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# Effects of Demographic Variables, Perceived Spousal Support, and Gender Role Attitudes on Taiwanese Women's Employability

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Luo Lu<sup>1</sup>

## Abstract

The aim of this research was to explore demographic, familial, and attitudinal correlates of Taiwanese women's employment status. Using data from a representative nationwide sample of female workers aged 21 and above ( $N = 1,047$ ), the author found that (a) the employment rate of females decreased steadily with age, with no sign of reentry into the labor market in middle adulthood; (b) the more educated women had higher employment likelihood throughout the early and middle adulthood than their less educated counterparts, whereas this trend reversed after the age of 60; (c) multivariate analysis confirmed that age, education, personal health, and family income were significant predictors of female employment. In a fast changing society, more concerted research is needed to inform public policies and human resource practices to ameliorate the challenges faced by female workers, to promote social justice and female labor participation.

## Keywords

employability, women, age inequality, educational disadvantage

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Employment can be a means of enabling individuals to participate in society. In Taiwan, with Western influences and societal modernization, important social changes have taken place since the 1970s, including a decline of birthrates, a fast growing aging population, an increase in female labor participation, and a substantially increased enrollment in higher education (Directorate-General of Budget, 2006). With respect to employment, the male labor participation rate has dropped from 73.8% (1991) to 67.44% (2005), with an average of 70%, whereas female labor participation rate has increased from 44.39% to 48.44% during the same period. The average rate of male labor participation in Taiwan is comparable to other countries in the West and East Asia. Female labor participation in Taiwan, however, has lagged behind these countries. For cross-country comparison, the Taiwanese rate was 47.71% in 2004, lower than that of the United States (59.2%), Canada (61.6%), Singapore (54.2%), and Korea (49.8%; Directorate-General of Budget, 2004). For within-country comparison, Taiwanese women's labor participation rate was the highest for the 25–44 age group (74.83%), followed by those for the 45–64 age group (45.08%) and the above 65 age group (4.64%), but still lower than those of corresponding male labor participation rates in every age group (92.94%, 76.89%, and 11.74%; Directorate-General of Budget, 2008).

A low birthrate, an aging population, coupled with increased enrolment in higher education, has affected severely the labor supply and has created a worsening problem of labor shortage in Taiwan. In its narrowest definition, a labor shortage is an economic condition in which there are insufficient qualified candidates (employees) to fill the marketplace demands for employment at any price. Techniques for measuring the existence and level of shortages in the labor force of a nation's economy are complex and controversial. The latest government data revealed that in the pyramid of occupations, the labor-intensive manufacturing sector has the most job vacancies in relation to the number of employed workers (2.49%), followed by service (1.84%) and technology (1.41%; Directorate-General of Budget, 2009).

In recent years, Taiwanese government has cautiously introduced migrant laborers from nearby south Asian countries to ease the labor supply shortage. However, such practice has provoked protests from domestic laborers and critics from scholars and social activists, not to mention the immense challenges posed for management of these foreign workers and potential social impact on the larger society (Wang, 2006). The government is thus encouraging more women and older workers to take up paid jobs or to remain in the labor market, aiming for a higher labor participation rate of these untapped sectors of the population (Directorate-General of Budget, 2005; Lu, 2010; Wang, 2006).

Our purpose of this study, therefore, was to explore demographic, familial, and attitudinal factors related to women's employment in Taiwan. Our logic is that (a) employment benefits both the individual and the society; (b) in Taiwan, there is a labor shortage; (c) increasing the number of women employed might help with the labor shortage; (d) understanding factors associated with women's employment is an important step toward achieving this goal.

