Leaders' Trustworthiness and the Mediating role of Autonomy in Predicting Employee Performance and Turnover Intentions

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Abstract

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Joseph Alexandre Carpini

The present study combined self-determination theory (Deci & Ryan, 1985) and trust theory (Mayer, Davis & Schoorman, 1995) in order to investigate the mechanisms underlying the relationships between leader trustworthiness (ability, benevolence, integrity; IV) and both performance (proficiency, adaptivity, proactivity; DV) and turnover intentions (DV) in part-time subordinates. A total of 350 (females = 196) part-time employees participated in this study. Participants completed a single online measure of leader trustworthiness, basic need satisfaction, individual performance and turnover intentions. Regression analyses demonstrated that both leader ability and benevolence significantly predicted the satisfaction of subordinates' need for autonomy but not for competence or relatedness. Based on these findings, only the need for autonomy was considered in the examination of subordinate performance and turnover intentions. There was a significant indirect effect of both leader ability and benevolence on subordinate proficiency as well as proactivity. Finally, there was a mediated effect of leader ability on subordinate turnover intentions as well as an indirect effect of leader benevolence. The results address a disparity in the research investigating the role of leaders on subordinates' performance and turnover intentions as well as contribute a rich theoretical framework for future research. The practical implications for both training and selection practices are discussed.

This manuscript is dedicated to Maria Carpini for her relentless love and support, even during the most trying of times.

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Table of Contents

List of Tables

List of Figures

List of Appendices

Leaders' Trustworthiness and the Mediating role of Autonomy in Predicting Employee Performance and Turnover Intentions

Since its inception, one of the pillars of organizational behaviour research has been the role of leaders in shaping the environment of their subordinates (Derue, Nahrgang, Wellman, Humphrey, 2011). Indeed, a great deal of research has demonstrated that leaders contribute to the overall performance of an organization in a multitude of ways including motivating and directing employees (Cho, Ringquist, 2010; Wang, Oh, Courtright, Colbert, 2011). One area of research that has received greater attention in recent years is the role of trust in organizational settings, and in particular, the trustworthiness of leaders (Mayer & Gavin, 2005). While several studies have linked leader trustworthiness with subordinate motivation and performance, there remains a significant gap in the literature as per the specific *mechanisms* involved in these relationships (Dirks & Ferrin, 2002). Additionally, there has been a trend since the 1980s in the Western world toward non-permanent work (e.g., part-time, contractual; De Cuyper et al. 2007). In Canada, there was a 1% increase (153,000) in the number of contingent workers between 2009 and 2010, the largest jump in over 14 years (Statistics Canada, 2012).Given this trend and the fact that classical theories of work are founded on the traditional conception of full-time employment (Kalleberg, 2000), Pfeffer and Baron (1998) argue that almost all the theories of work which are currently used should not be indiscriminately generalized to non-permanent work conditions.

Therefore, the purpose of the present study is to address these gaps by exploring the role of leader trustworthiness in satisfying the basic psychological needs of part time employees and thus predicting subordinate performance and turnover intentions. The results of this line of inquiry will contribute to the advancement of our knowledge in several ways. Firstly, this study will explore the processes involved in the translation between leaders' characteristics and

employee behaviours. Secondly, this line of research tests the generalizability of classical work theory to non-traditional working samples (part-time workers; Pfeffer & Baron, 1998). Finally, this research will generate valuable insights which may have practical applications for organizations, particularly in terms of training and selection. For instance, should it be demonstrated that certain leader characteristics are related to the satisfaction of basic psychological needs and subsequently to employee performance, leadership training can be provided in order to assist managers to develop this form of trustworthiness.

Trustworthy Leaders

Our understanding of the relationship between leaders and subordinates has evolved tremendously over the past few decades in no small part thanks to the work of Dansereau, Graen, & Haga (1975) who developed leader-member exchange theory (LMX; Graen, & Uhl-Bien, 1995). This theory of leadership is distinct from earlier theories as it is founded on the quality of the relationship (Schriesheim, Castro, Cogliser, 1999). As such, LMX proposes that the quality of the relationship between leader and member exists along a continuum from 'high' to 'low' (Dienesch & Liden, 1986; Gerstner & Day, 1997). Relationships which are 'high LMX' are characterised by loyalty, behaviours which transcend employment contracts and mutual trust between parties (Brower, Schoorman, Tan, 2000).

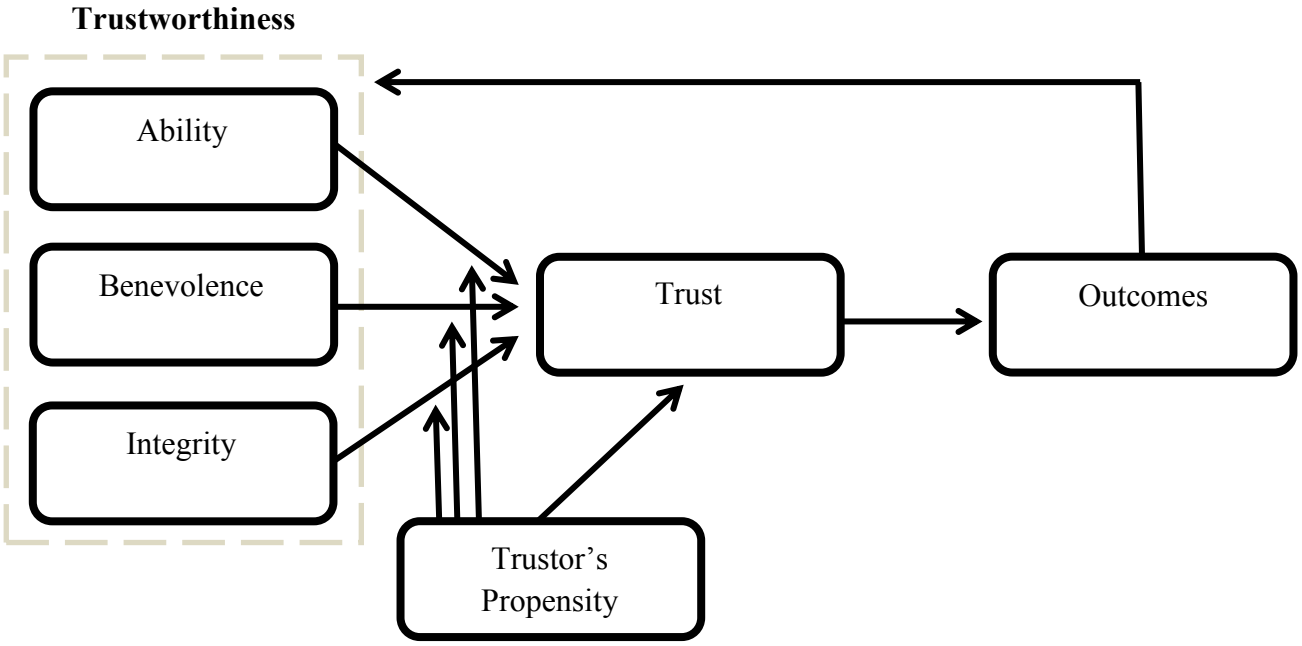
One of the primary concerns of LMX is the reciprocal nature of the relationship between parties (Iles, Nahrgang & Morgeson, 2007). As such, the theory postulates that trust builds and develops overtime through interactions (McKnight, Cummings, & Chervany, 1998). While trust is part of the relationship which is built through LMX, the two constructs are distinct. In this way, trust is not assumed to be equally reciprocated between parties (Gerstner & Day, 1997; Serva, Fuller & Mayer, 2005). It is within the context of leadership research that trust in leaders

has taken root and has advanced over recent years (Dirks & Ferrin, 2002). Research has demonstrated that trust in leadership has been positively associated with various individual and organizational outcomes such as job performance, occupational citizen behaviours (OCBs), job satisfaction and organizational commitment (Chan, Huang, & Man Ng, 2008; Colquitt, Scott, & LePine, 2007; Dirks & Ferrin, 2002; Tan & Lim, 2009; McEvily, Perrone & Zaheer, 2003).

In light of growing empirical research and trends in both the composition of the workforce and organization of the workplace, trust has become a major topic for both researchers and practitioners (Framer, 1999; Mayer, Davis, & Schoorman, 1995). While trust's accent into the research spotlight has triggered a great deal of scholarship, the field remains largely fragmented due to a lack of a comprehensive and empirically testable model (Burke, Lazzara & Salas, 2007; Rousseau, Sitkin, Burt, & Camerer, 1998). In 1995, Mayer, Davis and Schoorman proposed a new model of trust which sought to bridge the various fields of psychology, organizational behaviour, sociology and economics (Möllering, Bachmann, & Lee, 2004). This model brought much needed unity to the field while simultaneously drawing attention to the distinctions between trustworthiness, trust propensity, and trust.

In this model, Mayer and his colleagues (1995) propose a direct relationship between the trustworthiness of a leader, trust and outcomes (please see Figure 1). Within this framework, trustworthiness represents characteristics of the leader and focuses on subordinates' perceptions of the leader's character. This is of particular concern given that followers are likely to draw inferences about the leader's characteristics and these will in turn have an effect on both subordinate attitudes and subsequent behaviour (Dirks & Ferrin, 2002). According to Mayer et al. (1995), trustworthiness is comprised of three sub-parts: ability, integrity and benevolence. Ability is defined as 'that group of skills, competencies, and characteristics that enable a party to

Figure 1. Mayer, Davis & Schoorman (1995) Model of Trust



Note. Modified version of the model of trust presented in Mayer, Davis, & Schoorman (1995).

influence with some specific domain' (Mayer, Davis, & Schoorman, 1995, p.717). This definition includes such behaviours as setting compelling directions, the creation of structure, as well as both task and situation specific knowledge (McEvily & Tortoriello, 2011). Integrity is defined as 'the trustor's perception that the trustee adheres to a set of principles that the trustor finds acceptable' (Mayer, Davis, & Schoorman, 1995, p.717). Butler (1991) explains that factors such as accountability, perceptions of justice and value congruence all belong to this facet of trustworthiness. The final facet of trustworthiness is that of benevolence. Benevolent leaders create and sustain genuinely caring relationships with subordinates while fostering supporting contexts (Burks, Sims, Lazzara, Sala, 2007; Caldwell & Hayes, 2007; Dietz, & Den Hartog, 2006).

In addition to trustworthiness, trust propensity refers to the individual level differences in peoples' disposition toward trusting others (Mayer & Gavin, 1999). This construct lends on the existing literature which suggests that trust is, at least in part, an individual level trait (Burks, Sims, Lazzara, Sala, 2007). In this way, Rotter (1954; 1967) suggests that all individuals have a 'baseline' level of trust that they freely extend to others and this is related to one's general propensity to make positive attributions of others' intentions.

Trust is conceptualized as an outcome of trustworthiness which is moderated by trust propensity (Mayer, Davis & Schoorman, 1995). Mayer et al. (1995) define trust as 'the willingness of a party to be vulnerable to the actions of another party based on the expectations that the other party will perform a particular action important to the trustor (Mayer, Davis, Schoorman, 1995, p.712). This definition is a culmination of the existing literature as it contains two parts that have been central to the development of this field; the intention of the trustor to be vulnerable, and positive expectations (Colquitt, Scott, LePine, 2007; Rousseau, Sitkin, Burt, &

Camerer, 1998). Together, trustworthiness, trust propensity and trust are hypothesized to predict both behavioural (e.g., performance) as well as attitudinal outcomes (e.g., turnover intentions; Mayer & Davis, 1999).

Regardless of the organizational structure, leaders have the authority to make decisions that can directly impact followers. Furthermore, research has demonstrated that the average person will spend more time at work than in any other social context (including time with family and friends; Aamodt, 2010). Given this reality, the trustworthiness of the leader becomes central to understanding follower behaviour and attitudes (Mayer & Davis, 1999; Mayer, Davis & Schoorman, 1995; Nyhan & Marlowe, 1997). It is within this framework that Rich (1997) as well as Mayer and Gavin (1999) suggest that the trustworthiness of a leader has a significant effect on employees such that employees who perceive their leaders as untrustworthy (e.g. lacking integrity or ability) will spend more time 'covering their backs' and will have greater psychological distress due to a heightened sense of risk (Carnevale, 1995). The perceived risk is due to the fact that the behaviours and intentions of the leader are unpredictable and as such may pose a threat to the employee (Burke, Lazzara, & Salas, 2007; Curral & Judge, 1995). When a manager is perceived as trustworthy, employees are more likely to commit to goals and will have higher performance levels compared to employees who perceive their leaders as untrustworthy (Davis, Schoorman, Mayer & Tan, 2000; Rich, 1997). Research in this domain has demonstrated particular interest in both individual performance and turnover intentions, most likely due to the fact that these two outcomes are of primordial importance to organizations of all types (Aamodt, 2010; DeConinck, 2011; Ivancevich, Konopaske, & Matteson, 2011).

Several studies have empirically tested the proposed relationship between perceived trustworthiness of leaders and subordinate performance. In a meta-analysis of 106 studies, Dirks

and Ferrin (2002) found that trustworthiness was weakly associated to job performance. This relationship was found to be significantly stronger for direct leaders (supervisors and managers) as opposed to organizational leaders (senior management). In a study by Scandura & Schrieshiem (1994) trustworthiness was positively related to higher levels of employee satisfaction and performance. Additionally, a study by Yand and Mossholder (2009) found that trustworthiness was a predictor of both in-role and extra-role behaviours. Interestingly, results of a study using 147 clinical and 188 non clinical Canadian health care agents found that perceived trustworthiness of management was positively associated with proactive behaviour but negatively related to other measures of performance (Wong & Cummings, 2009). Finally, a study by Heavey and colleagues (2011) found that trust in leaders positively predicted both motivation and performance.

In addition to the research examining trustworthiness and performance, a growing body of literature examines the impact of the trustworthiness of leaders on employees' turnover intentions (Dirks & Ferrin, 2002). Turnover intentions are of particular interest to organizations as it has been associated with huge financial implications such as cost of recruitment, training, and loss of both productivity and knowledge (Burke, Lazzara, Salas, 2007; Griffeth & Hom, 1995; Meier & Hicklin, 2008; Zimmerman & Darnold, 2009). Untrustworthy leaders are perceived as 'riskier' and this perceived risk is associated with heightened distress in employees which in turn results in increased turnover intentions (Kramer & Tyler, 1996; Rich, 1997). In studies by Connell, Ferres, and Travaglione (2003) as well as by Dirks and Ferrin (2001) trust was negatively correlated to turnover intentions. Similarly, research by Meyer, Stanley, Herscovitch, and Topolnytsky (2002) demonstrated that perceptions of trust were positively correlated to affective commitment, while negatively correlated to both absenteeism and

turnover. Interestingly, in a four-country study by Costigan et al. (2012), both strong and weak levels of trust were associated with higher turnover intentions while moderate levels of trust were not. Finally, in a meta-analysis conducted by Dirks and Ferrin (2002), trustworthiness was strongly negatively related to turnover intentions.

While several theories have focused on behavioural and attitudinal outcomes of trustworthiness such as job performance and turnover intentions, scholars have begun to question the specific mechanisms involved (Heavey, Halliday, Gilbert, Murphy, 2011; Mayer, Davis, Schoorman, 1995). Research by Fernet, Gagné & Austin (2010) examined the role of co-worker relationships on motivation and found positive main effects for high-quality relationships on motivation (Harvey, Kelloway, Duncan-Leiper, 2003). Most people would agree that trust between two parties is an inherent indication of a high-quality relationship and as such this line of research is extended by the work of Heavey, Halliday, Gilbert and Murphy (2011) who found that trust in management is a key element in employee motivation. In their research, they found a main effect for trustworthiness on motivation such that higher levels of perceived leader trustworthiness resulted in more motivation. Additionally, a study by Grant and Sumanth (2009) found that the trustworthiness of fundraiser leaders was positively related to motivation and performance in volunteers. Similarly, two studies by Cho and Perry (2009 and 2011) found that the trustworthiness of leaders interacted with both intrinsic and extrinsic motivation and predicted both performance and turnover intentions.

While these lines of inquiry have advanced our understanding of the role of trustworthiness in traditional organizational settings, there still remains no research examining perceived trustworthiness of managers by non-permanent workers and much ambiguity in explaining the relationship between trustworthiness, motivation and important employee

outcomes such as performance and turnover intentions (Dirks & Ferrin, 2002; Mayer & Gavin, 2005). Some scholars have proposed that trustworthiness is an antecedent of motivation (e.g. Heavey, Halliday, Gilbert and Murphy, 2011) while others have proposed it is a moderator of the relationship between motivation and outcomes (e.g. Cho & Perry, 2009; Chung, 1968). Lending on the seminal work of Deci & Ryan (1985; 2000), self-determination theory provides insight into the relationship between leaders trustworthiness and individual outcomes by offering an empirically testable theoretical framework that can explain the observed relationships (Weibel, 2007).

