

# **Person-Environment Fit in Non Standard Work: Insights from Workers with Limited Expectations of Continued Employment**

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*This study investigates nonstandard work through the lens of person-environment (PE) fit theory. Based on a sample of employees with limited expectations of continued employment in Singapore, PE fit is observed to be an important component of these individuals' work experiences. Findings suggest that demands-abilities fit was strongly associated with the organizational commitment and job satisfaction of nonstandard workers. Furthermore, needs-supplies fit was also associated with commitment but not satisfaction. In contrast, value congruence was only weakly associated with commitment and not at all related to satisfaction. Implications of applying PE fit to the study of nonstandard work are discussed.*

## **INTRODUCTION**

Nonstandard work is becoming a more and more prominent employment arrangement in today's modern economy. As of 2005, contingent work accounted for at least 1.8 percent of total employment in the United States, while independent contractors, on-call, temporary help, and workers provided by contract firms further totaled approximately 14.8 million or 10.7% of total employment (BLS report, 2005). This phenomenon is not just constrained to the US. The developed economies of Europe and Asia have all experienced considerable growth in nonstandard work during the past decades (Kalleberg, 2000; Kalleberg, Reskin, & Hudson, 2000).

Prevalent conceptualizations describe standard workers as those who work on a fixed schedule, at the employer's location, under the employer's administrative authority, and with the shared expectation of continued employment (Ashford, George & Blatt, 2007; Pfeffer & Baron, 1988; Kalleberg et al., 2000). Thus, *nonstandard* workers operate in conditions where one or more of the above conditions are not fulfilled. As such, they include temporary workers, contract employees, and even part-timers (George & Chattopadhyay, 2005). As a comprehensive investigation of all types of nonstandard workers is beyond the scope of this study, this study focuses on individuals who do not have the shared expectation of continued employment, which is one of the key dimensions of nonstandard work (Pfeffer & Baron, 1988).

To cope with their growing presence, organizations and their managers need to know how to design nonstandard jobs to create conducive working environments for nonstandard employees (Feldman, Doeringhaus, Turnley, 1994). Unfortunately, the applicability of current knowledge in the context of nonstandard work is questionable because most of it has been developed based on assumptions of standard employees who work a fixed number of hours daily while holding the expectation of long-term employment with the same company (Ashford et al., 2007). The current study seeks to address this issue by assessing the relevance of person-environment (PE) fit to the above-mentioned group of nonstandard workers.

PE fit is a widely-used framework in the study of individual attitudes and behavior (Edwards, 2008). In highlighting the importance of satisfying the individual needs of employees and designing jobs that suit their abilities, PE fit research often presumes that individuals are involved in long-lasting and stable employment relationships (Kristof-Brown, Zimmerman & Johnson, 2005). Hence, some could say that this perspective might be less useful when individuals work without expectations for continued employment because the absence of such expectations may compromise the perceived benefits of PE fit (e.g. social support and learning opportunities), many of which may require a sustained relationship with an employer over a good amount of time.

On the other hand, PE fit might be especially applicable to nonstandard work. Past research on nonstandard work has typically adopted a one-sided approach by either focusing on individual factors such as demographics (Ellingson, Gruys & Sackett, 1998; Lee & Johnson, 1991), or environmental factors like work conditions to understand the experience of nonstandard work (Martin & Peterson, 1987; Van Dyne & Ang, 1998). PE fit can thus serve as a unifying analytical tool to incorporate *both* individual and environmental factors within the context of nonstandard work. Furthermore, nonstandard work also serves as an ideal context for testing the boundaries of widely used frameworks like PE fit (Ashford et al., 2007). In particular, it is important to ask if and how established relationships between PE fit and individual experiences are altered by the unique conditions that are experienced by non-standard workers such as the lack of expectations for continued employment and/or significantly reduced time on the job. Thus, noting the lack of research on nonstandard work utilizing PE fit theory despite its potential, this study seeks to provide insight to the crucial but unexplored question of: “How important is PE fit to nonstandard workers?”

The current study focused on PE fit’s relationship with two fundamental types of job attitudes: Organizational commitment and job satisfaction. These attitudes are widely-considered important aspects of nonstandard work experience and have been the focus of numerous studies (Ashford et al., 2007; Galais & Moser, 2009; McGinnis & Morrow, 1990). However, most investigations on them have been conducted based on the loose premise that nonstandard workers receive less favorable inducements and work under poorer social and task-based conditions compared to their standard worker counterparts (Aletraris, 2010; Eberhardt & Shani, 1984; McLean Parks, Kidder & Gallagher, 1998). Consequently, results to date have been inconsistent at best, suggesting that the nonstandard employment status alone cannot accurately account for the work attitudes of nonstandard workers (Ang & Slaughter, 2001). This study deals with this issue by using PE fit theory to gain insight to how characteristics of both individuals and their work environments are related to their work attitudes under nonstandard work arrangements.

#### Hypotheses Development

PE fit refers to the congruence, match, or similarity between a person and the environment (Edwards, Caplan & Harrison, 1998). According to Kristof (1996, c.f. Muchinsky & Monahan, 1987), the three main types of fit involve fit between individual needs and provisions supplied by the environment or needs-supplies (NS) fit (Dawis & Lofquist, 1984); individual abilities and environmental demands or demands-abilities (DA) fit (Edwards, 1996); and similarity between individuals and their social environments (e.g. supplementary fit or value congruence) (Chatman, 1989; Posner, 1992). Unfortunately, past research has tended to only focus on isolated relationships involving one or two of the above mentioned types of fit (Edwards & Shipp, 2007). Thus, in addition to testing the relevance of the PE fit to nonstandard work, this study also improves on current research on this topic by investigating and comparing relationships involving all three different types of fit to individuals working under such arrangements (Jansen & Kristof-Brown, 2006).