## *The Economic Circumstances of Taiwanese Female Workers*

Government census data in Taiwan have shown that the low female labor participation is mainly attributable to women quitting their jobs after getting married or having babies (Directorate-General of Budget, 2004). This phenomenon has its root in the traditional, patriarchal social structure in Taiwan: “male superior and female inferior,” “men as bread earners and women as homemakers” are values imprinted in Taiwanese people’s mind (Fu & Chang, 2007), which are practiced by viewing women only as temporary and marginal labor force (Bowen, 2003). Taiwanese women are expected to sacrifice their careers for marriage and family, forcing them to take a discontinued career path (Yi & Chien, 2001). Living up to such popular images of Chinese women has caused contemporary Taiwanese women great tension between choices of paid work and homemaking (Lu & Lin, 1998; Yi & Chien, 2001). Further research has revealed that sex segregation and gender discrimination are still prevalent in Taiwanese workplace, indicated by blatant practices of sex discrimination in hiring process, a substantial gender gap in pay (Bowen, 2003), and unfair treatment of female workers in aspects of promotion, training, and compensation (Lu, Hsieh, & Pan, 2009). It thus seems that lowering both personal and social barriers for Taiwanese women to obtain suitable employment and remain in the labor market is the key to increasing female labor participation and injecting more human resources to tackle the worsening labor supply shortage.

Industrial restructuring in Taiwan over the past decades underscores the issue of women’s participation in the labor force. Although Taiwan is transforming its labor-intensive industrial structures to a high-tech and service-oriented economy, many workers are facing precarious economic positions. Relatively neglected in these discussions, however, have been the unique circumstances of female workers. As many Taiwanese manufacturers moved their production plants to mainland China or Southeast Asia for cheaper labor and land availability, women’s representation in the production as machine operators or assembly-line workers has declined over the years. Scholars have warned that in such an economic context, the distinction between voluntary exit and involuntary unemployment becomes quite blurry (Quadagno & Hardy, 1996). For example, is a female worker whose factory is relocating to a lower cost country and who opts for a settlement and leaves the job market permanently for family really making a voluntary exit? Is a female worker who settles for a lower pay part-time job but who would much prefer a full-time job were it available adequately employed? Factory closure and company downsizing often result in unemployment or underemployment for female workers, as they are typically the last to be hired and the first to be let go in Taiwan (Bowen, 2003). We thus have reason to believe that Taiwan’s recent economic changes have fueled employment adversity particular to female workers.

In Western literature, an important measure of employment hardship is underemployment, which usually includes people who are (a) unemployed, (b) working full-time for near-poverty-level wages, (c) working part-time despite a preference

for full-time work, (d) have given up looking for a job due to discouragement with their prospects (Hauser, 1974). However, such detailed data were not collected in Taiwanese national surveys and government archives, we thus in the current study adopt the term “employment hardship” to broadly refer to a set of employment challenges faced unequally by women.

Partly as a result of Taiwan’s relocation of the manufacturing industries, female workers have moved into service industries such as retail sales, representing 36.7% of the labor force in 1978 to 53.7% in 1999 (Directorate-General of Budget, 1999). However, despite the significant gains made by female workers in service industries, the gender gap in pay widened, placing women under even greater employment hardship. Using Taiwanese census data, Bowen (2003) calculated a negative correlation ( $r = -.20, p < .05$ ) between the ratio of female-to-male employees and the average monthly female-to-male earnings ratio across all industries between 1982 and 1999. This means that as the percentage of female employees increase in an industry, the relative pay for female workers vis-à-vis their male counterparts decreases. In the service industries, females were earning 77.2% of what males were paid in Taiwan (Bowen, 2003). Overall, Taiwanese female workers were earning 74% of what males were paid across all occupations (Directorate-General of Budget, 2000).

The causes for such a gender gap in pay are delineated by the “dual labor market theory” (Cleveland, Stockdale, & Murphy, 2000; Doeringer & Piore, 1971). Men for various reasons are more likely to get jobs in the primary labor market, which offer secure employment, good promotion prospects, and high wages, leaving women occupying the secondary labor markets, with relatively insecure, poorly paid jobs, and bleak promotion prospects. The traditional patriarchal social structure in Taiwan is likely to strengthen such a dual labor market, exacerbating women’s employment hardship (Yi & Chien, 2001) and sex segregation at work (Bowen, 2003; Lu et al., 2009). Chen and Kuan (2006) confirmed such speculations with a quantitative analysis of the census data in Taiwan, revealing that sex discrimination in employment was the most important factor contributing to the gender differential in pay.

