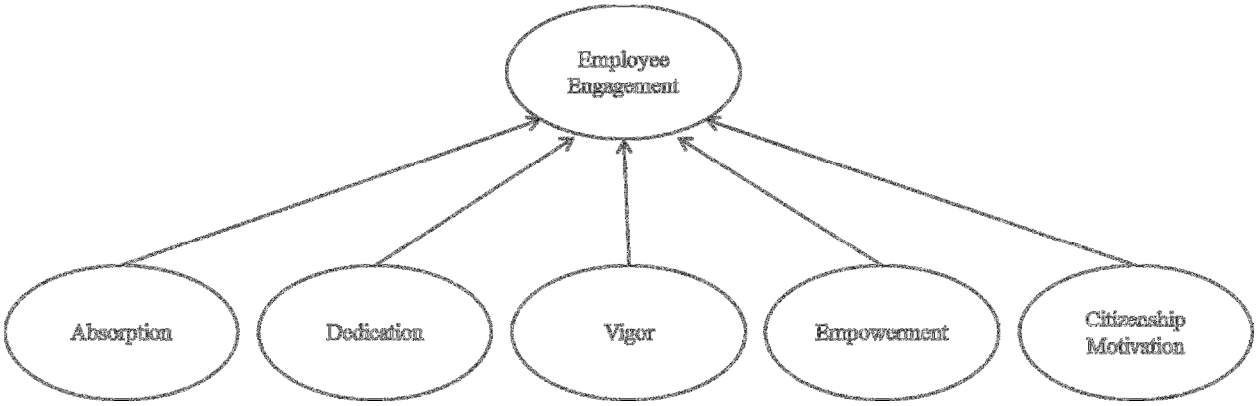
CITIZENSHIP MOTIVATION



PSYCHOLOGICAL EMPOWERMENT (MULTI-ORDER)



EMPLOYEE ENGAGEMENT (MULTI-ORDER)



APPENDIX 4: REFLECTIVE MEASURES

Employment status was measured categorically with respondents selecting "Part time" or "Full time." All other items were measured on a scale of 1 to 5, with 1 = strongly disagree and 5 = strongly agree.

Individual items are available from the author upon request.

EMPLOYEE ENGAGEMENT SUB DIMENSIONS

EMPLOYEE ENGAGEMENT REFLECTIVE ITEMS

Source: new items generated for the present study

Factor	Definition	Items	Sample	Mean	StDev	α
Employee engagement (reflective items)	An attitude regarding one's work within one's organization, comprising a perception of psychological empowerment; feelings of vigor, absorption, and dedication; and citizenship motivation.	Emp Eng Refl_1**	2252	4.21	0.80	0.83
		Emp Eng Refl _2**	2256	4.30	0.78	
		Total items = 2	2256	4.25	0.62	

VIGOR

Source: Schaufeli & Bakker (2003)

Factor	Definition	Items	Sample	Mean	StDev	α
Vigor	High levels of energy and mental resilience in the work context, and willingness to expend to effort and persist in the face of challenges.	Vigor_1	2252	3.90	0.96	0.78
		Vigor _2	2250	4.18	0.80	
		Vigor_3	2249	4.15	0.77	
		Vigor_4	2255	4.33	0.63	
		Total items = 4	2255	4.14	0.62	

DEDICATION

Source: Schaufeli & Bakker (2003)

Factor	Definition	Items	Sample	Mean	StDev	α
Dedication	A sense of significance, enthusiasm, inspiration, pride, and challenge at work.	Dedication_1	2253	4.30	0.85	0.91
		Dedication_2	2255	4.25	0.86	
		Dedication_3	2253	4.11	0.95	
		Dedication_4	2253	4.50	0.68	
		Total items = 4	2255	4.29	0.74	

ABSORPTION

Source: Schaufeli & Bakker (2003)

Factor	Definition	Items	Sample	Mean	StDev	α
Absorption	Being fully concentrated, happy, and deeply engrossed in one's work whereby time passes quickly	Absorption_1	2248	4.23	0.83	0.83
		Absorption_2	2252	3.58	1.05	
		Absorption_3	2252	4.07	0.82	
		Absorption_4	2247	4.04	0.81	
		Absorption_5	2239	3.59	0.97	
		Total items = 5	2252	3.90	0.70	

EMPOWERMENT FACTORS

Source: Spreitzer (1995)

Factor	Definition	Items	Sample	Mean	StDev	α
Empowerment Reflective Items	A sense of confidence regarding one's self in one's work reflected by four attributes: meaning, competence, self-determination and impact.	Empower Refl_1 **	2162	3.81	1.01	0.66
		Empower Refl_2**	2177	4.33	0.73	
		Total items = 2	2177	4.07	0.76	
Empowerment - Meaning	A sense of purpose or personal connection about work	Meaning_1	2168	4.48	0.66	0.93
		Meaning_2	2177	4.34	0.77	
		Meaning_3	2176	4.42	0.70	
		Total items = 3	2177	4.41	0.67	
Empowerment - Competence	Believing one's self is capable of succeeding in one's work.	Competence_1	2179	4.59	0.61	0.84
		Competence_2	2176	4.27	0.78	
		Competence_3	2173	4.49	0.62	
		Total items = 3	2179	4.45	0.58	
Empowerment - Self Determination	A sense of freedom about how one does one's work.	Self_Determ_1	2170	3.99	0.98	0.90
		Self_Determ_2	2170	3.99	0.99	
		Self_Determ_3	2169	3.86	1.06	
		Total items = 3	2170	3.94	0.92	
Empowerment - Impact	A belief that one can influence the larger organization in which she is embedded.	Impact_1	2175	3.70	1.12	0.84
		Impact_2	2169	3.24	1.18	
		Total items = 2	2175	3.47	1.07	

CITIZENSHIP MOTIVATION

Source: adapted from Lee & Allen's (2002); Robinson et al. (2004)

Factor	Definition	Items	Sample	Mean	StDev	α
Citizenship Motivation	A motivation to act, both in- and extra-role, in service of the organization's goals	Motivation_1	2134	4.40	0.65	0.95
		Motivation_2	2132	4.45	0.61	
		Motivation_3	2135	4.28	0.75	
		Motivation_4	2134	4.38	0.69	
		Motivation_5	2137	4.45	0.62	
		Motivation_6	2134	4.25	0.74	
		Motivation_7	2134	4.36	0.65	
		Motivation_8	2131	4.08	0.88	
		Motivation_9	2135	4.09	0.87	
		Motivation_10	2131	4.32	0.76	
		Motivation_11	2122	4.21	0.77	
		Motivation_12	2136	4.27	0.75	
		Motivation_13	2133	4.20	0.78	
		Motivation_14**	2127	4.42	0.63	
		Motivation_15**	2128	4.39	0.70	
		Total items = 15	2137	4.30	0.55	

RELATED AND OVERLAPPING VARIABLE MEASURES

PSYCHOLOGICAL CONTRACT FULFILLMENT (ANTECEDENT)

Source: adapted from Rousseau (2000)

Factor	Definition	Items	Sample	Mean	StDev	α
Psychological Contract Fulfillment	Perception of fulfillment of the implicit and explicit terms of the employment agreement between the employee and the organization.	PC Fulfillment_1	2057	3.80	0.97	0.81
		PC Fulfillment_2	2057	3.76	1.00	
		PC Fulfillment_3	2057	4.40	0.62	
		PC Fulfillment_4	2056	4.42	0.59	
		Total items = 4	2057	4.09	0.65	

