

## Job Performance Modeling: A Holistic Theoretical Analysis

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### Abstract

The purpose of this study is to investigate inconsistent findings in extant research on organizational performance prediction. Systematic review is used to (a) evaluate the overall validity of traditional antecedents of organizational performance, (b) examine their underlying causal relationships in determining organizational performance, and (c) investigate the potential existence of mediating and moderating effects of each antecedent. Rather than simply making the customary plea for more elaborate micro theories of behavior or improved research designs, it is contended that greater progress could be made by examining and organizing what is already known about performance and its antecedents. Thus, leveraging on the systematic review analysis, this research develops a holistic theoretical model by blending three job performance antecedents to study their explanatory power and to reveal how these factors may interact with each other. The proposed causal-chain framework may be regarded as representative references for future research in the organizational psychology. Practitioners can also develop a better operational strategies based on the theoretical model.

**Key words:** Job performance; Work intention; Performance model

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### INTRODUCTION

The concepts in organizational psychology have revolutionized the operational strategies of many corporations and thus attracted much attention from industry and academia. Enormous effort has been expended over the past five decades in attempts to unravel the possible relationships between job performance and its hypothesized antecedents (Judge et al., 2001; Rich et al., 2010; Judge et al., 2013).

Some typical antecedents, which are studied, consist of job satisfaction (Iaffaldano & Muchinsky, 1985), personality (Barrick & Mount, 1991), working environment (Vischer, 2007) and attitude (Birnbaum & Somers, 1986). Unfortunately, much of the empirical research focus on searching for a simple relationship between job performance and one or two selected variables. Although such studies certainly number in the thousands, they cannot summarize a strong and consistent antecedent for job performance prediction or explanation. In particular, research has not provided conclusive confirmation or disconfirmation of the relationship between identified antecedents and job performance, partly because of a lack of assimilation and integration in the literature (Christen et al., 2006). It is also argued that the previous limitation stems from a neglect of the interaction between indicators and most of the current models ignore certain important dimensions of performance, which reduces the consistency and reliability of the model (Blumberg & Pringle, 1982). In this paper, a different approach to the understanding of job performance is suggested. Through reviewing extant literature of job performance, we sort out all the consistent results in previous research and tried to integrate them in a holistic model. It is contended that greater progress could be made by examining and organizing what is already known about performance and its antecedents. To facilitate this, three basic antecedents (work intention, work environment and work capability) of performance

are defined, and the probable form of their interaction is explored.

Work intention, as a common influential factor of job performance, has been defined as “feelings or affective responses to facets of the (workplace) situation” (Smith et al., 1986). Researchers believe that employee work intention is the affective state of employees regarding multiple facets of their jobs (Brown & Peterson, 1993); so work intention comprises employee feelings regarding multiple aspects of the job such as job satisfaction and self efficacy. In addition, work intention contains some cognitive components. These components are made up of judgments and beliefs about the job whereas the affective component comprises feelings and emotions associated with the job. One may easily find the potential link between work intention and job performance through psychological perspective. The principle of psychology becomes the best trigger for doing research on work intention and job performance.

The work environment, as a new antecedent of job performance, is increasingly important in predicting job performance. Croucher (2013) summarized five dimensions of the work environment, which includes occupational safety and health, bundles of HR practice, wages, working time and training. In their research, all of these five dimensions significantly related to job performance, indicating the strong impact of the work environment on job performance. Chandrasekar (2011) concluded that it is the quality of the employee's workplace environment that most impacts on their level of motivation and subsequent performance. Creating a work environment in which employees are productive is essential to increase profits for organization, corporation or small business. The relationship between work, the workplace and the tools of work, workplace becomes an integral part of work itself.

Some inherent antecedents of job performance, like working experience, ability or skill, could be integrated as “work capability (Pringle et al., 1982). Personnel psychologists have devoted substantial resources to the study of the relation between measures of work capability and job performance. Large amounts of validity data have been accumulated in the research literature. Quantitative review of this literature (Callender & Osburn, 1981; Hirsh, Northrop, & Schmidt, 1986; Pearlman et al., 1980; Schmidt, Gastrosenberg, & Hunter, 1980; Trattner, 1985) has shown work capacity to be an effective antecedent for all jobs.