The existence and practice of such a dual labor market also make it easier to push women out of paid jobs and into the family. In addition to the aforementioned government census data suggesting sex discrimination in pay (Bowen, 2003), researchers have recently found empirical evidence from a random stratified national sample, showing that female workers in Taiwan face substantial discrimination and unfair treatment in almost every aspect of their work life, such as pay, promotion, welfare, and work content (Lu et al., 2009). In this national sample, 34.03% of participants perceived overall unfair treatment of women at work. Specifically, participants perceived the ratio of male/female managers (66.54%) as the most unfair aspect, followed by opportunities for business trips (44.60%), starting salary (43.68%), promotion (38.10%), salary increase (24.02%), on-job training (16.09%), year-end bonus (14.16%), and job security (7.35%). Such economic inequality coupled with the traditional Chinese social arrangement of

ascribing family responsibilities mainly to women, makes it relatively less costly for women to leave work when there are family members needing care, young or old. Indeed, 54.5% women gave “taking care of family” as the primary reason for not working (Directorate-General of Budget, 2004). It must be noted that Taiwanese women are expected to respond to family needs and socially sanctioned to sacrifice their careers or jobs for the family welfare (Lu & Lin, 1998; Wang, 1999; Yi & Chien, 2001).

### *Age and Educational Disadvantages Among Taiwanese Female Workers*

Focusing on the economic circumstances of Taiwanese female workers in the aggregate may mask the persistent disadvantages faced by particular subgroups of women, for instance, older women and those who are less educated. Research in the United States found clear disadvantages for older workers relative to their middle-aged counterparts—and women in particular (Slack & Jensen, 2008). Furthermore, the mechanisms that influence poverty among the U.S. men and women differ significantly due to gendered work and marital arrangements, namely married women exit from paid work thus constricting their economic autonomy (McLaughlin & Jensen, 1995, 2000). It thus seems that the older and less educated women may suffer a double jeopardy in terms of their likelihood of being excluded from the labor market or being underemployed.

In Taiwan, so far there has been no systematic research examining these differential vulnerabilities in employment positions within female workers. Official labor figures (Directorate-General of Budget, 2004) do suggest two things. First, for the age group of 25–44, rates of both male and female labor participation were not significantly different from those in other countries; however, while male labor participation in Taiwan remained at 83.7% for the age group of 50–54, the rate for female in the same age group dropped drastically to 45%, which was significantly lower than those of United States (74.5%), France (75.6%), Japan (68.4%), and Korea (56.1%). The employment rate for Taiwanese older women (aged 55–59) was even lower (29.1%) compared to men of the same age group (68.5%). Furthermore, there is no sign of women’s reentry into the labor market after marriage and childbirth as observable in Japan and Korea—the employment rate for Taiwanese women shows a trend of steady decline from age 35 onward (35–39: 67.5%; 40–44: 63.9%; 45–49: 57.6%; 50–54: 45%; 55–59: 29.1%; 60–64: 18.0%). Su (2007) confirmed such phenomenon after analyzing the official employment data for a 10-year period (1997–2006). Although it is true that some Taiwanese women may prefer to stay at home after marriage, they may pay the price of limited economic independence and autonomy (Lu, 1994; Yi & Chien, 2001).

One possible reason for the female disadvantage may be the already mentioned gender inequality in Taiwanese employment and work environment. Older age further exacerbates this gender disadvantage. This is because negative attitudes and

stereotypes toward older people still prevail in Taiwan (Lee, 1999; Lin, 1993; Lu & Kao, 2009), which constricts older people's opportunities of finding and retaining satisfactory jobs. Relatively lower education attainment for older Taiwanese women compared to men may be another exacerbating factor for this employment disadvantage (Wu, 2006).

American research did find that lower education attainment explained some of the age disadvantage in employment (Slack & Jensen, 2008). Official data in Taiwan also revealed that 56.0% of those unemployed older workers (aged 45+) had education attainment at only elementary school level (Directorate-General of Budget, 2004). More recent data showed that among employed older workers (aged 50–64), those who had education attainment above high school comprised the largest group (Ministry of the Interior, 2006).