Basic Psychological Needs & Motivation

First proposed by Deci and Ryan (1985), self-determination theory (SDT) is a macro-theory of human motivation. In the simplest of terms, Deci and Ryan (1985) define motivation as the process through which individuals are moved into action. While other theories of human motivation (e.g. expectancy theory, equity theory & goal setting theory) operate under the assumption that motivation is a unitary concept (Grant & Shin, 2011), self-determination theory proposes three arch-types of motivation that are qualitatively distinct (Deci & Ryan, 2008; Ryan & Deci, 2000a; 2000b). In this way, Deci & Ryan (1985) propose that the lowest quality of motivation is amotivation (the absence of motivation) followed by controlled motivation and finally the highest quality of motivation – autonomous motivation (see Figure 2). Within this framework, Deci and Ryan (2011) explained that these various types of motivation could effectively predict individual level outcomes. Indeed, a large body of empirical research has supported Deci & Ryan's (1985) proposition. Individual level outcomes such as psychological well-being (Deci & Ryan, 2008; Deci et al. 2001), performance (Dysvik & Kuvaas, 2011; Grant, Normohamed, Ashord & Dekas, 2011), and turnover intentions (Vansteenkiste et al. 2007) have

all been demonstrated to have unique relationships with the various forms of motivation proposed by self-determination theory.

According to self-determination theory, autonomous motivation is qualitatively the superior of the three types of motivation (Deci & Ryan, 2000; 2008). For motivation to be considered autonomous, an individual must 'experience volition, or a self-endorsement of their actions' (Deci & Ryan, 2008; p.182). This type of motivation contains three sub-types: intrinsic motivation, integrated regulation, and identified regulation. According to Deci & Ryan (1985) intrinsically motivated behaviours must be executed for its inherent satisfaction rather than for any contingent consequence (Deci, Koestner, & Ryan, 1999; e.g. "I work because the work I do is interesting"). Integrated regulation is characterised by volition and a congruency with one's own goals and values while no longer being purely instrumental in nature (Gagné & Deci, 2005). Identified regulation refers to behaviours which are instrumental in nature; however, these behaviours are also autonomously driven and are characterised by an attachment of personal importance to the behaviour and an ingrained belief that the behaviour is self-directed (Deci & Ryan, 2000). Research utilizing self-determination theory has found that contextual factors such as opportunities to exercise autonomy through decision making and expressing oneself have been associated with autonomous motivation (Stone, Deci, & Ryan, 2009). In contrast, autonomous motivation can be thwarted by conditions such as external rewards, deadlines, and compulsory goals (Deci & Ryan, 2000; 2008).

Comparatively lower in quality than autonomous motivation, controlled motivation is defined by a sense of internal or external pressure to behave, think or feel in a prescribed way (Deci & Ryan, 2008). This type of motivation is made up of two sub-parts: external regulation and introjected regulation. External regulation is best characterised by the proverbial 'carrot-and-

the-stick' and as such refer to behaviours which are directed toward the satisfaction of external demands which are in the pursuit of contingent rewards or avoiding punishment (Deci & Ryan, 2008; Ryan & Deci, 2000a; e.g. 'I work because I want the pay cheque', 'I work to avoid defaulting on my mortgage'). Introjected motivation is also founded on contingencies; however, these contingences revolve around the ego. This form of motivation is characterised by internalized pressure through ego involvement in order to obtain pleasant or avoid unpleasant emotional states such as pride, fear, shame, or embarrassment (Ryan & Deci, 2000b; e.g. 'I have to work otherwise I am afraid my contract will be terminated').

Amotivation represents the lowest quality of motivation (Deci & Ryan, 2000). This type of motivation is characterised by the complete absence of motivation (Ryan & Deci, 2000). Amotivation represents a deficit in the desire to behave and stands in stark contrast to both autonomous and controlled motivations (Deci, Koestner, Ryan, 1999). A belief that one does not possess the necessary efficacy or sense of agency in order to obtain a given goal is indicative of amotivation in goal pursuit (Ryan & Deci, 2000). As such, employees who feel they do not have the required knowledge, skills or ability for a given task are likely to feel amotivated.

Research utilising this taxonomy has found that autonomous and controlled motivations are predictive of various outcomes. For example, autonomous motivation has been empirical shown to predict psychological well-being, vivacity, goal attainment, progression toward goals, creativity, performance and organizational commitment (Deci, Connell, Ryan, 1989; Deci & Ryan, 2011; Gagné & Deci, 2005; Gegenfurtner, Festner, Gallenberger, Lehtinin, Gruber, 2009; Grant, Nurmohamed, Ashord, and Dekas, 2011; Ryan, Sheldon, Kaser & Deci, 1996). While autonomous motivation is generally associated with positive outcomes, controlled motivation is often a predictor of negative outcomes such as; maladaptive coping (Ryan & Connell, 1989),

poor concentration and time management, greater anxiety (Vansteenkiste, Zhou, Lens, & Soenens, 2005), and lower achievement (Soenens & Vansteenkiste, 2005; Deci & Ryan, 2000).

In addition to breaking away from a unitary concept of motivation, Deci & Ryan (1985) built on previous theory related to basic psychological needs (Baard, Deci, & Ryan, 2004; e.g. Maslow, 1943; McClelland, 1960). Basic psychological needs are defined as essential nutrients that are necessary for survival, growth and the overall integrity of an individual (Deci & Ryan, 2000; Ryan, Sheldon, Kasser, & Deci, 1996). According to self-determination theory, the needs for autonomy, competence and relatedness are both inherent and universal (Baard, Deci, & Ryan, 2004; Deci & Ryan, 1985; Deci, et al. 2001). Autonomy is defined by a sense of volition and the freedom to behave in accordance with one's self-perceptions (deCharms, 1968; Deci & Ryan, 2002). The need for competence is characterized by the tendency for one to master the environment, to attain objectives and meet challenges (White, 1959). Finally, the need for relatedness involves the feeling of establishing and maintaining meaningful relationships with others (Deci & Ryan 2000a; Richer & Vallerand, 1998). Deci & Ryan (1985) propose that the satisfaction of the three basic psychological needs is directly related to the quality of motivation such that greater satisfaction is associated with more autonomous motivation. As such, need satisfaction represents a unique mechanism that explains differential outcomes as determined by the degree to which behaviour is autonomously versus controlled regulated (Deci & Ryan, 2000).

There have been a plethora of empirical studies in various life domains (e.g. education, sport, and work) examining the role of basic psychological needs in understanding and predicting behavior (Ryan & Deci, 2000; 2006). For example, a study by Baard, Deci and Ryan (2004) found that need satisfaction was positively related to work performance and adjustment. These findings are echoed in the research by Bartholomew and colleagues (2011) as well as by Adie,

Duba and Ntoumanis (2012) who found that athlete perceptions of need satisfaction predicted outcomes of sport participation such as burnout, depression and negative affect. In studies by Reis, et al (2000), Custers et al. (2010) and Downie and colleagues (2008) daily variations in both physical and psychological well-being could be predicted by need satisfaction in both adults and seniors. Indeed, research utilising this framework has effectively demonstrated the imperative role of basic psychological needs to human well-being, attitudes, and performance.

Leader Trustworthiness and Basic Psychological Need Satisfaction in Subordinates

Despite the growing volume of scholarship examining the role of basic psychological needs across contexts, there remains a lack of empirical work examining aspects of the environment that are likely to foster versus thwart need satisfaction (Avolio, 2007; Baard, Deci & Ryan, 2004; Deci & Vansteenkiste, 2004; Ryan & Deci, 2002). One avenue of particular interest in organizational psychology is the role of leadership in the need fulfillment process (Hetland, 2005; Hetland, et al. 2011). Gagné and Deci (2005) accentuated the unique position that leaders hold in their ability to influence subordinates and impact factors that may directly affect motivation, performance, attitudes and well-being.

According to some scholars, the beneficial outcomes associated with leadership styles may be due to the leader's ability to satisfy the follower's basic needs (Bass & Avolio, 2004). For instance, a study by Hetland and Sandal (2003) found links between leadership styles and employee outcomes (job satisfaction, motivation and well-being). The authors postulated that the relationship may be moderated by the satisfaction of the need for autonomy as suggested by Bass (1997). Furthermore, a study by Lian, Ferris and Brown (2012) found that basic need satisfaction mediated the relationship between abusive supervision and organizational deviance. Finally, a study by Roy and Gosselin (2006) demonstrated that the interpersonal context had a moderate

influence on motivation of part-time workers. Together, these studies support a potential relationship between leaders and subordinate need satisfaction. With this said, there have yet to be any published studies that have attempted to combine the two theoretical frameworks together. Given that one of the primary concerns of self-determination theory is the identification and understanding of contextual factors which support the needs for autonomy, competence and relatedness, thus foster high quality forms of both motivation and engagement, the combination of the two theoretical frameworks is natural (Deci & Ryan, 2000; Gagné & Deci, 2005) .

As such, the purpose of the present study was to empirically test the direct effects of trustworthiness on subordinates' need satisfaction and the indirect effects of trustworthiness on both performance and turnover intentions as mediated by need satisfaction. In this way, the potential role of leader trustworthiness will be explored in terms of its capacity to satisfy subordinates' basic psychological needs. In addition, the existing literature in both trust and self-determination theory will be extended by examining the potential indirect effects of trustworthiness on both performance and turnover intentions as mediated by basic need satisfaction.

As Deci and Vansteenkiste (2004) argued, there are aspects of the environment that are more likely to result in greater basic need satisfaction and as such greater autonomous motivation. Within the leadership literature, Dirks and Ferrin (2002) suggest that subordinates make inferences about their leader's characteristics (ability, benevolence and integrity) and that these inferences translate to both subordinate attitudes and behaviours. Utilizing self-determination theory, one can postulate that the translation of character-based inferences may be due to the satisfaction of basic psychological needs by the leader (Bass, 1997; Eisenberger, Huntington, Hutchison, & Sowa, 1986).

At a theoretical level, the definitions of the three facets of trustworthiness lend themselves to the satisfaction of the basic psychological needs as a whole. The satisfaction of the needs by various facets of trustworthiness may be further subdivided such that various aspects of trustworthiness are likely to satisfy different needs. The facet of ability is described as setting compelling directions, creating and sustaining enabling structures within the organization and holding both task and situational knowledge (Mayer & Davis, 2005). As such, this facet is likely to satisfy the needs for both autonomy and competence. In a similar way, integrity is characterised by accountability, value congruence and perceptions of justice (Mayer, Davis & Schoorman, 1995), which are likely to satisfy the needs or autonomy and relatedness. Finally, the facets of benevolence stress the creation and preservation of supportive work contexts and caring relationships, and as such are likely to satisfy the needs for both autonomy and relatedness.

Indeed, there is empirical support for these proposed relationships in the literature. For example, a study by Ryan and Grolnick (1986) found students of teachers who were perceived as warm and caring reported greater intrinsic motivation towards their school work. Similarly, research has also demonstrated that high-quality relationships with coworkers is important for employees who have less autonomous work motivation as it protects against negative psychological effects (Fernet, Gagné, & Austin, 2010). Furthermore, studies by Lewicki and Bunker (1996) as well as by Nyhan (2000) both support the notion that autonomy in the workplace is a critical factor in the building of trust in the workplace. In a longitudinal study by Adie and colleagues (2012), autonomy-support from coaches of sport teams positively predicted both within and between-person basic need satisfaction. Similarly, a study by Deci et al. (1989) found that subordinates of managers who were more autonomy-supportive reported greater levels of trust and overall job satisfaction. In several studies, transformational leadership was

associated with greater employee motivation (Bono & Judge, 2003; Brower, Schoorman, & Tan, 2000; e.g. Brown & Arendt, 2010; DeConinck, 2011). These findings were elaborated on in a model supported by Richer, Blanchard and Vallerand (2002), who found that factors such as choice, meaningful feedback and managers' interpersonal styles (generally associated with transformational leadership) were positively related to satisfaction of the need for autonomy in employees.

In light of these empirical findings and the theories proposed by Deci & Ryan (1985; 2000) as well as by Mayer, Davis and Schoorman (1995), the following hypotheses are proposed (see Figure 2 for an overview):

H1. Trustworthiness will be positively related to basic need satisfaction.

Ability.

H1a. Ability will be positively related to autonomy.

H1b. Ability will be positively related to competence.

Integrity.

H1c. Integrity will be positively related to autonomy.

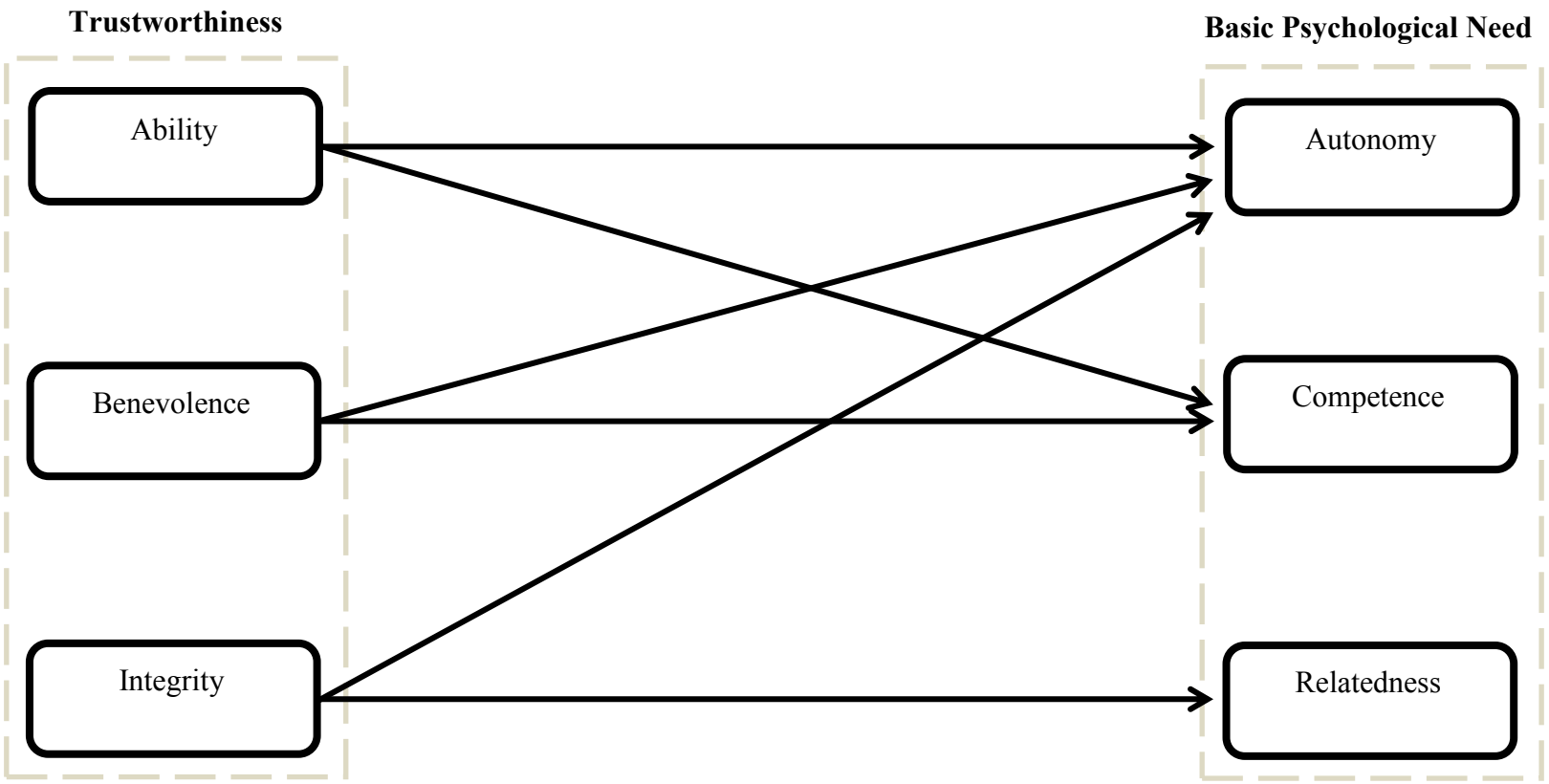
H1d. Integrity will be positively related to relatedness.

Benevolence.

