

The Joint Effect Of Task Characteristics And Organizational Context On Job Performance: A Test Using SEM

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ABSTRACT

Prior research document significant relationships between task characteristics and employee affective outcomes. However, there have been difficulties with implementing the findings of this task characteristics research in real life due to the absence of organizational context variables in these studies. The argument has been made that effective job design should emphasize task design (task characteristics) that is in congruence with surrounding organizational context and subsystems. The current study proposes an integrated task context model and then tests a subset of the model using organizational inflexibility and perceived environmental uncertainty to proxy for organizational context. The results of structural equation modeling confirm the existence of a joint effect of task characteristics and perceived environmental uncertainty on job performance among public accountants.

INTRODUCTION

Prior research finds task characteristics to be significantly related to employee affective outcomes such as job motivation and job satisfaction (Hackman and Lawler, 1971; Hackman, Oldham, & Pearce, 1976; Campion & McClelland, 1991). It is generally expected that employees that are satisfied with their jobs and are motivated and committed to the organization will do better on the job (Mitchell, Holtom, and Lee, 2001). However, problems have been reported with the implementation of the findings of these studies. Oldham and Hackman (1980) noted that a major problem with research studies on redesigned work is that they do not take into consideration surrounding organizational context as there are few studies that have examined tasks in organizational contexts and include the moderator effects specified in the job characteristics model (Roberts and Glick, 1981; Price and Mueller, 1981). Given the ever changing and more diverse work environment (Holman, Clegg, and Waterson 2002), it is important to study and understand organizational practices and sub-systems that most strongly compromise the implementation of work redesign (Oldham and Hackman, 1980). Effective job redesign should emphasize job characteristics that are congruent with other organizational systems and practices. If there are differences in the organizational context of accounting firms, do these differences interact with task characteristics to influence the job performance of employees? The current study extends prior research by examining the joint impact of task characteristics and organizational context variables (organizational inflexibility and perceived environmental uncertainty) on job performance among professional accountants in public practice.

BACKGROUND

This study combines findings on task design from the organizational behavior literature with research findings on organizational context from organizational theory to develop an integrated task characteristics/organizational context model. Accounting firm employees are used as the unit of analysis to examine the joint impact of organizational context variables (organizational inflexibility and perceived environmental

variables) and task characteristics on job performance. Support for the model will provide insights on the importance of the joint effect of organizational context and task characteristics to job performance.

Task Characteristics

The task characteristic approach to evaluating task design focuses on the characteristics of jobs that make a job interesting, and thus more motivating. This line of research focuses on five core dimensions of motivating work: task variety, task identity, task significance, task autonomy, and feedback (Hackman and Oldham, 1976). *Task variety* measures the degree to which a job requires a variety of different activities. A job high in variety will require the use of a number of different skills and talents of the person. According to activation theory, the use of different skills and talents helps sustain human productivity over extended periods of time (Scott, 1966). *Task identity* measures the degree to which a job requires the completion of an identifiable piece of work. This would involve doing a job from beginning to end with a visible outcome. Task identity is important for workers to find their work meaningful. Employees must feel that the work they perform is their own, and must feel personally responsible for whatever successes and failures occur as a result of the work. *Task significance* is the degree to which a job has substantial impact on the lives of other people either in the immediate organization or external environment. Employees may find it difficult to work effectively if they feel that the results of their efforts are not important. *Autonomy* measures the degree of freedom, independence, and discretion that the individual has in scheduling the work and in determining the procedures to be used in carrying out the work. When a job is high in autonomy, workers have more responsibility for the outcome of the job than for jobs low in autonomy. Jobs high in autonomy also offer more flexibility to employees in the performance of their tasks which offers great potential for productivity when the unforeseen occurs or when a bottleneck develops in the task process (Schultz, McCain and Joseph, 2003). *Feedback* is the measure of the degree to which performing the work activities results in the job incumbents obtaining direct and clear information about the effectiveness of their performance. By providing information on task performance, feedback can increase knowledge acquisition for complex tasks (Mascha 2001).

Organizational Context

The task characteristics model ignores the impact of organizational context on the job (Roberts and Glick, 1981; Price and Mueller, 1981; Holman, Clegg, and Waterson 2002). Organizational context is both internal and external to the firm: *Perception of environmental uncertainty* is used to proxy for context external to the firm and *organizational inflexibility* is used to proxy for context internal to the firm. There is general agreement that organizational structure impacts the effectiveness of firms (Robbins, 1990; Folami 1999). The configuration of people and jobs, the definition of roles, and the nature of relationships that exist in an organization are important determinants of organizational survival (Robbins, 1990). A management team that understands its structural options and the conditions under which each is preferred has a competitive advantage over their less informed counterparts. This study extends the task characteristics model by including organizational inflexibility and perception of environmental uncertainty as proxies for organizational context.

Organizational Inflexibility

Organizational inflexibility is a measure of the amount of discretion that's available to employees with regards to the application of rules and procedures. It is both a constraint on employee behavior and the exercise of professional judgment. Highly inflexible organizations are described as "rigid and unbending" with regards to rules and procedures (Kerr and Jermier 1978). In the public accounting environment, inflexible firms are those that place more emphasis on the use of formalized procedures over the exercise of professional judgment.

Perception of Environmental Uncertainty

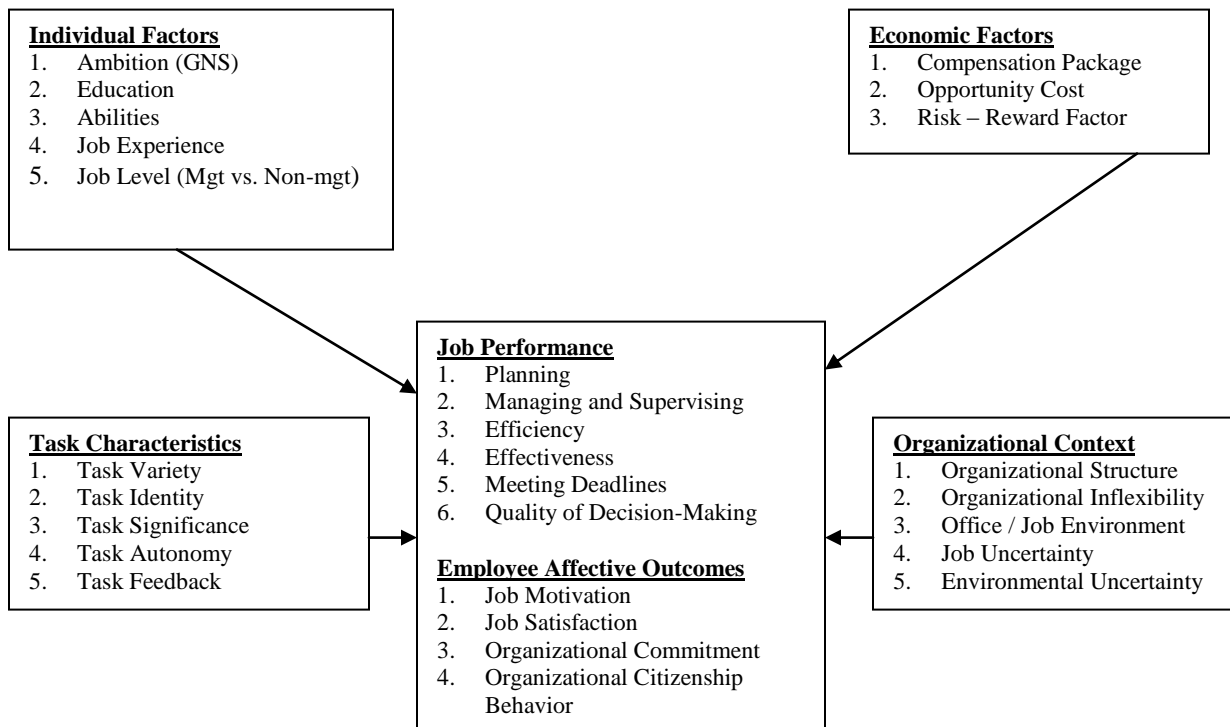
Perceptions of environmental uncertainty (PEU) refers to a "state when an individual engages in directed behaviors based upon less than complete knowledge of his relationship with the environment" (Rebele and Michaels, 1990). Modern organization theory views the organization as an open system, and thus subject to external influences (Robbins 1990). To achieve its goals, organizations structure themselves and employ operating procedures to cope