Looking at midlife (aged 50–69) employment choices, a recent study using data from 20 countries around the world revealed some interesting gender differences: education had greater effects in predicting women's employment status, whereas social status was a more salient predictor of men's employment status. Marital status had a significant effect on men's odds of employment, but not on women's (Ginn & Fast, 2006). Specifically, women with more education and men who were married were more likely to be employed. More importantly, perhaps, these researchers also noted that the mismatch between actual and desired employment status was greater among the working class, women, and those who were older, suggesting an unmet demands for jobs. Although Taiwan was not included in this study, we have reason to believe that Taiwanese female workers, especially those who are older and have lower education attainment, are vulnerable for employment hardship.

### *Attitudinal and Familial Factors Relating to Taiwanese Women's Employability*

Western research has found that gender role attitudes are related to women's continued employment after marriage and childbirth (Macke, 1978). Taiwanese studies have confirmed that women who endorsed more strongly modern gender role attitudes were more likely to choose continued employment, whereas those who identified more strongly with traditional gender role attitudes (e.g., men as bread earners and women as homemakers) were more likely to withdraw from the labor market after marriage or childbirth (Lu, 1992; Yi, 1982; Yi & Kao, 1986). Spousal support and familial factors are other significant correlates of Taiwanese women career choices (Lu, 1994; Yi & Chien, 2001). Husbands' emotional support and help with homemaking were pivotal for Taiwanese women to meet demands of work and family roles (Chang et al., 2009; Lu & Lin, 1998).

Because there has been no systematic research on female workers' employment plight in Taiwan, we address this void by asking the following research questions: (a) What are the important demographic correlates of employment status among Taiwanese female workers, especially age and education? and (b) What are the

important attitudinal and familial correlates of employment status among Taiwanese female workers? Although official labor figures may shed some light on the first question, they have to be treated with caution. For instance, in Taiwan, those who work for more than 1 hour per week at paid jobs are counted as “employed” in official census and government statistics (Council of Labor Affairs, 1999; Directorate-General of Budget, 2006), the employment rate is thus calculated rather generously. To present a closer-to-reality picture of women’s employment plight, we opted to use data from a high-prestige nationwide academic survey that collected attitudinal data too. We included both full-time (working more than 40 hours per week) and part-time (working 10–39 hours per week) workers as *employed* in the current study. A total of 80 hours for 2 weeks is the legal working hour limit in Taiwan.

## Method

### *Data and Participants*

Data for the current article came from the 2006 Taiwan Social Change Survey (TSCS). Conducted by Academia Sinica, the TSCS series has accumulated 37 surveys as of 2006. With more than 80,000 interviews over the past 22 years, the TSCS has become the largest survey series in terms of participants in the world (Smith, Kim, Koch, & Park, 2006). Highly reputed for its methodological rigor (e.g., strict supervision, post-interview verification and data checking), its high-quality database is widely used for academic research and cross-country comparisons (its core module is incorporated in the International Social Survey Program [ISSP]). The TSCS surveys people aged 21 and above. The national sample was randomly drawn based on census data, using three-stage (city/county–district/township–neighborhood/village) stratified proportion-to-population size sampling technique. Each participant was approached and interviewed by well-trained interviewers at home. The response rate for the 2006 survey was 45.7%. The sample representativeness was confirmed by checking against the national census data (Fu & Chang, 2007). For the purpose of the current study, we restricted our analysis to all women in the national sample, comprising the current study sample of 1,047 respondents. Our sample had a mean age of 47.31 ( $SD = 16.71$ , range = 21–94). Mean years of formal education was 11.44 ( $SD = 4.15$ ). The majority (59.2%) was married with a living spouse, and the rest single, divorced, or widowed (40.8%). The average household size was 4.18 persons ( $SD = 2.11$ , range = 1–16). Roughly half of our participants (50.8%) lived in cities.

### *Measures*

The author was a member of the TSCS drafting group, but this article is essentially based on a secondary data analysis. The data analyzed here came from the following parts of the survey.