H1e. Benevolence will be positively related to autonomy.

H1f. Benevolence will be positively related to relatedness.

Figure 2. *Theoretical Model for the Present Study: Hypotheses 1*



The Mediating Role of Basic Psychological Needs

Deci and Ryan (1985) have proposed that the satisfaction of basic psychological needs may be a mediator between contextual factors (e.g. leadership styles) and important individual level outcomes. This hypothesis has been supported by various scholars in several contexts. For example, in a study of dancers by Quested and Duda (2010) support was found for the role of basic psychological needs as partial mediators between the social context (autonomy supportive coaches) and measures of psychological well-being. Similar results by Wei and colleagues (2005) uncovered the mediating role of need satisfaction in the context of daily life in predicting negative affect in adults. Finally, a study by Van den Broeck, Vansteenkiste, De Witte and Lens (2008) in a work context found that satisfaction of the needs was a significant predictors of job performance, burnout and engagement.

In light of these findings, the current research study elaborates on the existing body of literature and answers the call by scholars to examine the mediating role of basic psychological needs in the work context (Gagné & Deci, 2005; Gagné & Forest, 2008). As such, basic psychological needs will be examined in terms of their potential role as mediators between the perceived trustworthiness of leaders and important subordinate outcomes. Given that both scholars and practitioners alike put great emphasis on individual performance as well as turnover intentions (Aamodt, 2010) the present study examines these two outcomes.

Performance: Trustworthiness of Leaders and Basic Need Satisfaction

Individual performance has been a topic of major empirical study for over the past forty years (Kluger & DeNisi, 1996). The classic literature on performance has examined the concept as a unitary fashion focusing almost uniquely on the job specific aspects of performance. This trend resulted in numerous empirical studies that conceptualized performance in terms of

individual proficiency (Blumberg & Pringle, 1982). An individual's level of proficiency is defined by the extent to which that person meets the formal requirements of the job – in other words, how well does the individual do when measured against the job description (Griffin, Neal & Parker, 2007). This definition of performance is a logical beginning given that it is a natural measure of performance and is readily measureable. Despite this, scholars such as Murphy and Jackson (1999) call for a more holistic view suggesting that performance should be assessed in terms of 'the total set of performance responsibilities associated with one's employment' (p.335).

It is in response to such criticisms that Griffin, Neal and Parker (2007) propose a more comprehensive model of work performance. The purpose of this model is to allow for the assessment of various types of performance and as such link them to an overall concept of work performance (Griffin, Neal & Parker, 2007). In this way, the authors propose three subtypes of work performance: proficiency, adaptivity and proactivity. Additionally, the authors also present three levels at which the subtypes of performance can be measured: the individual, the team and organization.

The authors retained the classic definition of individual proficiency to assess behaviours which are outlined in a given job description and as such have a ready standard against which performance can be measured. In addition to this classic definition of proficiency, Griffin and his colleagues (2007) propose that proficiency can operate at both the team and organizational levels. As such, the authors define team proficiency as the degree to which an individual meets both the expectation and the requirements of being part of a team. Similarly, this definition is extended to the organizational level and is defined as the extent to which an individual fulfills his or her requirements and expectations as a member of the organization (Griffin, Neal, & Parker, 2007).

An established body of research has examined employee proficiency particularly in terms of the antecedents of this type of performance. A study by Tyagi (1985) found various job characteristics (skill variety, autonomy, task identity, importance, and feedback) instrumental in enhancing individual performance. Conversely, leadership behaviours such as trust, support, goal emphasis, work facilitation, interaction facilitation (the leader listened and maintained positive interactions) and psychological influence (feeling like the leader considered the subordinate's perspective) had a direct effect on extrinsic motivation. Furthermore, research by Huang, Iun, and Gong (2010) demonstrated that supervisors' participative leadership style was directly related to the task performance of subordinates who are part of the management team. Interestingly, the relationship between participative leadership style and subordinate performance was mediated by trust-in-supervisors for non-managerial-subordinates. In-line with the findings of Huang and colleagues (2010), and a study by Dirks (1999) found no main effect of interpersonal trust on work group performance and instead supports the moderating role of trust as a factor that influences how motivation is converted into work group processes and performance. Finally, a study by Ang and Slaughter (2001) found that managers perceive non-permanent employees as less trustworthy and lower performing. As such, Dirks (1999) concludes 'trust may be best understood as a construct that influences group performance indirectly' (p. 445).

In response to growing uncertainty in organizations the authors also proposed a facet of work performance called adaptivity. As such, adaptivity is defined as 'the extent to which an individual adapts to changes in a work system or work roles' and includes such behaviours as adapting to new procedures, technologies, work settings and mergers (Griffin, Neal & Parker, 2007, p.329). At the individual level the changes are with respect to the individual's work system

or work roles, while at the team and organizational levels, the changes are in the team roles and work systems or organizational roles and work systems (Griffin, Neal & Parker, 2007).

Given the fast paced work environment in which many organizations evolve today, there is a growing body of literature on adaptive performance. A prime example of the need for adaptation is in the information technology (IT) sector given that a significant amount of money is invested in the creation of new technologies, and that the success of these technologies hinges on employees adopting new work practices (Mitchell, Gagné, Beaudry, Dyer, 2012). Mitchell, et al. (2012) examined factors contributing to employees' acceptance of new IT. The study found that perceived organizational support and distributive justice were both positively associated with more autonomous motivation to use new IT. These results are further explained in light of a study by Gagné, Koestner and Zuckerman (2000), which found that greater autonomy support (leaders providing explanations for doing a task, offering some degree of choice in how a given task is done, and acknowledging employee feelings about a task; Stone, Deci & Ryan, 2009) was positively associated with acceptance of major organizational change (Gagné, Koestner and Zuckerman, 2000). Interestingly, a study by Berg, Wrzesniewski and Dutton (2010) found employees of various not-for-profit organizations often had to engage in adaptive behaviour as an antecedent of proactive behaviour in order to capitalize on new opportunities. Indeed, these research findings support and highlight the importance of this facet of performance to various organizations.

The final facet of performance within this model is that of proactivity (Fay & Sonnentag, 2010). Proactivity is defined as 'the extent to which the individual takes self-directed action to anticipate or initiate change in the work system or work roles' (Griffin, Neal, & Parker, 2007, p.329). As is the case with the other facets of performance, this is proposed to operate at the

individual, team and organizational levels. An example of proactive behaviour may include a nurse recommending a modification to an existing patient-care protocol in light of new research.

There has been a dramatic increase in research examining proactive behaviour in the last decade as this type of behaviour is especially important for organizations seeking to remain competitive in uncertain economic times (Strauss, Griffin, & Rafferty, 2009). In a study by Ohly and Fritz (2010), employees reported more creativity and proactivity when they experienced greater 'challenge' as understood in terms of greater time pressure and job control. Similarly, a study utilising 282 wire makers found that both co-worker trust and job autonomy were associated with more proactive behaviour. Interestingly, supportive supervision was not an important predictor of subordinate proactive behaviour (Parker, Williams, & Turner, 2006). This line of research is furthered by the work of Fay and Sonnentag (2012) who found that employees who reported greater levels of experienced competence when completing core-task activities also spent more time completing these activities, while employees who experienced less competence spent greater time on proactive behaviours. Indeed, the results of the Fay and Sonnentag (2012) study speak to a growing body of literature which seeks to address the potential 'dark side' of proactivity (Belschak & Hartog, 2010a; Belschak, & Hartog, 2010b). For example, a study by Spychala and Sonnentag (2011) found proactive behaviour directed toward promotions caused an increase in task conflict as opposed to proactive behaviours which sought to simply prevent a problem. In this way, proactivity appears to be a double-edged sword that can both foster and hinder individual performance.

Indeed, studies that have distinguished between various types of performance have yielded interesting results (Parker, Bindl, & Strauss, 2010). For example, in the initial validation of the Griffin, Neal and Parker (2007) measure of performance evidence was found that the

various aspect of performance were independently predicted by role clarity, openness to change, self-efficacy, organizational commitment and negative affectivity. Additionally, a study by Griffin, Parker and Mason (2010) found that leaders could motivate employees to be more adaptive and proactive by presenting a clearer and more compelling view of the future. Finally, research by Wang et al. (2011) found that transformational leadership was most highly associated with proactivity, while transactional leadership was not.

The established body of literature also supports the role of leader trustworthiness in predicting subordinate performance (e.g. Bartram & Casimir, 2007; Dirks & Ferrin, 2002; Lee, Gillespie, Mann, & Wearing, 2010). For example, a study by Lester and Brower (2003) demonstrated a positive relationship between perceived trustworthiness of leaders and subordinate task performance as well as occupational citizenship behaviours. Similarly, a study by Dirks (2000) found that trust in leadership was both a significant predictor and product of performance in NCAA basketball teams. Interestingly, a study by Palanski and Yammarino (2011) demonstrated that leader integrity did not directly predict subordinate performance; however, it did indirectly via the followers' satisfaction with the leader. Indeed, the relationship between leader trustworthiness and task performance has been demonstrated cross-culturally by Casimir et al. (2006) in a sample of Australian and Chinese employees. However, no research to date has evaluated the different facets of performance using the Griffin et al. (2007) conceptualization. Furthermore, Connelly and Gallagher (2004) note that there is little research conducted on part-time employees and potential predictors of their performance.

Given that research utilising self-determination theory (Deci & Ryan, 1985) has found that basic psychological need satisfaction is positively related to performance (e.g. Baard, Deci, Ryan, 2004; Deci & Ryan, 1985). As such, the following hypotheses are proposed in light of the

Griffin, Neal and Parker (2007) model of performance and self-determination theory (Deci & Ryan, 1985, 2000; see Figure 4):

H2. Basic psychological need satisfaction will mediate the relationship between trustworthiness and performance.

Proficiency.

H2a. Autonomy will mediate the relationship between trustworthiness and proficiency.

H2b. Competence will mediate the relationship between trustworthiness and proficiency.

Adaptivity.

H2c. Autonomy will mediate the relationship between trustworthiness and adaptivity.

H2d. Competence will mediate the relationship between trustworthiness and adaptivity.

H2e. Relatedness will mediate the relationship between trustworthiness and adaptivity.

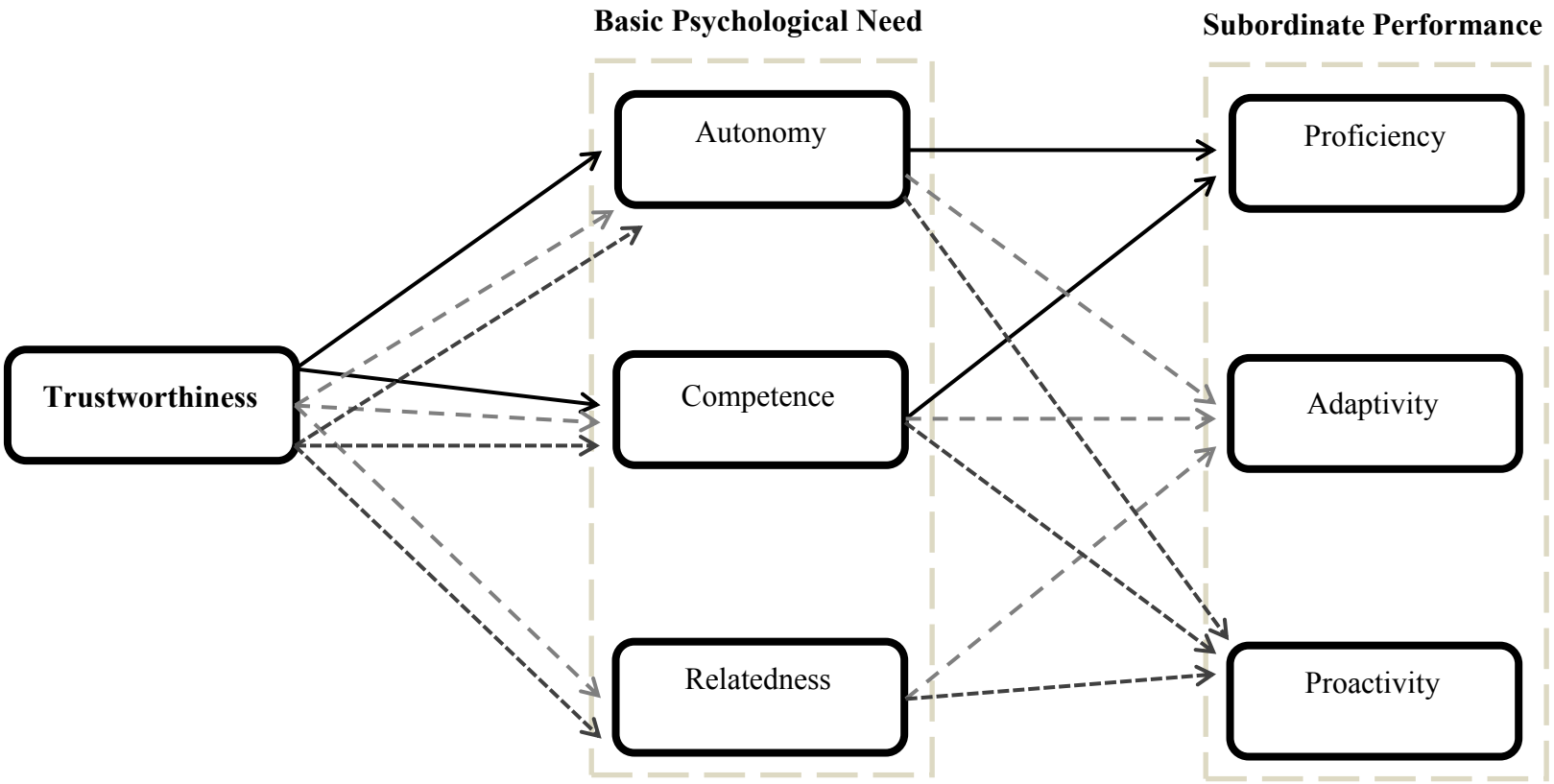
Proactivity.

H2f. Autonomy will mediate the relationship between trustworthiness and proactivity.

H2g. Competence will mediate the relationship between trustworthiness and proactivity.

H2h. Relatedness will mediate the relationship between trustworthiness and proactivity.

Figure 3. *Theoretical Model for the Present Study: Hypotheses 2*



Turnover: Trustworthiness of Leaders and Basic Need Satisfaction

In addition to performance, the turnover intentions of employees are of great importance to all types of organizations (Aamodt, 2010). The reason for this is that research has demonstrated turnover intentions are a reasonable proxy for actual turnover (Cho & Lewis, 2012). Turnover has been traditionally divided into two parts: voluntary and involuntary. The distinction between the two lies in the origin of the turnover such that voluntary turnover is a result of the individual choosing to leave, whereas involuntary turnover occurs when forces external to the employee terminate the employment contract. Voluntary turnover is of particular concern to an organization as it is generally associated with a high cost to the organization. Productive and beneficial employees who leave incur costs on the organization due to high costs of recruitment, training, lost productivity and the loss of knowledge and skills developed over time.

Research has found significant relationships between trust in leadership and turnover intentions. A study by Gould-Williams & Davies (2005) demonstrated that employees are less likely to want to leave when they have high levels of trust in their supervisors. These results were echoed in studied by Connell, Ferres, and Travaglione (2003) and Dirks and Ferrin (2001). Meta-analysis results (Dirks & Ferrin, 2002) show that trust is strongly negatively related to turnover intentions. Similarly in a study by Alexandrov, Babakus and Yavas (2007), perceived managerial concern for employees predicted organizational commitment; however, it was found that the relationship was weaker for part-time employees than for full-time employees. Interestingly, structure equation modeling by Chou et al. (2011) found that trust mediated the relationship between relationship management activities and temporary worker performance. Interestingly, a study by Maynards and colleagues (2006) demonstrated that students and involuntary part-time

workers systematically reported lower job attitudes and greater intentions to quit than did full-time and voluntary part-time workers.

Basic psychological need satisfaction has also been empirically demonstrated to predict turnover intentions. As Deci and Vansteenkiste (2004) have argued, individuals will be attracted to situations which foster the satisfaction of their basic psychological needs, while avoiding or disengaging those which thwart need satisfaction. Indeed, this proposition has been empirically demonstrated in a variety of studies (see Deci & Ryan, 1985, 2000 for a review). For example, a study by Gagné (2003) found that autonomy support predicted lower volunteer turnover. Additionally, another study by Gagné et al. (2010) found that the satisfaction of basic psychological needs was negatively associated with turnover intentions.