RECOMMENDABILITY (OUTCOME)

Source: adapted from Gallup (2006); Robinson et al. (2004)

Factor	Definition	Items	Sample	Mean	StDev	α
Recommendability	Likelihood of recommending employer to prospective employees	Recommend_1	2334	3.95	1.04	0.93
		Recommend_2	2246	3.79	1.05	
		Recommend_3**	2175	3.83	1.07	
		Total items = 3	2246	3.58	0.98	

INTENTION TO STAY (OUTCOME)

Source: adapted from Cammann et al. (1983)

Factor	Definition	Items	Sample	Mean	StDev	α
Intention to Stay	Intention to stay with the organization (opposite of turnover intention)	Stay_1 (R) **	2321	3.45	1.36	.79
		Stay_2 **	2327	4.09	0.97	
		Stay_3 **	2167	3.88	1.09	
		Total items = 3	2327	3.80	0.97	

ADDITIONAL OUTCOME MEASURES (OUTCOME)

Source: new items generated for the present study

Factor	Definition	Items	Sample	Mean	StDev	α
Productivity	Being productive in one's work	Productivity **	2250	4.41	0.62	N/A
Creativity	Being creative in one's work	Creativity **	2249	4.25	0.76	N/A
Proactive Problem Solving	Demonstrating proactive problem-solving	Problem Solving **	2242	4.30	0.71	N/A

ORGANIZATIONAL COMMITMENT (OVERLAPPING)

Source: Mowday et al. (1979)

Factor	Definition	Items	Sample	Mean	StDev	α
Organizational Commitment	Degree of attachment to one's organization, characterized by strong belief in and acceptance of the organization's goals and values; willingness to exert considerable effort on behalf of the organization, and strong desire to maintain membership in the organization.	Identification_1	2056	3.87	1.01	0.85
		Identification_2 (R)	2064	3.52	1.23	
		Effort_1	2064	4.31	0.73	
		Attachment_1	2064	3.44	1.15	
		Attachment_2 (R)	2063	3.60	1.33	
		Attachment_3 (R)	2057	3.19	1.22	
		Attachment_4 (R)	2053	3.54	1.22	
		Attachment_5 (R)	2054	3.54	1.28	
		Attachment_6 (R)	2053	4.12	1.14	
		Total items = 9	2064	3.68	0.77	

TRUST IN TOP MANAGEMENT (MODERATOR)

Source: Mishra & Mishra (1994)

Factor	Definition	Items	Sample	Mean	StDev	α
Trust in Top Management	The degree to which an employee trusts their organization's top leadership, reflected in perceptions of openness, competence, reliability, and concern for worker well-being.	TTM_1	2210	3.77	1.10	0.98
		TTM_2	2207	3.96	0.97	
		TTM_3	2215	3.83	0.99	
		TTM_4	2214	3.68	1.10	
		TTM_5	2211	3.76	1.11	
		TTM_6	2213	3.82	1.07	
		TTM_7	2209	3.80	1.08	
		TTM_8	2216	3.74	1.14	
		TTM_9	2212	3.62	1.16	
		TTM_10	2213	3.64	1.16	
		TTM_11	2210	3.77	1.13	
		TTM_12	2214	3.75	1.11	
		TTM_13	2213	3.75	1.09	
		Total items = 13	2216	3.74	0.99	

KNOWN GROUPS

Source: new item generated for the present study

Factor	Definition	Items	Sample	Mean	StDev	α
Employment Status	Part or full-time employee	Full_time	1771	Part-time = 430 Full time = 1341	N/A	N/A

** New item generated for the present study

APPENDIX 5: EMPOWERMENT FORMATIVE VALIDATION

PROCEDURE

To validate empowerment as a multi-order, formatively measured construct, the following procedure was followed. In all instances in which the Smart PLS tool (Ringle et al., 2005) was used, item weights and path coefficients were derived using the PLS algorithm set at 600 iterations; and significance values were derived using the bootstrapping algorithm set at 600 cases, 600 samples.

1. A structural path model was created in Smart PLS (Ringle et al., 2005). (Note: the model included all constructs in the primary research model in order to validate formative modeling of empowerment in the employee engagement context.)
    a. A construct was created for each of the four empowerment sub-dimensions, with each being described by its reflective indicators.
    b. A separate focal construct was created, described by the two reflective empowerment items generated for the present study.
    c. The four constructs representing the sub-dimensions of empowerment were connected as causal predictors to the focal construct.
2. Weighted indicators for each sub-dimension of empowerment were created in SPSS.
    a. A new variable was computed to represent a weighted indicator for each sub-dimension by multiplying the mean of the sub-dimension's reflective indicators and its path coefficient (derived from the structural model).
    b. A single weighted empowerment variable was created by computing a new variable comprising the sum of the four weighted indicators.
3. Multicollinearity tests were conducted in SPSS.

a. A correlation matrix was generated to show correlations between individual items, the weighted indicators, and the weighted-sum empowerment construct.
b. The weighted indicators were regressed against a weighted-sum empowerment variable and VIF values reported.

4. A weighted formative indicator model was created in Smart PLS (Ringle et al., 2005). (Note: the model included all constructs in the primary research model in order to validate formative modeling of empowerment in the employee engagement context.)
    a. A single empowerment construct was created and described using the weighted indicators as formative indicators.
5. In Smart PLS (Ringle et al., 2005), a redundancy analysis model was created.
    a. One empowerment construct was created and described using the weighted indicators as formative indicators.
    b. Another empowerment construct was created and described using the two reflective empowerment indicators.
    c. The two empowerment constructs were connected with the formative construct as a causal predictor of the reflective construct.