#### Needs-Supplies Fit

Edwards (2008) recommends focusing on specific forms of relationships involving person and environment when investigating PE fit. This requires thinking about how an outcome varies as environmental supplies approach individual needs. In needs-supplies (NS) fit psychological needs are compared against environmental supplies that often take the form of extrinsic (e.g. pay) and intrinsic (e.g. job autonomy and relationship support) resources provided by employers. Following significant recent PE

fit research utilizing the intrinsic dimensions of personal needs (Cable & Edwards, 2004; Edwards & Cable, 2009), this investigation centers around NS fit based on two fundamental aspects of jobs: *autonomy* (i.e. individual control over the nature and timing of one's job activities) and *relationships* (i.e. personal and social connections shared with other people at work (Baumeister & Leary, 1995)). These dimensions were also chosen because they represent aspects of work that are especially pertinent in the context of nonstandard work. *Relationships* have constantly been highlighted as an important aspect of nonstandard work. For instance, feelings of isolation impact many nonstandard employees (Feldman et al., 1994; Feldman & Bolino, 2000). Others have also pointed out that nonstandard employees are especially concerned about how they get along with others at work (Ashford et al., 2007; George & Chattopadhyay, 2005). Similarly, the need for *autonomy* is often cited as a key concern why people opt for nonstandard work (Kunda et al., 2002; Marler, Barringer & Milkovich, 2002)<sup>1</sup>.

NS fit impacts the commitment and satisfaction of nonstandard workers because they respond to the degree to which employer provisions are able satisfy their own needs (Ellingson et al., 1998). According to social exchange theory, nonstandard employees with limited expectations of continued employment tend to contribute on the job in response to how well their individual needs are being met (Parker, Griffin, Sprigg & Wall, 2002). Thus, commitment should increase as supplies increase toward individual needs because nonstandard employees feel an increasing need to reciprocate as employer provisions of job autonomy and supportive work relationships gradually meet their needs. Previous research has documented that nonstandard workers feel indebted and committed in response to having their psychological needs met (Liden, Wayne, Kraimer & Sparrow, 2003).

Contrastingly, commitment should *decrease* as organizational supplies exceed the amount that individuals need because over-supply may actually engender negative reactions. For instance, the provision of too much autonomy to nonstandard workers may compromise their opportunities to learn from others on the job, compromising a key reason why nonstandard workers remain with their jobs (Burger & Cooper, 1979). The lack of learning opportunities could be a factor why such workers become unattached to their jobs and employers. Furthermore, nonstandard workers also typically lack the time and organizational tenure that is required to fully utilize excess supplies of work relationships. Individuals need to be with an employer for a significant amount of time before they can utilize the benefits of positive relationships and social networks within the organization. Hence, the perceived political benefits of relationship networks that exceed personal needs may not exist for such workers due to their limited expectations of continued employment relationships. Thus, the lack of expectations for continued employment suggests that commitment should decrease once these nonstandard workers' psychological needs are met.

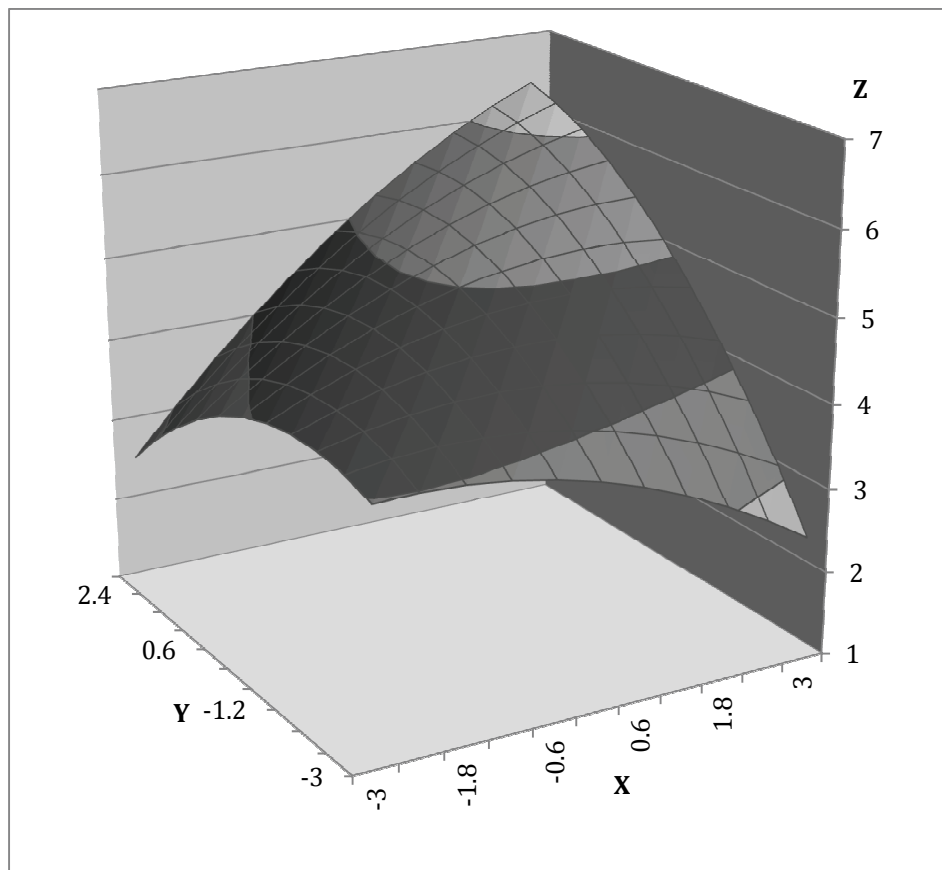
*Hypothesis 1: NS fit will be related to organizational commitment in such a way that commitment will increase as organizational supplies increase toward individual needs and will decrease as supplies exceed needs.*

Nonstandard workers' limited expectations of a long-term employer relationship and reduced time spent within the social context of their organizations cause them to be especially focused on the transactional nature of their work. Hence, it is important that their individual needs are fulfilled by the conditions experienced on the job (McLean Parks et al., 1998). Job satisfaction should thus improve as supplies increase toward personal needs (Locke, 1976). Conversely, organizational supplies that exceed personal needs could potentially have a negative impact on satisfaction where too much autonomy is accompanied by a lack of guidance, which in turn creates disturbing job-based uncertainty (Webster & Kruglanski, 1994). Similarly, work relationships that exceed the amount desired by individuals can also impinge in individuals' private space. This situation may be especially salient for individuals who opt for such nonstandard work because of other non-work related commitments (Maynard, Thorsteinson & Parfyonova, 2006).

