Gender Structure and Organizational Performance: The Analysis of Partnership Accounting Firms in Taiwan

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Abstract
Based on the perspective of economy sociology, this study discussed the relationship between gender composition and organizational performance for Partnership Accounting Firms (PAFs) in Taiwan. For answering the above question, this research sample adopted from 1993-2012 Annual Report of Accounting Firms surveyed by the Ministry of Finance of R.O.C. The empirical results show that (1) the higher the proportion of the female accountants was, the less organizational performance was; (2) the higher the proportion of female professionals was, the higher organizational performance was; (3) the higher proportion of female administrators was, the higher organizational performance was; (4) the similarity of female percentages between accountants and all employees was, the similarity of female percentages between accountants and professionals was, the higher organizational performance was; (5) the similarity of female percentages between accountants and professionals was, the higher organizational performance was.

Keywords
Gender, Organizational Demography, Relational Demography, Organizational Performance

I. Introduction
Demographic profiles are increasingly diversified as a result of industry structural changes (Jackson and Alvarez, 1992). For example, ethnic minorities, females, foreigners and elderly are accounting for an increasing percentage of the employees in the companies of the US (Johnston and Packer, 1987). In Taiwan, the introduction of a large number of foreign laborers and females into the job market has also led to the growing diversity (in terms of ethnic and gender mix) in the corporate world. This has resulted in many management issues. In fact, how to properly deal with the growing diversity of the demographic profile and enhance the competitiveness of an organization presents a daunting challenge for managers. This is particularly true for accounting firms as professional service providers whose main resources are “people”.

Gender has always been a fundamental block for division of labour in a society. It is also an important characteristic of demographic issues in an organization. Most of the gender studies can be divided into micro based or macro based. Micro-based studies elaborate the characteristics and social statuses of the two sexes and explain the effects of gender stereotypes on the interaction of organizational members. For example, female employees perform better as a whole in a male dominated organization (William and O'Reilly, 1999). However, male professionals underperform in a female dominated organization, compared to a male dominated organization. If sex discrimination is a prevalent experience for female employees in a male dominated organization, the social integration of female employees is lower (Konrad et al., 1992; Ely, 1994, 1995). Macro-based studies indicate that in an organization with an even gender split, the average job satisfaction is better than that in an organization with an imbalanced gender structure (Watson, 2002). Some studies suggest that the organization with more divergent gender split, the worse the communication is among members (Chatman and Flynn, 2001) and hence the worse organizational performances (O'Reilly, Snyder, and Boote, 1993). However, other studies argue that there is no direct relationship between gender structure and organizational performances (Michel and Hambrick, 1992).

In sum, there are no consistent conclusions regarding the relationship between gender structure and organizational performances. However, most studies agree that gender structure is a factor that influences communication and integration among members and hence the achievement of organizational performances. However, such studies are limited to teams, departments or subgroups within an organization (e.g., Murray, 1989; Michel and Hambrick, 1992; Ancona and Caldwell, 1992). There are few studies dealing with the relationship between gender structure and organizational performances of accounting firms as a group of professional service providers. This paper believes that the gender structure and gender concentration of occupations are relevant to organizational effectiveness in accounting firms whose professionalism lies in specialization. This paper examines the issue in the context of organizational demography and relational demography by exploring the relationship between gender structure and organizational performances of partnership accounting firms. The two main concerns of this paper are: (1) How does the demographic profile of each occupation within accounting firms affect organizational performances? (2) How does the demographic homogeneity of each occupation affect organizational performances?