So, according to the review of previous literature in this research domain, it is observed that substantial effort has been invested in studying each antecedent of job performance. However, few researchers have examined these antecedents in a single study. This is surprising, given that the job performance may be influenced by multiple antecedents simultaneously. Based on the information derived from literature, it is clear that few

scholars tried to involve multiple independent variables in their performance prediction model. Much of this research only focused on only one or two antecedents but ignored the whole picture of performance dimensions. Although some investigators classified an antecedent into several facets, they are still entangled by a single dimension. Judge et al. (2001) reviewed 124 studies that report a correlation between satisfaction and job performance and found the results differed greatly in similar industries, which means a single antecedent could not provide a stable and consistent result for performance prediction. This finding issues a strong call for investigators to recheck the study methods of job performance. Blumberg and Pringle (1982) asserted this limitation of performance prediction and emphasized the importance of multi-dimensional structural model. However, due to the limitation of computing power in 1982, they could only propose an initial model without data support and validation. Due to the significant inconsistency in the numerous studies, some scholars started to use meta-analysis to review previous research and tried to formulate an acceptable model for performance prediction. Miller and Monge (1986) reviewed three kinds of models of satisfaction-productivity relationship and got a controversial result. In 1991, Barrick and Mount (1991) used meta-analysis again to determine the correlation between job performance and the personality of employees. Meta-analysis continues to be used to nowadays. However, the same defect still exists by reason that the reviewed studies still solely focused on one or two dimensions of performance. In addition, few studies attempted to investigate the relationship among these antecedents. Some mediator factors or observed variables could be wrongly deemed as vital antecedents, because investigations between antecedents were not conducted in previous research. It is contended that examining and organizing what is already known about performance and its antecedents could make greater progress.

Based on the previous background, there are three reasons to call for theoretically oriented research in performance prediction model. Firstly, the extant literature could not provide a complete and consistent prediction model for job performance. The previous limitation stems from a neglect of the interaction between indicators and most of the current models ignore some important dimensions of performance, which reduces the consistency and reliability of the models. Inconsistency in different models creates challenges for managerial consideration and also causes research gaps for future research. A systematical review of previous articles by generating a roadmap to indicate future direction of performance prediction subject area is necessary. Secondly, the casual relationship between performance antecedents is worth examining. The interaction between these factors could indirectly explain how they can cause impact on job performance. Thirdly, although Pringle (1982) raised an

integrated model for performance prediction, it stopped at the qualitative analysis stage. If this model could be supported with sufficient measurement tools and analysis methodologies, it could be developed to a clearer roadmap for subsequent researchers.

The objective of this study is twofold. First, this study aims to broaden the traditional research scope in which only one dimension of performance is modeled in each research study. A three dimensional-model will be developed based on systematic review of extant literature. These three big antecedents consist of the work capability, work intention and work environment. The impetus of choosing these three antecedents is explained in following sections. The second objective of this study is to further explore the endogenous causality correlation among these three antecedents of job performance. Past research suggests supportive or negative relationships between constructs and performance, but this study extends the result through inclusion of the interaction among different antecedents. One should note that since this study is exploratory, it is not clear how these antecedents will influence each other. Nevertheless, relationships observed among antecedents will provide valuable implications for researchers and managerial practice. In order to better appreciate the relationship between antecedents and job performance, the following research questions are formulated to guide the study:

**RQ1:** How do work environment, work intention and work capability affect individual job performance and organizational performance?

**RQ2:** How do these antecedents interact with each other?

**RQ3:** What is the exact role of extant antecedents in prediction models (antecedent, mediator or moderator?)

This paper is presented as follows: the next section provides an exhaustive review on three antecedents and their relationship with individual performance and organizational performance. In section 3, we develop a theoretical model to link up these antecedents. The fourth section further discusses the implications from the findings and suggests possible quantitative methodologies for the research model. Both theoretical and practical contributions are given in this section. Finally, in light of proposed theoretical model, the last section is devoted to the conclusion and future research directions derived from this model.