with external influences and uncertainties in the external environment. Ferris (1982) documents a significantly positive relationship between reported level of organizational coping and employee performance. This study used questionnaire items based on prior research (Sathe 1974; and Ferris 1982) to measure perceived environmental uncertainty (PEU). Prior research in accounting suggests that accounting firms face a relatively “uncertain and turbulent environment “(Watson 1975; Baker 1977). By focusing on accountants in public accounting only, the sample used for this study avoids the confounding effects of multi-industry variation in the perception of environmental uncertainty.

HYPOTHESIS & MODEL DEVELOPMENT

Prior research has demonstrated the positive effect of task characteristics on employee affective outcomes such as job motivation, job satisfaction (Hackman and Lawler, 1971; Hackman, Oldham, & Pearce, 1976), and job performance (Folami, 1999). The findings of these studies have been criticized because they ignore surrounding job context variables and their possible impact on the dependent variables. These criticisms may be legitimate given that there are several factors other than task characteristics that affect job performance. In Figure 1 below, we propose an integrated job context model which includes several of these omitted variables.

Figure 1: Integrated Job Context Model



As shown in Figure 1 above, factors other than task characteristics that may impact performance include individual, economic, and organizational context variables. Individual factors that may affect performance include ambition, education, ability, professional experience, and occupational level. Employees that are ambitious and are highly motivated are more likely to do better on the job. Employee growth need strength (GNS) has been used to proxy for ambition and individual differences between employees. Prior research provides support for GNS as

mediating the relationship between job characteristics and affective outcomes (Hackman & Lawler, 1971; Hackman & Oldham, 1976; Hackman, Oldham, and Pearce, 1976). Individual differences are used in the task characteristic model to capture how employee motivation can be enhanced through the design of jobs. According to theory, workers who desire higher order need satisfactions are more likely to obtain satisfaction when they work on jobs that are meaningful and that provide feedback on the adequacy of their personal work activities (Hackman & Lawler, 1971). In this study, GNS is used to proxy and control for ambition and individual differences between employees.

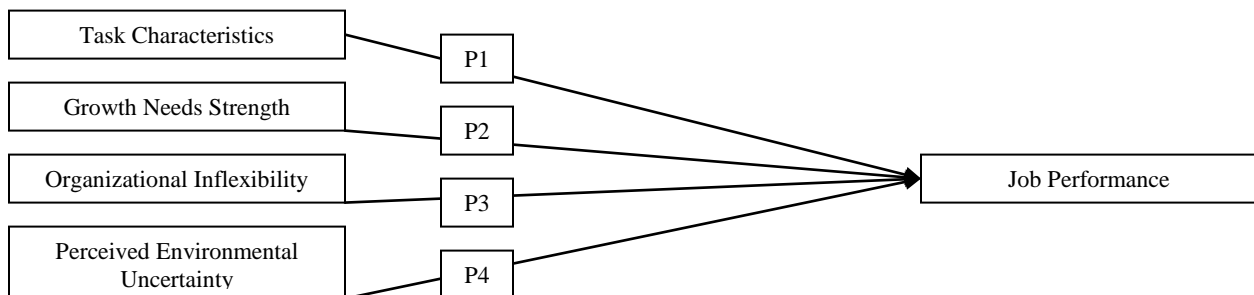
Employees with advance degrees or Certified Public Accountant certificates (CPA) in a public accounting firm may be expected to do a better job than their counter parts that do not have an advance degree or a CPA. Professionals in public accounting do a variety of different tasks in a variety of industries. As such, the ability for learning can play a critical role in their job performance. Job tenure is another factor that may impact performance. Professionals who have been with a firm longer or those that have more tenure with the accounting profession may be more likely to do a better job than their counterparts with lesser experience.

Economic factors that may impact performance include compensation and opportunity cost. Employees that perceive themselves as being well compensated are more likely to strive to do better on their jobs. Compensation could be a combination of salary, benefits, and opportunities for future advancement. Employees working in public accounting build an intellectual capital base that may translate to better prospects for future employment. Available opportunities for this intellectual capital may affect the motivation of employees on their job. If the opportunity cost for future employment is high, employees will be motivated to do better on the job.

Organizational context factors that affect job performance include organization structure variables (centralization, formalization, complexity, and organizational inflexibility), job environment, job uncertainty, and environmental uncertainty. Folami (1999) documents differences in the organizational structure of the former big five accounting firms. Other research has examined the relationship between perceived environmental uncertainty and organizational structure (Gordon and Narayanan 1984), compensation contract design (Kren and Kerr 1993), employee motivation, performance, and job satisfaction (Gul and Chia 1994; Anderson and Kida 1985; Ferris 1977, 1982). Given the differences in the organizational structure of accounting firms (Folami 1999; Kinney 1986), and the importance of perceived environmental uncertainty to research, the limitation of the job design literature in ignoring job context is a serious one. An important research question is whether the effect and magnitude of task characteristics on employee affective outcomes persist in the presence of organizational context variables. The present study extends prior research by examining the joint impact of task characteristics and organizational context variables on job performance.

Data limitation does not allow us to test the theoretical integrated job context model presented in Figure 1. Thus, in the model presented in Figure 2 below, we test a subset of the integrated job context model introduced in Figure 1.

Figure 2: Task Characteristics Model With Organizational Context Variables



Individual factor is proxy for with growth needs strength. The study used two variables to proxy for organizational context. Internal organizational context is proxy for with organizational inflexibility, external context is proxy for with perceived environmental uncertainty, and task characteristics are proxy with task autonomy, task significance, and task feedback. The research question relates to whether there is a joint effect of task characteristics and contextual variables on job performance. Thus, the null hypothesis is:

H₀: There is no joint effect of task characteristics with either organizational inflexibility or perceived environmental uncertainty on job performance.