*Hypothesis 2: NS fit will be related to job satisfaction in such a way that satisfaction will increase as organizational supplies increase toward individual needs and will decrease as supplies exceed needs.*

For illustrative purposes, the above hypothesized relationships linking NS fit to commitment and satisfaction are reflected graphically in the three-dimensional surface Figure 1. Needs and supplies are the horizontal axes perpendicular to one another and the outcome is represented on the vertical axis.

**FIGURE 1**  
**THREE DIMENSIONAL SURFACE ILLUSTRATING HYPOTHESIZED RELATIONSHIP**  
**BETWEEN NS FIT AND WORK ATTITUDE**



*Note.* Needs and supplies are scale centered, where -3 represents “none” and +3 represents “a very great amount”.

### **Demands-Abilities Fit**

Fit between job demands and nonstandard worker ability is also important. Abilities can take the form of skills, knowledge, time, and energy that people use to meet environmental demands, while demands are job requirements that range from objective (e.g. required work hours) to subjective (e.g. role expectations) (Edwards, 1996). Ang and Slaughter’s (2001) work on contract employees in the technology industry indicates that contractors respond poorly when they are not provided with jobs that suit their ability. Thus, DA fit impacts work attitudes because nonstandard workers are generally concerned about how their respective skills are used by their employers.

Commitment should increase as demands approach individual abilities because nonstandard workers appreciate increasing employer attempts to assign them appropriate work that matches their skills and

thus they reciprocate this with feelings of loyalty (Hundley, 2001). However, some caution that exceedingly high demands may overwhelm employees who may in turn feel taken advantage of and react negatively as a result (Edwards et al., 1998; Golden & Veiga, 2005). This feeling of being taken advantage of may be especially salient to workers who know that they will only be with an employer for a limited time, which lessens the possibility that they will be able to reap the benefits of future rewards that may be offered to workers who take on exceedingly challenging roles within a company. Thus, commitment should decrease once demands exceed abilities.

*Hypothesis 3: DA fit is related to organizational commitment in such a way that commitment will increase as job demands increase toward individual abilities and will decrease as demands exceed abilities.*

Job satisfaction should also increase as job demands increase towards individual abilities because nonstandard workers are likely to experience a sense of competence when they are able to fulfill role expectations (Edwards & Shipp, 2007). This may be especially true for nonstandard workers who want to make the most of their limited time on the job. Feelings of being bored, dissatisfied, and “underemployed” have been documented in circumstances where there is a lack of challenging work demands (Feldman, 1996; Fisher, 1993). On the other hand, satisfaction should decrease when job demands exceed individual abilities because people would feel overwhelmed and stressed by excess responsibilities and role expectations (Edwards, 1996). Their lack of a permanent employer relationship would also exacerbate dissatisfactory feelings of being shortchanged in such a situation. Overall, these ideas echo recommendations to design jobs that fit nonstandard worker abilities (Marler, Barringer & Milkovich, 2002).

*Hypothesis 4: DA fit will be related to job satisfaction in such a way that satisfaction will increase as job demands increase toward individual abilities and will decrease as demands exceed abilities.*

### **Supplementary Fit**

Supplementary fit refers to the similarity between characteristics of people and other individuals in their social environment. It is most commonly represented by studies of value congruence (VC) between individuals and their organizations (i.e. person-organization fit) (Chatman, 1989). While past research has uncovered significant relationships between VC and job attitudes, such research was based in settings where individuals usually had expectations of continued employment and full-time work occupied a majority of people’s lives (Kristof-Brown, et al., 2005). In the absence of such conditions, VC may not be so influential on the attitudes of nonstandard workers. The benefits of VC like improved communication and trust would seem less important when people know that they would only be with the organization for a limited period. Furthermore, the impact of VC on interpersonal attraction would also be less important for individuals working on reduced schedules because they would not be spending much of their time in their organizational setting (Edwards & Cable, 2009; Evans, Kunda & Barley, 2004).

*Hypothesis 5: The relationship between value congruence and work attitudes will be weaker compared to that of NS and DA fit.*

## **METHOD**

### **Context and Sample**

This study was conducted in Singapore, a developed country with a market-based economy. During the time of this survey (June to Dec 2009), the total resident labor force approximated 2 million, while unemployment rate stood at 4.5% (Manpower Research and Statistics Department (i.e. MRSD), 2009). At the same time, the Singapore economy had just recovered from a brief (less than a year) recession

perpetuated by the global financial crisis of 2008, and was experiencing a period of vigorous economic revival (Monetary Authority of Singapore, 2010).

An online survey was conducted to test the above hypotheses. Participants were recruited through advertisements. Survey advertisements containing links to the online survey were posted around the university campus and online bulletin boards calling for participants who were currently engaged in work on a *non-permanent* basis. The term “non-permanent” was used because this study targeted individuals in work arrangements without the shared expectation of continued employment. This term is usually used to refer to such nonstandard work in Singapore. Participants were offered \$5 for completing a survey. Number of survey responses totaled 189. Respondents were asked to provide the name of their organization and a brief description of the nature of their job. As some of the hypotheses involve supplementary fit between individuals and organizations, survey responses were screened to ensure that respondents were working in a job within an organization. This process resulted in the removal of one response from a worker who was self-employed (Evans et al., 2004), leaving us with a final sample size of 188.

There was a large variety of jobs in the sample including service-oriented jobs (e.g. waiting tables, serving store customers), sales jobs (e.g. telemarketers, in-store sales), and administrative jobs (e.g. receptionist, secretarial, accounts management). Job descriptions and the reported number of hours worked in a week confirmed that the type of nonstandard work arrangements were predominantly contract-based (i.e. temporary) and part-time. Temporary or contract workers are those who are on a fixed-term contract of employment that will terminate upon expiry. Part-timers in Singapore are those who work less than 35 hours a week. This is a popular arrangement for businesses in Singapore to manage their workforce requirements because part-timers’ employment can be started and terminated at relatively short notice and with little or any financial cost. The fluidity of such employment relationships gives rise to limited expectations of continued employment. Consequently, it is no surprise that workers under these arrangements refer to their work arrangements as temporary and non-permanent (Kalleberg, 2000; MRSD, 2009). Therefore, the individuals in the current sample did not have expectations of continued employment with their current employers.

The current sample consisted of 130 males (69.9%) and tenure averaged almost 9 months (s.d. = 10.2). 167 (89.8%) respondents also indicated were part-timers and worked less than 35 hours a week (Mean = 15.9; s.d. = 11.8). To account for the effects that hours worked, tenure, and gender could have on the hypothesized relationships, these variables were treated as control variables in the present analyses.