**Employment status.** In the survey, participants were asked to report their current work status. Respondents self-identified themselves in one of the following groups: (a) *employed full-time* includes individuals who are currently working full-time for 40 or more hours per week (45.7% in the current sample); (b) *employed part-time* includes individuals who are currently working part-time or unstably, for between 10 and 39 hours per week (13.9%); (c) *full-time homemakers* includes individuals who self-identify with the housewife role (21.0%); (d) *unemployed* includes individuals who are out of work because of sickness or other reasons (14.6%); (e) *retired* includes individuals who have retired from work permanently (4.8%). For the purpose of the current study, the retirees were excluded from further analyses, except for calculating the employment prevalence rates. Because these group memberships were self-identified, we conducted preliminary analysis to see whether there were any substantial differences between the full-time and part-time workers. We found that in terms of reported weekly working hours, the full-time workers (Mean = 47.77,  $SD = 13.02$ ) were not significantly different from the part-time workers (Mean = 44.59,  $SD = 24.11$ ;  $t = 1.52$ ,  $df = 170$ , *ns*). For our analytical purpose, we then combined the first two groups to constitute the *working group*, whereas the latter two groups constitute the *nonworking group*.

**Demographic and familial correlates of the employment status.** In the survey, seven possible demographic and family correlates of the employment status were measured straightforwardly (a) *age*; (b) *education* attainment (convertible to years of formal education); (c) *marital status* (1 = *married*, 0 = *not married*); (d) *socio-economic status* (*SES*, 1 = *lowest*, 10 = *highest*); (e) *personal health* (1 = *very bad*, 5 = *very good*); (f) *spousal health* (1 = *very bad*, 5 = *very good*); and (g) *family income* (includes total monthly pretax income of the household).

**Attitudinal correlates of the employment status.** Three possible attitudinal correlates of the employment status were also measured in the survey (a) *spousal emotional support* mainly tapped conjugal emotional support and marital alliance, using 2 items “My spouse listens to my troubles,” “My spouse tells his/her troubles to me” (1 = *strongly disagree*, 7 = *strongly agree*); (b) *spousal help with homemaking* asked respondents how often their spouses helped with preparing the evening meal, doing the laundry, and cleaning the house (1 = *never*, 7 = *almost everyday*); (c) *traditional gender role attitudes* were measured by 4 items, mainly tapping patriarchal values pertaining to men’s and women’s prescribed roles in society. The 4 items are “It is more important for a wife to help her husband’s career than to pursue her own career,” “A husband’s job is to earn money; a wife’s job is to look after the home and family,” “Men ought to do a larger share of household work than they do now” (reversed score), and “During an economic recession, it is alright for women to be laid-off before men” (1 = *strongly disagree*, 7 = *strongly agree*).

Items comprising these three scales were selected and revised from those tested in previous TSCS questionnaires (Fu & Chang, 2007). In the current sample, internal

**Table 1.** Percentage of Women Employed for Full-Time and Part-Time Jobs by Age and Education Attainment

Age	Overall Sample (N = 1,047)	Less Than 12 Years of Education (N = 676)	12 or More Years of Education (N = 369)
21–29 years	68.21	100	67.46
30–39 years	84.58	68.18	86.46
40–49 years	75.77	72.88	76.79
50–59 years	61.66	55.45	69.88
60–69 years	19.81	20.22	18.75
70+ years	9.02	9.52	0

Note: Percentages shown in this table were calculated by the number of women employed for full-time and part-time jobs divided by the total number of women in a particular age group.

consistency reliability  $\alpha$  coefficients were .80 for the 2-item spousal emotional support scale, .81 for the 3-item spousal help with homemaking scale, and .76 for the 4-item traditional gender role attitudes scale.

### Analytic Strategy

As 47.2% of participants in the national representative sample had education attainment up to high school (or 12 years of formal education; Fu & Chang, 2007), we grouped our female respondents who had 12 or more years of schooling as the “*more educated group*,” and those who had less than 12 years of schooling as the “*less educated group*.” We first calculated the prevalence of women’s employment by age and education as background information. We further contrasted the *working group* against the *nonworking group*, using cross-tabulations and *t* tests to examine their differences on the seven personal/family correlates and the three attitudinal correlates of the employment status. As multiple *t* tests were performed, Bonferonni corrections were used to reduce the risk of Type I error. Finally, we estimated multivariate logistic regression models to predict the likelihood of a woman being employed.