## 1. LITERATURE REVIEW

Research on performance prediction can be traced back to the study of Roethlisberger & Dickson (1939). In that study, scholars first deemed organization as machines that needed to be made as efficient as possible, and the most vital part of this machine was the people in organization. The potential linkage between people's attitudes and

performance was considered in earnest from then on, coinciding with the Hawthorne studies and the ensuing human relations movement. Although the Hawthorne studies literately emphasized the relationship between employee attitudes and performance, assumptions in that studies made subsequent researchers realize the potential possibility of linking other factors to performance. From then on, this subject area started to consider how to enhance people's performance for the improvement of organizational operation. From 1955 to now, enormous effort has been expended in uncovering the potential relationships between potential antecedents and job performance. During this period, several influential factors of performance were revealed and studied through qualitative and quantitative analysis. The most well adopted and discussed antecedents include: job satisfaction (Brayfield & Crockett, 1955; Irvine & Evans, 1995; Griffeth et al., 2000), personality (Tupes & Christal, 1992; Digman, 1989; Barrick & Mount, 1991), working environment (Sundstorm et al., 1994; Statt, 1994; Ryan & Deci, 2000), and personal capability (Vroom, 1964; Susman & Brown, 1977; Patterson et al., 2004). Accordingly, some derivative factors were also revealed through deeper mining of relationships. Wright and Cropanzano (2000) stated that "Psychological Well-being", which refers to individual happiness, performs better than job satisfaction in performance prediction. Their findings lend support to the basic proposition that "happy" workers often have better performance. They argued that well-being was related to performance ratings beyond the effect of job satisfaction. Similar derivative studies were raised consecutively based on some basic dimensions of performance. However, there is no systematic review in this period to summarize these dimensions. The lack of review caused an evitable condition in this subject area, which is inconsistent. Although this field has enough qualitative (Locke, 1976; Crockett, 1955) or quantitative (Behrman & Perreault, 1984) reviews, it is surprising to find that results for these studies showed huge variance and differences. Once a study generated a significant result through regression analysis, later studies could generate the opposite result to challenge previous one. Debates frequently occurred in this subject area, in what has become known as the "attitude-behavior controversy," and attitude theory repeatedly has been subjected to serious charges of weakness and inadequacy in its ability to predict overt behavior (Perry, Gillespie, & Lotz, 1976). In addition, job satisfaction was re-examined by Wright et al. (2006) and their conclusion was that this classic antecedent failed to account for variation of performance, indicating there is no significantly relationship between these two variables. After years of research, no one could definitely claim that these determinants or antecedents are significantly related to job performance. Most

researchers invariably stated “it depends” (Singer, 1974). For this problem, some researchers claimed that variance in results stemmed from the different nature of organizations or industries (Miller & Monge, 1986; Green & Craft, 1979). However, according to the meta-analysis done by Judge et al. (2001), even in the same industry (hospitals e.g.), the results are still controversial. Fortunately, Blumberg and Pringle (1982) argued that inconsistency existing in performance prediction might stem from a neglect of other dimensions of performance. Blumberg (1982) stated that if a study would like to investigate the relationship between a single antecedent and job performance, researchers must control the other dimensions of performance to avoid inaccuracy, or they should concentrate equally on the majority of dimensions in one study. This statement is supported by Ellingson et al. (1998) and Leblebici (2012), who challenged previous studies on performance prediction due to their ignorance of other major antecedents. A simple example raised by Blumberg was: Two professors with equal job satisfaction work in two different workplace environments. A’s environment were well equipped but B’s is shabby. The results of investigation turned out to show that A’s performance is much better than B’s. Scholar of this study may claim that job satisfaction has no significant relationship performance. Obviously, this claim is inaccurate and unreliable. Besides ignoring control variables, Greene and Craft (1979) raised a proposition that some pre-assigned variables may be wrongly positioned as antecedents of job performance. These variables could be mediators and moderators in job performance prediction model. According to the clarification of Bolar (2013), mediators are more like translators, which carry forward the influence of an independent variable on the dependent variable. In layman terms, it is a broker between parties of interest. Moderator variables are those variables that act like a catalyst in a regression relationship. They interact with the independent variables, either to bring down or enhance the relationship between the independent and dependent variables. In other words, the relationship between dependent and independent variables is a function of the moderator variable. Vicent (2005) illustrated the relationship between these three types of variables and found that if mediators were wrongly deemed as antecedents in a model, that model’s consistency would be attenuated. The reason behind this condition is that in different organizations or workplaces, some mediators may not exist due to lack of triggers (antecedent). Its explanatory power would be overestimated.