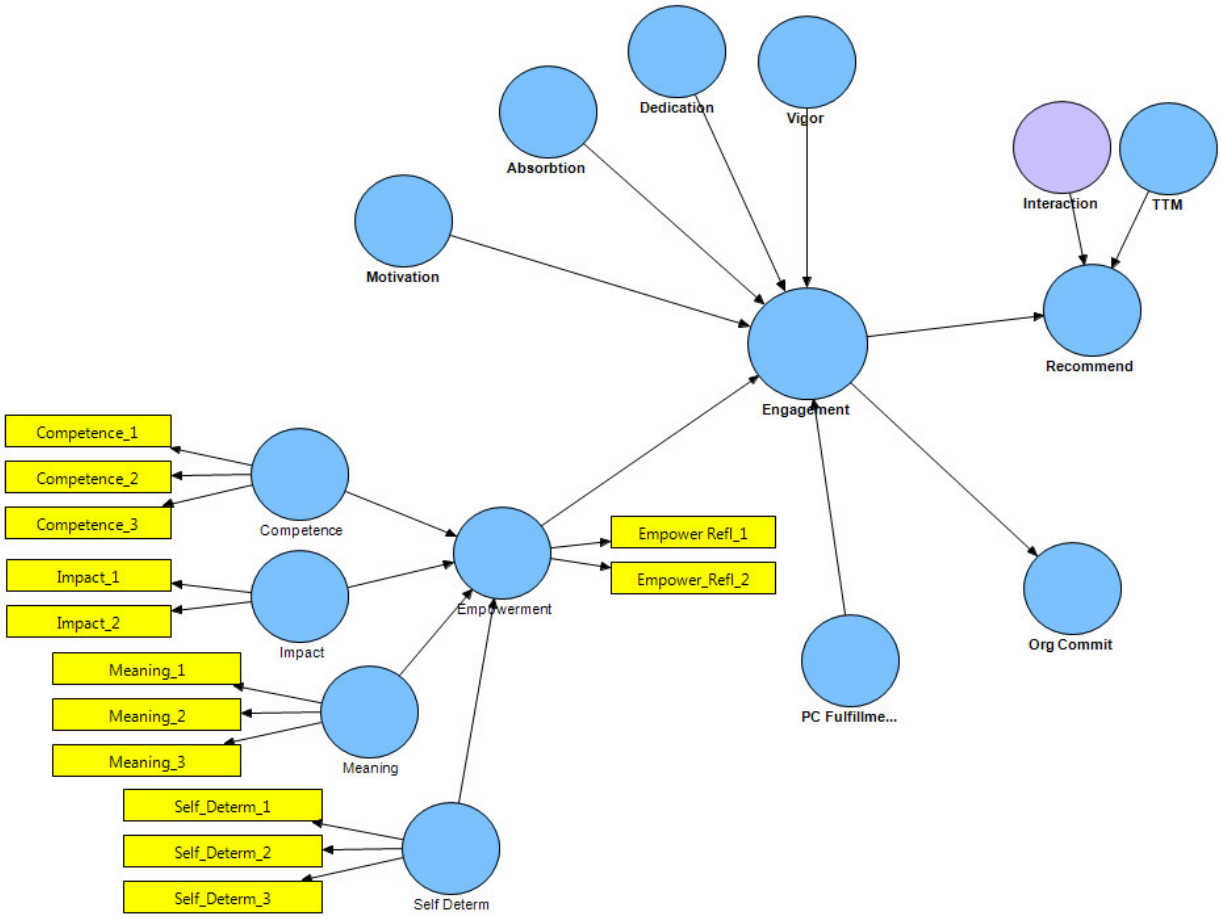
FORMATIVE MEASUREMENT OF EMPOWERMENT RESULTS SUMMARY

Test	Threshold	Outcome
T-values for structural path model	t-value > 1.96	All items and paths significant
T-values for formative weighted indicator model	t-value > 1.96	Competence indicator item weight not significant
Low path coefficients / item weights for structural path model	Path coefficient / item weights < .08	All path coefficients and item weights > .08
Low item weights for formative weighted indicator model	Path coefficient / item weights < .08	Competence indicator item weight < .08
Coexistence of positive and negative coefficients / item weights for structural path model	Path coefficient / item weights < 0	All path coefficients and item weights > 0
Coexistence of positive and item weights for formative weighted indicator model	Path coefficient / item weights < 0	All item weights > 0
Multicollinearity VIF analysis	VIF < 3.33	All VIF < 3.33
Bivariate correlations	r < .80	All correlations significant. Correlations between items and their corresponding weighted indicators > .50; correlations between weighted indicators all < .50; correlations between weighted indicators and weighted empowerment between .51 and .83
Redundancy analysis	Path coefficient > .80	Path coefficient = .72 and is significant

RESULTS

STRUCTURAL PATH MODEL

MODEL



PATH COEFFICIENTS AND T-VALUES

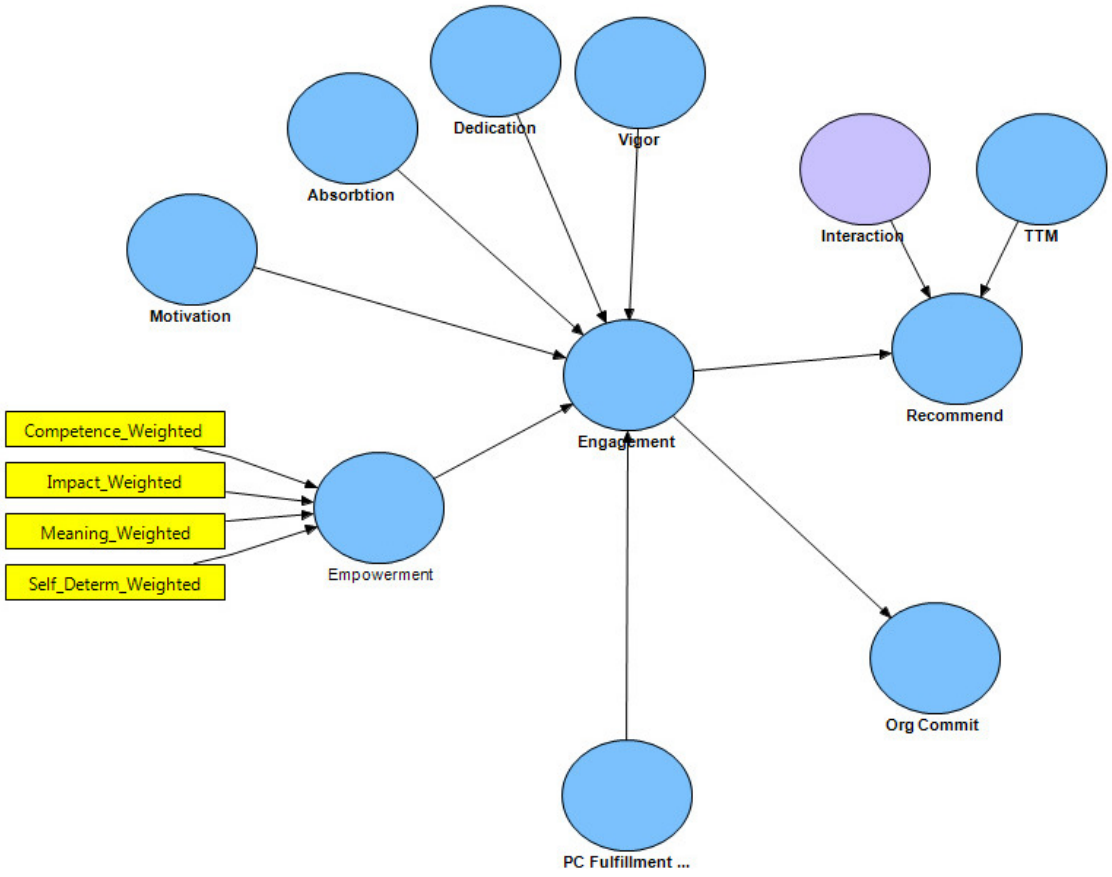
	Path Coefficient (PLS algorithm, 600 iterations)	T-value (Bootstrapping algorithm, 600 case, 600 sample)
Competence	0.14	3.31
Impact	0.29	7.33
Meaning	0.32	7.20
Self Determination	0.25	5.54

ITEM WEIGHTS AND T-VALUES

	Item Weight (PLS algorithm, 600 iterations)	T-value (Bootstrapping algorithm, 600 case, 600 sample)
Competence_1	0.89	67.96
Competence_2	0.77	24.39
Competence_3	0.92	81.55
Impact_1	0.930	112.18
Impact_2	0.930	120.69
Meaning_1	1.00	93.35
Meaning_2	0.94	120.33
Meaning_3	0.96	129.11
Self Determination_1	0.91	82.06
Self Determination_2	0.91	65.89
Self Determination_3	0.92	87.66
Empower Reflective_1	0.89	84.96
Empower Reflective_2	0.85	48.53

WEIGHTED FORMATIVE INDICATOR MODEL

MODEL



PATH COEFFICIENTS AND T-VALUES

	Path Coefficient (PLS algorithm, 600 iterations)	T-value (Bootstrapping algorithm, 600 case, 600, sample)
Competence	0.01	0.20
Impact	0.39	5.33
Meaning	0.59	8.65
Self Determination	0.29	3.70