In line with previous research on nonstandard workers, analysis also controlled for the effects of choice. The amount of choice that people had in determining their nonstandard status significantly influences how these workers respond to their jobs environments (Ashford et al., 2007). For instance, Van Dyne and Ang (1998) argue that the “voluntariness” of contingent workers’ status was responsible for hypothesized differences in attitudes and behavior among such workers in Singapore and the United States (cf. Feldman et al., 1994). While previous research has identified multiple reasons that could be responsible for choosing nonstandard work (Maynard et al., 2006), two were chosen due to the expected nature of the current sample. First, although advertisements were directed toward nonstandard workers of all backgrounds, they were still especially likely to be seen by people who had access to them on the university campus and student-based bulletin boards. Thus, the effects of student status was controlled for by asking respondents how much “Going to school” played a role in their decision to work in a nonstandard job (Mean = 4.76; s.d. = 2.09). Next, as the Singapore economy was still in the process of recovery from a recession, full-time or permanent jobs were still very much in demand (Monetary Authority of Singapore, 2010). Thus, it was also important to take into account the degree to which individuals would have chosen a full-time position over their nonstandard work if such opportunities available (Ellingson et al., 1998). Hence, the “Lack of full-time jobs” as a reason for nonstandard work also served as a control variable in the analysis (Mean = 2.32; s.d. = 1.77). Answers to both these questions were assessed using a 7-point scale (i.e. “1” = “No role” and “7” = “Major role”).

## Measures

The Work Values Survey (WVS) was used to operationalize the *relationships* and *autonomy* dimensions of needs-supplies (NS) fit and value congruence (VC). *Relationships* (e.g. “Developing close ties with coworkers”) and *autonomy* (“Doing my work in my own way”) were each represented by three items. This measure is suitable because it draws from a widely-recognized theory of individual needs and values (Schwartz, 1992), and it also allows person and environment constructs to be operationalized commensurately in the study of NS fit and VC (Cable & Edwards, 2004; Edwards & Cable, 2009). In line with previous research for NS fit and personal needs, respondents were asked “How much is the right amount for you?” for each item using the scale from 1 (none) to 7 (a very great amount). Using the same scale, organizational supplies were measured by asking with regards to the same items “how much are present in your work?” As with previous research in values congruence, individual values were measured by asking respondents to rate how important each item was to them using the scale from 1 (not important at all) to 7 (extremely important). Correspondingly, organizational values were measured by asking respondents to rate how important each item was to their work organization using the same scale.

A different approach was required when it came to demands-abilities (DA) fit because of the huge amount of variance that was expected in the nature of jobs of respondents. As responsibilities across participant jobs were expected to range widely from menial (e.g. maintaining workplace cleanliness and waiting tables) to interactive (e.g. telemarketing, in-store sales) and intellectual (e.g. data entry and analysis), it was impossible to determine a fixed set of dimensions to assess with regards to job demands. Hence, respondents were asked to focus on the overall skill requirements of each job by rating the overall level of skill required to perform their job. Ergo, job abilities were assessed by asking respondents to rate their possessed level of skill when it comes to performing their job. Both demands and abilities were rated using a 7-point scale ranging from 1 (low) to 7 (high) (Edwards, 1996). Job satisfaction was assessed using Edwards & Rothbard’s (1999) 3-item scale and affective organizational commitment was measured using Allen and Meyer’s (1990) 8-item measure. All measures demonstrated good reliability (see Table 1).

## Analyses

Polynomial regression modeling and response surface methodology were used to test hypotheses. Investigating PE fit effects involving VC, NS, and DA fit requires representing these concepts in terms of the relationship between two types of variables modeling the person and the environment. For instance, estimating VC effects requires analyzing nonlinear and interactive terms consisting of individual and organizational values. Past research uses the following polynomial regression model to estimate such PE fit effects (Edwards, 1994; Edwards & Parry, 1993):

$$Z = b_0 + b_1X + b_2Y + b_3X^2 + b_4XY + b_5Y^2 \quad (1)$$

$Z$  denotes either organizational commitment or job satisfaction as outcome variables. In the case of value congruence,  $X$  and  $Y$  represent organizational and individual values respectively, whereas for NS fit  $X$  and  $Y$  represent organizational supplies and psychological needs respectively. Lastly, in the case of DA fit,  $X$  and  $Y$  denote job skill requirements and individual skills respectively. Response surface methodology is appropriate for the current study because it facilitates the analysis of whether the dependent variable increases or decreases when the environment variable ( $X$ ) in equation 1 approaches and exceeds the person variable ( $Y$ ) (Cha, Kim & Kim, 2009). This is done through the testing of linear combinations of regression coefficients (currently done using SAS v9.2) from equation 1 and the plotting of these findings along a three-dimensional surface (Edwards, 1994; Edwards & Rothbard, 1999)<sup>2</sup>. All PE fit measures were scale-centered for ease of interpretation and illustration using response surfaces.

## Results

**TABLE 1**  
**DESCRIPTIVE STATISTICS, RELIABILITY ESTIMATES, AND CORRELATIONS**

Measure	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
Personal Needs														
1. Relationships	5.20	1.16	(.94)											
2. Autonomy	4.93	1.07	.29	(.83)										
Organizational Supplies														
3. Relationships	4.52	1.45	.57	.14	(.94)									
4. Autonomy	4.33	1.33	.10	.42	.31	(.87)								
Individual Values														
5. Relationships	5.26	1.22	.64	.18	.46	.15	(.96)							
6. Autonomy	5.07	1.09	.15	.51	.15	.43	.21	(.91)						
Organizational Values														
7. Relationships	4.88	1.41	.43	.14	.50	.18	.45	.19	(.96)					
8. Autonomy	4.41	1.38	.25	.33	.27	.43	.32	.44	.48	(.93)				
Job Demands & Abilities														
9. Demands	4.29	1.46	.19	.26	.17	.23	.25	.24	.29	.27				
10. Abilities	4.93	1.23	.20	.32	.17	.22	.08	.18	.20	.23	.44			
Dependent Variables														
11. Org Commitment	3.96	0.90	.26	.01	.45	.26	.27	-.01	.40	.16	.28	.16	(.74)	
12. Job Satisfaction	4.59	1.35	.32	.07	.31	.15	.38	-.01	.42	.22	.27	.22	.65	(.95)