Fortunately, decades of research about performance prediction still provide us with instructive information for major antecedents of performance. Vroom (1964) and Maier (1955) identified that “ability” and “willingness” are two vital antecedents of job performance. Pringle

(1982) extended this topic and finished this model by adding one more antecedent, which is “opportunity to perform”. Opportunity to perform here indicates “the particular configuration of the field of forces surrounding a person and his or her task that enables person’s task performance and that are beyond the person’s direct control.” One may conclude this dimension as “working environment and supplies”. Also, he extends the scope of two previous antecedents and defined these three factors at three dimensions of job performance. A summative model can be described as below:

$$P=f(O\times C\times W).$$

Where:

$P$  = Job Performance

$O$  = opportunity to perform

$C$  = Capacity to perform

$W$  = Willingness to perform

This model has been widely adopted in its original form, and some researchers added minor modifications on this model in the following years (Williams & Anderson, 2006; Brown & Leigh, 1996). Nevertheless, its main point is unchanged. This summative model provided subsequent research with a basic framework or possible directions to discover theories for performance prediction. According to the result of systematic review, the extant literature can be classified into these three dimensions. Below is a summative table for the extant literature about performance prediction. One may observe that theories can be divided into three categories, which correspond to the three dimensions of Pringle’s model.

However, this model has not been developed over the last 30 years, and the reasons behind this are threefold. The first reason is that three dimensions of this model are latent variables and cannot be measured directly. Multivariate regression models are not suitable for solving the parameters of this formula. Second, due to the limitation of computing power and statistical techniques, it stops at qualitative analysis stage, and there is no sufficient quantitative evidence to support this model. Thirdly, this model still cannot uncover the casual relationship between antecedents.

In summary, for the past decades, many researchers have studied the antecedents of job performance. Most of them could not raise a consistent and reliable result to prove the relationship between job performance and a specific antecedent. This problematic condition leads subsequent researchers to consider if they must control other vital dimensions of job performance when investigating one or two antecedents. A three dimensional model was developed by Blumberg and Pringle (1982), but their study stops at the initial level of this model. Accordingly, the purpose of the present paper is to reexamine the state of the literature concerning the relationship between these three dimensions and

job performance and developed a causal-chain model to illustrate the inter-relationships among the adopted research constructs. We expect that this model can cover all the three traditional dimensions of job performance and also has the capability to account for additional variance in performance. Below is a summary of the extant literature of job performance prediction.

**Table 1**  
**Theories and Models Used in Performance Prediction Research**

Theories and models	Representative references
<i>Work intention</i>	
Job satisfaction theories	Judge et al. (2001)
Attitude models	Birbaum and Somers (1986)
Job involvement theories	Diefendorff et al (2002)
Motivations	Ilgen and Pulakos (1999)
Perceived self image	Judge and bono (2001)
Self efficacy	Stajkovic and Luthans (1998)
Feeling of equity models	Sarah et al. (2004)
Trust theories	Colquitt and Scott (2007)
<i>Work environment</i>	
Physical supplies	Crawford et al. (2010)
Leader behavior theories	Podsakoff et al. (1990)
Mentorism theories	Babin and Boles (1996)
Interpersonal relationship	Chiaburu and Harrison (2008)
Privacy	Sundstorm et al. (1980)
Safety	Nahrgang et al. (2011)
<i>Work capability</i>	
Academic achievement model	Wise (1975)
Age	Ng et al. (2008)
Work experience	Waldman and Avolio (1986)
Occupational health	Sparks et al. (2001)
Social skills and mental ability	Ferris et al. (2001)

## 2. MODEL DEVELOPMENT

Since current research lacks a general overall picture of evidence in the theory of how multiple antecedents affects individual and organizational performance through their interaction, a systematic review of the extant literature in work capability, intention and environment is conducted. Systematic review uses a process to identify comprehensively all studies for a specific focused question, appraise the methods of the studies, summarize the results, present key findings, identify reasons for different results across studies, and cite limitations of current knowledge (Cook et al., 1997). Petticrew and Roberts (2006) suggested that this method is suitable for developing new research models and theories. Eric and Kevin (2014) also used systematic review to develop a theoretical model based on previous literature. The result of systematic review could provide this study with sufficient theoretical support for formulating the causal-chain framework for the proposed model.