MULTICOLLINEARITY ANALYSIS

BIVARIATE CORRELATIONS

(All correlations significant; correlations >.4 shown)

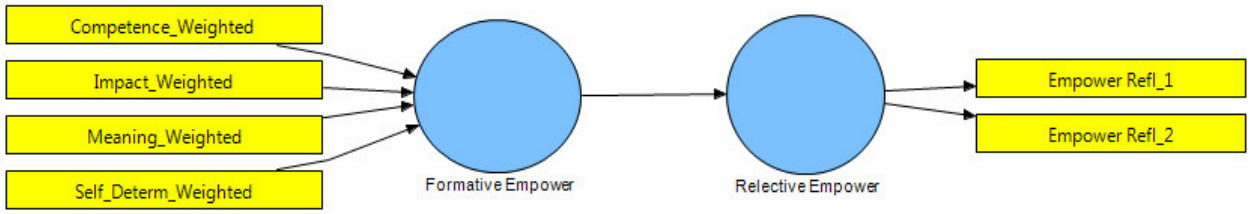
	M1	M2	M3	MW	C1	C2	C3	CW	SD1	SD2	SD3	SDW	I1	I2	IW
Meaning_1	1														
Meaning_2	.79	1													
Meaning_3	.82	.88	1												
Meaning_Weighted	.92	.95	.96	1											
Competence_1	.55	.46	.52	.54	1										
Competence_2					.55	1									
Competence_3	.48	.42	.45	.48	.72	.67	1								
Competence_Weighted	.49	.42	.46	.48	.84	.87	.90	1							
Self Determ_1									1						
Self Determ_2									.75	1					
Self Determ_3									.73	.78	1				
Self Determ_Weighted									.90	.92	.92	1			
Impact_1									.41		.49	.47	1		
Impact_2									.42	.42	.51	.50	.73	1	
Impact_Weighted									.45	.44	.54	.52	.93	.93	1
Empower_Weighted_Sum	.65	.69	.68	.71			.51	.51	.72	.70	.75	.79	.78	.76	.83

N=2103

VIF ANALYSIS

Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Valueistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-1.976E-014	.000		.	.		
	Impact_Weighted	1.000	.000	.488	.	.	.678	1.474
	Competence_Weigh t	1.000	.000	.131	.	.	.719	1.390
	Meaning_Weighted	1.000	.000	.334	.	.	.669	1.495
	Self-Determ_Weight	1.000	.000	.363	.	.	.653	1.531
a. Dependent Variable: Empowerment_Weighted_Sum (1)								

REDUNDANCY ANALYSIS



	Item Weight / Path Coefficient (PLS algorithm, 600 iterations)	**T-value (Bootstrapping algorithm, 600 case, 600 sample)**
Competence Weighted	0.17	2.99
Impact Weighted	0.35	6.05
Meaning Weighted	0.49	8.33
Self-Determination Weighted	0.33	5.39
Empowerment Refl_1	0.88	66.35
Empowerment Refl_2	0.86	55.67
Path Formative-Refl	0.74	28.76

APPENDIX 6: EMPLOYEE ENGAGEMENT FORMATIVE VALIDATION

PROCEDURE

To validate employee engagement as a multi-order, formatively measured construct, the following procedure was followed. In all instances in which the Smart PLS (Ringle et al., 2005) tool was used, item weights and path coefficients were derived using the PLS algorithm set at 600 iterations; and significance values were derived using the bootstrapping algorithm set at 600 cases, 600 samples.

1. Single-item indicators were generated for each sub-dimension of employee engagement. Because the empowerment sub-dimension was modeled formatively, it is best represented by the single-item, weighted-sum indicator derived in Appendix 5. To enhance consistency in the measurement model, the other sub-dimensions of engagement were also consolidated into single items.
    a. The weighted-sum empowerment indicator generated in the empowerment validation exercise (see Appendix 5) was used for empowerment.
    b. For each of the remaining sub-dimensions, a new variable was computed in SPSS to represent the sub-dimension by calculating the mean of the sub-dimension's reflective indicators.
2. A structural path model was created in Smart PLS (Ringle et al., 2005). (Note: the model included all constructs in the research model.)
    a. A construct was created for each of the five employee engagement sub-dimensions, with each being described by its single-item indicator.
    b. A separate focal construct was created, described by the two reflective employee engagement items generated for the present study.

c. The five constructs representing the sub-dimensions of engagement were connected as causal predictors to the focal construct.

3. Weighted indicators for each sub-dimension of employee engagement were created in SPSS.
    a. A new variable was computed to represent a weighted indicator for each sub-dimension by multiplying the construct's single-item indicator and its path coefficient (derived from the structural model).
    b. A single weighted-sum employee engagement variable was created by computing a new variable comprising the sum of the five weighted indicators.
4. Multicollinearity tests were conducted in SPSS.
    a. To test for multicollinearity, a correlation matrix was generated to show correlations between the weighted indicators and the weighted-sum employee engagement construct.
    b. To test for multicollinearity, the weighted indicators were regressed against the weighted-sum employee engagement variables and VIF values reported.
5. A weighted formative indicator model was created in Smart PLS (Ringle et al., 2005).
    a. A single employee engagement construct was created and described using the weighted indicators as formative indicators.
6. In Smart PLS (Ringle et al., 2005), a redundancy analysis model was created.
    a. One employee engagement construct was created and described using the weighted indicators as formative indicators.
    b. Another employee engagement construct was created and described using the two reflective engagement indicators.
    c. The two employee engagement constructs were connected with the formative construct as a causal predictor of the reflective construct.
7. In Smart PLS (Ringle et al., 2005), relationships were tested to study nomological and discriminant validity.

a. Hypothesized relationships H1, H2, H3, H4 were tested using the full research model.
b. A simple model comprising only employee engagement and an outcome measure was created. Several alternative outcome measures were tested using this model.

8. Known-groups comparison was conducted.
    a. In SPSS, part-time employees were assigned a value of zero and full-time employees a value of one to create a dummy variable capturing employment status (MacKenzie et al., 2011)
    b. In Smart PLS (Ringle et al., 2005), a simple model was created in which the dummy variable was connected as a causal predictor to the weighted formative indicator employee engagement construct.
9. A post-hoc power analysis was conducted.
    a. In Smart PLS (Ringle et al., 2005), the structural path model was modified by removing variables not part of the employee engagement focal construct or its sub-dimensions.
    b. Explained variance of the focal construct was calculated using the PLS algorithm.
    c. A statistical calculator (Soper, 2013) was used to derive observed power.