*Note.* Reliability estimates (Cronbach's alpha) are reported along the diagonal. Correlations larger than .14 are significant at the  $p < .05$  level; Correlations larger than .18 are significant at the  $p < .01$  level

Correlations, descriptive statistics, and reliability estimates for all measures are reported in Table 1. Hypotheses 1 to 4 would be supported if there was a negative (downward) curvature along the  $Y=-X$  line (i.e. a negative value for  $b_3 - b_4 + b_5$ ) for the particular response surfaces (Edwards, 1994; Edwards & Parry, 1993). Figures in Table 2B show the results of the testing of this linear combination of regression coefficients. This relationship was supported for the effect of *relationships* on commitment ( $p < .05$ ), while there was no effect for job satisfaction (second column from the right in Table 2). Figure 2, illustrates the surface linking NS fit for the *relationships* dimension and commitment, where the downward curvature (inverted-U) along the  $Y=-X$  line is evident running from the left to right of the three-dimensional plane. Both commitment and satisfaction were higher when supplies and needs were high, as evidenced by a positive slope along the  $Y=X$  line for the particular response surface (i.e. a positive value for  $b_1 + b_2$  displayed in the 5<sup>th</sup> column from the right in Table 2). This result is similar to findings of research conducted in standard work contexts (Cable & Edwards, 2004).



**TABLE 2A**  
**RESULTS FROM POLYNOMIAL REGRESSION MODELS ON COMPONENTS OF NEEDS-SUPPLIES, DEMANDS-ABILITIES, AND SUPPLEMENTARY FIT**

Dimension	DV	n	Constant b <sub>0</sub>	X b <sub>1</sub>	Y b <sub>2</sub>	X <sup>2</sup> b <sub>3</sub>	X*Y b <sub>4</sub>	Y <sup>2</sup> b <sub>5</sub>	R <sup>2</sup>
Needs-Supplies Fit									
Relationships	OC	188	3.490**	0.138	0.105	-0.023	0.109*	-0.056	0.251**
Autonomy	OC	188	3.668**	0.190*	0.012	-0.049	0.039	-0.058	0.146**
Relationships	JS	188	3.562**	0.094	0.316*	0.110*	0.013	-0.055	0.23**
Autonomy	JS	188	4.069**	0.097	0.162	-0.056	0.073	-0.079	0.11*
Demands-Abilities Fit									
	OC	188	3.728**	0.027	0.178*	-0.056*	0.089*	-0.073	0.163**
	JS	188	4.279**	-0.102	0.494**	-0.096*	0.206**	-0.175**	0.243**
Supplementary Fit									
Relationships	OC	188	3.531**	0.180**	0.144*	-0.007	0.042	-0.065*	0.221**
Autonomy	OC	188	3.836**	0.046	0.052	-0.080*	0.102	-0.070	0.128**
Relationships	JS	188	3.763**	0.191*	0.234*	0.022	0.071	-0.045	0.272**
Autonomy	JS	188	4.411**	0.217	-0.034	-0.058	0.061	-0.076	0.146**

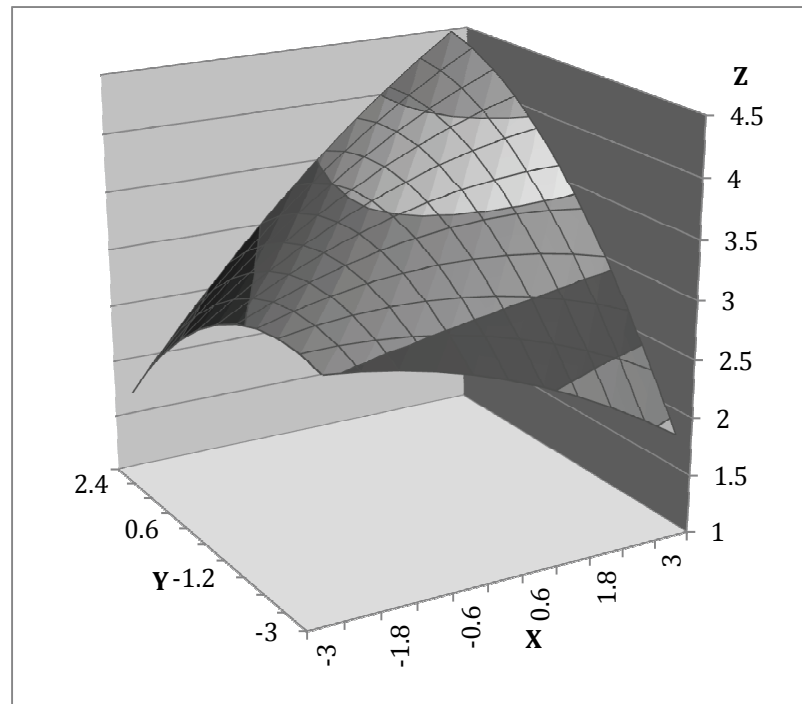
*Note.* The column labeled R<sup>2</sup> indicates the variance explained by the five fit-based terms, controlling for work hours, expectations for continued employment, gender, tenure, and reasons for nonstandard work (i.e. going to school, and the lack of full-time jobs). OC represents organizational commitment. JS represents job satisfaction. \* *p* , .05. \*\* *p* , .01.