If the results support the null hypothesis, it would provide justification for prior research that ignores the effect of organization context in the study of job design. However, if the null hypothesis is rejected, future research and human resource professionals should consider the effect of organizational context variables in their design and interpretations of studies on task characteristics.

METHOD

Data: Survey and Descriptive Statistics

The sample is made up of 504 professional employees from the five largest accounting firms at the time of the study and some regional accounting firms in seven states within the United States¹. To measure the variables of interest, questionnaires were mailed to 2,754 professional members of the Big-5 and regional accounting firms in the seven states mentioned above.

The final sample size of 504 is made up of 44 from Arthur Andersen LLP², 80 from Deloitte and Touche LLP, 79 from Ernst and Young LLP, 48 from KPMG Peat Marwick LLP, 72 from PriceWaterhouseCoopers LLP, and 139 from non-big 5 firms. The remaining 42 respondents did not indicate their firm's identity. Of the 462 respondents that indicate their firm's identity, 76% of the sample is made up of subjects that are managers or above (351) and twenty-four percent of the respondents is professional staff (111). Occupational areas represented in the sample were 237 (45%) from Audit, 179 (34%) from Tax, 67 (13%) from consulting, and 40 (8%) from other non-specified areas, for a total of 523. Some of the respondents work in more than one functional area, which explains the difference for the total of 523 for the functional areas versus the 504 for the sample size.

Measurements were taken on perceptions of organizational inflexibility, perceived environmental uncertainty, task characteristics, employee growth needs strength, job satisfaction, job motivation, job performance, and general information such as education, tenure, and income. Table 1 provides descriptive information on education, job tenure, and accounting career tenure.

Table 1: Sample Composition

By Occupational Levels			
Firms	Management	Prof. Staff	Total
Arthur Andersen	32	12	44
Deloitte & Touche	57	23	80
Ernst & Young	60	19	79
KPMG	43	5	48
PWC	51	21	72
Non Big-5 Firms	108	31	139
Total	351	111	462
	76%	24%	100%

¹ The states include Pennsylvania, Montana, New York, California, Florida, Illinois, and Kansas

² The only firm no longer in existence

By Departments					
Firms	Audit	Tax	Consulting	Other	Total
Arthur Andersen	17	18	10	4	49
Deloitte & Touche	44	33	5	3	85
Ernst & Young	43	23	12	6	84
KPMG	27	16	8	3	54
PWC	38	24	7	6	75
Non Big-5 Firms	68	65	25	18	176
Total	237	179	67	40	523
	45%	35%	13%	8%	100%

By States								
Firms	PA	MO	NY	CA	FL	IL	KS	TOTAL
Arthur Andersen	2	4	8	15	1	14	1	45
Deloitte & Touche	4	5	12	44	7	7	1	80
Ernst & Young	2	7	22	25	5	17	1	79
KPMG	1	3	10	21	4	9		48
PWC	3	7	20	25	9	8	1	73
Non Big-5 Firms	6	15	48	54	1	18	1	143
Total	18	41	120	184	27	73	5	468
	4%	9%	26%	39%	6%	16%	1%	100%

Demographic Information	
Average Age – Mean	35
Average Age – Median	34
Average Years With Firm – Mean	9
Average Years With Firm - Median	6
Average Years in Accounting - Mean	12
Average Years in Accounting - Median	10
Single	154
Married	348
Male	318
Female	185
Masters Degree	164
Juris Doctor Degree	24

The average age for the respondents is 35 years, the youngest is 20 years old and the oldest respondent is 74 years old. There are 185 females and 318 males in the sample. 348 respondents are married and 154 are single³. The average tenure with the current employer is 9 years, with a minimum of 1 year and a maximum of 39 years. The average tenure in the accounting profession for the respondents is 12, with a minimum of less than 1 year and a maximum of 40 years.

There are certain characteristics about this sample that strengthens the construct validity of the measures. One may assume that management is more familiar with the organization context of the firm than professional staff. The fact that 76 percent of the sample is from management strengthens the construct validity for the organization context measures. Also, the fact that the average tenure with the firm is approximately nine years may imply an adequate level of knowledge about the firm's organizational context. These two facts taken together increase the construct validity of the measures.

³ Some of the respondents did not provide their marital status or gender, thus the total for this classification does not add up to 504.

Dependent Variable: Job Performance

Job performance is the dependent variable used to examine the existence of a joint effect of task characteristics and organizational context variables. Job performance measure respondents’ work performance on the dimensions of planning, investigating, coordinating, evaluating, supervising, representing, and meeting deadlines. A self reported managerial performance measure (Mahoney, Jerdee and Carroll 1963) that has been well tested was used to measure this construct (Brownell and McInnes 1986; Frucot and Shearon 1991; Schmidt 2002).

Analysis: Correlation and SEM

Correlation analysis was used to evaluate the validity of the measurement variables on the latent constructs. We chose structural equation modeling (SEM) to test for the joint effect of task characteristics and organizational context on job performance because SEM allows the simultaneous tests of all relationships within the model. Structural equation modeling, using AMOS 4.0 was used to examine the simultaneous and joint effects of task characteristics, growth needs strength, organizational inflexibility, and perceived environmental uncertainty on job performance. The use of SEM allows the researcher to control for the correlation effects among exogenous variables.

RESULTS

Correlation Analysis

Correlation analyses were conducted on all the variables in the model to test for multicollinearity. The results indicate that multicollinearity is not a problem with this dataset.

Table 2: Correlation - Latent Variables

		Correlations				
		Task Complexity	Growth Needs Strength	Org. Inflexibility	Environmental Uncertainty	Job Performance
Task Complexity	Pearson Correlation	1.000	.322**	-.081	-.355**	.306**
	Sig. (2-tailed)	.	.000	.071	.000	.000
	N	503	499	502	498	500
Growth Needs Strength	Pearson Correlation	.322**	1.000	-.046	-.288**	.275**
	Sig. (2-tailed)	.000	.	.307	.000	.000
	N	499	499	498	497	497
Org. Inflexibility	Pearson Correlation	-.081	-.046	1.000	.137**	-.136**
	Sig. (2-tailed)	.071	.307	.	.002	.002
	N	502	498	502	497	499
Environmental Uncertainty	Pearson Correlation	-.355**	-.288**	.137**	1.000	-.272**
	Sig. (2-tailed)	.000	.000	.002	.	.000
	N	498	497	497	498	495
Job Performance	Pearson Correlation	.306**	.275**	-.136**	-.272**	1.000
	Sig. (2-tailed)	.000	.000	.002	.000	.
	N	500	497	499	495	500