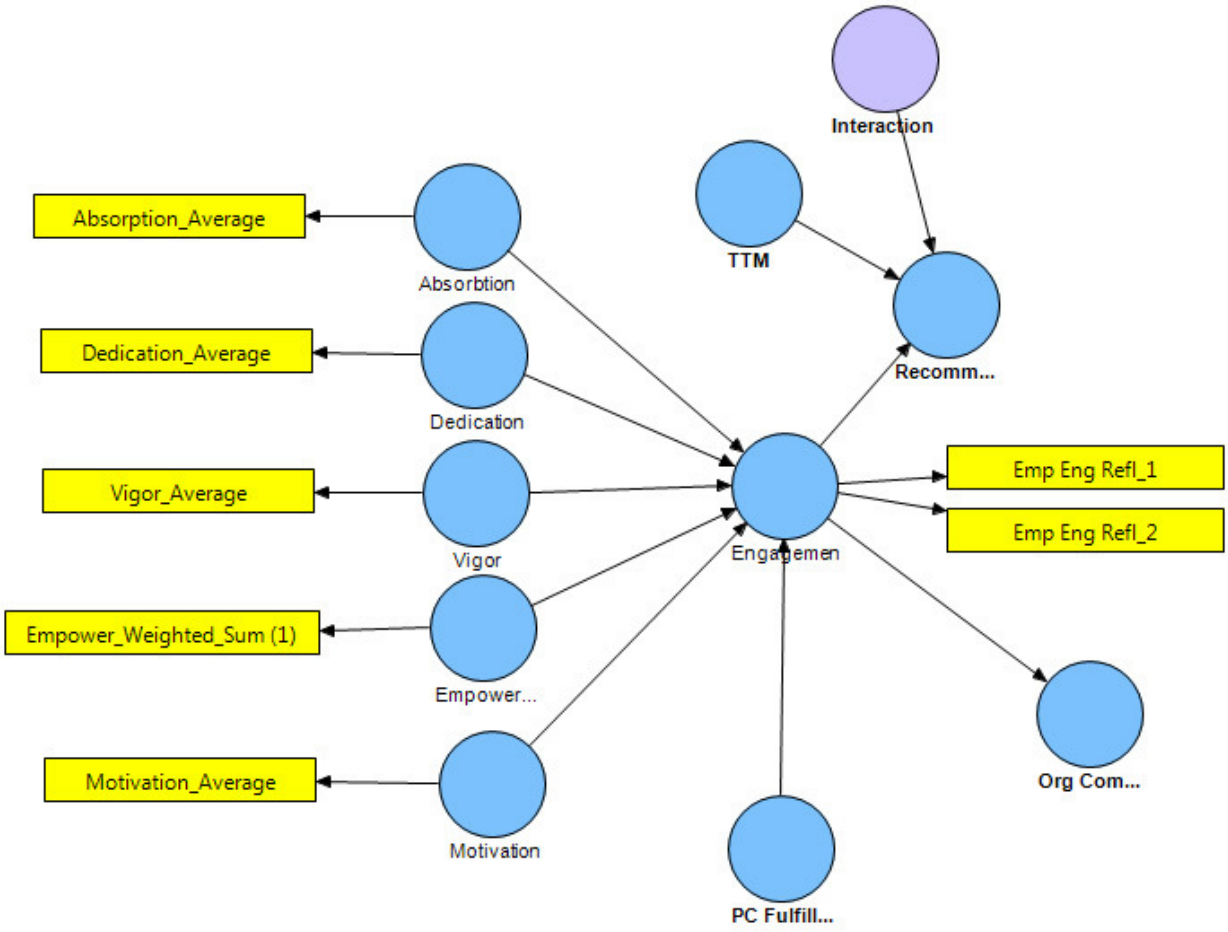
FORMATIVE MEASUREMENT OF EMPLOYEE ENGAGEMENT RESULTS SUMMARY

Test	Threshold	Outcome
T-values for structural path model	t-value > 1.96	Path coefficients for absorption and citizenship motivation were not significant
T-values for formative weighted indicator model	t-value > 1.96	Path coefficient for absorption not significant
Low path coefficients / item weights for structural path model	Path coefficient / item weights < .08	Path coefficients for absorption and citizenship motivation < .08
Low item weights for formative weighted indicator model	Path coefficient / item weights < .08	Item weight for absorption < .08
Coexistence of positive and negative coefficients / item weights for structural path model	Path coefficient / item weights < 0	Path coefficients for absorption and citizenship motivation < 0
Coexistence of positive and item weights for formative weighted indicator model	Path coefficient / item weights < 0	Item weight for weighted citizenship motivation < 0 (due to calculating the weighted item using a negative path coefficient)
Multicollinearity VIF analysis	VIF < 3.33	All VIF < 3.33
Bivariate correlations	r < .80 for formative indicators	All correlations significant. (Absolute value) correlations between weighted indicators all between .53 and .71; (absolute value) correlations between weighted indicators and weighted employee engagement between .61 and .96.
Redundancy analysis	Path coefficient > .80	Path coefficient = .77 and significant

RESULTS

STRUCTURAL PATH MODEL PATH COEFFICIENTS

MODEL

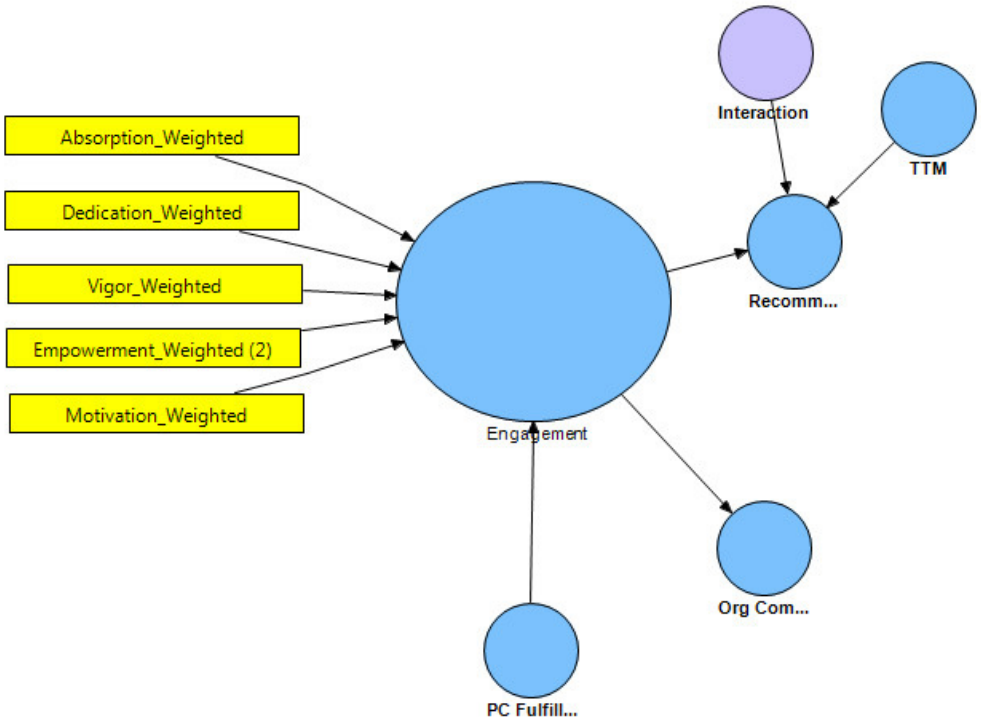


PATH COEFFICIENTS AND T-VALUES

	Path Coefficient (PLS algorithm, 600 iterations)	T-value (Bootstrapping algorithm, 600 case, 600 sample)
Absorption Average	-0.03	0.61
Dedication Average	0.39	6.94
Vigor Average	0.23	4.51
Empowerment Weighted Sum (1)	0.10	1.99
Citizenship Motivation Average	-0.03	0.63

WEIGHTED FORMATIVE INDICATOR MODEL

MODEL



ITEM WEIGHTS AND T-VALUES

	Indicator weight (600 iterations)	T-value (600 case, 600, sample)
Absorption Weighted	0.04	0.76
Dedication Weighted	0.33	6.01
Vigor Weighted	0.18	3.19
Empowerment Weighted (2)	0.46	7.43
Motivation Weighted	-0.23	4.14

