Gender study on the analysis of task on the job requirement

Setyabudi Indartono  
Department of Business Administration  
National Central University  
No. 300, Jungda Rd, Jhongli City  
Taoyuan, Taiwan 320, ROC  
Email: 964401605@cc.ncu.edu.tw

Abstract:  

This study investigated the gender analysis on the complexity of job design. Work design concept, proposed by Morgeson (2006) included knowledge, task, and social and work context characteristics. This study was focus on task characteristics of job design. Effect of gender on task characteristic was proposed for basic hypothesis. Comparing the mean of task characteristic on gender was conducted for basic evidences. Moderation effect of gender on task characteristics was investigated for further hypothesis.

Confirmation on the model, structural equation modeling was used to test the instrument. Complexity dimension of knowledge and task characteristics was investigate using high-level confirmatory analysis (HCFA) and second order analysis to confirm their single construct models. This study found satisfactory model and support the hypotheses. Single variable of task characteristic was used to represent all of their dimensions.

The result showed direct effect of gender on task characteristic. Correlation on the level of task characteristics dimension also showed that gender was significantly correlated to task variety, task significant, task identity and feedback from the job. Hypothesis result indicates that different of gender require task criteria of work design differently (t-test=-3.999, p<.01). Implication of the findings for organizations and suggestions for future research are discussed.

Keywords: Work design, knowledge characteristics, task characteristics, satisfaction

Biographical notes:
Setyabudi Indartono is a Doctoral Student in Department of Business Administration, National Central University, Taiwan. Lecturer of Management Department, Yogyakarta state University, Indonesia. His Major Field of research is Personal Fit, Servant Leadership, and Organizational Citizenship Behavior.
Introduction

Great practical of job design produced most popular programs such as TQM (Deming, 1986; Juran et al 1988; Waldman, 1994) and reengineering (Hammer et al, 1993), and human capital management (Lepak & Snell, 1999). Nowadays, work design becomes something of a fad among leaders and organizational consultants. In nature, the job was designed to simplify employee activities on works, manage social-interpersonal daily works, and help to achieve the goal of work, efficiently. On the psychological point of view, work was designed to achieve high performance and works satisfactions of workers. It was found significantly effect to run the organization effectively. Previous study found that successful on designing of work were implied positively on employee’s behavior and attitudes such as performance, satisfaction, commitment, involvement, motivation, role perception of outcomes, anxiety and stress (Humphrey et al 2007).

However, the previous findings of work design studies were found the different effects of its work characteristics on outcomes, (Johns et al., 1992; Oldham, 1996). Some characteristics were found fully effects on outcomes than other ones (Campion & McClelland, 1993, Morgeson, 2006, Morgeson and Campion, 2003 and Humphrey et al, 2007). It made the work design became meaningless. Some possible explanations needed to answer these conditions more clearly. Employees and organization’s conditions might become possible explanations of these situations (Humphrey et al, 2007, MacKinnon, 2008). The different of organizational requirement might happen to deal up with business competitiveness and improve work effectiveness. Different requirement and capability of employee as individual background, might effect on the difference perception on their work outcomes (O’Reilly et al 1991, Chatman 1991, Edward 1996, Judge 1996, Saks et al, 1997). Individual characteristics
mostly used to provide explanations of different worker attitude and behavior. Scholar used the term such as individual cohort, and demographic characteristics (Judge, 2007).

Gender as one of individual characteristic has been used on many studies to provide some explanations of different effect on outcomes. Gender found made a different effect in many contexts such as within interpersonal relationships into household decision-making (Qualls, 1987, Baghat et al, 2008). In example, female were known tend to be more expressive. Its expressive behavior was manifested in their socio-emotional behavior (Meyers-Levy and Maheswaran, 1991). Theory of motivation may provide for further insight into gender differences in relationships such as motivation (Deci and Ryan, 1985) and commitment (Baghat et al, 2008). The current research (Haswell et al., 1999; Lyonski and Gaidis, 1991; Whipple and Swords, 1992) was also found that female more sensitive to ethical issues (Bernardi, 2008). Thus, sensitivities, expressive behaviors, and motivations of female worker would response work design differently from male.