II. Literature Review and Hypotheses

A. Organizational demography and organizational performance
Organizational demography examines the relationship between demographic variables and organizational performances (Lawrence, 1997). Research approaches can be roughly divided into compositional demography and relational demography (Tsui, Egan and Xin, 1995). Compositional demography is based on a group or an organization as a basic analytical unit regarding the effects of demographic profiles on individual behavior or the whole organization. Pfieffer (1983) develops the theoretic perspectives of compositional demography and most studies in organizational demography use his framework in the discussion over the impacts of demographic compositions.
Many recent empirical studies indicate that gender structure affects the behaviour and attitude of members in an organization and therefore indirectly influences the level of satisfaction and mobility of the organization. For instance, in an organization with a high percentage of females, female members tend to influence each other in terms of beliefs and attitudes (Ely, 1995). Williams and O’Reilly (1999) suggest that the more homogenous of female members, the better organizational performances are. Boldry, Wood, and Kashy (2001) point out that the more divergent gender structure, the better performance of female members. Some studies argue that the cooperation of people of the same sex leads to a high degree of satisfaction and identification (Maccoby, 1990; Ibarra, 1992; O’Reilly, Snyder, and Boothe, 1993). The more convergent gender structure, the easier communicating and understanding between members. This allows fast handling of organizational problems and creates positive effects on organizational performances (William and O’Reilly, 1999). Other studies hold that the more divergent gender structure, the higher mobility of members in an organization (Tusi, Egan and O’Reilly, 1992; Sonfield et al., 2001). In sum, the majority of literature in organizational demography supports that the more convergent gender structure, the easier communication and solidarity, the lower the mobility and the better performances of an organization. Women have always been a core source of human resources for accounting firms in Taiwan. Women’s detail orientation and patience with tedious tasks are helpful to the complexity of accounting jobs. This is probably men tend to avoid accounting as a university major a career decision. Meanwhile, the growing complexity of economies and scale of accounting firms have led to increasing specialization of tasks and diversity of businesses. All these phenomena highlight the advantages of women in the professional environment of accounting. Hence, this paper believes that for occupations such as certified accountants, professionals or administrators, women may be better suited to the job descriptions and report better performances. This paper develops the following hypotheses:

H1a: The higher the percentage of female employees as a whole in a partnership accounting firm, the better the organizational performance is.

H1b: The higher the percentage of female accountants in a partnership accounting firm, the better the organizational performance is.

H1c: The higher the percentage of female professionals in a partnership accounting firm, the better the organizational performance is.

H1d: The higher the percentage of female administrators in a partnership accounting firm, the better the organizational performance is.

B. Relational demography and organizational performance

Relational demography examines how the similarity of demographic attributes in an organization affects the organization or individuals (Jackson et al., 1991; Brewer, 1995; Northcraft et al., 1995; Riordan and Shore, 1997). Studies show that the level of similarity in demographic attributes in an organization is relevant to the work attitude and behavior of individuals (Jackson et al., 1992; Tusi et al., 1992; Riordan and Shore, 1997). In other words, similarities attract and people like to deal with others who are similar in personality, behavior and attitude. In a male dominated environment, female employees experience prevalent sex discrimination and hence their social integration is weak (Konrad et al., 1992; McNeilly, 2000).

The development of relational demography is related to similarity-attraction paradigm, self-categorization theory and social identity theory. The early studies concerning similarity-attraction paradigm focus on the attitude similarity of individuals before extension into the examination of demographic characteristics. Many studies confirm that when an individual enters an organization, similarity attraction helps him/her to identity with other members and achieve high job satisfaction (Tsui, Egan, and O’Reilly, 1992; Moreland and Myaskovsky, 2000). In contrast, weak similarity leads to low job satisfaction and a higher turnover (Tsui et al., 1992; Watson, Kumar, and Michaelsen, 1993).

Self-categorization theory and social identity theory argue that the interaction with similar people enhances self-recognition and self-evaluations (Tsui et al., 1995). The fundamental argument of these theories is that people categorize themselves to the group of similar attributes. This enhances self-recognition based on social identity in a group and enforces solidarity within an organization (Jackson et al., 1991). Similarity-attraction theory, self-categorization theory and social identity theory all center on self-identification as the key to differentiate oneself with the group (Kramer, 1991; Jackson et al., 1992; Northcraft et al., 1995).