MULTICOLLINEARITY ANALYSIS

BIVARIATE CORRELATIONS

(All correlations significant; correlations >.4 shown)

VIGOR

	V1	V2	V3	V4	VW
Vigor_1	1				
Vigor_2	.53	1			
Vigor_3	.47	.53	1		
Vigor_4	.40	.46	.52	1	
Vigor_Weighted	.80	.81	.80	.72	1
Employee Engagement Weighted Sum	.78	.62	.61	.58	.84

N=2057

DEDICATION

	D1	D2	D3	D4	DW
Dedication_1	1				
Dedication_2	.71	1			
Dedication_3	.75	.81	1		
Dedication_4	.66	.67	.67	1	
Dedication_Weighted	.88	.91	.92	.82	1
Employee Engagement Weighted Sum	.83	.89	.89	.80	.96

N=2057

ABSORPTION

	A1	A2	A3	A4	A5	AW
Absorption_1	1					
Absorption_2	.47	1				
Absorption_3	.51	.50	1			
Aabsorption_4	.51	.50	.60	1		
Absorption_5	.35	.55	.46	.55	1	
Absorption_Weighted	-.72	-.80	-.78	-.80	-.77	1
Employee Engagement Weighted Sum	.67	.44	.60	.59		-.68

N=2057

CITIZENSHIP MOTIVATION

	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	MW1
Motivation_1	1															
Motivation_2	.75	1														
Motivation_3	.60	.64	1													
Motivation_4	.58	.65	.58	1												
Motivation_5	.62	.67	.53	.68	1											
Motivation_6	.57	.63	.61	.60	.66	1										
Motivation_7	.61	.66	.56	.63	.66	.69	1									
Motivation_8	.46	.48	.44	.46	.49	.58	.59	1								
Motivation_9	.45	.43	.46	.46	.44	.47	.46	.45	1							
Motivation_10	.52	.52	.45	.51	.56	.46	.48		.65	1						
Motivation_11	.47	.49	.42	.46	.49	.46	.49		.53	.56	1					
Motivation_12	.53	.54	.47	.51	.54	.50	.51	.41	.57	.64	.71	1				
Motivation_13	.54	.50	.48	.48	.52	.50	.53	.43	.65	.66	.67	.71	1			
Motivation_14	.56	.62	.49	.53	.63	.53	.59		.49	.63	.59	.67	.65	1		
Motivation_15	.532	.57	.47	.52	.58	.53	.57	.40	.52	.61	.58	.68	.66	.76	1	
Motivation_ Weight	-.76	-.79	-.72	-.75	-.78	-.77	-.79	-.66	-.72	-.76	-.73	-.79	-.80	-.79	-.79	1
Emp Eng_ Weighted Sum	.47	.43		.41	.47		.40		.48	.63	.48	.52	.55	.54	.54	.61

N=2022

ALL FACTORS

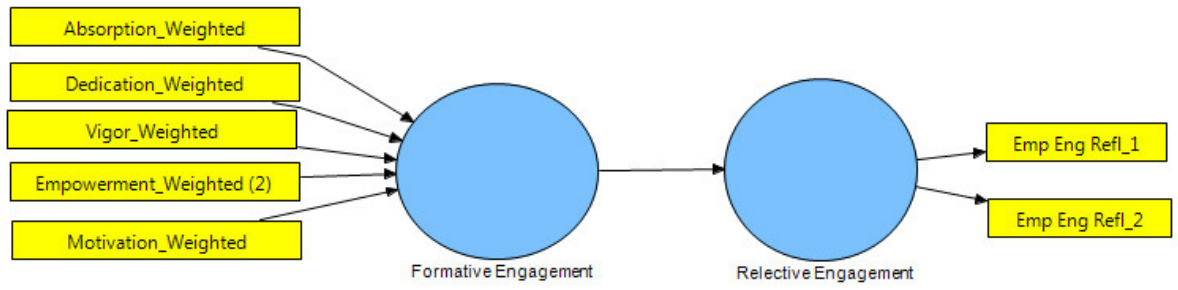
	AW1	DW1	VW1	PEW2	MW1	EEW
Absorption_Weighted	1					
Dedication_Weighted	-.65	1				
Vigor_Weighted	-.64	.67	1			
Empowerment_Weighted (2)	-.58	.71	.62	1		
Motivation_Weighted	.53	-.57	-.57	-.60	1	
Employee Engagement Weighted Sum	-.68	.96	.84	.79	-.61	1

N=2136

VIF ANALYSIS

Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Valueistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-5.040E-014	.000		.	.		
	Motivation_Weighted	1.000	.000	.033	.	.	.554	1.806
	Empowerment_Weighted (2)	1.000	.000	.146	.	.	.420	2.381
	Absorption_Weighted	1.000	.000	.041	.	.	.487	2.054
	Dedication_Weighted	1.000	.000	.680	.	.	.377	2.651
	Vigor_Weighted	1.000	.000	.333	.	.	.437	2.289
a. Dependent Variable: Engagement_Weighted Sum								

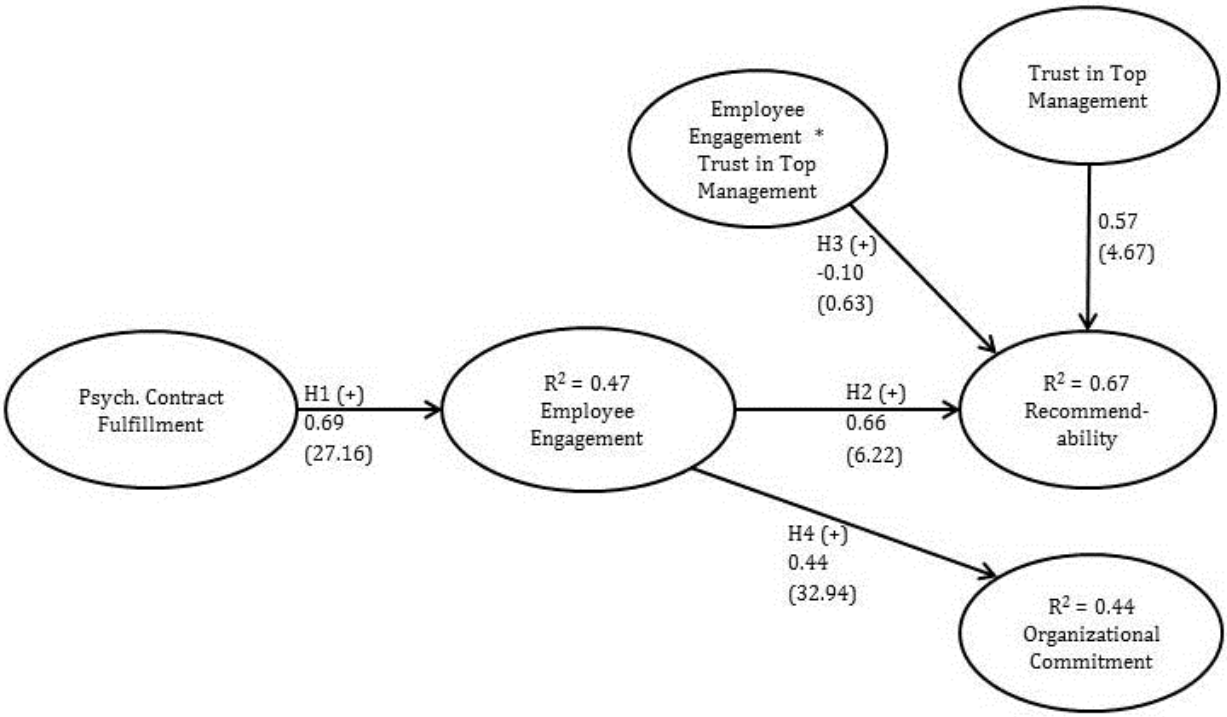
REDUNDANCY ANALYSIS



	Indicator Weight / Path Coefficient (PLS algorithm, 600 iterations)	T-value (Bootstrapping algorithm, 600 case, 600 sample)
Absorption Weighted	0.02	0.38
Dedication Weighted	0.54	7.14
Vigor Weighted	0.37	4.76
Empowerment Weighted (2)	0.21	3.07
Motivation Weighted	-0.03	0.51
Engagement R1	0.92	92.02
Engagement R2	0.93	118.12
Path Formative-Refl	0.77	36.55