In light of the research presented as well as the theoretical foundations offered by both Mayer et al. (1995) and by Deci and Ryan (1985) the following hypothesis is proposed (see Figure 4):

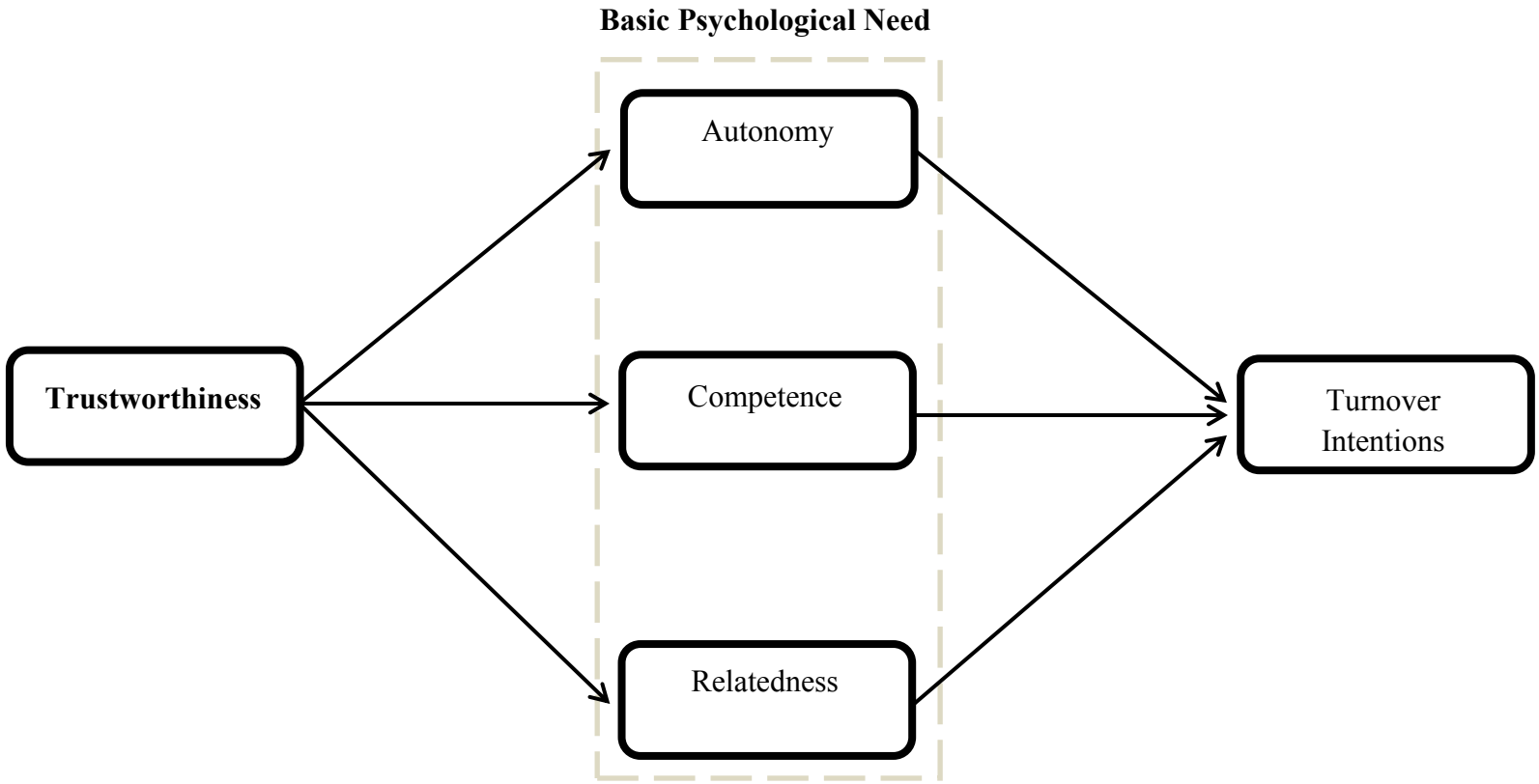
H3. Basic need satisfaction will mediate the relationship between trustworthiness and turnover intentions.

H3a. Autonomy will mediate the relationship between trustworthiness and turnover intentions.

H3b. Competence will mediate the relationship between trustworthiness and turnover intentions.

H3c. Relatedness will mediate the relationship between trustworthiness and turnover intentions.

Figure 4. *Theoretical Model for the Present Study: Hypotheses 3*



Methodology

In order to investigate the relationship between employee trust in their management teams (ability, benevolence, integrity), basic need satisfaction at work (autonomy, competence, relatedness), performance (adaptivity, proactivity, proficiency) and turnover, the following methodology was implemented. The procedures, measures, data preparation and analytical strategy utilised in this study are described below.

Participants

The present study implemented a cross-sectional quantitative research design over the course of an eight month data collection period from October to May 2012. Data was collected from a total of 350 participants (*N*= 153 males, *N* = 196 females) recruited from the Greater Montreal area. The mean age of participants was 21.35 years with a standard deviation of 3.01 years (*M* =21.35, *Min* = 15, *Max* = 38, *SD* = 3.01, *N* = 348). For the most part, participants had completed some university education (*N* = 293). In addition, participants represented several industries; service (*N* = 172), retail (*N* = 82), fast food industry (N = 16), and other (*N* = 72). Finally, participants were primarily non-unionized (N = 291). The eligibility criterion for the study was that participants had to be currently employed on a contingent basis (either part-time or contractual).

Participants were recruited through several channels. The majority of the sample was collected through the John Molson School of Business participant pool as part of an introductory level business course (*N* = 260). A second sample of second-year business students was collected through two in-class presentations where students were introduced to the study and asked if they would like to participate (*N* = 50). A third data collection was conducted at a Montreal company after having received written permission from the General Manager. Employees of the company

were recruited in person at work and through a social media tool ($N = 40$). All potential participants were informed that the primary purpose of the study was to better understand how contingent workers perceive their jobs and were told the questionnaire would take approximately one hour to complete.

Participants from the John Molson School of Business were compensated with one 'participant pool credit' which increased their final course grade by 1%. Participants from the Montreal-based company were compensated with a $5.00 gift card to a retailor of their selection (amongst four potential retailers). All participants were debriefed and thanked for their time.

Procedures

Participants completed the questionnaire in a single sitting from any internet enabled device. In total, the questionnaire took approximately 30 minutes to complete. John Molson School of Business students accessed the questionnaire through the university participant pool website which provided a brief overview of the study and provided a hyperlink to the study's website. The overview informed potential participants that the study wished to better understand contingent worker (part-time and contractual workers) perceptions of their jobs in light of growing job insecurity in Canada. Individuals who wished to participate were automatically rerouted to the study's main interface which was hosted by *Qualtrics* (www.qualtrics.com). *Qualtrics* is a web-based program licensed to the John Molson School of Business where all data is stored on a secure password-protected server. Participants who were not currently registered John Molson School of Business students were individually emailed an anonymous web link for *Qualtrics*.

The questionnaire began with a welcome page with the John Molson School of Business logo and instructed participants to hit the 'next' button to continue to the consent form. The consent form outlined the purpose, procedures, risks and benefits as well as the conditions of participation. Participants were reminded of their right to withdraw from the study at any time without negative

consequence. Participants electronically consented by hitting the "next" button at the end of the form (see Appendix A). Hitting the 'next' button brought participants to the start of the questionnaire.

Administration of the Measures. In order to control for order effects, the *Qualtrics* system was programmed to counterbalance the six scales as well as the individual scale items. This controlled for potential order effects at both the scale and item levels. Descriptives were gathered after the presentation of the scales. The questionnaire ended with a debriefing message and participants were thanked for their time.

Measures & Instruments

A total of four scales and nine descriptive questions were used. They are described below.

Measures of Trust (Mayer & Davis, 1999; see Appendix B). This self-report measure assesses employees' trust in their management team. The scale is comprised of sixteen items which represent answers to the question 'Think about your company's management team (supervisors and managers)'. For each statement, write the number that best describes how much you agree or disagree with each statement.' Answers were recorded on a five-point Likert scale ranging from one (1) 'disagree' to five (5) 'agree'. Items represent three subscales and are divided as follows: six items measure ability ("Top management is very capable of performing its job."), five items measure benevolence ("Top management is very concerned about my welfare.") and five items measure integrity ("Top management tries hard to be fair in dealings with others.") Each of the three subscales demonstrated very good reliability; $\alpha = .89$, $M = 3.66$, $SD = .77$ for ability, $\alpha = .89$, $M = 3.26$, $SD = .89$ for benevolence, and $\alpha = .85$, $M = 3.29$, $SD = .80$ for integrity (Pedhazur, 1997). The mean for each subscale was tabulated to create the test variables.

Work-Related Basic Need Satisfaction Scale (Van den Broeck, Vansteenkiste, De Witte, Soenens, & Lens, 2009; see Appendix C). This 16 item self-report questionnaire assesses the extent to

which basic psychological needs are satisfied at work. Participants are asked to 'Please indicate the extent to which statements correspond to your current work.' Scores for each item are on a five-point Likert scale from one (1) 'not at all true' to five (5) 'completely true'. The measure is made up of three subscales; autonomy, competence and relatedness. There are five items measuring autonomy ("I feel free to do my job the way I think it could best be done"), four items measuring competence ("I feel competent at my job") and six items measuring relatedness ("At work, I can talk with people about things that really matter to me"). The subscales for both relatedness and competence demonstrated acceptable reliability; $\alpha = .78$, $M = 4.78$, $SD = .63$ for relatedness, and $\alpha = .76$, $M = 4.11$, $SD = .54$ for competence (Pedhazur, 1997), while the subscale for autonomy was slightly below the generally acceptable criterion value; $\alpha = .64$, $M = 4.19$, $SD = .58$. The mean for each subscale was tabulated to create the test variables.

Performance Scale (Griffin, Neal and Parker, 2007; see Appendix D). This self-report questionnaire is made up of 27 items. The measure creates a matrix whereby three dimensions of performance (individual, team and organizational) are each subdivided into three facets of performance (proficiency, adaptivity, and proactivity). Participant responses were based on the root sentence: 'The following statements relate to your personal performance. Please indicate the extent to your agreement with each statement' on a five-point Likert scale ranging from one (1) 'Strongly Disagree' to five (5) 'Strongly Agree'. For the purpose of this study, only the individual and organizational dimensions were used across the three performance facets, therefore a total of 18 items were presented. In order to obtain aggregated measures of performance across the three facets, the individual and organizational items were combined providing overall indexes of proficiency, adaptivity and proactivity. Proficiency was assessed by six items (three individual and three organizational level items; "Carried out the core parts of your job well", "Presented a positive image of the organization to other people"), six items assessed

adaptivity (three individual and three organizational level items; “Adapted well to changes in core tasks”, “Responded flexibly to overall changes in the organization”), and proactivity was assessed with six items (three individual and three organizational level items; “Initiated better ways of doing your core tasks”, “Made suggestions to improve the overall effectiveness of the organization”). The three aggregated subscales demonstrated good reliability; $\alpha = .70$, $M = 4.05$ $SD = .48$ for proficiency, $\alpha = .77$, $M = 3.97$, $SD = .47$ for adaptivity, and $\alpha = .87$, $M = 3.70$, $SD = .69$ for proactivity (Pedhazur, 1997). The mean for each subscale was tabulated to create the test variables.

Turnover Intentions Questionnaire (Forest & Gagné, 2011; see Appendix E). Two items assessed participants’ turnover intentions. Participants recorded their responses to the question ‘While thinking of your current job, please indicate the extent to which you agree with the following statements.’ Responses were recorded on a five-point Likert scale ranging from one (1) ‘strongly disagree’ to five (5) ‘strongly agree’. The items were; ‘I often think of leaving the organization’, and ‘I have the intention of looking for alternative employment within the next year’. The two items correlated strongly to one another ($r = .68$, $M = 3.04$, $SD = .1.17$; Pedhazur, 1997). Items were translated from French to English by the researcher and back-translated by a third party. The mean for each subscale was tabulated to create the test variables. Items closely resemble those used by Galleta et al. (2011).

Data Preparation

The data set was cleaned using the six-step Tabachnick and Fidell (2007) method. This method begins with the inspection of univariate descriptive statistics to verify the range of responses. This step is followed by the managing of missing data. The third step verifies normality which is followed by the transformation and verification of z-scores. The fifth and six steps identify outliers and evaluate variables for multicollinearity and singularity (Tabachnick & Fidell, 2007).

Following the Tabachnick & Fidell (2007) method a missing data analysis was conducted next. The missing data analysis identified 17 participants for whom 50% or more of the data was missing and as such they were removed from the sample (Tabachnick & Fidell, 2007). The remaining sample contained less than 7% missing data. Following this, a missing data pattern analysis was conducted. Results demonstrated that the missing data was at complete random (MCR). Given this pattern, the missing data (6 items) was managed through the use of the Monte Carlo Expectation Maximization algorithm in order to replace missing values (EM; Allison, 2010, Tabachnick & Fidell, 2007).

Following this step, the scales were analysed for skewness and kurtosis using a two-step process (Muthén & Kaplan, 1985; Keppel, Saufley, & Tukunaga, 1992). First, each item was verified for both skewness and kurtosis. Subsequently a mean was created for each subscale in order to identify potential issues. All of the scales demonstrated acceptable levels of skewness and kurtosis (Kline, 2010): the measures of trust scale (skewness = .50, kurtosis = .55), performance scale (skewness = .65, kurtosis = .88), need satisfaction at work (skewness = .67, kurtosis = .99), and the turnover intentions scale (skewness = .27, kurtosis = 1.08).

In order to verify for univariate outliers, standardized z-scores were created from the raw scores. Following the Tabachnick & Fidell (2007) method, outliers were defined as any z-score above or below 3.29 standard deviations from the mean. Results of this analysis identified five outliers in the measures of trust scale, 13 outliers in the performance scale and 10 outliers in the need satisfaction at work scale. The outliers were retained in the sample after having verified skewness and kurtosis for all items and finding them within acceptable ranges (Kline, 2010). This concluded the data preparation. Following this the analytical strategy was executed and is described in the following section.

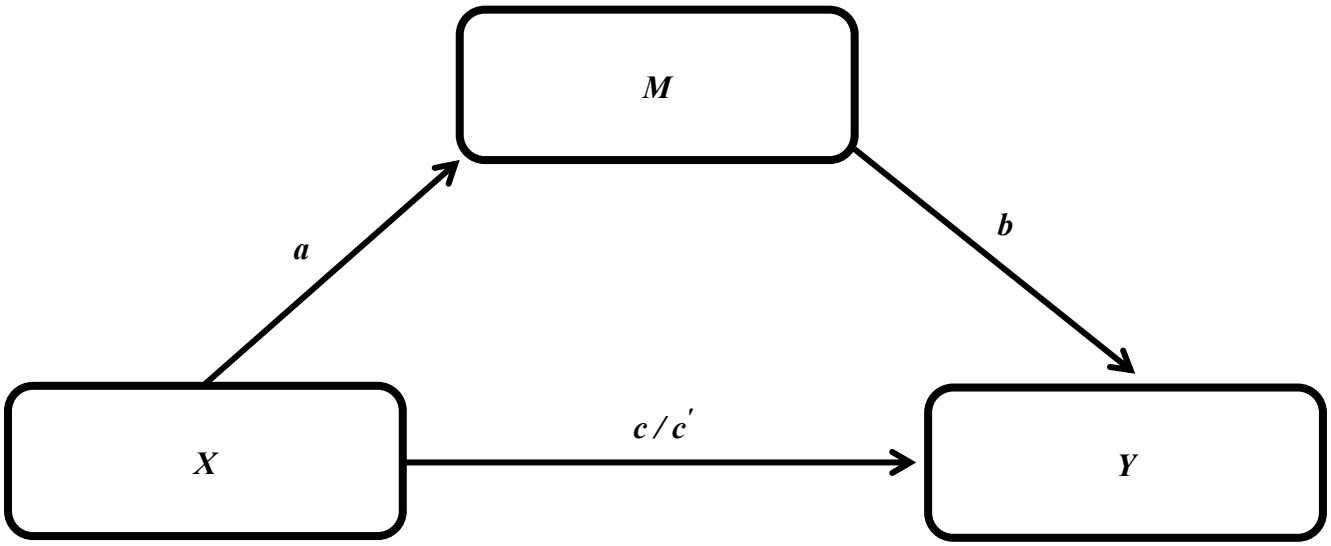
Analytical Strategy

In order to text the hypotheses a two-step analysis was conducted. The analysis began with the examination of the correlations between the three forms of trust (ability, benevolence and integrity) with the basic psychological needs (autonomy, competence, and relatedness).