The human resources of an accounting firm comprise of accountants, professionals and administrators. Some studies suggest that if managers and the managed are of the opposite sexes, the managed will have higher role pressures and as a result lower performances (Judge, 1993; Pelled, 1996). In a partnership accounting firm, accountants are managers, whereas professionals and administrators are the managed. In line with Judge (1993) and Pelled (1996), this paper believes that in a female dominated accounting firm, the more females are as accountants, professionals and administrators either as a group or between two hierarchical levels, the better communication and sharing of information and values. Hence, this paper develops the following four hypotheses:

H2a: The higher the similarity of female percentages between accountants and all employees in a partnership accounting firm, the better the organizational performance is.

H2b: The higher the similarity of female percentages between accountants and professionals in a partnership accounting firm, the better the organizational performance is.

H2c: The higher the similarity of female percentages between accountants and administrators in a partnership accounting firm, the better the organizational performance is.

H2d: The higher the similarity of female percentages between professionals and administrators in a partnership accounting firm, the better the organizational performance is.

III. Method

A. Research sample and data sources

The research data is sourced from Survey Report of Audit Firms in Taiwan published by the Department of Statistics, Ministry of Finance. It covers demographic data such as genders, educations, ages, and positions of employees, business incomes and audit jobs, expenditures and expenses. The sampling period is 1993-2012. The pooling data covers a total of 20 years. This paper focuses on partnership accounting firms and samples a total of 2,579 firms after the elimination of sample points with incomplete data.
B. Definitions and measurements of research variables

1. Organizational demography
This paper focuses on the gender attributes of members in partnership accounting firms in the context of organizational demography. The measured variables are the numbers of female accountants, professionals and administrators as a percentage of the total employees, respectively.

2. Relational demography
The relational demography analysis is performed on four member categories, i.e. employees as a whole, accountants, professionals and administrators. This paper measures the level of female popularity similarity between accountants and employees as a whole, between accountants and professionals, between accountants and administrators and between professionals and administrators, with the scale of Euclidean distance (Riordan and Shore, 1997; Young and Buchholtz, 2002). The greater the distance, the larger the variance; the shorter the distance, the smaller the variance (i.e. the similarity is higher). The Euclidean distance is calculated as:

\[ D = \left( \frac{1}{n} \sum_{i=1}^{n} (S_i - S_j)^2 \right)^{1/2} \]

Where

- \( D \) be the variance of a demographic attribute in an organization;
- \( n \) be a job category in an organization;
- \( S_i, S_j \) be the mean of a demographic attribute in the \( i \)th or the \( j \)th category in an organization, \( \forall i, j \in \mathbb{N} \).

3. Organizational performance: net profit margin
This paper samples accounting firms as the research target. Accounting firms are professional service providers, similar with law firms. Hitt, Bierman, Shimizu and Kochhar (2001) measure profitability with net profit margins, i.e. net profits divided with sales as reported in the income statement. This study also refers to net profit margins as an indicator of performances of accounting firms.

4. Control variable
To truly reveal the net relationship of the gender structure of members in partnership accounting firms, this paper controls variables such as organizational age, organizational size, and the human leverage in the empirical study. Organizational ages expressed with the number of months calculated with the number of the sampling period minus the number of years in the history of the sampled firms. Organizational size is measured with the number of professionals in the accounting firms. The human leverage is defined as the number of professionals divided with the number of accountants at the year’s end during the sampling period. The diversity of business offerings is measured with Herfindahl-Hirschman index (HHI) as follows:

\[ \text{HHI} = \sum_{i} p_i^2 \]

Where,

- \( i \) be the number of individual businesses, \( i = 1, 2, 3, \ldots, I \);
- \( P \) be the individual business revenue as a percentage of total sales.

IV. Results and Discussion

A. Descriptive statistical analysis of variables
Table 1 summarizes the mean, standard deviation and correlation coefficients of each two variables. The absolute values of all the correlation coefficients with independent variables are below 0.60 and indicating the independence of these variables.