## Results

### Prevalence of Employment

Table 1 shows the percentage of female workers who are in employment by age and education. Percentages were calculated by the number of women employed for full-time and part-time jobs divided by the total number of women in a particular age group. The data showed a steady decline of employment rates with age, for less educated and more educated women alike, with the peak in the 30–39 age group (84.58%). We also noted that far more less educated older females continued to work than their more educated counterparts after the age of 60.

**Table 2.** Differences Between Working Women and Nonworking Women

	Working Group (N = 623)		Nonworking Group (N = 373)		<i>t</i> ( <i>df</i> )
	Mean	SD	Mean	SD	
Age	41.10	11.68	58.39	17.01	-16.67*** <sup>(513)</sup>
Education years	12.75	3.68	8.79	3.61	16.05*** <sup>(958)</sup>
Socioeconomic status (SES)	5.71	1.45	5.15	1.88	4.63*** <sup>(509)</sup>
Personal health	3.87	0.96	3.38	1.20	6.46*** <sup>(571)</sup>
Spousal health	3.91	1.00	3.62	1.10	3.27*** <sup>(400)</sup>
Family income	9.21	11.28	5.01	5.02	7.58*** <sup>(852)</sup>
Spousal emotional support	10.60	2.63	9.87	3.02	-3.06*** <sup>(960)</sup>
Spousal help with homemaking	10.42	5.03	9.04	5.58	-3.20*** <sup>(615)</sup>
Traditional gender role	15.50	3.89	18.24	4.01	-10.28*** <sup>(956)</sup>

\*\*\*  $p < .001$ .

### Correlates of the Employment Status

We contrasted the *working group* against the *nonworking group*, using cross-tabulations and *t* tests to examine their differences on the seven personal/family correlates and the three attitudinal correlates of the employment status. Cross-tabulations revealed that there was no significant association between marital status and employment status ( $\chi^2 = 1.43$ ,  $df = 1$ , *ns*). Specifically, 61% of those who were married were currently working, whereas 57.4% of those who were not married were currently working. Regarding education, we found a significant association between the level of education attainment and the employment status ( $\chi^2 = 175.68$ ,  $df = 4$ ,  $p < .001$ ). Specifically, among those who had only elementary school education, 28.7% were working; among those who had junior school education, 60% were working; among those who had high school education, 71% were working; among those who were educated for college level and above, 76.15% were working. These data showed that employment rate increased with level of education attainment for women.

Comparisons of group means of continuously measured variables using *t* tests revealed that in contrast to the nonworking group, the working group was younger, healthier, had more years of formal education, higher SES, healthier spouses, and higher family income, as shown in Table 2. We can also see in this table that the working group enjoyed more spousal emotional support, more tangible help with household chores from their spouses, and endorsed lower traditional gender role attitudes.

### Multivariate Analysis

The descriptive results and simple *t* tests showed that women's employment was associated with age, education, SES, personal health, spousal health, family income,

**Table 3.** Logistic Regression Models Predicting Women's Continued Employment

Independent Variable	Model 1			Model 2		
	<i>b</i>	OR	SE	<i>b</i>	OR	SE
<b>Age</b>						
21–29 (ref.)						
30–39	0.08	1.08	0.31	0.18	1.19	0.33
40–49	–0.39	0.68	0.29	–0.11	0.90	0.29
50–59	–0.72*	0.49	0.31	–0.15	0.86	0.33
60+	–2.77***	0.06	0.35	–2.03***	0.13	0.44
<b>Education</b>						
Up to junior school (ref.)						
High school or more	0.63**	1.87	0.20	0.56*	1.59	0.26
Socioeconomic status (SES)				0.04	1.04	0.07
<b>Married status</b>						
Married (ref.)						
Not married				0.24	1.28	0.20
Personal health				0.32**	1.38	0.12
Spousal health				–0.13	0.88	0.12
Family income				0.06*	1.06	0.02
Spousal emotional support				0.01	1.01	0.04
Spousal help with homemaking				0.04	1.04	0.02
Traditional gender role attitudes				–0.04	0.96	0.03
Intercept	1.11***	3.02	0.31	–0.33	0.72	0.96
Pseudo <i>R</i> <sup>2</sup>	.26			.23		
<i>N</i>	960			521		

OR = odds ratio.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

spousal emotional support, spousal help with homemaking, and traditional gender role attitudes. We now present logistic regression models in an attempt to account for these differences and to provide a more nuanced assessment of the correlates of employment among female workers. The dependent variable was a dichotomy measuring whether an individual was employed (1 = *yes*) or not. Table 3 shows the results.