**TABLE 2B**  
**RESULTS FROM TESTS OF LINEAR CONTRASTS INVOLVING REGRESSION COEFFICIENTS**

Dimension	DV	n	Y=X line		Y=-X line	
			b <sub>1</sub> +b <sub>2</sub>	b <sub>3</sub> +b <sub>4</sub> +b <sub>5</sub>	b <sub>1</sub> -b <sub>2</sub>	b <sub>3</sub> -b <sub>4</sub> +b <sub>5</sub>
Needs-Supplies Fit						
Relationships	OC	188	0.243**	0.030	0.033	-0.188*
Autonomy	OC	188	0.202	-0.068	0.178	-0.146
Relationships	JS	188	0.410**	0.068	-0.222	0.042
Autonomy	JS	188	0.259	-0.062	-0.065	-0.208
Demands-Abilities Fit						
	OC	188	0.205**	-0.040	-0.151	-0.218**
	JS	188	0.392**	-0.065	-0.596**	-0.477**
Supplementary Fit						
Relationships	OC	188	0.324**	-0.030	0.036	-0.114
Autonomy	OC	188	0.098	-0.048	-0.006	-0.252*
Relationships	JS	188	0.425**	0.048	-0.043	-0.094
Autonomy	JS	188	0.183	-0.073	0.251	-0.195

*Note.* Columns labeled b<sub>1</sub> + b<sub>2</sub> and b<sub>3</sub> + b<sub>4</sub> + b<sub>5</sub> represent the slope of each surface along the Y = X line, and columns labeled b<sub>1</sub> - b<sub>2</sub> and b<sub>3</sub> - b<sub>4</sub> + b<sub>5</sub> represent the slope of each surface along the Y = -X line. OC represents organizational commitment. JS represents job satisfaction. \* *p* , .05. \*\* *p* , .01.

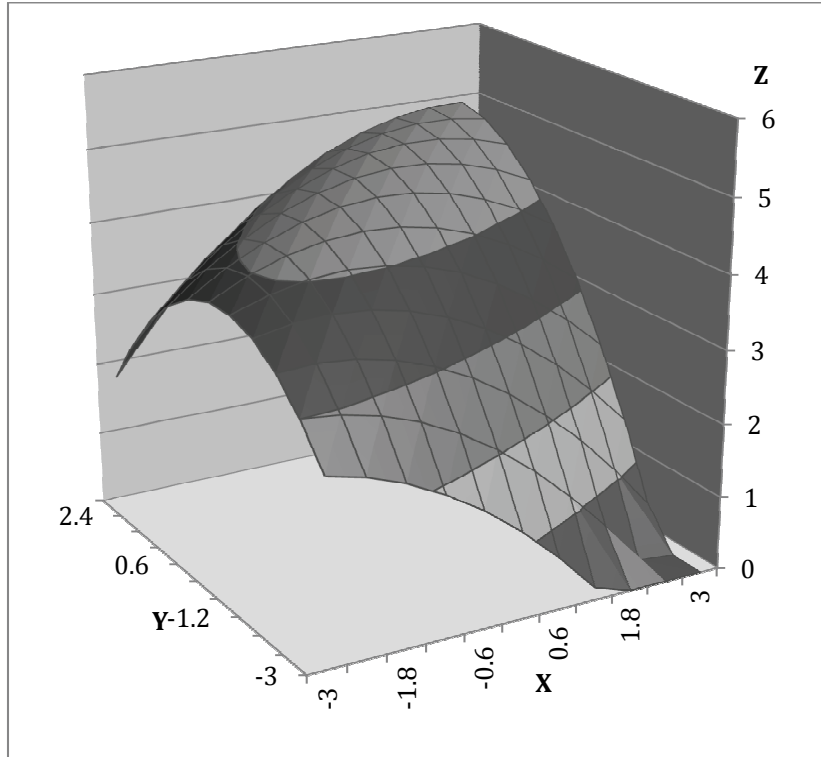
**FIGURE 2**  
**SURFACE LINKING NEEDS-SUPPLIES FIT FOR THE *RELATIONSHIPS* DIMENSION AND ORGANIZATIONAL COMMITMENT**



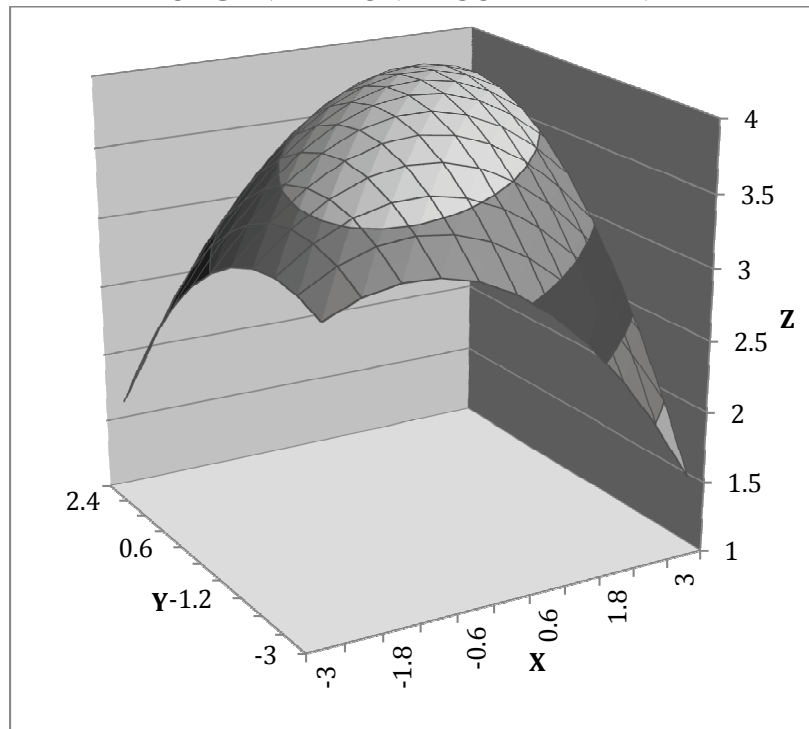
Results also suggest strong support for hypotheses 3 and 4 where there were significant downward curvatures along the  $Y=-X$  line ( $p < .01$ ). There was also a negative slope along the  $Y=-X$  line for job satisfaction ( $p < .01$ ), which suggests that satisfaction was maximized when demands was *less* than abilities (see Figure 3). Furthermore, positive slopes along the  $Y=X$  line ( $p < .01$ ) also indicate that commitment and satisfaction were highest when individuals had *high* abilities that were met with challenging jobs. Significant results for supplementary fit were only found for the relationship involving *autonomy* ( $p < .05$ ) where commitment was maximized when fit existed between individual and organizational values for *autonomy* (Figure 4).