B. Effects of individual control variables on organizational performances
To gain an understanding of the effects of demographic composition and relational demography on organizational performances, this paper conducts a regression analysis in its empirical study. The results are shown in Table 2. The model for Table 2 is a regression analysis on the effects of organizational sizes, organizational history and human leverage as control variables on organizational performances. The results suggest that (1) there is a significant and positive correlation between organizational history and organizational performances (\( \beta=0.007, p<0.01 \)); (2) there is a significant and negative correlation between firm sizes and organizational performances (\( \beta=-0.006, p<0.01 \)); (3) there is a negative but not significant correlation between sector specialization and organizational performances (\( \beta=0.013, P>0.1 \)); (4) there is a significant and negative correlation between human leverage and organizational performances (\( \beta=-0.005, p<0.001 \)).

Effects of gender composition on organizational performances
Model 1 in Table 2 lists the regression results concerning the effects of organizational history, sector specialization, firm sizes and human leverage as control variables on organizational performances. The findings suggest a positive and significant correlation between organizational history and organizational performances. There is a negative and significant correlation between firm sizes and organizational performances, as well as between human leverage and organizational performances. This paper summarizes the effects of gender structure of occupations as a control variable on organizational performances in Model 2 of Table 2.

Firstly, as Model 2 of Table 2 indicates, the correlation between the number of females as a percentage of total employees and the performance of the organization is insignificant. Therefore, Hypothesis 1a is rejected. This may be a result of weaker motivations for females to share knowledge when they are the majority and in the same profession. It can easily cause mistrust among members. Hypothesis 1a is rejected as there is not significantly positive correlation between the number of females as a percentage of total employees and the performance of the organization. Secondly, Model 2 of Table 2 suggests that the higher the percentage of females among accountants, the poorer the organizational performances (\( \beta=-0.028, p<0.05 \)). Therefore, Hypothesis 1b is rejected. This paper thinks that this may be the inflexibility in opinions among accountants (usually partners) due similarity in professional training and educational background. The difficulty in communication is detrimental to organizational performances. Hence, Hypothesis 1b is rejected.

Thirdly, Model 2 of Table 2 shows that the higher percentage of females among accountants, the better the organizational performances (\( \beta=0.035, P<0.01 \)). This is probably because of the patience and detail-orientation of female professionals improves the quality and efficiency of auditing in the complex process and hence better the performance of the organization. Therefore, Hypothesis 1c is supported.

Fourth, Model 2 of Table 2 reveals that the higher percentage of females among administrators, the better the organizational performances.
performances ($\beta=0.023, P<0.01$). This is probably because females have advantages in performing administrative functions such as human resources, finance, and public relations. The sensitive nature of females means they provide friendly and satisfactory support and service. Therefore, Hypothesis 1d is supported.

Compared to Model 1 of Table 1, the $F$-statistics in Model 2 of 2.78 reach statistical significance. The $R^2$ in adjusted is 0.029, also statistically significant. These numbers indicate the effects of female populations in different occupations on organizational performances. They have practical and theoretic implications.

### C. Effects of gender composition similarity between occupations on organizational performances

Similarly, this paper validates the effects of relational demographic in terms of gender compositions as control variables on organizational performances. The results are summarized in Model 3 of Table 2.

Firstly, Model 3 of Table 2 suggests that the more similar female percentages between accountants and employees as a whole, the better the organizational performances ($\beta=-0.223$, $p<0.01$). This supports Hypothesis 2a. From the perspective of the similarity-attraction theory, females share similarities in personal attributes and this attraction helps communication, reduces the cost of coordination and resolution and hence improves organizational performances.

Secondly, Model 3 of Table 2 indicates that the more similar female percentages between accountants and professionals, the worse the organizational performances ($\beta=0.156$, $p<0.01$). In the context of female personality attributes, similar competences and professional backgrounds prevent knowledge sharing and discourage tolerance. As a result, work effectiveness is hampered.

Thirdly, Model 3 of Table 2 shows that high similarity of female percentages between accountants and administrators has no significant influence over organizational performances ($\beta=0.013$, $P=0.1$). Hence, Hypothesis 2c is not supported. This is probably because administrators follow the books and they are mostly detail-oriented and obedient. Hence, a high similarity in the female percentages between accountants and administrators has no obvious impact on organizational performances.