### 2.1 The Relationship Between Work Capability and Job Performance

The term “work capability” was firstly introduced by Mace (1935) and Viteles (1953), indicating this concept comprises two perspectives of a staff’s ability to perform his work. It refers to the physiological and cognitive capabilities that enable an individual to perform a task effectively. In addition to ability, capacity represents the effects of the individual’s knowledge, skills, intelligence, age, state of health, level of education, endurance, stamina, energy level, motor skills, and similar variables. Unfortunately, there is no standard approach to measure individual work capability since it relates to privacy issues and subjective judgments. The current method to “measure” this factor is using different antecedents of capability to qualitatively reflect it. Later in 2013, Noon et al. (2013) concluded that four important antecedents were involved in the capability of working, including working experience, education, mental health condition and physical health condition. Noon’s statement is supported by Shepherd (1999), in which it was stated that although work capability is difficult to accurately measure, work experience, age and the cognitive health of employee could properly reflect the variation of this concept. Although some earlier management scientists considered that this dimension of performance could simply be measured by a staff’s working experience and education degree, rather than complicated ability measurement, the current trend is to use composite measurement tools to evaluate the work capability.

Work capability provides employee with competence to reach and maintain a satisfactory standard in their work. (Jeske, 2015). Inadequate skills, knowledge and competencies or as a result of health problems may lead to a high level of sickness absence. This may typically occur when technologies or processes change and the need for adaptation, despite training and support, proves to be beyond the capability of an individual. As Jeske (2015) reports that the employee’s performance was significantly impacted by their professional skills and work experience. Also, according to Bueno et al. (2010), the literature has established a high correlation between individual education degree and work experience on individual performance. Here, we suggest that work capability has a positive impact on employee’s performance (i.e., strengthen performance of their work). However, inadequate work capability has a negative impact (i.e., weaken the performance of work.).

Therefore, an evaluation must be operationally defined within the context of the application to which it will be put. To achieve this perception, this study would like to put forward the following propositions for proposed model:

P1 (1): The work capability could be well reflected by education degree, work experience, age and occupational health.

P1 (2): The work capability is directly associated with job performance. High capability could improve job performance; and low capability discourages job performance.

## 2.2 The Relationship Between Work Intention and Job Performance

Intention of working is a classic research tradition in this subject area. Its relationship with job performance attracted numerous scholars. Theoretically, intention of working indicates the psychological and emotional characteristics that influence the degree to which an individual is inclined to perform a task, and comprises the willingness dimension (Pringle, 1986). In addition to motivation (and its concomitants, expectancy and valence), this concept represents the effect on behavior of job satisfaction, personality, attitudes, norms, values, status, anxiety, task characteristics, job involvement, perceived role expectations, self-image, need states, and closely related concepts. The extant literature on job performance prediction focuses on mainly three concepts of this dimension, which are job satisfaction (Pincus, 1986; Bateman, 1983; Christen, 2006), motivation (Ilgen & Pulakos, 1999; Hackman & Oldham, 1976; Orpen, 1997) and job involvement (Diefendorff et al., 2002; Lawler, 1970; Lodahl, 1965). In most of the literature, these three concepts are directly positioned as antecedents of job performance. For instance, some occupational psychologists like Babin and Boles (1996), Williams and Anderson (1991) preferred to believe that there is no mediator between job satisfaction and job performance. Nevertheless, their statements were challenged by Janssen (2001), Bowling (2007) and Petty et al. (1984), for these scholars indicated that there should be several models between job satisfaction and job performance, and more empirical data should be provided to validate the correlation and make it more consistent. Similar controversial conditions occurred to the other two concepts as well. In summary, several studies investigating intention of working all revealed a strong causal relationship between job performance and above three concepts under intention categories. The proposed relationships are illustrated schematically in the proposed model. Based on the above, we propose that:

P2 (1): The work intention can be well reflected by job satisfaction, job involvement and motivation.