Few of studies have explored different effect of employee’s characteristics on the effect of work design. Point to the previous explanation, we suggest to expand the study on gender-work design relationship and test the module of work design on outcomes based on gender. Thus, this study was aimed to investigate the effect gender on task characteristics of work design.

**Conceptual background and hypotheses**

*Gender on task characteristic of Work Design*

Current research of work design provides explanation of the main characteristics was needed on the job (Humphrey et al, 2007). Morgeson (2006) suggested the characteristics included task, knowledge, social and
work context. Task characteristics were included job autonomy, task variety, task significant, task identity, and feedback from job. This characteristic influence jobs to be more satisfying for workers (Humprey et al, 2007). The task characteristics was found significant effected on job satisfaction, motivation, and performance (Humprey et al, 2007).

Previous researches have explained that organizational required specific criteria on the job. The criteria may require differently on the job, such as professional and non-professional job (Morgeson, 2006, Humprey et al, 2007). Different job position has different requirement in order to achieve that job objectives, such as task, knowledge, social and work context characteristics. However, few scholars investigated the different job requirement on various individual points of view. Different cohort, gender, tenure, and other demographics characteristics might effect on the job requirements, differently.

Gender of employee’s was known as one of controlled variable in researches. Different effect of gender on employee attitudes and behavior, have been found in many studies. Acceptance of gender effect on outcomes was demonstrated i.e. on commitment (Bernardi, 2008, Baghat, 2008, William, 2008, Tanriverdi, 2009), satisfaction, involvement, and stress (Burke, et al, 2008, Jones et al, 2009). O’Neil et al (2008) indicate that for the women job career been identified on patterns. Women's larger-life contexts, families and careers, women's career paths patterns, and human and social capital are critical factors for women's careers.

Burke, et al, 2008, Jones et al, 2009) direct this study to propose basic evidence of gender effect on job design within predictions:

Hypothesis: Different of gender required task criteria of work design differently

Method

Participants

Participants were 729 employees from various businesses. They were approximately 34.85 years old, 330 (45.3%) were married, and 306 (42%) were men. From the participants 32 (4.4%) graduate from college, 197 (27%) held a graduate degree, 202 (27.7%) held a master degree and 65 (8.9%) held a doctorate degree.

Procedures

Correlation, regressions and structural equation model (SEM) was used on this procedure. Confirmatory factor analysis (CFA) and high level of CFA (HCFA) was used to confirm the model of work design characteristics in a whole and each gender. CFA was used to confirm each construct model after investigate the traditional factor loading of SPSS. Single variable of task characteristics were investigate using HCFA. Correlations analysis was used to figure out the task characteristics and demographics characteristics. Simple regressions were used to investigate the moderation effect of gender on task characteristics.

Measure Development Strategy

Items were written by the authors or obtained from previous research. After review of wording, content, and so forth, 24 item sets for total items were retained for inclusion in the instrument. Responses were made on a 5-point Likert-type scale with scale anchors ranging from 1 (strongly disagree) to 5(strongly agree).
Task characteristics were measured using 24 items taken from Morgeson & Humphrey’s (2006) WDQ. Participants were asked i.e., “The job allows me to make my own decisions about how to schedule my work”. The knowledge characteristics 5 dimensions included Work scheduling autonomy (M=3.946, Cronbach’s α=0.841), decision-making autonomy (M=3.777, Cronbach’s α=0.867), work-method autonomy (M=3.884, Cronbach’s α=0.898), task variety (M=3.868, Cronbach’s α=0.911), task significant (M=3.693, Cronbach’s α=0.848), task identity (M=3.929, Cronbach’s α=0.800) and feedback from job (M=3.656, Cronbach’s α=0.846).

Result

Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) for task characteristics of work design ware used sed to confirm the measurement allowed to the previous ones.

Confirmatory Factor Analysis of task characteristics

Confirmatory analysis using the traditional factor loading of SPSS generated the formulation of each construct. Initial solution with KMO and Bartlett’s test of sphericity, maximum likelihood extraction method, and varimax rotation was used in this CFA. The result on the table 1, suggested combining the work scheduling autonomy, decision-making autonomy, and work-method autonomy into one single dimension “autonomy”.