In Table 3, Model 1 included only the key independent variables of interest (age and education) as predictors of employment. The results showed that the likelihood of being employed decreased monotonically from age 50 onward. Model 1 also confirmed a statistically significant advantage for more educated women to obtain employment. Model 2 added the effects of SES, marital status, personal health, spousal health, family income, spousal emotional support, spousal help with homemaking, and traditional gender role attitudes. The results showed that the likelihood of being employed was significantly higher for those with better personal health and higher family income.

## Discussion

The purpose of the current study was to explore personal/family and attitudinal factors related to women's employment status in Taiwan. Our results show that contrary to popular images of Chinese women being full-time homemakers, taking care of their husbands, children, and the extended family (Lu & Lin, 1998; Yi & Chien, 2001), labor force participation among contemporary Taiwanese women is rather high throughout the life span. The overall rate of labor force participation was 59.6% in our sample, much higher than the published official labor figures (e.g., 48.44% for 2005, Directorate-General of Budget, 2006). The labor force participation rate in our sample suggests that female is now an integral and indispensable part of Taiwan's labor force.

Our systematic exploration of possible employment status correlates confirmed that age, education, SES, personal health, spousal health, and family income were all personal/family factors associated with women's labor force participation. Using more stringent analysis of multivariate logistic regression, we confirmed that age, education, personal health, and family income were all significant personal/family predictors of women's labor force participation. It is clear that the age and educational disadvantages prevail into the work realm, distressing Taiwanese women's employment plight. In addition, we also found that more emotional support and tangible help from husbands and less endorsement of traditional gender role attitudes were significant correlates of women's labor participation.

Our study extends the literature in three ways. First, we contribute to the literature on underemployment (e.g., Clogg & Sullivan, 1983; Hauser, 1974) by focusing on the neglected issue of employment hardship among Taiwanese women. The literature to date has uncovered a significant curvilinear age effect on underemployment in Western countries, but has paid little attention to women in non-West societies. Our findings presented here show that though many Taiwanese women participated in the labor market, their employment likelihood steadily decreased as a function of age. The critical ages seem to be 50 and 60, when there are significant increases of likelihood of unemployment for women. A previous nationwide attitudinal survey has uncovered 60 to be the customary marker for "the old age" in Taiwan (Lee, 1999). Prevailing ageism in Taiwan (Lee, 1999; Lin, 1993; Lu & Kao, 2009) thus may work against older females who wish to continue their employment both 10 years earlier and more severe than men. Although some older women may willingly retire to take care of family and grandchildren, increasing life expectancy and living costs make such decision an increasingly difficult one for many. Especially for people of lower SES, continued employment may be an economic necessity, as poor pension entitlements are associated with those in poor health and low occupational class (Arber & Ginn, 1991). Thus, the genuine choice of retirement timing for those who are socially disadvantaged is limited. As we see in our sample, far more less educated older females continued to work than their more educated counterparts after the age of 60, probably out of economic necessity rather than voluntary

choice. Unfortunately, their likelihood of getting adequate employment is bleak (Lu, 2010). Our findings for the first time present a map of female employment by age and education attainment in Taiwan.