The mediation hypotheses were tested using the steps outlined by Hayes and Preacher (2011). A macro was downloaded from Hayes' professional website (http://www.afhayes.com/spss-sas-and-mplus-macros-and-code.html) in order to conduct the mediation analyses. This macro was added to SPSS 20 in order to test the proposed model. The macro allows for the simultaneous testing of several independent variables (dichotomous, continuous or multicategorical), mediators and dependent variables and allows for the use of the bootstrap method. In addition, it can test relative and omnibus direct, indirect and total effects through the use of percentile bootstrap. For the purpose of the present study, the three trust variables (ability, benevolence and integrity) were entered as independent variables, the three needs were entered as mediators with the three facets of performance (proficiency, adaptivity, and proactivity) and turnover intentions as the dependent variables.

According to Hayes and Preacher (2011), a mediation analysis contains three effects of a given variable *X* on a variable *Y*; the first effect is the *direct effect* (*c*), the second which is the primary focus of the mediation analysis – the indirect effect which is the sum of *a* and *b* (*ab*), and the third which is the total effect (c′; see Figure 5) which is equal to $c + ab$. Through the distinction of these three effects of *X* on *Y*, the method for testing mediation according to Hayes and Preacher (2011) does not require the direct effect in order to rest for the indirect effect (*ab*). Therefore, the indirect effect results from the causal influence of variable *X* on another variable *M* which in turn effects *Y* and is manifested through mean differences. With this logic, the direct effect is simply the mean difference in *Y*, regardless of the

Figure 5. Mediation Analysis



effect(s) of variable *X* on variable *M*. Finally, the total effect is the cumulative difference in group-means for variable *Y* (Edwards & Lambert, 2007).

This method for testing the mediation hypotheses was favoured over the traditional Baron and Kenny (1986) for several reasons. The first reason is that the Baron and Kenny (1986) method suffers from very low statistical power as demonstrated by Fritz and MacKinnon (2007). In addition, it has been argued that this traditional method overemphasises the importance of a direct affect while suppressing the actual focus of the mediation analysis which is the indirect effect (Rucker, Preacher, Tormala, & Petty, 2011; Zhao, Lynch & Chen, 2010). Finally, the Baron and Kenny (1986) methods suffers from the assumption that a lack of correlation between variable *X* and variable *Y* nullifies the potential for a mediation, which has since been proven to be a false assumption (Bollen, 1989; Hayes & Preacher, 2011).

The Hayes and Preacher (2011) model was also favoured over the classic Sobel test for two reasons. The first reason is that the Sobel test is founded on the assumption of normality in the sampling distributions, which has been shown to be a false assumption (Hayes, 2009). Secondly, the Sobel test is not as statistically powerful and can only test a single independent variable at a time (Hayes, 2009; Hayes & Preacher, 2011).

An additional advantage of using the mediation macro developed by Hayes and Preacher (2011) is that it allows for the simultaneous use of the bootstrapping technique. The bootstrapping technique has been growing in popularity over the past two decades as an effective means of assessing indirect effects (Preacher, Rucker & Hayes 2007). This statistical technique is among a variety of resampling strategies which utilises the study's sample (*n*) as a miniature version of the larger population. The present study utilised 1,000 bootstrap samples (*k*) each of 350 cases (*N*; Preacher & Hayes, 2008). Each bootstrap sample is created through a resampling procedure whereby all the cases are available for

selection until the number of cases is reached (Preacher, Rucker & Hayes, 2007). This means that any single case may appear in a bootstrap sample anywhere from not at all to several times (Tabachnick & Fidell, 2007). This procedure is repeated until the number of bootstrap samples (*k*) has been reached. Therefore, the results of the present study represent the mean indirect effect (*ab*) and standard deviation (*SD*) of 1,000 bootstrap samples. The confidence interval of 95% (*CI*) is estimated through the sorting of the bootstrap sample-values for the indirect effect (*ab*) from smallest to largest (Hayes, 2009; Preacher & Hayes, 2004).

To sum up, four key reasons explain why the bootstrap method is gaining in popularity. First, bootstrapping is more powerful for testing mediating effects than the classic Sobel test (MacKinnon et al., 2004). Second, no standard error is needed in order to calculate the indirect effect and as such this method bypasses the extensive debate regarding the 'best' means of estimating the standard error (Hayes, 2009). Third, the bootstrap method is extremely flexible in terms of the number and complexity of the indirect effects it can test (Preacher, Rucker, & Hayes, 2007). Finally, this statistical method circumvents the Sobel test's assumption regarding the shape of the sample distribution of the indirect effect by operating without this assumption (Hayes, 2009; Hayes & Preacher, 2011).

Results

Each questionnaire contained three verification questions designed to assess whether participants were reading items. The items were randomly distributed throughout the questionnaire and began with the root phrase 'This question verifies that you have read this item, please select _____". The first verification question required participants to select 'strongly agree', the second 'agree' and the third 'disagree'. Results demonstrated that for the most part participants read the items and correctly answered the question: verification question one 96%, verification question two 97% and verification question three 97%. This indicates that participants were attentive in answering questions.

The means (*M*) and standard deviations (*SD*) for the constructs used in the present study are displayed in Table 2. In addition, the means and standard deviations were computed for both the unionized ($N = 57$) and un-unionized ($N = 291$) participants. The results do not show any large discrepancies between the group means. Due to the difference in the size of the groups (over five times), a t-test could not be used to validate the assumption that the groups are homogenous. Finally, the means and standard deviations for males ($N = 153$) and females ($N = 196$) are also presented in Table 1.

An independent-samples t-test was executed in order to investigate potential systematic gender differences (see Table 2). Two significant mean differences were found. The first difference is the females ($M = 4.86$, $SD = .64$) reported higher satisfaction for the need of relatedness than did their male counterparts ($M = 4.69$, $SD = .60$; $t(347) = -2.48$, $p = .014$). In addition, females ($M = 4.11$, $SD = .46$) reported significantly higher levels of proficiency than males ($M = 3.98$, $SD = .49$; $t(347) = -2.65$, $p = .008$).

Table 1

Measure Descriptives

	Whole Sample		Males		Females		Unionized		Un-Unionized	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Ability	3.66	.77	3.64	.85	3.67	.70	3.70	.81	3.65	.76
Benevolence	3.26	.89	3.18	.89	3.32	.89	3.21	.95	3.27	.88
Integrity	3.29	.80	3.28	.82	3.30	.78	3.38	.79	3.28	.80
Autonomy	4.19	.58	4.14	.53	4.24	.62	4.18	.69	4.20	.56
Competence	4.78	.63	4.15	.56	4.08	.46	4.09	.66	4.12	.51
Relatedness	4.11	.54	4.69	.60	4.86	.64	4.75	.68	4.80	.62
Proficiency	4.05	.48	3.98	.49	4.11	.46	4.01	.46	4.06	.48
Adaptivity	3.97	.47	3.93	.46	4.01	.47	3.95	.52	3.98	.46
Proactivity	3.70	.69	3.75	.70	3.66	.68	3.75	.66	3.69	.70
Turnover Ints.	3.04	1.17	3.14	1.10	3.00	1.23	2.89	1.10	3.07	1.18

$N = 350$.

Table 2

Independent Samples t-test: Males versus Females

					95 % CI	
Construct	*t*	*df*	*p*	*SE*	*LL*	*UL*
Ability	-.35	294	.73	.08	-.20	.14
Benevolence	-1.40	347	.15	.10	-.33	.05
Integrity	-.21	347	.83	-.02	-.19	.15
Autonomy	-1.66	334	.10	.06	-.22	.02
Competence	1.14	347	.26	.06	-.05	.18
Relatedness	-2.48	347	.01	.07	-.30	-.03
Proficiency	-2.65	347	.01	.05	-.24	-.04
Adaptivity	-1.55	347	.12	.05	-.18	.02
Proactivity	1.26	347	.21	.07	-.05	.24
Turn Ints.	1.37	340	.17	.12	-.07	.42

Analysis of Variance (ANOVA): Industry Differences

Analyses of variance test were conducted in order to verify potential mean differences between participants who belong to various industries (service, retail, and other) on their perceptions of managerial trustworthiness, need satisfaction, performance and turnover intentions. Significant results were only obtained for adaptivity, $F(2, 341) = 4.83$, $p = .009$, and was followed up with Tukey HSD tests. Results of demonstrated that participants who identified themselves as working in the 'service' industry ($N = 188$, $M = 4.04$, $SD = .44$) were significantly different from both those in the 'retail' industry ($N = 82$, $M = 3.90$, $SD = .49$) as well as those working in 'other' industries ($N = 74$, $M = 3.86$, $SD = .47$).

Correlational Results

Pearson correlation coefficients were computed in order to investigate the relationship between the various sub-constructs of trustworthiness, basic psychological need satisfaction, performance and turnover intentions (see Table 3). Ability, benevolence and integrity were all positively correlated with the basic psychological need for autonomy. Ability positively correlated with both proficiency and adaptivity while being negatively correlated with turnover intentions. Benevolence and integrity correlated with all the outcomes variables at a low to moderate levels: Finally, there were no significant correlations between the facets of trustworthiness (ability, benevolence, integrity) and the basic psychological needs of relatedness or competence. These results provided preliminary support for hypotheses 1a, 1c and 1e, while refuting hypotheses 1b, 1d, 1f.

The need for autonomy was significantly correlated to all the outcome variables, while the needs for relatedness and competence were positively correlated to all three facets of performance but not to turnover intentions. These results provide preliminary support for hypotheses 2a, 2c, 2f and 3a.

Table 3

Correlation Matrix: Trustworthiness, Basic Psychological Needs, Performance and Turnover Intentions

	1	2	3	4	5	6	7	8	9	10
1. Ability	-	.57**	.66**	.34**	-.00	.03	.26**	.24**	.07	-.35**
2. Benevolence		-	.73**	.67**	.07	.07	.27**	.21**	.17**	-.34**
3. Integrity			-	.34**	.05	.05	.25**	.19**	.13*	-.37**
4. Autonomy				-	.20**	.29**	.33**	.14**	.23**	-.55**
5. Competence					-	.26**	.33**	.28**	.42**	.03
6. Relatedness						-	.20**	.13**	.15**	-.10
7. Proficiency							-	.42**	.36**	-.30**
8. Adaptivity								-	.33**	-.15**
9. Proactivity									-	-.18**
10. Turn Ints.										-

$N = 350$. * $p < .05$; ** $p < .01$.

Trustworthiness & Need Satisfaction (H1)

The relationship between trustworthiness (ability, benevolence, and integrity) and basic need satisfaction (autonomy, competence, relatedness) was further investigated using a multiple regression. Given that the previous correlational results demonstrated that all three facets of trustworthiness positively correlated with the basic psychological need of autonomy, but did not correlate at all with either of the needs for competence or relatedness, only the need for autonomy is considered for the regression analysis. Results demonstrated support for the relationship between the three facets of trustworthiness and autonomy, $R^2_{adj.} = .15$, $F\ (3, 346) = 22.20$, $p < .001$. The regression on autonomy yielded significant results for both ability, $\beta = .13$, $p < .01$, and benevolence, $\beta = .14$, $p < .01$. Conversely, integrity did not regress significantly on autonomy, $\beta = .05$, $p = .39$. As such, hypotheses 1a, and 1e were supported, while the remaining hypotheses were not (please refer to Table 4 for a summary).

Mediating Effect of Autonomy on Trustworthiness and Performance (H2)

Only the basic psychological need of autonomy was retained for the mediation analyses. The first mediation analysis predicted proficiency. The result demonstrates that the overall model was significant, $R^2_{adj.} = .08$, $F\ (3, 346) = 11.30$, $p < .001$. The direct effect of benevolence $\beta = .16$, $p = .04$ was significant, whereas ability $\beta = .13$, $p = .06$ and integrity $\beta = .06$, $p = .51$ were not (see Figure 6). The direct effect of autonomy was found to regress on proficiency, $\beta = .25$, $p < .001$.When autonomy is considered in the model, the effects of ability, $\beta = .09$, $p = .19$, benevolence, $\beta = .10$, $p = .18$, and integrity, $\beta = .04$, $p = .64$, decreased and the model fit increased, $\Delta R^2 = .051$, $F(1, 345) = 14.13$, $p < .001$, indicating possible indirect effects. Subsequently, the indirect effects were assessed using the bootstrapping and confidence interval procedure proposed by Preacher and Hayes (2004).

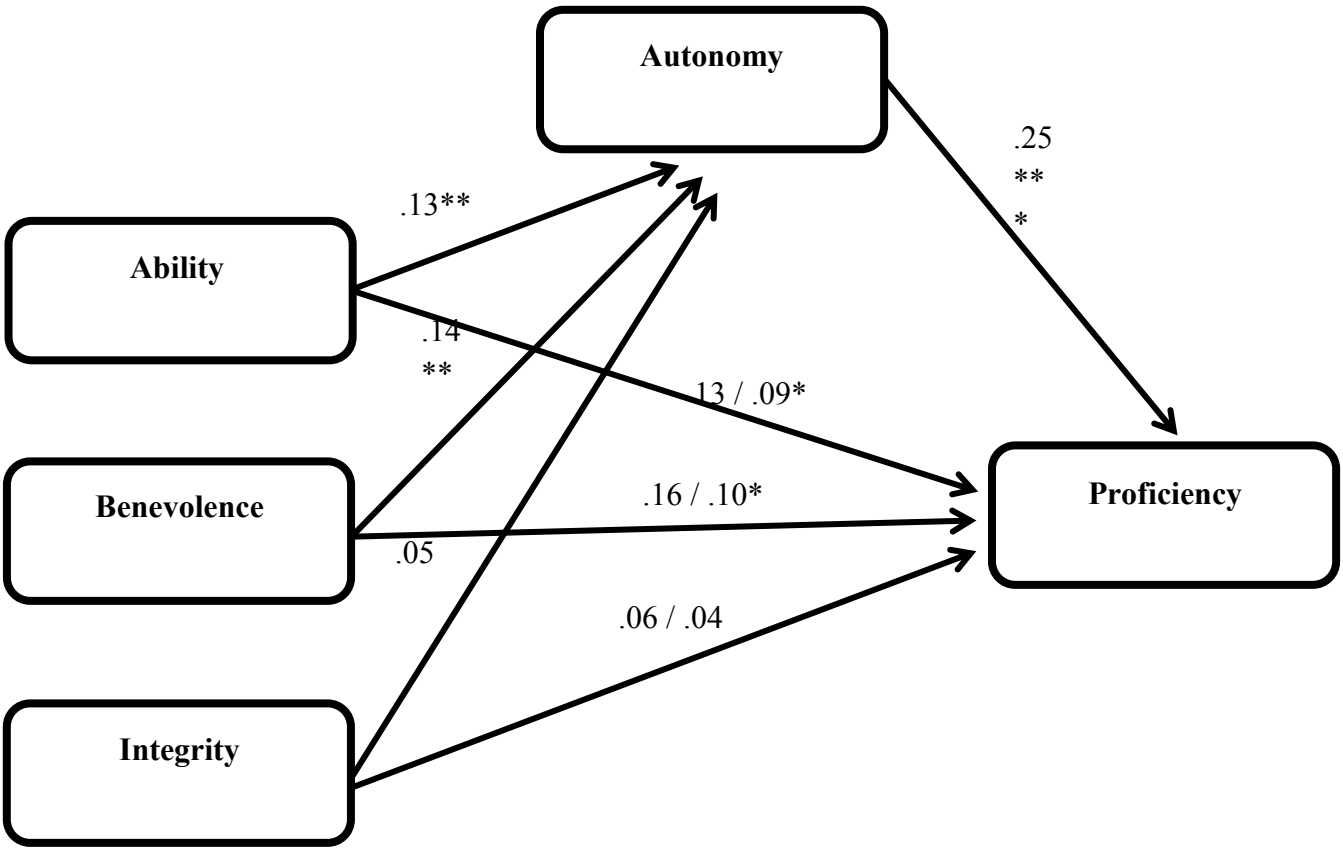
Table 4

Regression Analysis Summary for 'Ability', 'Benevolence', and 'Integrity' Predicting the 'Basic Psychological Need of Autonomy'

					95% CI	
	B	SE B	β	*p*	LL	UL
Constant	3.08	.146		.000	2.80	3.37
Ability	.13	.05	.17	.01	.03	.23
Benevolence	.14	.05	.22	.00	.05	.24
Integrity	.05	.06	.07	.39	-.06	.17

N = 350.