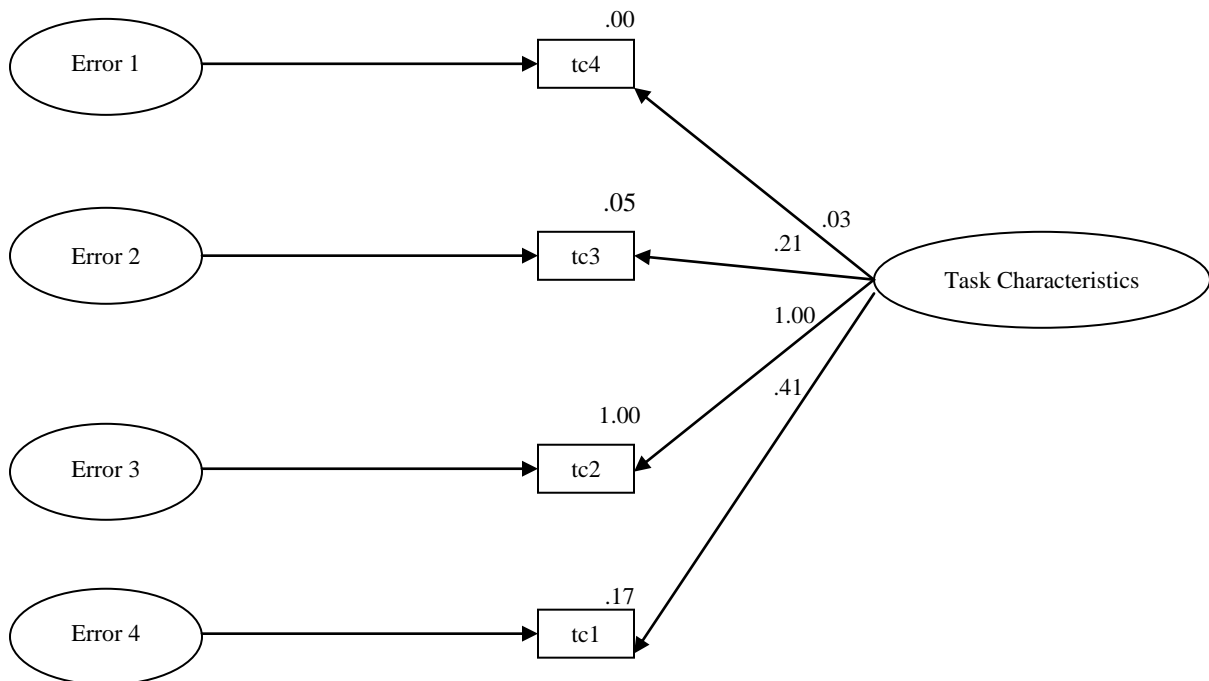
** . Correlation is significant at the 0.01 level (2-tailed).

We also conducted correlation analyses among the observed variables used to measure the latent constructs in the study. Correlations analyses⁴ of the observed variables for task characteristics, organizational inflexibility (OI), perceived environmental uncertainty (PEU), job performance, and employee growth needs strength (GNS), together with information from the measurement models was used to analyze the questionnaire items for validity.

Measurement Models Analysis

The first measurement model is on task characteristics. A review of the model presented in Figure 3 below indicates that observed variables tc3 and tc4 contribute very little to task characteristics⁵. Tc3 and tc4 measure task identity and task feedback, respectively and are represented by question number 3 and 4 under task characteristics in Appendix A. Next, we examine the correlation table for task characteristics to see how well tc3 and tc4 correlate to tc1 and tc2. This analysis indicates that that tc3 and tc4 correlates poorly with tc1 and tc2, suggesting that these observed variables might be measuring a latent construct different from the one being measured by tc1 and tc2. Accordingly, tc3 and tc4 were dropped, and only tc1 and tc2 were used to examine the effects of task characteristics.

Figure 3: Task Characteristics Measurements Model



Similar analyses were performed for employee growth needs strength; organizational inflexibility; and perceived environmental uncertainty.

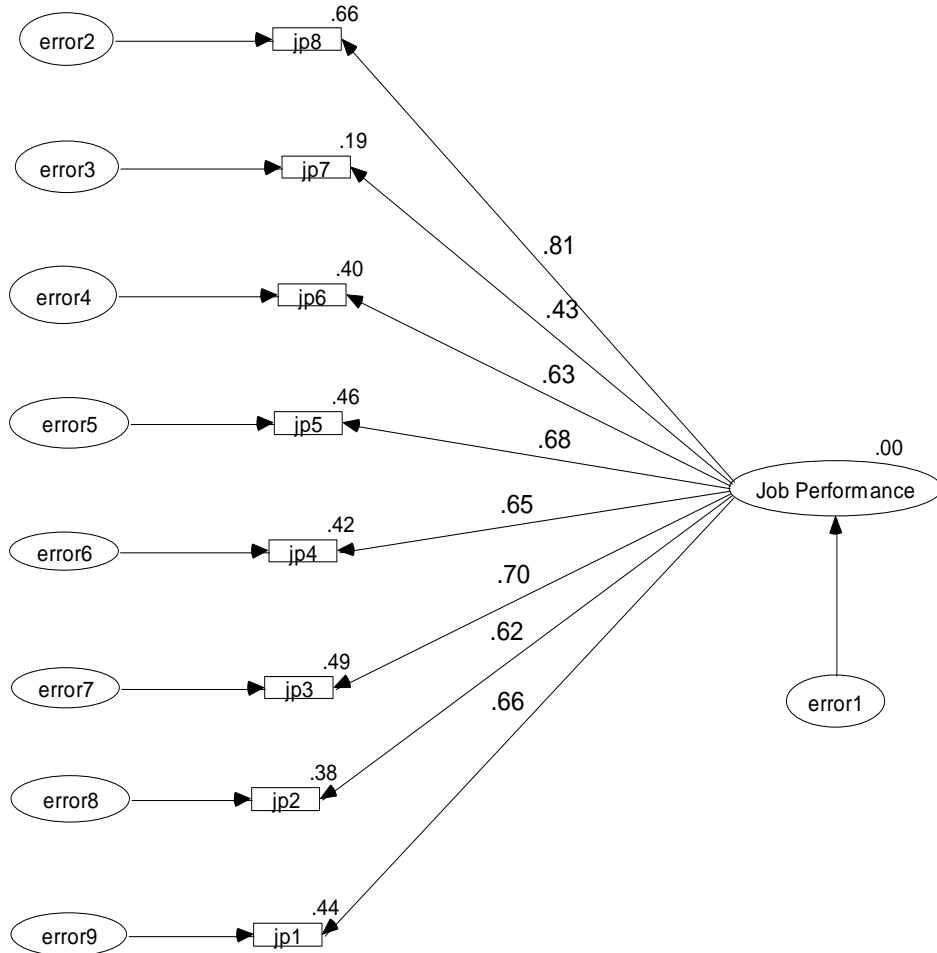
The final measurement model analysis is on job performance. Figure 4 below shows the path diagram for this model. Except for jp7, all of the indicator variables show a strong link between the observed variables and the underlying construct of job performance. Correlation and factor analyses indicate two underlying constructs; Jp1 and jp3 seems to represents a planning dimension of job performance, while jp2, jp4, jp5, and jp6 represent a supervisory

⁴ Results of these correlation analyses are shown Appendix B

⁵ An examination of their t-statistics from AMOS output indicates the t-statistics were not significant.

dimension. These two dimensions were used as separate measures of job performance in the integrated task characteristics/organizational context model.