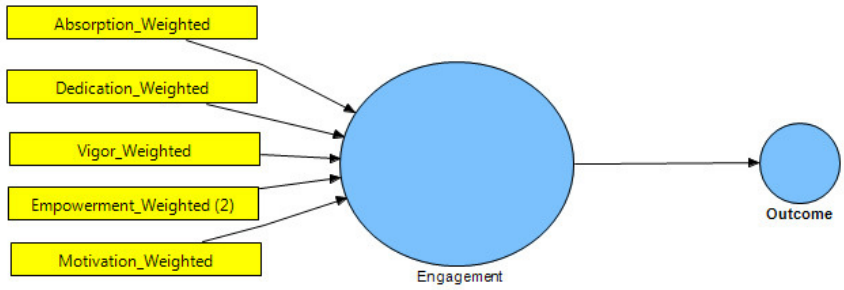
HYPOTHESIZED NOMOLOGICAL RELATIONSHIPS

MODEL AND RESULTS



EXPLAINED VARIANCE OF ALTERNATE OUTCOMES

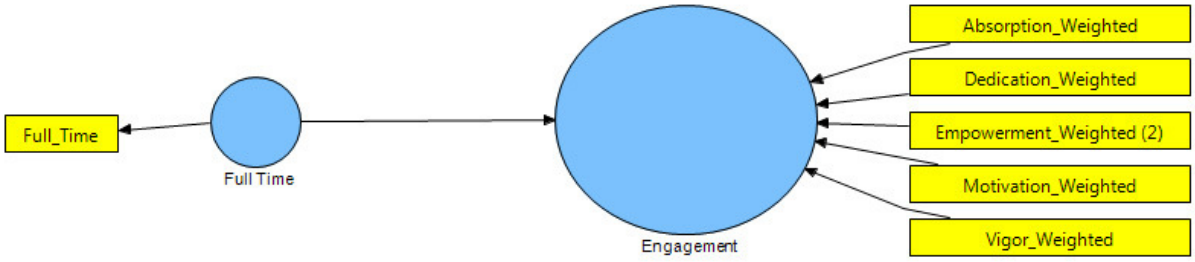
MODEL



Outcome Measure	Explained Variance	Path Coefficient / Item Weight (T-value) (PLS algorithm, 600 iterations and bootstrapping algorithm, 600 cases, 600 samples)
Recommendability	0.53	Path coefficient: 0.73 (32.88) Absorption: 0.04 (0.60) Dedication: 0.45 (6.49) Vigor: 0.14 (2.19) Empowerment: 0.52 (6.73) Citizenship Motivation: -0.04 (0.71)
Intention to Stay	0.46	Path Coefficient: 0.68 (28.85) Absorption: 0.10 (1.40) Dedication: 0.56 (6.76) Vigor: 0.18 (2.38) Empowerment: 0.42 (4.92) Citizenship Motivation: -0.04 (0.55)
Creativity	0.41	Path coefficient : 0.64 (19.31) Absorption: -0.16 (2.11) Dedication: 0.26 (2.75) Vigor: 0.31 (3.64) Empowerment: 0.20 (2.29) Citizenship Motivation: -0.26 (3.30)
Productivity	0.42	Path coefficient : 0.65 (20.29) Absorption: -0.11 (1.40) Dedication: 0.22 (2.02) Vigor: 0.40 (4.48) Empowerment: 0.15 (1.71) Citizenship Motivation: -0.30 (4.00)
Problem-Solving	0.36	Path coefficient: 0.60 (18.28) Absorption: -0.10 (1.20) Dedication: -0.04 (0.34) Vigor: 0.41 (4.15) Empowerment: 0.34 (3.62) Citizenship Motivation: -0.37 (4.47)

KNOWN GROUPS COMPARISON

MODEL

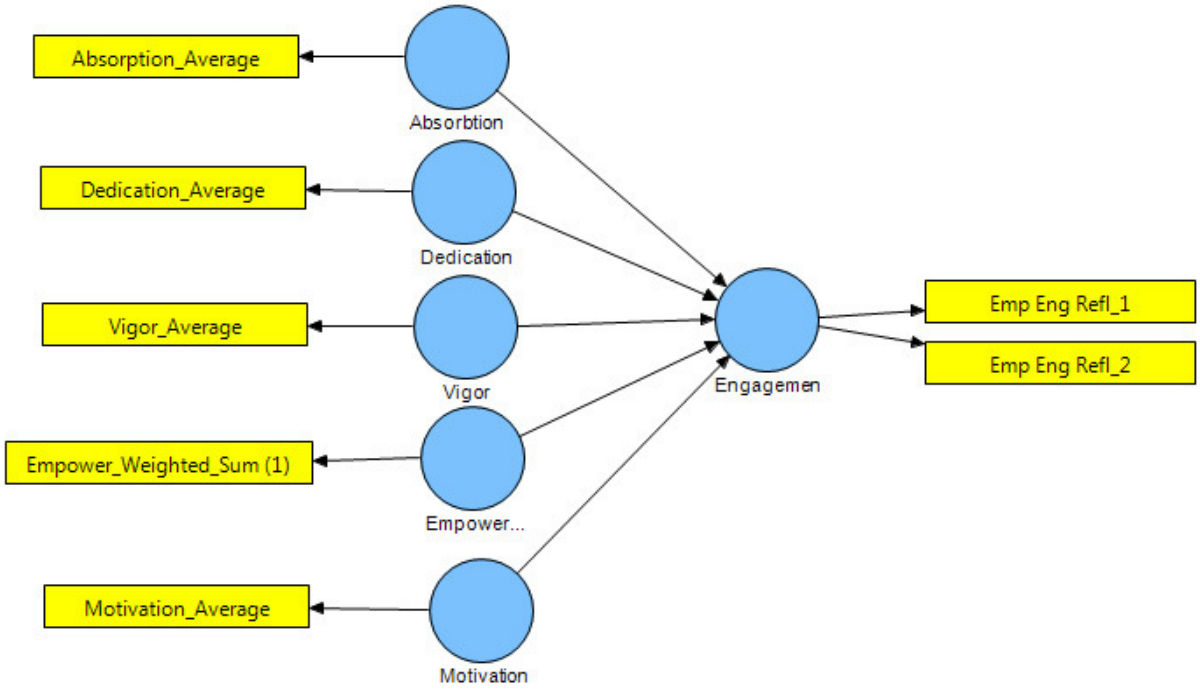


RESULTS

Input Measure	Explained Variance	Path Coefficient / Item Weight (T-value) (PLS algorithm, 600 iterations and bootstrapping algorithm, 600 cases, 600 samples)
Employment Type	0.06	Path coefficient: -0.26 (5.29) Absorption: -0.44 (2.02) Dedication: 0.69 (3.03) Vigor: -0.14 (0.57) Empowerment: 1.10 (6.13) Citizenship Motivation: -0.24 (1.07)