Figure 6. *Standardized Betas for 'Ability', 'Benevolence', and 'Integrity' Predicting 'Proficiency' as Mediated by 'Autonomy'*



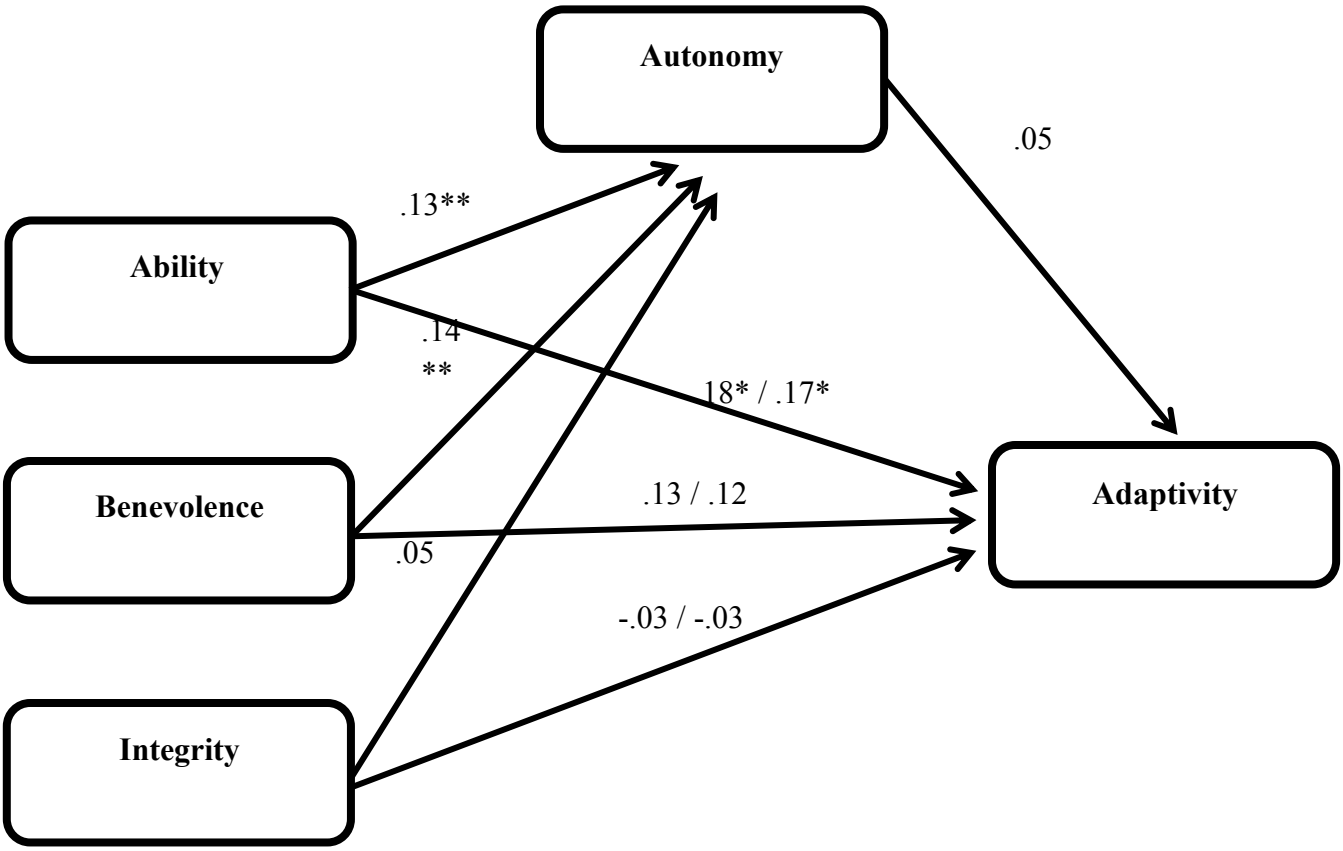
Note. $N = 350$. * $p < .05$; ** $p < .01$; *** $p < .001$. Values for 'c' are identified on the left while values for 'c'' are on the right of the slash.

It was found that the 95% bootstrapping confidence interval for ability lies between .0053 and .0555, for benevolence between .0074 and .0589, and for integrity between - .0142 and.0350. Given that the confidence intervals for both ability and benevolence did not include zero, it is concluded that the indirect effect is indeed significantly different from zero. With this said, given the confidence interval for integrity does contain zero, the null hypothesis is supported and the indirect effect is not considered statistically different from zero. As such, the mediation hypothesis is refuted for integrity; however, two indirect effects were identified for ability and benevolence.

The second mediation analysis utilised adaptivity as the dependent variable. The result of the overall model was significant, $R^2_{adj.} = .06$, F (3, 346) = 8.05, $p < .001$. The result of the regression analysis showed that ability, β = .18, $p = .01$ significantly regressed onto adaptivity while benevolence, β = .13, $p = .09$ and integrity, β = - .03, $p = .74$ did not. The need for autonomy, β = .05, $p = .39$ did not significant predict adaptivity. When autonomy was considered as a mediator the betas for ability, β = .17, $p = .02$, benevolence, β = .12, $p = .12$ and integrity, β = - .03, $p = .71$ did not change significantly and the model fit was not improved, $\Delta R^2 = .002$, $F(1, 345) = 6.22$, $p = .39$. The indirect effect was further investigated using the bootstrapping and confidence interval procedure proposed by Preacher and Hayes (2004). It was found that the 95% bootstrapping confidence interval for ability lies between -.0075 and .0225, for benevolence between -.0062 and .0238, and for integrity between - .0063 and .0135. Given the confidence interval for all ability, benevolence and integrity contain zero, the indirect effect is not considered statistically different from zero (see Figure 7). As such, hypotheses 2c, 2d, and 2e are not supported, although a direct effect of ability on adaptivity was found.

The last mediation test had proactivity entered in as the dependent variable. Results of the analysis demonstrated the overall model to be significant, $R^2_{adj.} = .02$, F (3, 346) = 3.49, $p = .02$. The regression analysis for benevolence, β = .17, $p = .04$, was significant, while ability, β = -.06, $p = .44$,

Figure 7. *Indirect Effect Summary for 'Ability', 'Benevolence', and 'Integrity' Predicting 'Adaptivity' as Mediated by 'Autonomy'*



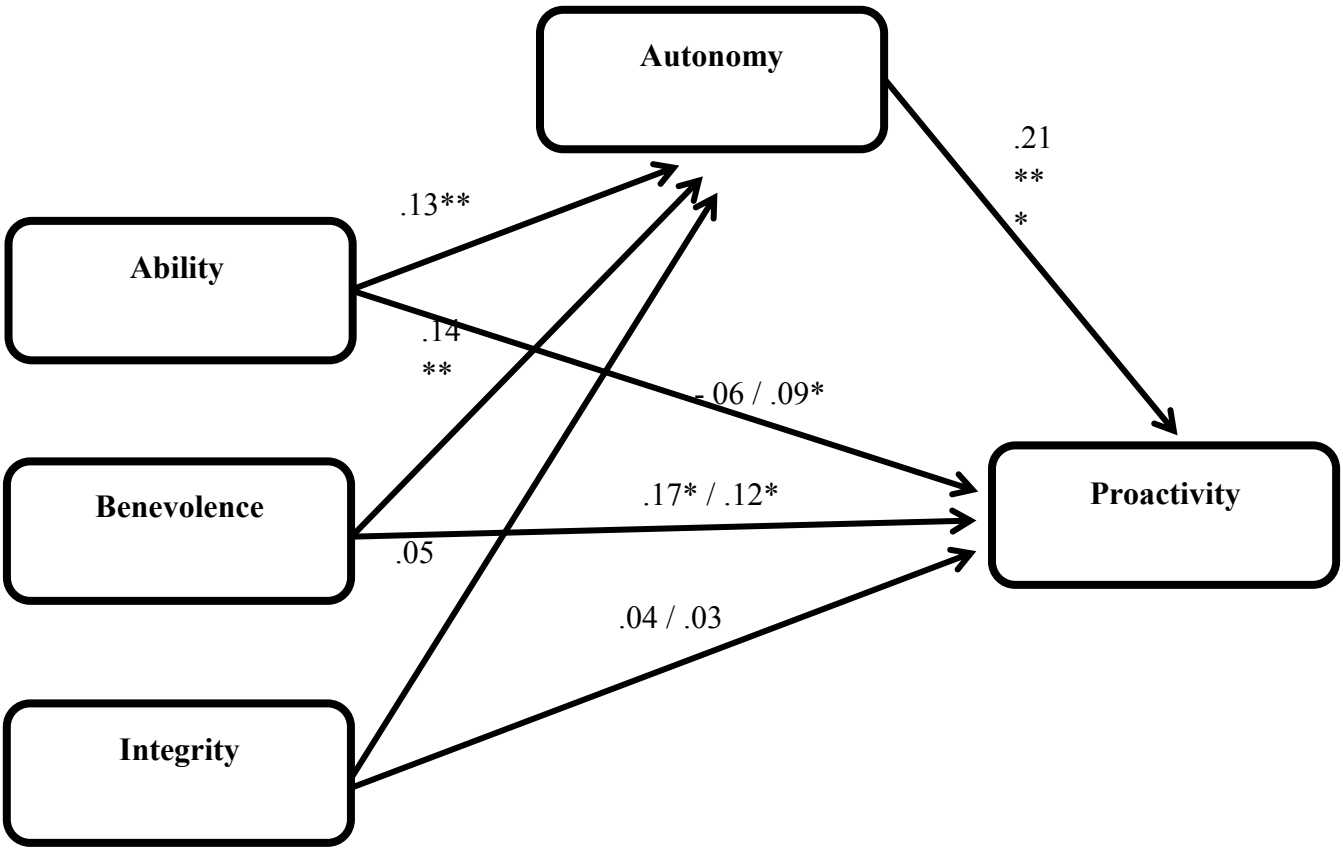
Note. $N = 350$. * $p < .05$; ** $p < .01$. Values for 'c' are identified on the left while values for 'c'' are on the right of the slash.

and integrity, β = .04, p = .61, were non-significant. A regression of autonomy, β = .21, p < .001, on proactivity demonstrated significant results. When the need for autonomy was considered in the model, the effect of ability, β = -.09, p = .20, benevolence, β = .12, p = .12, and integrity, β = .03, p = .73, dropped and the overall fit of the model increased significantly, ΔR^2 = .04, $F(1, 345) = 13.20$, p < .001; see Figure 8). As was the case before, the indirect effect was assessed using the bootstrapping and confidence interval procedure. Results demonstrated that the 95% bootstrapping confidence interval for ability lies between .0051 and .0690, for benevolence between .0071 and .0734, and for integrity between -.0129 and .0434. Given that zero is not part of the confidence intervals for ability and benevolence, it is concluded that the indirect effect is significant. Similarly, with the presence of zero in the 95% confidence interval for integrity, it is concluded that this indirect effect is not statistically different from zero. As such, hypothesis 2f is supported, an additional indirect effect was identified, and hypotheses 2g and 2h are refuted.

Mediating Effect of Autonomy on Trustworthiness and Turnover Intentions (H3)

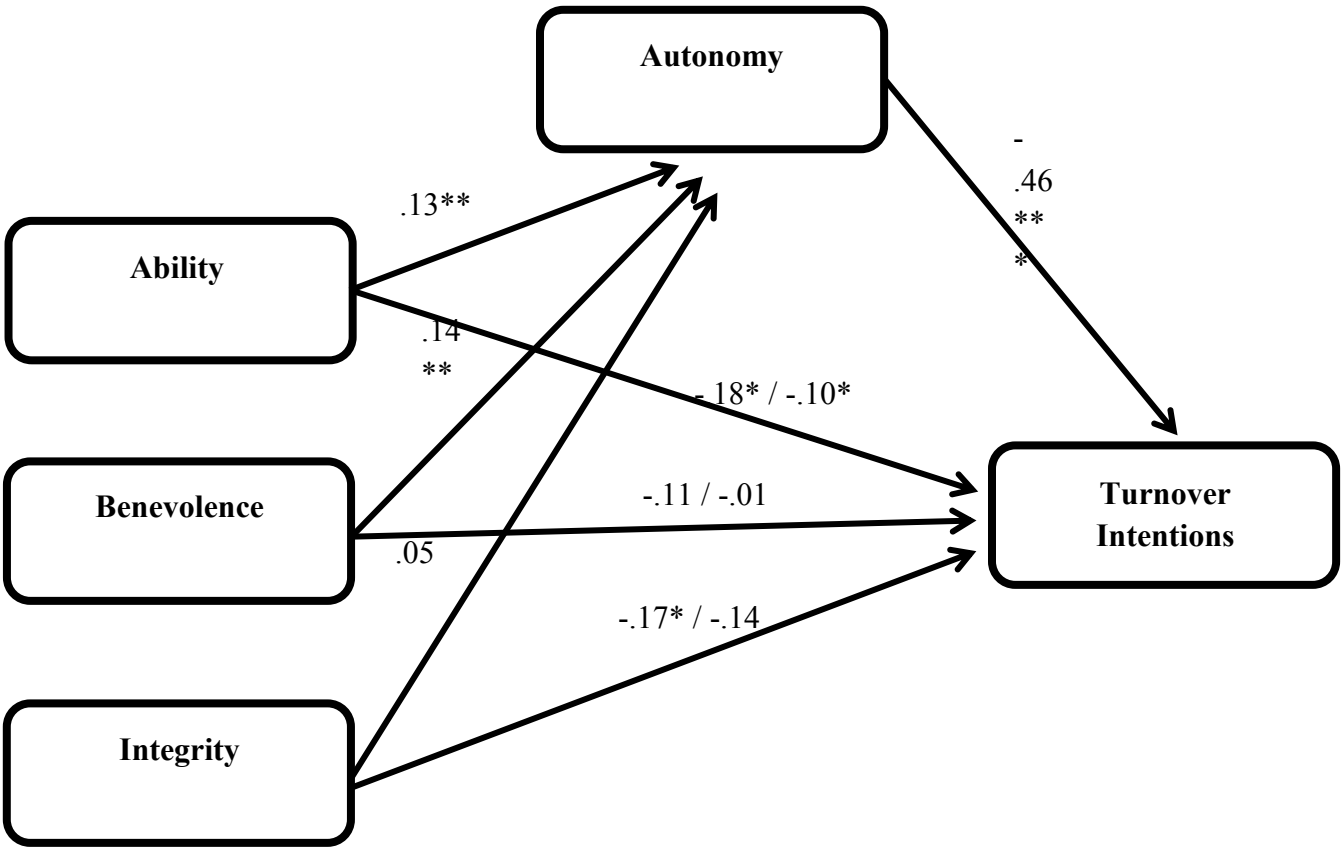
Again, only autonomy was considered for the mediation analysis on turnover intentions. The results of this analysis demonstrated that the model was significant, $R^2_{adj.}$ = .15, F (3, 346) = 22.04, p < .001. Regression analyses demonstrated integrity, β = -. 17, p = .04, and ability, β = -.18, p < .01, were significant while benevolence, β = -.11, p = .13, was not significant. The need for autonomy, β = -.46, p < .001, demonstrated a strong negative relationship with turnover intentions. When autonomy is considered as a mediator, the effects of ability, β = -.10, p = .10, benevolence, β = -.01, p = .86, and integrity, β = -.14, p = .06, all decreased and the overall model fit, ΔR^2 = .18, $F(1, 345) = 93.02$, p < .000; see Figure 9) increased significantly. Following the mediation procedures outlined by Preacher and Hayes (2008), the 95% confidence interval for ability was found to lie between -.2237 and -.0239,

Figure 8. *Indirect Effect Summary for 'Ability', 'Benevolence', and 'Integrity' Predicting 'Proactivity' as Mediated by 'Autonomy'*



Note. $N = 350$. * $p < .05$; ** $p < .01$; *** $p < .001$ Values for '*c*' are identified on the left while values for '*c*′' are on the right of the slash.