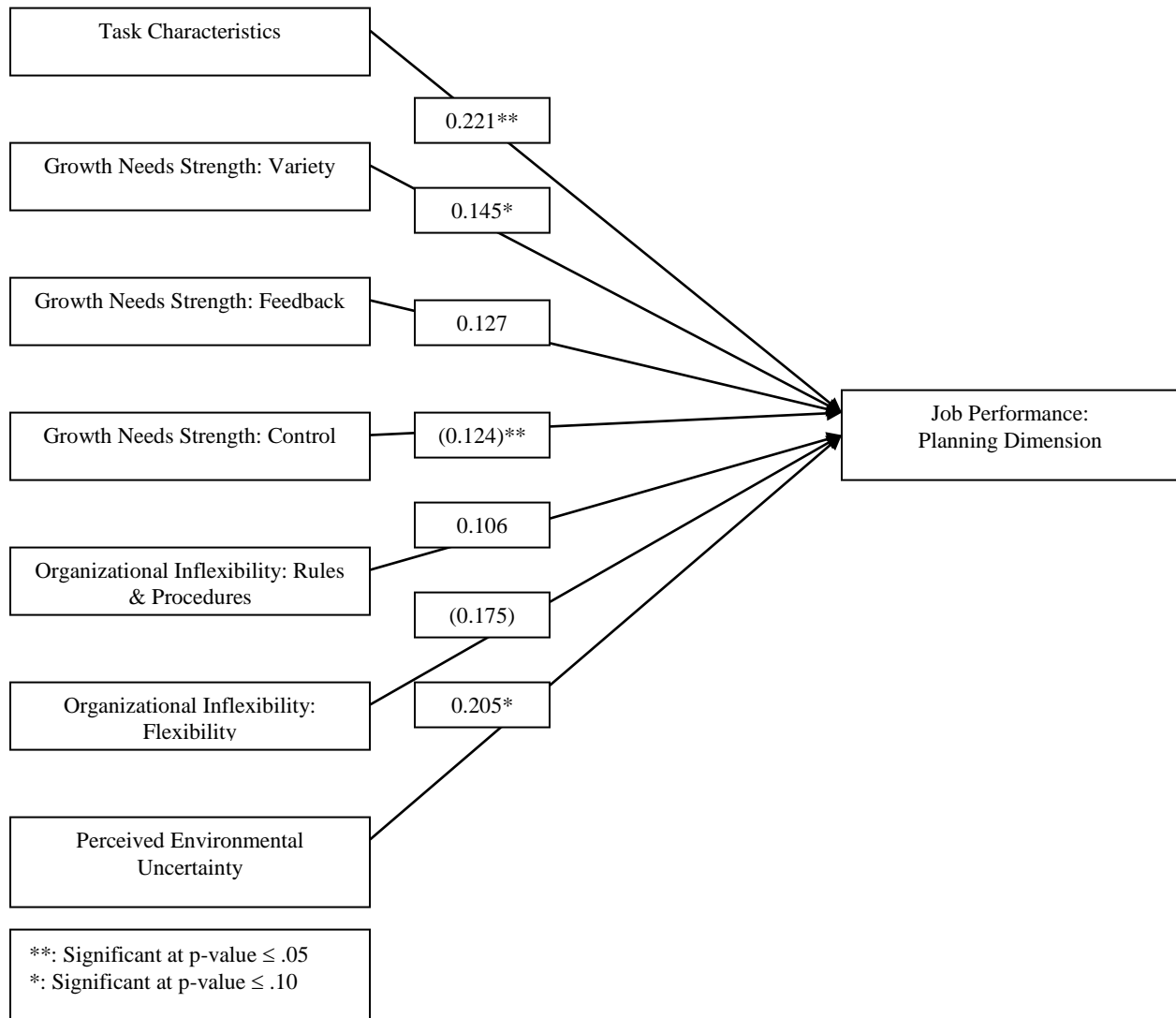
Figure 4: Job Performance Measurement Model



SEM Results

We perform two sets of SEM analyses on two path diagrams each. The first set used the planning dimension of job performance as the dependent variable, while the second set used the supervisory dimension. Each set includes two path diagrams, one for the full model, and the other for the restricted model. The full model include constructs for task characteristics, growth needs strength, organizational inflexibility, and perceived environmental uncertainty. The restricted model includes task characteristics and growth needs strength, but excludes organizational inflexibility and perceived environmental uncertainty. The results of the full model for the planning function of job performance are shown in Figure 5 below.

Figure 5: Task Characteristics Model With Organizational Context Variables On Job Performance - Planning Dimension



The results of the AMOS path diagram in Figure 5 depict a good fit for the theoretical model with task characteristics and organizational context variables (full model). This model has a chi-square of 191, with 124 degrees of freedom (df), and p-value of less than .0001. Traditionally, the most popular model fit index has been the chi-square statistic. However, because of the known sensitivity of this statistic to variations in sample size, other alternative measures have been proposed (Byrne, 1995). Currently recommended indexes of overall model fit include the normed fit index (NFI), comparative fit index (CFI), incremental fit index (IFI), and Tucker-Lewis index (TLI) (Hoyle and Panter, 1995). The Root Mean Square Error Approximation (RMSEA) is another measure of fit recommended in the SEM literature. RMSEA value of less than .06 indicates a good fit (Hu and Bentler 1999). Because there is little consensus regarding the best index of overall model fit, it is recommended that researchers present multiple indexes of overall fit. For the planning function of job performance, the full model goodness of fit indexes of NFI, RFI, IFI, TLI, CFI, and RMSEA indicate a good fit, and are shown in Table 3A. These fit indexes are good when they exceed the .90 threshold level (Byrne 2001).

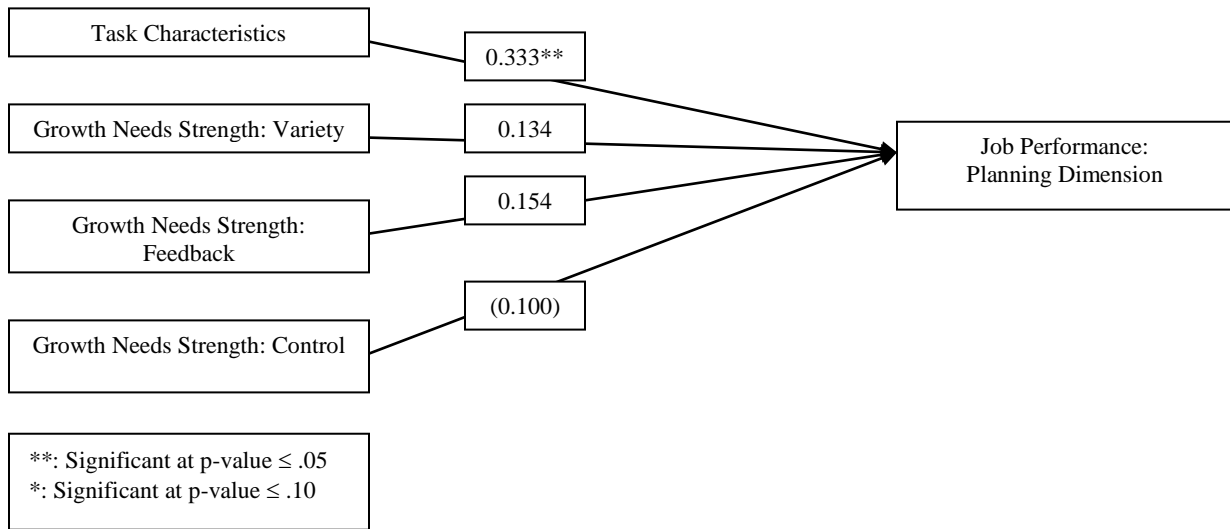
Table 3A: Goodness Of Fit Results For Job Performance - Planning Path Models