POWER ANALYSIS

MODEL



RESULTS

Inputs:

Number of predictors: 5

Observed R2: 0.59

Probability level (alpha): 0.05

Sample size: 2342

Return:

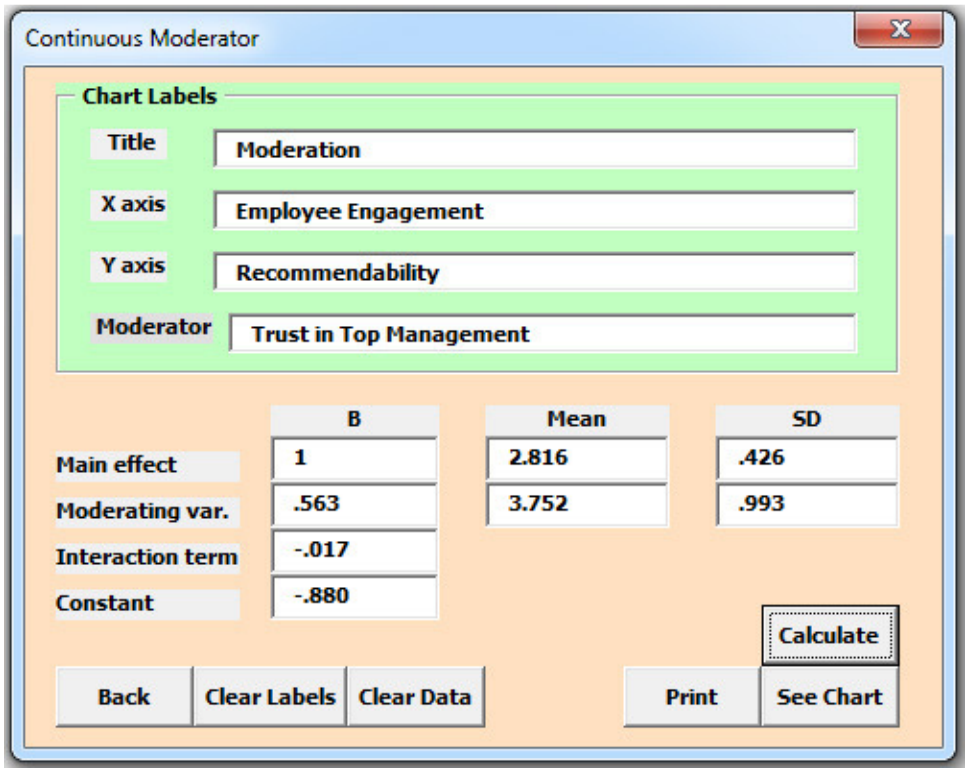
Observed statistical power: 1.0

APPENDIX 7: MODERATION AND MEDIATION ANALYSIS

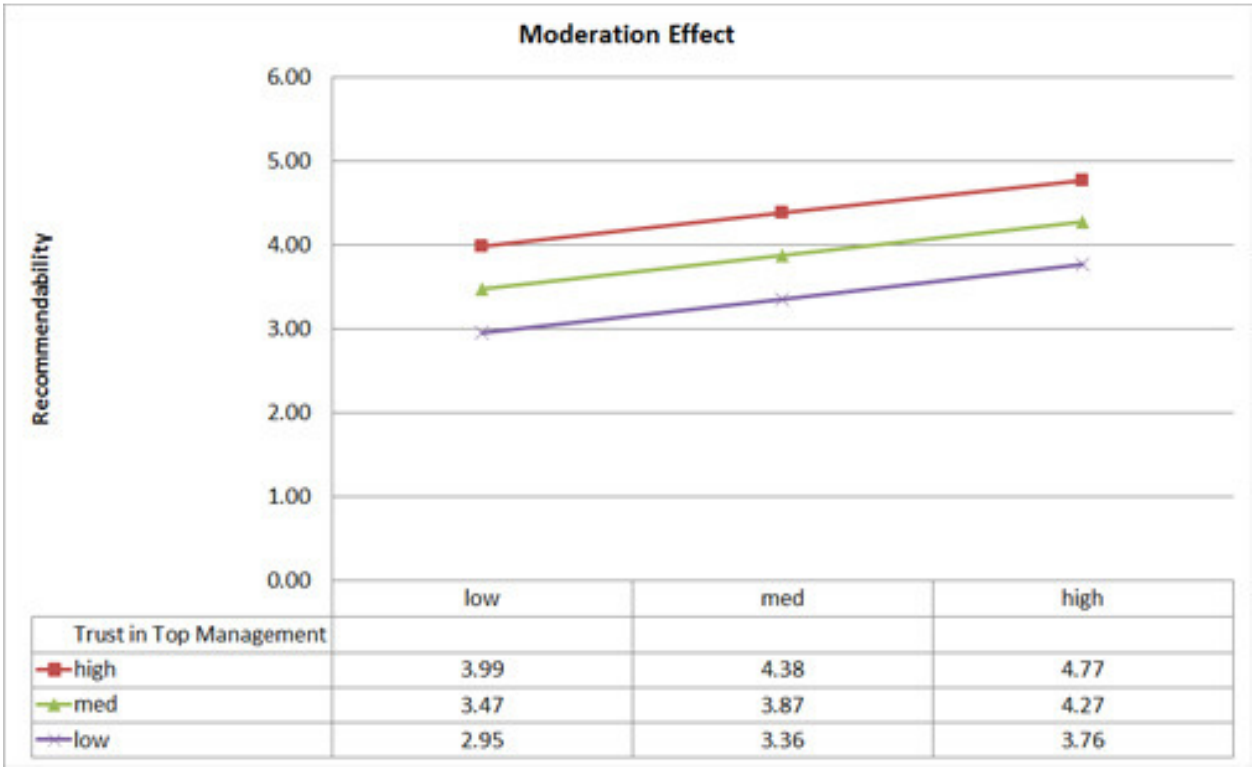
To assess whether employee engagement and trust in top management share a moderating or mediating relationship in explaining recommendability, an analysis of each relationship was conducted using ModGraph (Jose, 2008) and MedGraph (Jose, 2003) software. Results are reported below.

MODERATION RELATIONSHIP

INPUT



OUTPUT



Trust in Top Management	low	med	high
high	3.99	4.38	4.77
med	3.47	3.87	4.27
low	2.95	3.36	3.76

MEDIATION RELATIONSHIP

INPUT

	Employee Engageme	Recommendability
Trust in Top Management	0.554	0.774
Employee Engagement		0.695
Sample size	2133	

Employee Engagement regressed on Trust in Top Management

B (unstandardised regression coefficient)	0.238
se (standard error)	0.008

Recommendability regressed on Trust in Top Management AND Employee Engagement

Employee Engagement	
B (unstandardised regression coefficient)	0.944
se (standard error)	0.035
beta (standardised regression coefficient)	0.407
Trust in Top Management	
beta (standardised regression coefficient)	0.519

OUTPUT

MedGraph - PC: A programme to graphically depict mediation among three variables

Type of mediation Partial
Sobel z-value 19.98197 significance <0.000001
Standardised Coefficient of Trust in Top Management on Recommendability
Direct: 0.519
Indirect: 0.255