Figure 9. *Indirect Effect Summary for 'Ability', 'Benevolence', and 'Integrity' Predicting 'Turnover Intentions' as Mediated by 'Autonomy'*

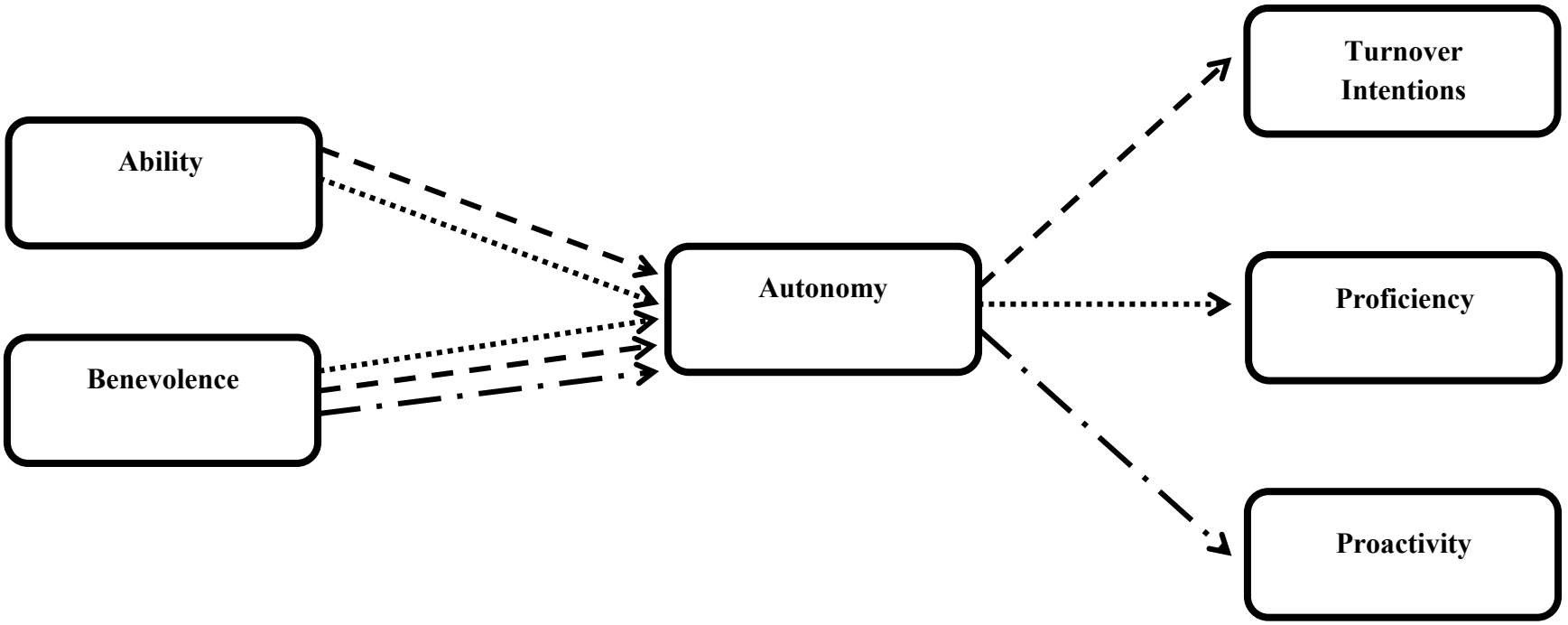


Note. $N = 350$. * $p < .05$; ** $p < .01$; *** $p < .000$.

benevolence between -.2351 and -.0412, and integrity between -.1565 and .0662. Given that zero is not part of the 95% confidence interval for ability and benevolence, it is concluded that the indirect effect is in fact statistically significant. In this way, it is equally concluded that the indirect effect of integrity through the need for autonomy is not statistically significant from zero. As such, hypothesis 3a is partially supported.

Please refer to Figure 10 for a summary of the supported hypotheses.

Figure 10. *Summary of the Supported Hypotheses*



Discussion

The present study combined self-determination theory (Deci & Ryan, 1985) with trust theory (Mayer, Davis & Schoorman, 1995) in order to investigate the underlying mechanisms that account for the established relationships between trustworthiness of leaders and subordinate performance and turnover intentions in part-time workers (Dirks & Ferrin, 2002). The first purpose was to better understand the relationship between the three facets of trustworthiness (ability, benevolence and integrity) and the three basic psychological needs (autonomy, competence and relatedness). Correlational results demonstrated that both ability and benevolence were only related to the need for autonomy, while integrity failed to demonstrate any relationship with the basic needs. Therefore, the first set of hypotheses was partially supported.

Scholars such as Bass (1997), and Gagné and Deci (2005) have postulated that leaders play an integral role in subordinate need satisfaction; however, there is a definite lack of empirical research addressing this issue. As such, the result of the first hypothesis is particularly interesting given that this is the first documented occasion of this relationship being directly measured. Research by Hetland and Sandal (2003) found a significant relationship between leadership styles and outcomes such as motivation, performance and attitudes. While the authors did not directly measure trustworthiness and basic need satisfaction, they did propose that the relationship was potentially moderated by the ability of the leader to satisfy subordinates' basic needs (Bass, 1997; Hetland & Sandal, 2003).

Indeed, the results of the present study do partially support this position; however, the fact that only autonomy was found to be significant is insightful. This may be due to the similarities of ability and benevolence with autonomy supportive contexts (Deci & Ryan, 2000). According to self-determination theory, an autonomy supportive context is one which is characterised by the leader understanding and acknowledging the subordinates' perspective, providing meaningful information,

offering opportunities for choice, and encouraging self-initiation (Deci, Ehgrari, Patrick, & Leone, 1994, Deci & Ryan, 2000; Gagné & Deci, 2005). In this way, the facets of both ability and benevolence may be closely related to an autonomy supportive context, which in turn explains why the need of autonomy was the only need that was significant in the analyses. As such, the trustworthiness of a leader (ability and benevolence) may be a part of, or foster greater autonomy supportive contexts, thus satisfying the need for autonomy (Snyder & Lopez, 2005). Furthermore, there has been a trend in self-determination theory research to focus on autonomy due to its focal role in determining autonomous motivation which has been demonstrated to be an antecedent of both behavioural and attitudinal outcomes (Deci & Ryan, 1985; Ryan & Deci, 1997; 2006; e.g. Chatzisarantis & Haggar, 2007).

In addition to the possible role of autonomy supportive contexts in explaining the results of the present study, it is possible that the need for competence was not satisfied because the ability of a leader is more closely related to the leaders' performance and it does not necessarily provide feedback to the subordinate, nor does it inherently ensure that leader ability will facilitate subordinate performance and therefore feelings of competence (Deci & Ryan, 2000). Furthermore, the need for benevolence may not have satisfied the need for relatedness given that benevolence is specific to the behaviours of leaders, whereas relatedness can be satisfied by leader, peer or subordinate relationships. As such, the role of a benevolent leader in satisfying this basic psychological need may be minimal when compared to the impact of peers (Richer, Blanchard, & Vallerand, 2002).

Finally, it is noteworthy that the research which has examined the impact of trustworthiness on subordinates is dominated by samples of full-time workers. Pfeffer and Baron (1998) argue against the assumption that research findings from full-time employees will generalize to part-time employees. As such, it is possible that part-time employees are sensitive to the satisfaction of different needs than are traditional workers. In this way, the needs for competence and relatedness may be less important to part-

time employees than the need for autonomy, representing potential systematic differences between full-time and part-time employees.

The finding that integrity did not relate to the basic need for autonomy or the need for relatedness was somewhat surprising. Given that integrity is defined as the trustee adhering to a set of guiding principles (which the trustor finds acceptable) in a logical and predictable manner theoretically would satisfy the needs for both autonomy and relatedness. It was believed that the guiding principles and predictability of managerial behaviour would contribute to an autonomy supportive environment (Deci & Ryan, 2000). Additionally, the notion that the guiding principles acceptable to the trustor are believed to indicate a positive relationship between the trustor and trustee, and as such contribute to the satisfaction of the need for relatedness. The fact that integrity failed to demonstrate a significant relationship with the basic psychological needs may be attributed to the fact that, unlike ability and benevolence, the integrity of a leader is a more abstract concept that may prove difficult for subordinates to quantify. It is also possible that the perceived integrity of the leaders is psychologically more distral than the ability and benevolence of leaders, and as such fails to satisfy the basic psychological needs (Dirks & Ferrin, 2002; Vallerand, Pelletier, & Koestner, 2008).

The second purpose of the study was to examine the potential mediating role of the basic psychological needs in the relationship between trustworthiness and performance. Results of the mediation analysis demonstrated that the need for autonomy mediated the relationship between ability and proficiency, as well as the relationships between benevolence and proficiency, and benevolence and proactivity. Based on these results, the second hypothesis was partially supported in so far as only one of the three needs was a significant mediator.

Previous research has demonstrated a positive relationship between leader trustworthiness and job performance (e.g. Dirks & Ferrin, 2002; Mayer & Gavin, 2005) as well as between basic

psychological needs and job performance (Utman, 1997; Gillet, Rosnet and Vallerand, 2008); however, past scholarship is limited in the extent to which various facets of these constructs have been examined (Baard, Deci, and Ryan, 2004; Brown & Arendt, 2010; Griffin, Neal & Parker, 2007; Korsgaard, Boadt, & Whitener, 2002). Studies such as the one by Korsgaard and colleagues (2002) utilised an aggregated measure of leader trustworthiness and performance; and studies such as Lian, Ferris and Brown (2012) and Bartholomew and colleagues (2011) utilised an aggregated measure of need satisfaction. In this way, these studies are limited in their ability to explain the underlying mechanisms and ultimately fail to capture important details.

The finding that leader ability predicted subordinate proficiency through autonomy was not surprising. There is an established body of literature which focuses on the perceived ability of leaders and subordinates' task related performance (Burke, Sims, Lazzara & Salas, 2007; Rich, 1997). With that said, the finding that benevolence was also related to proficiency was particularly interesting. Dirks & Ferrin (2002) duly noted a large discrepancy in the number of studies that utilise affective measures of leaders' character (such as benevolence) and an over-emphasis on cognitive (ability and integrity) traits of leaders. Additionally, the authors note that few studies utilise both measures of affective and cognitive leader traits in a single study (Dirks & Ferrin, 2002). As such, the present study furthers this argument by demonstrating that benevolence is in fact correlated to proficiency to a greater extent than is ability.

Given that Griffin et al. (2007) highlight the increasing importance of employee proactivity for organizations to continue to be competitive and effective, the finding that benevolence predicted this facet of performance speaks volumes. This finding may be better understood in light of the risk hypothesis (Rich, 1997). According to this hypothesis, employees who perceive their leaders as less trustworthy will divert energy away from job-related performance in order to 'cover their backs' (Mayer

& Gavin, 1999). This is elaborated by Rich (1997) who suggests that as the trustworthiness of a leader increases, so does the propensity for subordinates to have higher job satisfaction and positive attitudes toward their jobs. In this way, it is possible that leaders who exhibit benevolence garner trust from subordinates and thus are perceived by subordinates as 'less risky' and therefore more predictable – building time, volition and cognitive space for proactive behaviour.

Although there is a theoretical basis for autonomy to result in greater adaptivity (Gagné & Deci, 2005), the result of the mediation analysis was not significant. The correlation between adaptivity and autonomy was very low, and as such the effect may have been wiped out when the other variables were entered into the analysis (Edwards, 1979; Kleinbaum, Kupper, Nizam & Muller, 2008). Indeed, Griffin, Neal and Parker (2007) note that the various facets of performance are not intended to be mutually exclusive and thus it is possible that adaptivity was overshadowed by the other two types of performance. Furthermore, there may be a systematic difference underlying these non-significant results. Given that the present study utilised a student sample working part-time, the ability of these individuals to adapt to changes in their work environment and roles may not be as central when compared to employees who work full-time. The reason for this may lie in the type of work that is being done on a part-time basis. Considering that the majority of part-time positions available to students are those requiring minimal skill, it is possible that these jobs do not require a great deal of adaptivity (e.g. cashiers, shelf-stockers, greeters, telemarketers, lawn maintenance personnel). Furthermore, this type of work is generally short-term and therefore individuals engaging in this work environment may not remain with the organization long enough for there to be a need for them to adapt. Additionally, given that the present study is cross-sectional, it is possible that participants have not had the opportunity to even perform in an adaptive manner. Therefore the type of sample used and the methodology may not be ideal for assessing this facet of performance and may account for the lack of mediation.

The third and final purpose of the present study was to examine the relationship between trustworthiness and turnover intentions as mediated by the satisfaction of the basic psychological needs. Similarly to the results of the second hypothesis, the basic psychological need of autonomy mediated the relationship between both ability and benevolence and turnover intentions. As such, the third hypothesis is also partially supported given that only one of the three basic psychological needs was a significant mediator.

The present results support previous research which has utilised both trust theory and self-determination theory. Research by Gould-Williams and Davis (2005) as well as by Connell, Ferres and Travaglione (2003) found a significant negative relationship between the trustworthiness of leaders and subordinates' turnover intentions. Similarly, research by Galleta, Portoghese and Battistelli (2011) and Vansteenkiste et al. (2007) demonstrated that need satisfaction was negatively related to turnover intentions. The finding that autonomy mediates the relationship between trustworthiness and turnover intentions may be at least partially explained by a consideration of the context. According to Deci and Vansteenkiste (2004), individuals will orient themselves toward social contexts that allow them to satisfy their basic psychological needs. Taken together with the results of Gagné (2003) who found that autonomy supportive environments resulted in lower actual turnover, one can postulate that the facets of ability and benevolence contribute to a social context that fosters the satisfaction of the basic psychological needs and in particular autonomy. Interestingly, the present findings do not support the model proposed by Richer, Blanchard and Vallerand (2002) which suggested that satisfaction of the needs of competence and relatedness would be negatively related to turnover intentions.

These results are also particularly interesting given that Dirks & Ferrin (2002) propose that variables that are more proximal in nature should be more highly related to one another than variables which are distral. With this said, Dirks and Ferrin (2002) propose that trust and turnover intentions

should be more highly related to one another than trust and performance. Indeed, this proposition is supported; however, it is important to note that autonomy is even more highly related to turnover intentions than the facets of trustworthiness, thus suggesting it is more proximal to the variable.

Limitations

When considering the results of the present study, there are several limitations that are particularly noteworthy. The first limitation is the cross-sectional nature of this study. Given that cross-sectional data represents but a 'snapshot' of the dynamic human processes that are being studied, the results are limited in terms of providing directionality as well as explaining potential changes over time as a result of both internal and external factors (Mook, 2001). In this way, it is possible that there is a feedback loop, as proposed in the Mayer, Davis and Schoorman (1995) model, between performance and trustworthiness that cannot be assessed using a cross-sectional research model. In addition, the results of the present study are limited in their generalizability. This is due to the fact that a student population that works part-time was used in order to assess contingent worker perceptions of their management teams. With this said, the present results may not translate to full-time workers, and may vary as a function of both age (McEvoy & Cascio, 1989) and unionization status (Huang, 2011). Furthermore, all the variables of interest were assessed using questionnaire data. In this way, responses may be subject to common method bias and the relationship between variables inflated (Mook, 2001; Podsakoff, MacKenzie, Lee & Podaskoff, 2003). The final limitation of the present study is the autonomy subscale of the work-related basic need satisfaction scale (Van den Broeck, Vansteenkiste, De Witte, Soenens, & Lens, 2009). Given that the alpha obtained for this subscale was below the generally acceptable level (Byman, Bell, Mills, Yue, 2003) the results utilising this scale suffer from internal reliability issues (Keppel, Saufley, Tokunaga, 1992). Although the scale had been previously validated in Dutch, our analyses did uncover issues with this instrument, particularly in the autonomy subscale.

Future Directions

While the present research contributes to the advancement of both trust theory (Mayer, Davis & Schoorman, 1995) as well as self-determination theory (Deci & Ryan, 1985) through the combination of these theoretical frameworks, there remain many empirical questions. Based on the results of the present study and the existing body of literature, future research may wish to address three avenues of study in particular: methodological questions, individual level differences, and potential contextual factors.

Future research in the field of trust may wish to adopt more sophisticated methodologies in order to better understand this dynamic process. As such, researchers may wish to use a combination of both quantitative and qualitative methods in order to triangulate and obtain richer results (Mook, 2001). This may be accomplished through the use of both Likert scales as well as open ended questions, in addition to focus groups and interviews (Zhang & Wildemuth, 2009). For example, using a mixed research design may allow researchers to test the proposed explanation for why integrity was not significant by exploring the topic with a focus group. This type of data may also be particularly useful in understanding the impact of leaders on subordinates' satisfaction of the need for relatedness as compared to peers.

In addition, researchers should also attempt to use multi-source data which would be made up of both subordinate and manager responses (Burke et al. 2007). The use of multi-source data would allow for a more robust test of performance, particularly in light of the fact that leaders' perceptions of subordinate performance is more often than not the basis on which important administrative decisions are made (Dirks & Ferrin, 2002). This would also allow for the controlling of potential ceiling effects in self-reporting of performance and other cognitive biases (Kluger & DeNisi, 1996; Levy & Williams, 2004).