Goodness of Fit Indexes	With Org. Context ¹	Without Org. Context ²	Difference
Chi-square (df, p-value)	191 (124, 0.000)	204 (127, 0.000)	13 (3, 0.000)
Chi-square / degrees of freedom	1.539	1.607	
NFI	0.994	0.994	N/A
RFI	0.991	0.991	N/A
IFI	0.998	0.998	N/A
TLI	0.997	0.997	N/A
CFI	0.998	0.998	N/A
RMSEA	0.033	0.035	N/A

In the full model 1 depicted in Figure 5 above, task characteristics (beta = 0.221), GNS-Control (beta = -0.124), and perceived environmental uncertainty (beta = 0.205) are significantly related to the planning function of job performance (p-value < 0.05). GNS-Variety is marginally related to job performance – planning (beta = 0.145, at p-value < .10).

Next, we perform an SEM analysis on the planning dimension of job performance without the contextual variables. In the restricted model, task characteristics (beta = 0.333) and employee growth needs strength-feedback (beta = 0.154) significantly relate to the planning function at p-value less than .05. The fit indexes for this model depict a good fit, and are presented in Table 3A above. The path diagram for this model is depicted in Figure 6.

Figure 6: Task Characteristics Model Without Organizational Context Variables on Job Performance - Planning Dimension

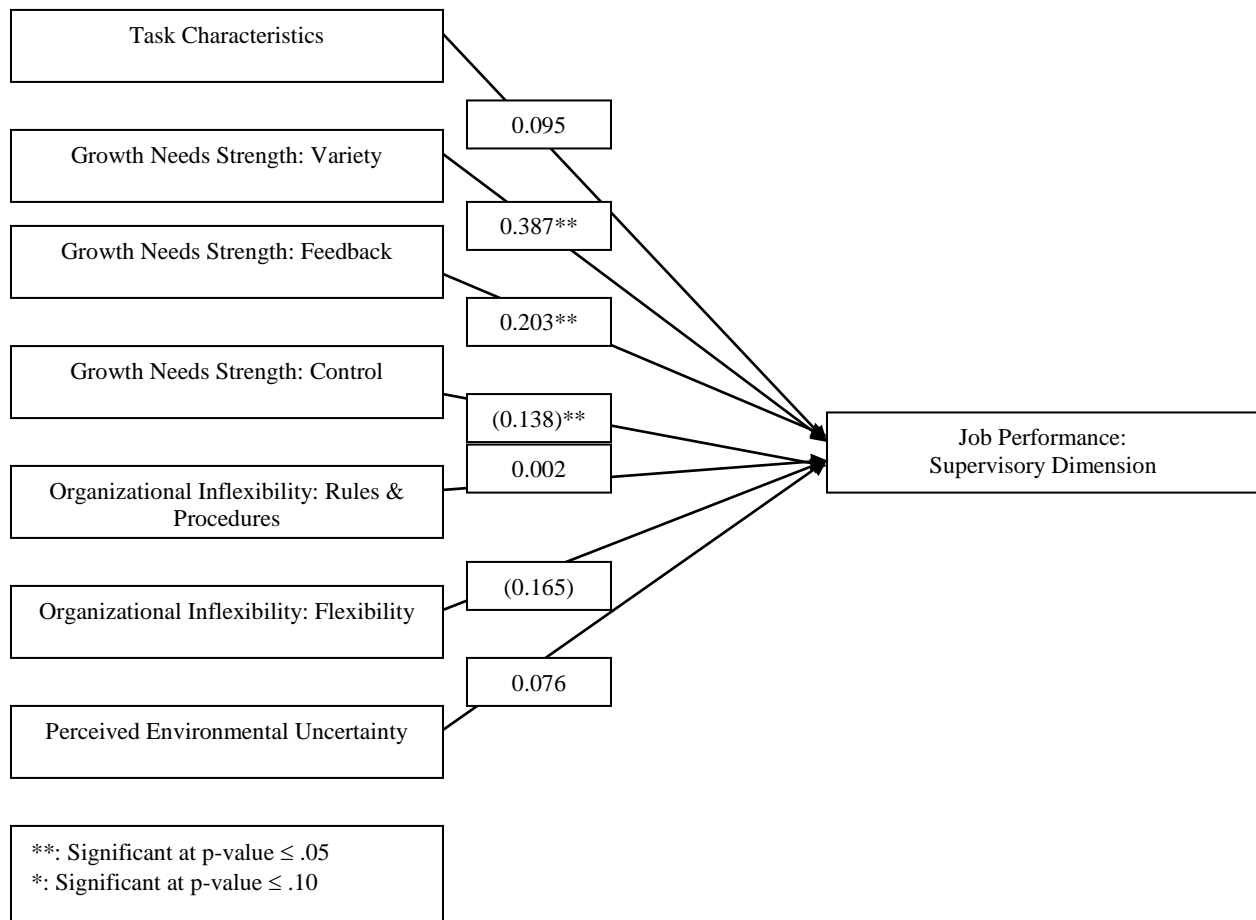


To test the null hypothesis that there is no joint effect of task characteristics with either organizational inflexibility or perceived environmental uncertainty for the planning function of job performance, we assess the theoretical model’s (full model) ability to explain the variance in the planning function as compared to the restricted model. We used the chi-square difference procedure suggested by Anderson and Gerbing (1988) to conduct this test. This test was used to compare the full model to the restricted model (model without organizational inflexibility and perceived environmental uncertainty) to prove that the full model does not provide a better fit for the data. We subtracted the chi-square statistic for the full model from the chi-square statistic for the restricted model (204 – 191 =

13). Next, we calculated the difference in their respective degrees of freedom ($127 - 124 = 3$). If the restricted model is better, the value of 13 comes from a chi-square statistic with 3 degrees of freedom. With 3 degrees of freedom, chi-square values greater than 7.81 are significant at the p -value $\leq .05$ level. Therefore, we conclude that the full model provides a better fit than the restricted model⁶. Null hypothesis H_0 is rejected for the task characteristics model on the planning function of job performance.

We repeated the procedure described above for the supervisory dimension of job performance. Results for the path diagram for the full model is shown in Figure 7 below.