6
Table 1
CFA of task characteristics

<table>
<thead>
<tr>
<th>Factor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>The job allows me to make my own decisions about how to schedule my work</td>
<td>0.547</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The job allows me to decide on the order in which things are done on the job</td>
<td></td>
<td>0.796</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The job allows me to plan how I do my work.</td>
<td>0.548</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The job gives me a chance to use my personal initiative or judgment in carrying out the work</td>
<td>0.694</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The job allows me to make a lot of decisions on my own</td>
<td>0.824</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The job provides me with significant autonomy in making decisions.</td>
<td>0.801</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The job allows me to make decisions about what methods I use to complete my work</td>
<td>0.787</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The job gives me considerable opportunity for independence and freedom in how I do the work</td>
<td>0.781</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The job allows me to decide on my own how to go about doing my work.</td>
<td>0.836</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The job involves a great deal of task variety.</td>
<td>0.694</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The job involves doing a number of different things</td>
<td>0.831</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The job requires the performance of a wide range of tasks.</td>
<td>0.895</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The job involves performing a variety of tasks.</td>
<td>0.865</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The results of my work are likely to significantly affect the lives of other people</td>
<td>0.509</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The job itself is very significant and important in the broader scheme of things</td>
<td>0.532</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The job has a large impact on people outside the organization.</td>
<td>0.876</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The work performed on the job has a significant impact on people outside the organization.</td>
<td>0.921</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The job involves completing a piece of work that has an obvious beginning and end</td>
<td></td>
<td>0.750</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The job is arranged so that I can do an entire piece of work from beginning to end</td>
<td></td>
<td>0.677</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The job provides me the chance to completely finish the pieces of work I begin</td>
<td></td>
<td>0.677</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The job allows me to complete work I start</td>
<td></td>
<td>0.618</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The work activities themselves provide direct and clear information about the effectiveness (e.g., quality and quantity) of my job performance</td>
<td></td>
<td></td>
<td>0.848</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The job itself provides feedback on my performance.</td>
<td></td>
<td></td>
<td>0.848</td>
<td>0.911</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The job itself provides me with information about my performance.</td>
<td></td>
<td></td>
<td>0.911</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Model fit

To test the model of fit on within the dimensions, order analysis of HCFA was used to confirm single variable of task characteristics. This study confirmed that the task model showed on the figure 1, was satisfactory fit, with the index of fit shows Goodness of fit with value of CFI=.914, NFI=.899, RFI=.873, IFI=.914, TLI=.892 and RMSEA=.082.
Hypothesis testing

Hypotheses of this study were tested by, model fit, simple correlation and simple regressions. Model fit was used to compare the fit between male and female data to prove the adequacy of construct and its dimensions. It indicated the strength of interaction within models. Correlations analysis was used to figure out the relationship between task characteristics and gender. Multiple regressions were used to investigate the effect of gender on task characteristics.

Table 2
Overall of fit on HCFA knowledge and task characteristics of work design, satisfaction, and model alternatives

<table>
<thead>
<tr>
<th></th>
<th>GFI</th>
<th>AGFI</th>
<th>RMR</th>
<th>CFI</th>
<th>NFI</th>
<th>IFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task characteristics of work design</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>.876</td>
<td>.884</td>
<td>.877</td>
<td>.102</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>.887</td>
<td>.859</td>
<td>.884</td>
<td>.097</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2 presented the different model fit on HCFA task characteristics of work design. HCFA on task model showed moderate fit on male and female model. The model also showed that female model of task characteristics was found fit more. It was indicate that female was more task oriented on work. Hypothesis that predicted different of gender required task criteria of work design differently was strongly indicated.