Finally, longitudinal data would allow for the present model to be tested more stringently. In this way potential interactions and discrepancies could be examined (Bryman, Bell, Mills & Yue, 2011). Furthermore, a longitudinal study utilising the same theoretical framework could replicate previous findings by Reis et al. (2000) demonstrating daily variations in need satisfaction and tying those variations to the three types of performance. Additionally, using a longitudinal design would allow one to uncover potential patterns which may be otherwise impossible to detect. It is possible that variations in the exposure of employees to various members of the management team will significantly affect subordinates' perceptions of leader trustworthiness and need satisfaction. As such, a networking analysis may be beneficial to tweeze out these potential affects.

In combination with the methodological advancements proposed, future research may wish to investigate several individual differences at both the trustor and trustee levels. As such, it would be beneficial to examine the potential moderating role of trust propensity in understanding the relationship between trustworthiness and individual level outcomes (Mayer, Davis & Schoorman, 1995). One would expect that employees with a greater propensity to trust will demonstrate a stronger relationship between the facets of trustworthiness and the various facets of performance (proficiency and proactivity). Conversely, subordinates with low trust propensity are likely to have a weaker relationship between trustworthiness and the outcomes (Colquitt, Scott, & LePine, 2007).

Furthermore, it may prove insightful to include other personality measures in order to investigate potential interaction effects or moderators of the observed relationships. One potential avenue would be to better understand the relationship between core self-evaluations and trust propensity as well as perceived trustworthiness (Judge, 2009; Judge, Van Vianen, & De Pater, 2004; Judge et al. 2003). Research has linked core self-evaluations with performance as well as turnover intentions (Judge et al. 2003). While theorists such as Burke et al. (2007) suggest trust propensity is a trait, there is little

empirical evidence. Given the theoretical foundations of trust propensity, it is likely that higher core self-evaluations will also coincide with higher levels of trust propensity. This is due to the fact that trust propensity includes a willingness to extend trust to others and a general tendency to make positive attributions about others' intentions (high agreeableness, low neuroticism; Burke, Sims, Lazzara, & Salas, 2007; Judge, 2009; Judge, Erez, Bono, & Thoresen, 2003).

Additionally, this line of research would complement the recent call by Young and Daniel (2003) to investigate the role of emotions in trust. In this way, it seems likely that more emotionally stable individuals will experience their leaders as more trustworthy (Judge, 2009). Furthermore, daily variations in emotions may moderate the relationship between trustworthiness and basic need satisfaction. As such, those who are experiencing positive emotions may have inflated perceptions of leader trustworthiness as opposed to those experiencing negative emotions.

As noted in the meta-analysis by Dirks & Ferrin (2002), there is relatively little research that examines the contextual factors that determine varying levels of trust and the relative relationship between trust and various individual and organizational level outcomes. Based on research conducted using the self-determination theory, it may be beneficial to include measures of managerial autonomy support as it has previously been associated with basic need satisfaction, autonomous motivation and important outcomes (Deci & Ryan, 2000; Gagné, 2003; Gagné & Deci, 2005). In addition, an examination of potential differences between jobs varying in their job-security may prove insightful and will empirically test the 'risk hypothesis' which is integral to trust theory (Mayer, Davis & Schoorman, 1995).

Finally, researchers may wish to incorporate other theories of motivation such as the goal setting theory (Locke & Latham, 1990). Given that the goal setting theory is founded on the premise of setting specific and challenging goals (directions) and underlines the importance of providing feedback (Locke

& Latham, 1990), it is likely to result in subordinates perceiving greater ability and benevolence in their leaders. As such, the introduction of goal setting interventions may prove a feasible way of not only testing the effectiveness of this type of intervention in fostering increased trust in organizations, but would also allow researchers a glimpse at the processes underlying the development of trust.

Practical Contributions

In addition to the theoretical contributions of the present study, there are equally important practical contributions. Given the demonstrated relationships between leader ability and benevolence with turnover intentions, proficiency and proactivity, the results of this study have several practical applications which are directly related to 'the bottom line'. These practical contributions can effectively be divided into two broad categories: training and selection.

Contemporary organizations are under increasing external pressures as the external environment continuously changes and becomes more complex. As such, organizations are faced with the daunting task of training leaders who are not only able to navigate but can also perform effectively in these environments (DeRue, Sitkin, Podolny, 2011). A recent study by O'Leonard (2010) found that approximately 25% of the 50 billion dollars spent annually by organizations on learning and development is targeted toward leadership development. Indeed, several studies have demonstrated that training is an effective means of modifying managerial behaviour (e.g. Brown, & May, 2010; Duygulu & Kublay, 2011; Kark, 2011; Kelloway, Barling & Helleur, 2000). Interestingly, in a study that examined the return on investment of leadership training, it was discovered that the return on investment could range anywhere from a low negative to as high as 200 % (Avolio, Avey, Quisenberry, 2010).

It is imperative that organizations invest their money wisely, particularly given that leadership interventions are not all 'created' equally. In light of this, organizations would be wise to invest in interventions that are not only empirically supported but are also been demonstrated to transcend

organizational contexts. Therefore, the present study provides support for leadership interventions that are directed towards fostering leaders' ability and benevolence. In this way, leadership training which focuses on task specific knowledge and skills, as well as assists managers in creating structure and setting compelling goals will increase subordinates' perceptions of managerial ability (Mayer & Davis, 1999). In a study by Berg and Karlsen (2011), training was beneficial for managers to learn how to use the manager's toolbox as well as how to solve real life problems, while developing desirable managerial behaviours. Similarly, training can be provided to allow managers to improve their interpersonal skills and train them on how to create autonomy supportive work environments (Stone, Deci, & Ryan, 2009). Indeed, empirical studies have demonstrated that training managers to be 'benevolent leaders' has been associated with increased performance and decreased turnover intentions in subordinates (Chan, & Mak, 2012; Karakas & Sarigollu, 2012; Wang & Cheng, 2010).

Given that leaders make decisions that can have long term effects on the organization's ability to be competitive, productive and profitable, the selection of managers warrants substantial attention (Hurley, 2006; Rose & Baydoun, 1995). In combination with the changing environment as well as the importance of leaders in organizations, there has been a recent trend for selection practices to focus on basic leadership characteristics (Fiedler & Macaulay, 1998). While traditionally human resource managers have operated under the assumption that appropriate selection procedures stem from a matching of the knowledge, skills and abilities of a manager to the requirements of a given job, the present study proposes that the interpersonal aspect of a leader is equally important. As such, the present study contributes to the advancement of selection practices by providing support for the role of both ability and benevolence in effective leaders. In this way, job candidates can be screened using a combination of questionnaires as well as interviews in order to assess these two characteristics (Carles, 2009). This may assist in filling a void in human resources selection practices given there is a lack of

quick, valid and cost effective methods for the selection of low- to mid-level managers (Barrick, 2009; Rose & Baydoun, 1995).

Conclusion

The present study sought to contribute to the established body of literature in order to understand the underlying mechanisms involved in the translation of leader trustworthiness (ability, benevolence and integrity) to individual subordinate outcomes in part-time workers (performance and turnover intentions). Through the combination of trust theory (Mayer, Davis & Schoorman, 1995) and self-determination theory (Deci & Ryan, 1985), results demonstrated that only the need of autonomy was significantly related to leader ability and benevolence. Furthermore, mediation analyses revealed that the need for autonomy mediated the relationship between leader trustworthiness and both performance and turnover intentions. As such, the present study addressed a gap in the literature (Gagné & Deci, 2005) and provides a rich theoretical and empirically derived framework for future research.

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Appendix A

Participant Consent Form

Informed Consent to Participate in Employees' Attitude Study

This document states that I understand that I am being asked to participate in a research project conducted by Joseph Carpini, Master of Science (MSc) student at the John Molson School of Business, Concordia University under the supervision of Dr. Gagné of the John Molson School of Business. Phone: 514-531-6110 Email: j_carpin@jmsb.concordia.ca.

A. PURPOSE

I have been informed that the purpose of the present study is to better understand employee perceptions of equity and of their management teams in relation to my personal performance.

B. PROCEDURES

The present study requires participants to complete a questionnaire with a total number of questions of about 150. Questionnaires will be distributed by a member of the research team. Instructions for completing the questionnaire are available on the second page as well as before every questionnaire. Should you feel uncomfortable answering any question, please circle the number corresponding to that question and move on. We ask you to circle the number so that we know you did not simply miss the item, but made a conscious decision not to answer the question. This will help us identify any potential problems there may be with the question and help future research address problematic items. You may raise your hand for assistance in understanding a question at any time, a member of the research team would be happy to provide any support necessary to facilitate you completing the questionnaire.

Please answer all questions prior to submitting the survey. In some instances questions may appear redundant; however they are designed to ensure validity and reliability. Therefore, I ask you to answer ALL questions so that you may help contribute to this research project.

Remember, you have the right to discontinue the study at any time without negative consequence. Should you wish to discontinue please close your questionnaire booklet and raise your hand. A member of the research team will pick the booklet up and ensure your data is disposed of appropriately.

C. RISKS AND BENEFITS

There are no anticipated risks associated with your participating in the present study. Your participation will yield many benefits and further the research being conducted in the field employee work attitudes. Data collected will contribute to our established understanding of the workplace and will assist in creating a healthier work environment for members of your immediate and larger communities.

D. CONDITIONS OF PARTICIPATION

- I understand that I have the right to withdraw from the present study at any time without negative consequence.
- I understand that my participation will be kept anonymous. Only I will know the number I created to represent my data (pseudo ID number).
- I understand that the data from this study may be published in academic journals and conferences, without disclosing my identity.

- I understand that my employer will at no time have access to my individual responses.

I HAVE CAREFULLY STUDIED THE ABOVE AND UNDERSTAND THIS AGREEMENT. I FREELY CONSENT AND VOLUNTARILY AGREE TO PARTICIPATE IN THIS STUDY. SIGNING THIS FORM CONSTITUTES MY INFORMED CONSENT.

Print Name: _____ Date: _____
(MM/DD/YY)

Signature: _____

If at any time you have questions about your rights as a research participant, please contact the Research Ethics and Compliance Advisor of Concordia University, at 514.848.2424.x 7481 or ethics@alcor.concordia.ca.

Appendix B

Trustworthiness Scale (Mayer, Davis & Schoorman, 1995)

Trustworthiness of Leaders

Think about the place you work and the management team (supervisors, managers, and general manager). For each statement below, please indicate the number that best describes how much you agree with each statement. Indicate the degree to which you agree with each statements using the following scale: 1 (disagree strongly), 2 (disagree), 3 (neither agree nor disagree), 4 (agree), 5 (strongly agree).

1.	Management is very capable of performing its job	1	2	3	4	5
2.	Management is known to be successful at the things it tries to do.	1	2	3	4	5
3.	Management has much knowledge about the work that needs to be done.	1	2	3	4	5
4.	I feel very confident about management's skills.	1	2	3	4	5
5.	Management has specialized capabilities that can increase our performance.	1	2	3	4	5
6.	Management is well qualified.	1	2	3	4	5
7.	Management is very concerned about my welfare.	1	2	3	4	5
8.	My needs and desires are very important to management.	1	2	3	4	5
9.	Management would not knowingly do anything to hurt me.	1	2	3	4	5
10.	Management really looks out for what is important to me.	1	2	3	4	5
11.	Management will go out of its way to help me.	1	2	3	4	5
12.	Management has a strong sense of justice.	1	2	3	4	5
13.	I never have to wonder whether management will stick to	1	2	3	4	5

its word.

14. Management tries hard to be fair in dealing with others.	1	2	3	4	5
15. Management's actions and behaviors are not very consistent.*	1	2	3	4	5
16. I like management's values.	1	2	3	4	5
17. Sound principles seem to guide management's behavior.	1	2	3	4	5

Scoring Keys: Trustworthiness

Construct	Items
Ability	1 – 6 (inclusive)
Benevolence	7 – 11 (inclusive)
Integrity	12 – 17 (inclusive)

* This item is reverse scored.

(Mayer, Davis & Schoorman, 1995)

Appendix C

Work Basic Psychological Need Satisfaction

The following questions concern your feelings about your job over the past year. If you have held your current position for less than a year, please answer the questions based on your experience thus far. Remember, your answers are held completely confidential and your boss will never know how you responded to these questions. Please indicate to what extent the following statements correspond to your experience at work. Use the scale provided below to respond to the following items.

Please indicate the extent that statements correspond to your current work.

1.	I feel like I can be myself at my job.	1	2	3	4	5
2.	I really master my tasks at my job.	1	2	3	4	5
3.	I don't really feel connected with other people at my job.	1	2	3	4	5
4.	At work, I often feel like I have to follow other people's commands.	1	2	3	4	5
5.	I feel competent at my job.	1	2	3	4	5
6.	At work, I feel part of a group.	1	2	3	4	5
7.	If I could choose, I would do things at work differently.	1	2	3	4	5
8.	I am good at the things I do in my job.	1	2	3	4	5
9.	I don't really mix with other people at my job.	1	2	3	4	5
10.	The tasks I have to do at work are in line with what I really want to do.	1	2	3	4	5
11.	I have the feeling that I can even accomplish the most difficult tasks at work.	1	2	3	4	5
12.	At work, I can talk with people about things that really matter to me.	1	2	3	4	5
13.	I feel free to do my job the way I think it could best be done.	1	2	3	4	5

14. I often feel alone when I am with my colleagues.	1	2	3	4	5
15. In my job, I feel forced to do things I do not want to do.	1	2	3	4	5
16. Some people I work with are close friends of mine.	1	2	3	4	5

Scoring Keys: Work-related Basic Need Satisfaction Scale

Item	Construct
# 1, 4, 7, 10, 13, 15	Perceived autonomy
# 3, 6, 9, 12, 14, 16	Perceived relatedness
# 2, 5, 8, 11	Perceived competence

(Van den Broeck, Vansteenkiste, De Witte, Soenens, Lens, 2009)

Note. The original scale was published with subscale items clustered one after the other. In order to avoid biases, items were randomized. The current item numbers represent the order in which items were presented in this study.

Appendix D

Performance: Proficiency, Adaptivity & Proactivity

The following statements relate to your personal performance. Please indicate the extent to which you agree with each statement using the five point scale provided.

1.	Carried out the core parts of your job well	1	2	3	4	5
2.	Completed your core tasks well using the standard procedures	1	2	3	4	5
3.	Ensured your tasks were completed properly	1	2	3	4	5
4.	Adapted well to changes in core tasks	1	2	3	4	5
5.	Coped with changes to the way you have to do your core tasks	1	2	3	4	5
6.	Learned new skills to help you adapt to changes in your core tasks	1	2	3	4	5
7.	Initiated better ways of doing your core tasks	1	2	3	4	5
8.	Come up with ideas to improve the way in which your core tasks are done	1	2	3	4	5
9.	Made changes to the way your core tasks are done.	1	2	3	4	5
10.	Presented a positive image of the organization to other people	1	2	3	4	5
11.	Defended the organization if others criticized it	1	2	3	4	5
12.	Talked about the organization in positive ways	1	2	3	4	5
13.	Responded flexibly to overall changes in the organization	1	2	3	4	5
14.	Coped with changes in the way the organization operates	1	2	3	4	5
15.	Learnt skills or acquired information that helped you	1	2	3	4	5

adjust to overall changes in the organization.

16. Made suggestions to improve the overall effectiveness of the organization. 1 2 3 4 5

17. Involved yourself in changes that are helping to improve the overall effectiveness of the organization 1 2 3 4 5

18. Come up with ways of increasing efficiency within the organization 1 2 3 4 5

Scoring Keys: Performance Scale (Proficiency, Adaptivity & Proactivity)

Aggregated Construct	**Item**	**Construct**
Proficiency	# 1,2,3	Individual task proficiency
	# 10,11,12	Organizational member proficiency
Adaptivity	# 4,5,6	Individual task adaptivity
	# 13,14,15	Organizational member adaptivity
Proactivity	# 7,8,9	Individual member proactivity
	# 16,17,18	Organizational member proactivity

(Griffin, Neal & Parker, 2007) *Note.* The original scale was published with subscale items clustered one after the other. In order to avoid biases, items were randomized.

Appendix E

Turnover Intentions

Turnover Intentions

Please indicate the extent to which you agree with each statement using the five point scale provided.

1. I often think of leaving the organization 1 2 3 4 5
2. I have the intention of looking for alternative employment within the next year. 1 2 3 4 5

Scoring Key: Turnover Intentions

Both items are used together to create the construct labeled 'turnover intentions'. Items are translated from the original Forest & Gagné (2011) which were written in French. Items were translated by the researcher and back translated by an independent party.