Figure 7: Task Characteristics Model With Organizational Context Variables On Job Performance - Supervisory Dimension



For the full model, task characteristics ($\beta = 0.387$), gns-feedback ($\beta = 0.203$), and gns-control ($\beta = -0.138$) significantly relates to the supervisory dimension of job performance. None of the organizational context variables were significant in this model. The goodness of fit indexes all indicates a good fit, and are shown in Table 3B below.

⁶ Chi-square statistic is actually a badness of fit index. Therefore, a smaller chi-square statistic is better than a bigger one.

Table 3B: Goodness Of Fit Results For Job Performance - Supervisory Path Models

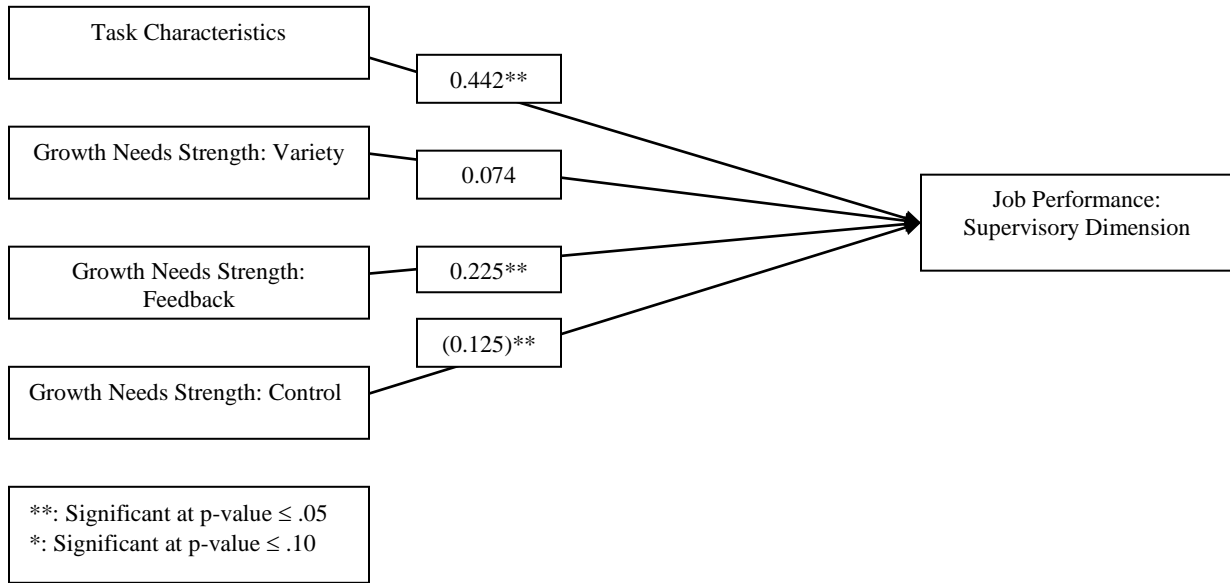
Goodness of Fit Indexes	With Org. Context ³	Without Org. Context ⁴	Difference
Chi-square (df, p-value)	246 (161, 0.000)	258 (164, 0.000)	12 (3, 0.000)
Chi-square / degrees of freedom	1.527	1.574	
NFI	0.993	0.993	N/A
RFI	0.990	0.990	N/A
IFI	0.998	0.997	N/A
TLI	0.997	0.996	N/A
CFI	0.998	0.997	N/A
RMSEA	0.032	0.034	N/A

- 1. See Figure 8
- 2. See Figure 9
- 3. See Figure 10

4. See Figure 11

Next, we ran a restricted model, and performed a difference of chi-square test to determine which is the better model. The restricted model is shown in Figure 8, and the goodness of fit indexes is reported in Table 3B above.

Figure 8: Task Characteristics Model Without Organizational Context Variables On Job Performance - Supervisory Dimension



The difference of the chi-square statistics is 12 (258 - 246), with 3 degrees of freedom. From the chi-square distribution table, we find that with 3 degrees of freedom, chi-square values greater than 7.81 are significant at the p-value ≤ .05 level. With a chi-square statistic that is greater than the chi-square of the full model by 12, we conclude that the restricted model is the weaker model. Therefore, we reject the null hypothesis of the task characteristics model on the supervisory dimension of job performance.

The SEM results confirm the joint-effect of task characteristics and organizational context variables on job performance. Task-characteristics is significant in explaining the variance in both the planning and supervisory

dimensions of job performance. Perception of environmental uncertainty was significant in explaining the variance in the planning dimension of job performance. Based on the results, hypothesis H_0 is rejected, and we conclude that there is a significant joint effect of task characteristics and perceived environmental uncertainty on job performance.

DISCUSSION AND CONCLUSION

This study examines the joint effect of task characteristics and organizational context variables on job performance. Organizational inflexibility and perceived environmental uncertainty were used to proxy for internal and external organizational context, respectively. Structural equation modeling was used to test for the joint effect of task characteristics and organization context on job performance. The results of SEM indicate the existence of a joint effect of task characteristics and perception of environmental uncertainty on job performance.

Correlation and measurement model analysis of task characteristics indicates that only two out of four characteristics used in this study are useful proxies for task characteristics that have meaningful and significant relationship with job performance. The results of the study confirms the criticisms of prior research that suggest that it is not appropriate to study job design in isolation of surrounding organizational context and subsystems. Therefore, future studies on task design should consider the impact of organizational context variables in their research design. Furthermore, the results of prior studies on task characteristics and job design that ignore organizational context variables should be interpreted with caution.

While the results of this study confirm the existence of a joint effect of task characteristics and organizational context, the significant effect of organizational context variables on job performance is limited. Results indicate a positive and significant association between perceived environmental uncertainty and the planning function of job performance, but not with the supervisory function. The rules and procedures dimension of organizational inflexibility shows a positive link to job performance, while the flexibility dimension indicates a negative link. However, neither of these links was significantly related to job performance. More research is needed to determine the effect of organizational and job context variables on employee affective outcomes and performance.

The findings of the study may be limited because of the proxies used to operationalize organizational context and task characteristics. Organizational context is a dynamic and multi-dimensional construct. Organizational inflexibility and perceived environmental uncertainty may not completely represent this construct. Task characteristics as measured here followed the practice used in the organizational behavior literature. However, other studies have used other measures to measure task characteristics. In the audit judgment literature, task complexity is used to measure audit task difficulty and task structure (Bonner, 1994). The findings of this study should be interpreted with caution because of the limitations imposed by the measures used for the latent constructs in the study. The study also suffers from the omitted variable problem. The theoretical model proposed in Figure 1 includes several factors that may affect job performance. Many of these factors were not captured in this study. Future studies should consider the use of additional factors presented in Figure 1 in the study of task characteristics and organizational context.

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Data Availability: Contact the first author regarding data availability. The questionnaire used in the study is available upon request.