P2 (2): The work intention is directly associated with job performance. Positive work intention could improve job performance; and negative work intention discourages job performance.

## 2.3 The Relationship Between Work Environment and Job Performance

Environment of working is a fresh antecedent of job performance. It was taken seriously after Pringle (1982) firstly introduced it as one of the dimensions of employee

performance. Nevertheless, environment is a concept that was recognized from 1950s. Some earlier scholars like Porter and Lawler (1968) stated that environmental factors would intervene to influence the effort of performing work duties. Cummings and Schwab (1973) discussed the differences in the performance of two bricklayers, arguing that, environmental factors should be proper independent variables influencing job performance. The relationship between workplace environment and job performance is the basis of the "5S" theory, which is an advanced lean production concept aiming at improving job performance by organizing the workplace environment. Indeed, through 5S implementation and its success (e.g. Ab Rahman, 2010), one could observe that an improving environment could surely enhance staff performance. However, Pringle (1982) indicated that when investigating the environment of working, scholars may dismiss this effect in a sentence or two and proceed to concentrate on the effects of intention and capability. Mobley (1973) recognized that the dramatic improvement of job performance might not solely be contributed by environment improvement. It may contribute to the intention of working directly, and then influence job performance. The relationship between the environment of working and job performance still needs sufficient empirical data to develop a consistent model. In sum, the extant literature indicates that certain environmental factors play a significant role in job performance prediction. The remaining questions for current researchers are how environment factors influence performance. The proposed model in this study will be used to investigate this research gap in depth. This study follows Peters and O'connor (1980)'s result to reflect the environment of working. In their study, they identified eight classes of situational variables in response to the workplace condition. The proposed model uses five of the variables to reflect the environment of working. Therefore, we expect that:

P3(1): The environment of working can be well reflected by equipment, communication, privacy, supervisor support and coworker relationship

P3(2): The work environment is directly associated with job performance. Positive environment could improve job performance; and negative environment discourages job performance.

## 2.4 The Mediating Effect of the Work Intention on Work Capability and Work Environment

The next research question addresses the mediating effect of the work intention on work capability and work environment on the impact of individual performance and organizational performance. Mediators are variables that explain the causal relationships between antecedents and outcomes (Preacher, Rucker, & Hayes, 2007). Prior research report that work capability and environment has an impact on the individual's intention to perform his job (Cropanzano et al., 2003; Westerman & Yamamura,

2007; Koestner et al., 2002; Kim et al., 2009). Although work intention has been extensively examined as an antecedent, it has also been adopted as a mediator of several common antecedents of job performance. According to the statement of Schleicher (2004), there are two root antecedents of individual performance. One of them is external objective factor, which includes variables that are not related to personal feeling and cognitive appraisal. For example, workplace environment is a typical objective factor. The other root antecedent is inner subjective factor, which consists of psychological activities and cognition of employees. Work intention belongs to this root antecedent. That is why Mittal (1999), Cote and Miners (2006) both used personal intentions to mediate employee’s behavior in the workplace. Upon systematic review, we anticipate that work capability and environment positively influence work intention and further strengthen their relationship with job performance. On the other word, work intention is a mediator between these two dimensions and job performance. We develop the following two propositions:

P4 (1): The work intention is a mediator between the work capability and job performance

P4 (2): The work intention is a mediator between the work environment and job performance