To assess the relative importance of all types of fit (hypothesis 5), additional analyses were run to see which relationships prevailed after controlling for other types of fit. Thus, separate analyses were run using equations that contained NS fit, DA fit, and VC for both dimensions of *relationships* and *autonomy*. Only H3 and H4 received support, supporting H5 and the preeminence of DA fit over VC and NS fit. There was significant downward curvature for DA fit ( $p < .05$ ) indicating the presence of a fit effect where commitment was maximized when individual skills matched job demands. As evidenced by a positive slope along the  $Y=X$  line, commitment was also higher when individuals with higher levels of skills were able to meet higher job demands ( $p < .05$ ). Figure 5 illustrates this relationship for the *autonomy* dimension. Similar relationships were observed for job satisfaction, where only significant DA fit relationships were detected. There was also significant downward curvature for DA fit ( $p < .01$ ) accompanied by a negative slope ( $p < .01$ ) along the  $Y=-X$  line. The latter finding indicates that whereas satisfaction increased as job demands increased toward abilities, satisfaction peaked when demands were still *less* than abilities (Figure 6). Positive slopes along the  $Y=-X$  line also indicate that satisfaction was higher when individuals with more skills were able to meet higher job demands for both *relationships* ( $p < .01$ ) and *autonomy* ( $p < .05$ )<sup>3</sup>. Hence, nonstandard workers were most satisfied when their abilities slightly exceeded the demands of their jobs.

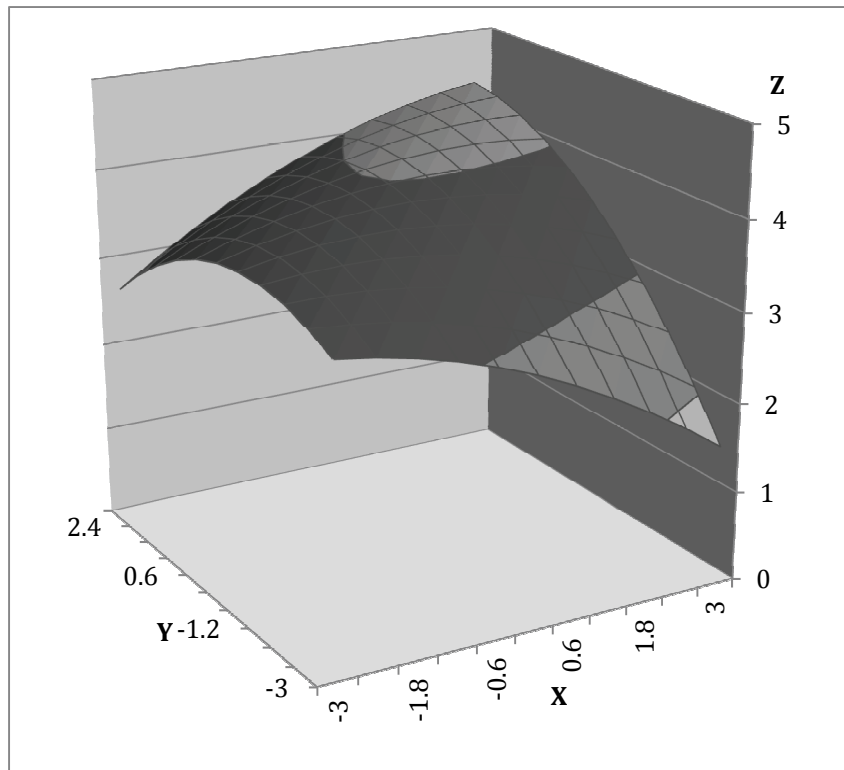
**FIGURE 3**  
**SURFACE LINKING DEMANDS ABILITIES FIT AND JOB SATISFACTION**



**FIGURE 4**  
**SURFACE LINKING SUPPLEMENTARY FIT FOR THE *AUTONOMY* DIMENSION AND ORGANIZATIONAL COMMITMENT**



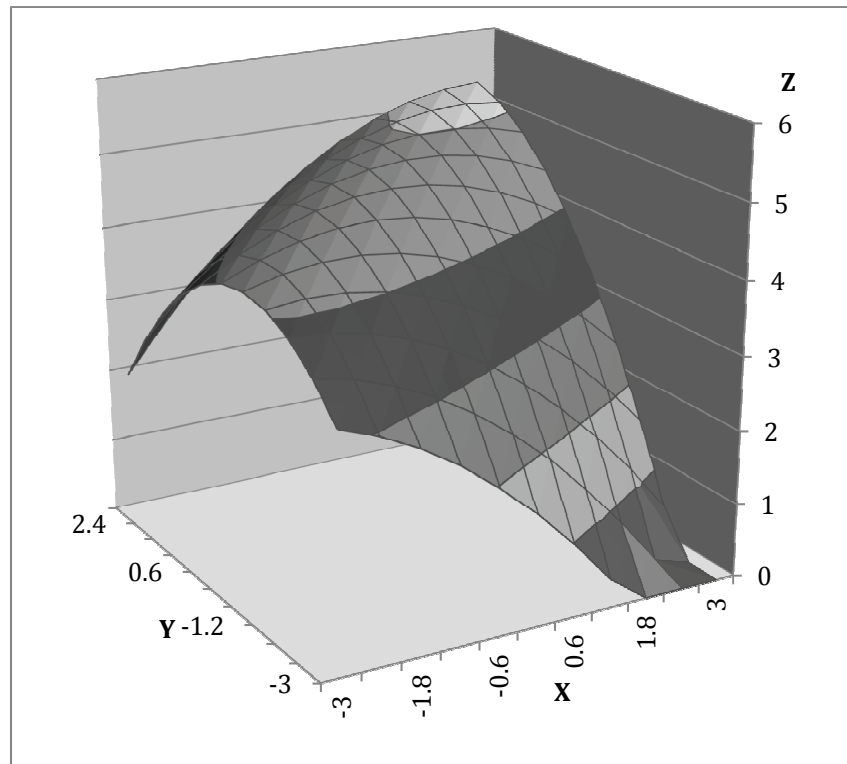
**FIGURE 5**  
**SURFACE LINKING DA FIT AND ORGANIZATIONAL COMMITMENT CONTROLLING**  
**FOR NS FIT AND SUPPLEMENTARY FIT ON *AUTONOMY***



## DISCUSSION

While past research has identified both individual and environmental factors as important determinants of the nonstandard work experience, the importance of PE fit theory has yet to be explored in such a context. Results from this study attest to the utility of using PE fit as a unifying framework to see how *both* individual and environment are related to the attitudes experienced by nonstandard workers. The additional insight gained from explicitly considering different types of PE fit and its multidimensional nature is also demonstrated (Jansen & Kristof-Brown, 2006). Findings from this study suggest that assigning challenging jobs that suit the abilities of individuals who had limited expectations for continued employment helps develop a sense of commitment toward the employer. Nonstandard employees are also more satisfied with their jobs when they have excess ability take on a reasonably challenging job in a comfortable manner. Satisfying needs for *relationships* induced feelings to reciprocate employers with increased commitment, but it did not make these individuals more satisfied with their jobs. Lastly, VC was not important to the experience of commitment and satisfaction.