Fourth, Model 3 of Table 2 reveals that high similarity of female percentages between professionals and administrators has no significant influence over organizational performances ($\beta=0.025$, $P=0.1$). Therefore, Hypothesis 2d is not supported. This is perhaps because accounting as a profession and administration as a profession are essentially two different career paths. Professionals and administrators do their own jobs and a similar female-centric profile is irrelevant to organizational performances.

Compared to Model 2 of Table 2, the $F$-statistics of Model 3 is 3.15, reaching statistical significance. The $R^2$ in adjusted $R^2$ is 0.037, also statistically significant. These numbers indicate the effects of female populations in different occupations on organizational performances. They have practical and theoretic implications.

### Table 1: Correlation Coefficient Matrix

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>0.194***</td>
<td>0.157***</td>
<td>0.111***</td>
</tr>
<tr>
<td>Organizational age</td>
<td>0.007***</td>
<td>0.007***</td>
<td>0.007***</td>
</tr>
<tr>
<td>Organizational size</td>
<td>-0.006***</td>
<td>-0.002</td>
<td>-0.005</td>
</tr>
<tr>
<td>The diversity of business offerings</td>
<td>-0.013</td>
<td>-0.014</td>
<td>-0.014</td>
</tr>
<tr>
<td>Human leverage</td>
<td>-0.005***</td>
<td>-0.005***</td>
<td>-0.005***</td>
</tr>
<tr>
<td>% of female employees as a whole</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of female accountants</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of female professionals</td>
<td>0.085***</td>
<td>0.009***</td>
<td></td>
</tr>
<tr>
<td>% of female administrators</td>
<td>0.023***</td>
<td>0.031**</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Effects of demographic composition and relational demography on organizational performances
The empirical finding that a high female percentage means they can provide more satisfactory administrative support. However, the considerate nature of females play a supporting role.

The contributions from both professionals and administrators are both significant. However, the considerate nature of females perhaps means the patience and detail-orientation of females. Accounting, taxation and auditing are all professional tasks. Partnership accounting firms are in charge of all the businesses whilst professionals handle respective tasks. However, when both accountants and employees as a whole, values or emotions become more consistent in the firms. This is beneficial to the improvement of organizational performances.

The empirical results of this paper show the following: (1) in terms of gender composition similarity of individual occupations, the higher the percentage of females in professionals and administrators, the higher the similarity in gender composition between accountants and employees as a whole, the better the organizational performances. The higher the similarity in gender composition between accountants and professionals, the worse the organizational performances are.

B. Managerial implications

The above findings convey the following implications:

1. Accounting firms are a professional service organization.

Most of the staff members are business graduates and highly professional. Meanwhile, the complex and tedious nature of accounting and auditing tasks are mostly performed by females. The patience and detail-orientation of females perhaps means they are better suited as auditors/accountants. The empirical study of this paper shows that the higher the female percentage of professionals, the better the organizational performances. This is perhaps why gender is a key consideration in the recruitment process for professionals in partnership accounting firms.

2. Professionals are the core human resource of partnership accounting firms, whereas administrators play a supporting role.

The contributions from both professionals and administrators are both significant. However, the considerate nature of females means they can provide more satisfactory administrative support. The empirical finding that a high female percentage in administrators, the better the organizational performances of partnership accounting firms is in line with expectations.

3. The more similar female percentages between accountants and employees as a whole in partnership accounting firms, the better the organizational performances are.

This is in line with similarity-attraction theory or self-categorization theory. When the gender composition becomes similar between accountants and employees as a whole, values or emotions become more consistent in the firms. This is beneficial to the improvement of organizational performances.

4. Globalization has resulted in a growing diversity of business offerings by accounting firms.

Accounting, taxation and auditing are all professional tasks. Accountants are in charge of all the businesses whilst professionals handle respective tasks. However, when both accountants and professionals are women, they may be inflexible in their professional perspectives and opinions. This makes it difficult to reach an agreement and have adverse effects on the improvement of organizational performances.

References