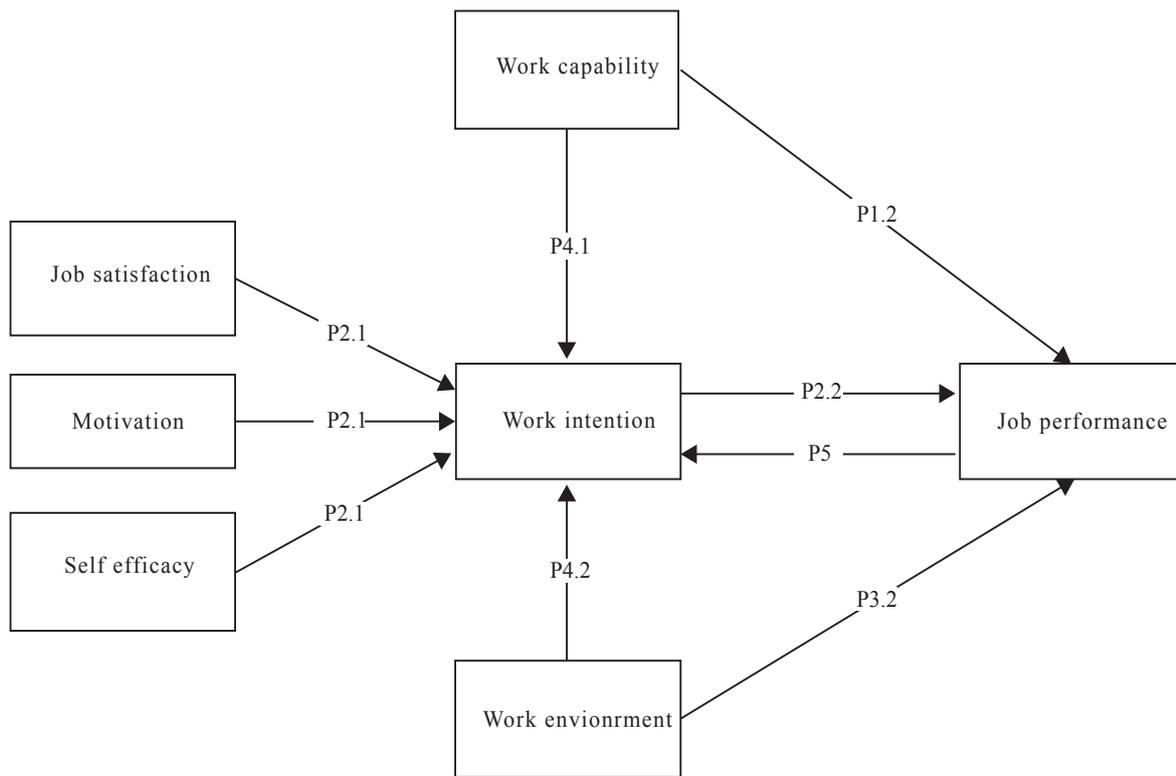
### 2.5 Reverse Effect of Job Performance

Models of the reciprocal relationship between work

intention and job performance have no distinct theoretical foundation. Rather, they are hybrid models of “intention leads to performance” and “performance leads to intention”, accepted by those who believe that both theoretical explanations are plausible, that performance can be both satisfying and, in turn, caused by work intention. Although reciprocal models may well find unique justification in each literature, further theoretical grounding seems important. Bagozzi (1980) and Siegel and Bowen (1971) have suggested that job performance leads to job satisfaction but not the reverse. Judge et al. (2001) partially support reciprocal relationship between these two concepts by giving strong correlation coefficient. A recent research produced by Nathan (2007) also generates supportive results showing job performance also positively relates to employee’s intention to work. The model given by Nathan even shows that performance is the major antecedent of work intention instead of other classic antecedents. His finding echoes the statement of Wanous (1974) that performance and work intention could construct circle to reciprocally influence each other. Based on the above discussion on how job performance impact on work intention, we develop the last proposition of this study:

P5: Work intention and job performance are reciprocally related

Above propositions are illustrated schematically in Figure 1



**Figure 1**  
**Theoretical Model**

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### 3. DISCUSSION

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#### 3.1 Theoretical Contributions of This Study

When reviewing previous studies about performance prediction and evaluation, it is not surprising that scholars solely concerned with personality, work environment or job satisfaction have failed to raise a significant and consistent relationship between these antecedents and job performance. Researchers worked on single dimension of job performance, for example, rarely tried to control the other dimensions, yet these dimensions are known to be vital factors of an individual's performance. Although the relative impact of these interdependent dimensions may vary from industry to industry, they should not be included in the "error" part when conducting statistical analysis. At least, if scholars tried to avoid inaccurate or incomplete prediction, they should attempt to control the implications that other dimensions have on job performance, and meanwhile consider if there is mediator between dependent and independent variables. In order to remedy the previous limitation of extant literature, this research investigates into the combined effect of environment and capability on job performance using the work intention as a mediator. The theoretical model developed in this study could be used for studying how traditional dimensions of job performance affects individual and organizational performance through direct impact or mutual interaction. We expect that this model can bring impact on organizational psychology research in three perspectives.