**FIGURE 6**  
**SURFACE LINKING DA FIT AND JOB SATISFACTION CONTROLLING FOR NS FIT AND SUPPLEMENTARY FIT ON *AUTONOMY***



### **Implications**

The current findings suggest that research on nonstandard work should focus more on investigating how relationships between individuals and their environments are associated with the experience of such work arrangements. While past research has yielded some interesting findings through the comparison of standard and nonstandard workers, their findings do not provide much information about exactly which characteristics of individuals or their work environments are directly related to the experience of positive attitudes (Eberhardt & Shani, 1984; Lee & Johnson, 1991). In this respect, using PE fit to study nonstandard workers provides organizations and their decision makers with more specific recommendations for the better management of these employees as opposed to relying on prescriptive assumptions about the impact of employment status (Jackofsky & Peters, 1987; McGinnis & Morrow, 1990; Parker et al., 2002).

It is thus very important for organizations to understand the abilities and skills of nonstandard workers and assign them jobs where they can fully utilize their talents. Instituting too much job demands can also be detrimental because nonstandard workers are also prone to role overload resulting in lower commitment and satisfaction. The current findings also allow us to refine our understanding of how PE fit operates across different types of work arrangements. For instance, present findings are somewhat at odds with Cable and Edwards' (2004) findings that both VC and NS fit had unique direct effects on work attitudes. Instead, VC was not essential to the nonstandard work experience in the present study. Value-based similarity with co-workers and employers becomes less salient in the absence of shared expectations for continued employment, possibly due to the limited importance of long-term working relationships.

Likewise, findings also conflict with Edwards and Rothbard's (1999) results that satisfaction improves when employers supplied their employees with excess *relationships* and *autonomy*, which likely occurred because excess amounts of these supplies acted as resources to gain access to other supplies that fulfilled needs on other work dimensions (i.e. a carryover effect) (p. 92). In contrast, no such carryover effects were observed in the current sample of nonstandard workers who largely became less committed and satisfied once supplies exceeded personal needs. This relationship may be again attributed to the general lack of a definite expectation for future employment among current nonstandard employees, where carryover effects are less meaningful when there is uncertainty about future opportunities to use such excess supplies. Therefore, a promising area for expansion in PE fit theory is the more explicit consideration of temporal expectations regarding the sustainability of employer-employee relationships, and how these expectations influence the saliency of different types of fit (e.g. NS, DA, and VC) (Shipp & Jansen, 2011).

### **Limitations and Future Research**

The present cross-sectional design does not facilitate the inference of causal mechanisms linking fit to work attitudes. Thus, care was taken to ensure that the above interpretations of the results highlighted the *associative* relationships between PE fit and attitudes. However, the results still provide vital information of the cognitive appraisal process underlying how PE fit is associated with work attitudes among nonstandard workers. Hence, one can still say that job design and DA fit is a crucial component to the experience of work attitudes because of the variance in outcomes explained and the nature of the response surfaces linking the two variables. Moreover, a significant amount of recent research that has made important contributions to PE fit research has also been based on cross-sectional designs (Cable & Edwards, 2004; Edwards & Rothbard, 1999; Edwards & Cable, 2009). Still there is no doubt that future research employing longitudinal designs can help disentangle the causal flow between fit and attitudes in the context of nonstandard work (Ashford et al., 2007; Yu, 2009).

The current results were also purely based on individual subjective perceptions of PE fit and its components. Based on the widely-held assumption that subjective experiences of PE fit are the most proximal indicators of fit and its relationship with attitudes (Kristof, 1996; Kristof et al., 2005), this approach was appropriate for the current study because it focused on the psychological experiences of nonstandard workers (Edwards & Cable, 2009). Other PE fit research has however investigated fit by obtaining third-party ratings of organizational supplies, values, and job demands (e.g. O'Reilly, Chatman & Caldwell, 1991), which are assumed to represent objective representations of the environment. Both these approaches have their merits and future research should be conducted to investigate if they reveal different relationships linking PE fit to attitudes (Kristof-Brown & Guay, 2011).

Finally, the current sample also presents some limitations regarding the generalizability of the findings. As noted earlier, the sample was made up of predominantly contract and part-time workers. As such, findings may not generalize as much to other types of non-standard workers like "boundaryless" professionals (Evans et al., 2004; Inkson, Heising & Rousseau, 2001) and telecommuters (Golden & Veiga, 2005), who arguably engage in nonstandard work for different reasons. In addition to investigating how the employment expectations and physical attachment of these other types of nonstandard employees impact their experience of PE fit, future research should also explore how the amount of administrative attachment that employers or agencies have over nonstandard employees impacts PE fit relationships. It could be that NS fit would be less related to organizational commitment for employees who are largely under the administrative control of temporary work agencies because a larger proportion of supplies may now be derived from the agency instead (George & Chattopadhyay, 2005).

### **CONCLUSION**

The growing incidence of nonstandard work in today's organizations makes it imperative that we develop a better understanding of the work experiences of nonstandard employees. The current study demonstrates that the PE fit framework adds valuable insight to the psychological experience of such

employees. Future research is needed to realize the potential of nonstandard work as a fertile context for improving the explanatory power and precision of PE fit theory.

## ENDNOTES

1. Selecting these dimensions does not deny the existence of other potentially applicable aspects of nonstandard work, instead focusing on two dimensions ensures that the current investigation covers a manageable set of dimensions that are relevant enough to develop a good initial understanding of the role of PE fit in nonstandard work (cf. Cable & Edwards, 2004; Edwards & Rothbard, 1999).
2. Please see Edwards and Parry (1993) and Edwards (2002) for details of the testing of these linear combinations and complete discussions of response surface methodology.
3. Detailed results from these supplemental analyses may be obtained from the first author upon request.

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