REFERENCES

1. Anderson J. L. and Gerbing, D. W. (1988). Structural Equation Modeling in Practice: A Review and Recommended Two-step Approach. *Psychological Bulletin* 103: 411-423.
2. Baker, C. R. (1977). Management Strategy in a Large Accounting Firm. *The Accounting Review*, July: 574-586.
3. Bonner, S. E. (1994). A Model of the Effects of Audit Task Complexity. *Accounting, Organizations, and Society*, Vol. 19, No. 3, 213-234.
4. Brownell, P. and McInnes, M. (1986). Budgetary Participation, Motivation, and Managerial Performance. *The Accounting Review*, October: 587-600.
5. Byrne, B. M. (1995). One Application of SEM from Two Perspectives: Exploring the EQS and LISTREL Strategies. *Structural Equation Modeling: Concepts, Issues, and Applications*, 138–157. Sage Publications, United States.
6. _____. (2001). *Structural Equation Modeling With AMOS: Basic Concepts, Applications, and Programming*. Lawrence Erlbaum Associates, Publishers, London.
7. Champion, M. A. and McClelland, C. L. (1991). Interdisciplinary Examination of the Costs and Benefits of Enlarged Jobs: A Job Design Quasi-Experiment. *Journal of Applied Psychology*, Vol. 76, No. 2, 186-198.
8. Ferris, K. R. (1977). Perceived Uncertainty and Job Satisfaction in the Accounting Environment. *Accounting Organizations and Society*, Vol. 2, 23-28.
9. Ferris, K. R. (1982). Perceived Environmental Uncertainty, Organizational Adaptation, and Employee Performance: A Longitudinal Study in Professional Accounting Firms. *Accounting Organizations and Society*, Vol. 7, No. 1, 13-25.
10. Folami, L. (1999). An investigation into perceptions of accounting firm organizational structure. Unpublished dissertation, Georgia State University, Georgia.
11. Frucot, V. and Shearon, W. T. (1991). Budgetary Participation, Locus of Control, and Mexican Managerial Performance and Job Satisfaction. *The Accounting Review*, January: 80-98.
12. Gordon, L. A. and Narayanan, V. K. (1984). Management Accounting Systems, Perceived Environmental Uncertainty and Organizational Structure: An Empirical Investigation. *Accounting, Organizations and Society*, Vol. 9, 33-47.
13. Gul, F. and Chia, Y. M. (1994). The Effects of Management Accounting Systems, Perceived Environmental Uncertainty and Decentralization on Managerial Performance: A Test of Three-way Interaction. *Accounting, Organizations and Society*, Vol. 19, 413-426.
14. Hackman, J. R. and Lawler, III, E. E. (1971). Employee Reactions to Job Characteristics. *Journal of Applied Psychology Monograph*, 55, 259-286.
15. Hackman, J. R. and Oldham, G. R. (1976). Motivation Through the Design of Work: Test of a Theory. *Organizational Behavior and Human Performance*, 16, 250-279
16. Hackman, J. R., Oldham, G. R., and Pearce, J. L. (1976). Conditions Under Which Employees Respond Positively to Enriched Work. *Journal of Applied Psychology*, 61, 359-403.
17. Hackman, J. R. and Oldham, G. R. (1980). *Work Redesign*. Addison Wesley Publishing Company, Menlo Park, CA.
18. Hair, Jr., J. F., Anderson, R. E., Tatham, R. L., and Black, W. C. (1992). *Multivariate Data Analysis With Readings*. Macmillan Publishing Company, New York, Chapter Four.
19. Hall, Richard H. (1991). *Organizations: Structures, Processes and Outcomes*. Prentice Hall, Englewood Cliffs, New Jersey.
20. Holman, D., Clegg, C., and Waterson, P. (2002). Navigating the Territory of Job Design. *Applied Ergonomics* 33, 97-205.
21. Hoyle, R. H. and Panter, A. T. (1995). Writing About Structural Equation Models. *Structural Equation Modeling: Concepts, Issues, and Applications*, 158 – 175. Sage Publications, United States.
22. Hu, L. and Bentler, P. M. (1999). Cutoff Criterion for Fit Indexes in Covariance Structure Analysis: Conventional Criteria versus New Alternatives. *Structural Equation Modeling*, 6: 1-55.
23. Kerr, S. and Jermier, J. M. (1978). Substitutes for leadership: Their meaning and measurement. *Organizational Behavior and Human Performance* 22: 375-403.

24. Kinney, William. Audit Technology and Preferences for Auditing Standards. *Journal of Accounting and Economics*, 1986, 8: 73-89.
25. Mascha, F. M. (2001). The Effect of Task Complexity and Expert System Type on the Acquisition of Procedural Knowledge: Some Evidence. *International Journal of Accounting Information Systems* 2, 103-124.
26. Mitchell, T. R., Holtom, B. C., and Lee, T. W. (2001). How to Keep Your Best Employees: Developing an Effective Retention Policy. *Academy of Management Executive*, Vol. 15, No. 4, 96-103.
27. Oldham, G. R. and Hackman, J. R. (1980). Work Design in the Organizational Context. In B.M. Staw and L.L. Cummings (Eds.), *Research in Organizational Behavior*, 2, Greenwich, CT:JAI Press, 247-278.
28. Podsakoff, P. M., Niehoff, B. P., MacKenzie, S. B., and Williams, M. L. (1993). Do Substitutes for leadership really substitute for leadership? An empirical examination of Kerr and Jermier's situational leadership model. *Organizational Behavior and Human Decision Processes*, 54: 1-44.
29. Price, James L. (1972). *Handbook of Organizational Measurement*. D. C. Heath and Company, Lexington, Massachusetts, Chapters 5, 7, and 13.
30. Price, J. L. and Mueller, C. W. (1981). *Professional Turnover: The Case of Nurses*. New York, NY:SP Medical and Scientific Books.
31. Rebele, J. and Michaels, R. E. (1990). Independent auditors' role stress: Antecedent, outcome and moderating variables. *Behavioral Research in Accounting* 2:124-153.
32. Roberts, K. H. and Glick, W. (1981). The Job Characteristics Approach to Task Design: A Critical Review. *Journal of Applied Psychology*, 66, 193-217.
33. Robbins, S. (1990). *Organization Theory: Structure, Design, and Applications*. Prentice Hall, New Jersey.
34. Sathe, V. V. (1974). Structural Adaptation to Environment: Study of Insurance Company Departments and Branch Banks. Unpublished Ph.D. Dissertation, Ohio State University.
35. Schmidt, F. L. (2002). The Role of General Cognitive Ability and Job Performance: Why There Cannot be a Debate. *Human Performance*, 15:187-210.
36. Schultz, K. L., McClain, J. O., and Thomas, L. J. (2003). Overcoming the Dark Side of Worker Flexibility. *Journal of Operations Management*, 21, 81-92
37. Walter, G. T., Stout, E. S., and Shaw, K. N. (1998). Critical Analysis and Recommendations Regarding the Role of Perceived Environmental Uncertainty in Behavioral Accounting Research. *Behavioral Research in Accounting* 10:23-46.
38. Watson, D. J. H. (1975). The Structure of Project Teams Facing Differentiated Environments: An Exploratory Study in Public Accounting Firms. *The Accounting Review*, April, 259-273.