First, the model suggested in this study is to establish a three-dimensional outcome structure to provide users with complete and visual instruction for performance prediction. These three dimensions cover the majority of influence factors adopted in previous research. Though the potential linkage between a single antecedent and performance is a field in which great effort has been invested (Roznowski & Hulin, 1992), statistical analysis has been developed sharply for nearly 15 years, like LISREL or data mining techniques. These techniques can provide us with more convenient and reliable ways to build accurate models. Given the scope of the current review and the scrutiny across previous studies, one could state that the time has come for researchers to reexamine the topic of performance prediction and remedy past defects. In light of the model presented in here, we argue that we are able to clearly uncover the relationship between performance and its several antecedents.

Second, this study is one of the earliest studies conduct a systematic review to integrate previous performance prediction models and to eliminate inconsistency in performance prediction subject. When reviewing previous studies about performance prediction and evaluation, it is not surprising that scholars solely concerned with personality, work environment or job satisfaction have failed to raise a significant and consistent relationship

between these antecedents and job performance. Researchers worked on single dimension of job performance, for example, rarely tried to control the other dimensions, yet these dimensions are known to be vital factors of an individual's performance. Also, there is a lack of research in studying how these antecedents interact with each other. This study contributes to the extant literature by integrating their finding in a single model. Future research can be conducted to collect empirical data based on this model to see how these three dimensions' work. In next step, we plan to collect such data to support our hypotheses and also to validate this model quantitatively.

The last but not least, a roadmap for future research on job performance prediction is provided in this study. It is expected to provide a reference for researchers to stimulate new ideas for future research in this subject area. We conducted an intensive review of identified articles to reveal the researchers' focuses on performance prediction and their key findings, which can be used as an immediate reference for other researchers in this subject area.

#### 3.2 Practical Implications of This Study

For practical consideration, management should realize that there are more potential and alternative ways to improve an individual's performance according to the result of this study. For instance, if a manager aims to improve the performance of a division, he could consider putting the starting point in one of these three dimensions to achieve the best effectiveness. This model may change in different organizations, but its structure is stable since these three dimensions have been strongly supported by previous studies. What management needs is simply a message to show the most efficient way for improvement of performance. In other words, management, which hopes to improve organizational performance, must consider the effect of managerial behavior on each of the three dimensions, instead of focusing on any single of them.

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### CONCLUSION

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This theoretical study develops a model using a systematic review, which can sum up the holistic available research on a specific question, to investigate how traditional concepts in organizational psychology can affect the individual or organizational performance. We suggest that work capability and work environment can affect job performance through two different channels, including (a) direct impact and (b) mediates by work intention. At the same time, job satisfaction, motivation and self-efficacy have direct impact on work intention and further indirectly influence job performance. We also propose the possibility that work intention and job performance are reciprocally related. This research echoes the call for systematic review in organizational psychology research proposed

by Imran (2014) and strengthens our understanding on how traditional antecedents produce integrative effect on job performance and how they interact with each other. Particularly, this research is one of the earliest studies which could provide an intensive review of 53 identified articles in the extant literature to understand how previous researchers developed their models and theories to explain organizational behaviors toward job performance. By doing so, this study provides a pictorial summary for both future research and industry.

## FUTURE RESEARCH DIRECTIONS

This study proposes a unified framework to integrate several possible latent variables to predict job performance. Once this model's performance is acceptable in predicting individual job performance, an attempt would be made to involve the user generated content (UGC) from the internet and to focus on predicting the whole company's performance. UGC here indicates some online platforms for users to share opinions on a firm, products or services. In the digital age, UGC is easily accessible and widely available for researchers to collect and analyze, and it could provide a powerful data source with sufficient data and high reliability. With data support, this project could extend its research target from individual job performance to organizational performance. Thus, more valuable implications could be generated for managerial practice and the research literature.

In summary, based on preliminary results of the first step, we could extend this model by involving datasets from UGC and digital platforms. By leveraging data-mining techniques, these data could support this project to evaluate not only job performance of the individual, but also whole company's organizational performance. By doing so, modeling organizational performance could make great contributions to the literature and to managerial practice.

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