Second, our research extends the literature on sex discrimination (e.g., Bowen, 2003; Lu et al., 2009) and women's career choices (e.g., Yi & Chien, 2001; Wang, 1999) in Taiwan, by demonstrating how demographic, family, and attitudinal factors are associated with women's employment status. Past research has documented the extensiveness of gender inequality at work in Taiwan (e.g., Lu et al., 2009) and has traced its root back to the patriarchal social institution (e.g., Bowen, 2003). Against this larger social background for unfavorable employment environment, our results revealed some promising factors associated with women's labor participation. For instance, we noted that spousal support, both in terms of emotional alliance and tangible assistance of lending a helping hand, distinguished the working group from the nonworking group. Past research has already shown that support from husbands and a high quality of conjugal alliance was pivotal to Taiwanese women's successful transition to new roles, for example, being a mother (Lu, 2006), and could alleviate wives' feelings of conflict in engaging in roles outside the family (Beutell & Greenhaus, 1983). On average, employed women in Taiwan spent 5.09 hours per day on household chores, compared to 5.25 hours for unemployed women (Directorate-General of Budget, 1998). Another study (Tang, 1998) with dual-earner couples in Taiwan found that women spent 6.12 hours per day on home keeping, whereas men spent only half of the time (3.19 hours). As it is clear from these figures that in many dual-earner families, Taiwanese women still shoulder the bulk of the housework, caring for the young, the old, and the sick, husbands' willingness to support and help can go a long way to show appreciation, understanding, and to offer some breathing space for the role-juggling working women.

Third, our research is the first systematic analysis of the unique economic circumstances facing female workers in Taiwan, using credible nationwide survey data other than solely relying on secondary government labor figures. To date, studies of women in Taiwan mostly rely on Western theories and concepts. As the social realities in a developing Chinese society such as Taiwan are vastly different from those of the developed Western societies, it is a pressing concern thus to establish facts and patterns of employment circumstances among female workers in Taiwan to inform future research and policy making. Our research has addressed this void and established important baseline facts using a representative nationwide sample.

Despite these contributions, there are some limitations associated with this study. First, the survey design was cross-sectional, thus no causal conclusions are legitimate. Using our analysis as a springboard though, future research may consider panel designs to map out the duration and phases of female employment hardship. Second, the current study was essentially an exercise in secondary data analysis, which was inherently constricted by the range of variables assessed in the original survey. Future research thus could explore more potential risk factors that cause women to slip into employment hardship, such as family adversity.

The current study has important implications for career counseling of Taiwanese women. On an individual level, in a modern society, many women work outside the home for economic necessity or lifestyle choices. As the vulnerable sectors of the labor force usually bear the blunt of economic downsizing or industrial restructuring, female workers especially those who are older and have lower educational attainment face even graver challenges, while working for them is a matter of survival. Health problems, whether one's own or important family members' can also jeopardize women's career development. Career counseling services can use these demographic and familial factors to identify the high-risk groups of women and allocate enough resources to help with their training, placement, and follow-up counseling.

On the society level, we collectively pay an increasing price for the underutilization of female workers, in terms of lost productivity, ills of social injustice, and increasing welfare benefits. As the proportion of female students in higher education holds steadily high in Taiwan (48.98% as undergraduate students and 41.67% as graduate students in 2009), promoting female labor participation can be one way of capitalizing such high-quality human resources. It is worth noting that more educated women tended to have less traditional gender role attitudes ( $r = -.56, p < .001$  in the current study) and were therefore more likely to seek employment (see Table 3). We will further argue that merely allowing women to work is not social progress. The deeply held assumptions about the appropriate roles of men and women and the socially sanctioned gender demarcation at home and at work should be challenged to allow real social progress to occur (Davies & Thomas, 2000). Social services such as career counseling could devote more attention to reeducate Taiwanese men and women of gender equality values, to remove attitudinal barriers to women's continued employment. Organizations can help attracting and retaining female workers by establishing gender-equitable work practices. In Taiwan, the *Gender Equality in Employment Act* was enacted in 2002, which provides the legal basis and imperative for gender-equitable work practices. Organizations can also provide employee assistance programs and family-support policies designed to alleviate female employees' work-family conflict (Allen, 2001; Lu, Kao, Chang, Wu, & Cooper, 2008). Both gender-equitable and family-friendly work practices thus make good sense in human resource management.

In sum, the realities of a fast changing society call for greater attention to the labor market challenges to female workers. The unique circumstances facing Taiwanese women should be systematically examined and findings used to craft public policies and human resources management practices that will help ameliorate the employment hardship of female workers.

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