Table 3
Correlation, and cronbach’s $\alpha$ of each dimensions

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gender</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Education</td>
<td>-.066</td>
<td></td>
<td>-.417**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Marital</td>
<td>.122**</td>
<td>-.417**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Leader Position</td>
<td>.129**</td>
<td>-.254**</td>
<td>.286**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Autonomy</td>
<td>.025</td>
<td>.180**</td>
<td>-.040</td>
<td>.019</td>
<td>.866</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Task variety</td>
<td>.119**</td>
<td>.153**</td>
<td>-.137**</td>
<td>.026</td>
<td>.257**</td>
<td>.911</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Task significant</td>
<td>.122**</td>
<td>.067</td>
<td>.004</td>
<td>.177**</td>
<td>.261**</td>
<td>.623**</td>
<td>.848</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Task identity</td>
<td>.093*</td>
<td>.019</td>
<td>.100**</td>
<td>.143**</td>
<td>.420**</td>
<td>.294**</td>
<td>.463**</td>
<td>.800</td>
<td></td>
</tr>
<tr>
<td>9. Feedback from Job</td>
<td>.079*</td>
<td>.026</td>
<td>.146**</td>
<td>.071</td>
<td>.342**</td>
<td>.182**</td>
<td>.317**</td>
<td>.502**</td>
<td>.846</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
Diagonal value is cronbach’s $\alpha$

Correlation analysis on the table 3 showed that gender correlated and effected task characteristics significantly. Test of difference using independent sample t test found that male and female worker have different requirement of task criteria (t-test=-3.999, p<.01). Correlation on the level of task characteristics dimension also showed that gender was significantly correlated to task variety, task significant, task identity and feedback from the job. Thus, hypothesis was partially supported.
Gender study on the analysis of task on the job requirement

Conclusion

Discussion

This study investigates the individual factor related to task criteria of job. Preliminary analysis of the hypotheses testing was used to investigate the useable measurement and indication of the findings. Confirmatory factor analysis using loading factor of measurements were applied to check the adequate from its original. Adjustments were done on each variable such as integrating the autonomy dimensions. Evaluating on the model fit was applied to investigate the adequate model used. The nature of the model was found adequate of fit. While gender model of each variable and model interaction was also found adequate within various male-female differences. This gender model of fit was used to indicate the hypothesis results. Thus, these preliminary investigations provided the evidences of usable measurement, and were able to indicate the hypotheses.

Acceptance of the preliminary analysis provided some notes. It was explained that gender was significant individual attachments effect on the job requirements. Female found likely more accept for higher task characteristics on the job. Expressiveness of female worker (O’Neil et al, 2008) may influence on the satisfaction for the job. However, their sensitive (Haswell et al., 1999; Bernardi, 2008) able to inhibited their effort to achieve higher outputs.

Managerial Implication

Specific character of gender was in still important for the evidence on developing the job requirement, even it was found not significant different on the effect to outcomes. Therefore, the findings of different gender effect on task characteristic indicated that the acceptance of different job requirement was allowed. Managers have to pay attention more on the
different task characteristics from different gender workers. Manager might increase the female task competencies in the same position than male.

**Limitation and Future Research Direction**

Notwithstanding these contributions, this study also has several limitations. The sampling data collected was adequate to improve on the group level analysis (HLM). This study also investigate the individual assessment on the job, whereas team assessment was become fad.

Even, the findings supported the single variable of various dimensions. It was opened for further questions. Different characteristics of each dimensions on task was directed to the different feedback for outcomes. Different finding of preliminary indication and supporting hypothesis testing have not interpreted in detail yet. It may influence on the methodologies approach on the future investigation. Experimental or quasi-experimental research designs are needed to help rule out potential alternative explanations for these results (Morgeson, 2006).

**References**


Hammer, Michael and Champy, James 1993, Reengineering the corporation A Manifesto For Business Revolution


Humphrey, Stephen E., Nahrgang, Jennifer D., Morgeson Frederick P., 2007, “Integrating motivational, social, and contextual work design features: A meta analytic summary and theoretical extention of the work design literature, *Journal of Applied Psychology*, vol 92., No. 5, pg. 1332-1356

Judge, T.A., Cable, D.M. (1996), person organization fit, job choice decision and organizational entry. *Organizational behavior and Human decision processes* 67 pp 294-311


O’Neil, Deborah A, Hopkins, Margaret M, Bilimoria, Diana, 2008, Women’s Careers at the Start of the 21st Century: Patterns and Paradoxes Journal of Business Ethics, Vol. 80, Iss. 4; p. 727


