

The Linkage Between Work and Family: Female's Employment Patterns in Three Chinese Societies

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The significant rise of female's labor force participation in recent decades has become a focal topic worldwide. Outside of western industrialized nations, female's employment has been examined from its overall demographic trend, its contribution to the economic development, factors accounted for the pattern variation as well as its effects on family relations. Among the linkage between family and employment, a relative lack of attention is given to female's work patterns across various family life stages.

Marriage and childbearing, in both western and non-western worlds, are repeatedly shown to be two major stages which affect female's labor force continuity (Mott, 1972; Waite, 1976; Young, 1978; Shapiro and Mott, 1979; Sorensen, 1983; Waite et al, 1985). Females typically work before marriage and withdraw from the job market at marriage or at childbirth, later a substantial proportion may re-enter the labor force after child-rearing stage which result in a twin peak or a M-shaped labor force participation trend for females. However, the typical M-shaped employment pattern which has been prevalent in some western societies is not necessarily apparent in Asian countries like Taiwan (Hsueh, 2000; Yu, 1999; Chang, 1996; Chien and Hsueh, 1996). The difficulty of re-entry to the labor market is one reason documented for the absence of M-shaped employment curve (Yi, 1999); the deep-rooted cultural norm which prescribes female's family role priority is another possible explanation (Yu, 1999). As a consequence, over last few decades, employment discontinuity has become typical feature of female labor force participation in this area.

This paper will examine married female's employment pattern over the life course. Three consecutive family life stages, namely pre-marital, marriage to the first childbirth, youngest child during preschool ages, will be focused which encompass both marriage, childbearing, as well as the heaviest child rearing stages. It is assumed that beyond other factors, female's work continuity will respond to the demand of her family responsibility in each family stage.

The research loci are Taiwan, Tianjin, and Shanghai (a northern and southern metropolis in Mainland China). With similar cultural heritage, these three Chinese societies should have possessed similar values toward familial role demand as well as toward female employment. Nevertheless, different political systems and their concomitant structural circumstances may have produced diverse attitudes and actual behaviors toward female employment. It is the intention of this paper to compare female employment patterns of these three Chinese

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societies. The analysis will be put in the context of various family life stages and factors accounted for the variation will be delineated.

Factors Accounted for Female's Employment Variation

The female's labor force participation rate in Taiwan has increased from 39.2% in 1980 to 45.6 % in 1998.¹ The closest corresponding figures of Tianjin and Shanghai are 58.1% and 60.5% in 1998.² (National Bureau of Statistics, PRC, 1989, 1999; Tianjin Municipal Statistical Bureau, 1999; Shanghai Municipal Statistics Bureau, 1999). Among female workers, married females have assumed major proportion of the increase in that their labor force participation rate rises from 33.2% in 1980 to 46.5% in 1998 in Taiwan (corresponding figures in Mainland China are not available).

Generally speaking, female's personal resources, family's economic need, possible constraint from the social norm, and the larger social context/economic structure have been documented to be factors affecting female's employment patterns (Waite, 1976; Desai and Waite, 1991; Waite, 1980; Young, 1978; Yi, 1994; Chang, 1996; Lin, 1992;). With the drastic social change in this region, two corresponding phenomena are emerging: both the macro and the micro structure are conducive to female's taking continuous employment. A few relevant reports will be reviewed in the following.

1. The Economic Aspect

When Taiwan was basically an agricultural society, females either did not take any employment or worked as non-paid family members. With the establishment of numerous export-processing zones island-wide, middle-aged married females along with their unmarried counterpart joined the labor-intensive economy in the 1960s to 1970s. The availability of the employment opportunity provided many females to continue their employment status after marriage. It also facilitated middle-aged married females to either work full-time or to return to work after certain family stages (Chen and Hsiung, 1997; Yi, 1999).

After 1980s, the transition of married females employment from withdrawal to work continuity was gradually developed into an accepted work pattern for younger generations. With the capital and technology intensive economy (particularly the computer products related industries), the demand for female workers maintains its strength and females regardless of their marital status participate in the labor force with significant magnitudes. Likewise, in the agricultural area, married females continue their work without any interruption from the family life stage. The need of family laborers, the difficulty to find substitutes, the possibility to manage child care in the farm work all contribute to married female's work continuity (Chang, 1980; Chien and Hsueh, 1996). In other words, responding to the existing economic

¹ The female labor force participation rate in Taiwan refers to the % of female workers over all females aged 15 years and above. This category could be further classified into employed and unemployed subcategories (DGBAS Executive Yuan, ROC, 1996).

² For comparative purpose, the closest indicator found in Mainland China may be calculated from "Persons Employed" which refers to population aged 15 or over engaging in social labor which generates income, including total staff and workers, employees in urban private enterprises, urban individual laborers, rural laborers, and other social labors. Gender differences are included only since 1997. The figure here is the % of female persons employed over all females aged 15 and above.

structure, female employment seems to be less affected by the progress of family life cycle, especially the younger cohorts who are less inclined to discontinue employment when facing the pressure generated from their family roles.

In spite of the macro-economic context, personal or familial economic need has always been documented to be an important incentive for married females' labor force participation (Yi, 1994). For females with financial pressures at home, to continue working is certainly a necessary strategy (Waite, 1976, 1980). Even if temporary withdrawal from the work becomes unavoidable, they must strive for the return of the work status as soon as possible in order to help with the family economy (McLaughlin, 1982; Young, 1978). Therefore, for females with strong economic need, family life stages such as marriage or childbirth do not assume a priority in female's employment decisions.

2. The Human Capital Aspect

It is well known that education is the most significant resources for explaining female's employment. Higher educated females are less likely to leave the labor market due to the higher human capital as well as greater opportunity cost when conflict occurs at the marriage or childbearing stage (Sorensen, 1983; Desai and Waite, 1991).

In Taiwan, females with higher education are more likely to fall into the category of work continuity (Yi and Kao, 1986; Chien and Hsueh, 1996), but they may be forced to leave the job market at childbirth because of the lack of childcare support, and they tend to return to work whenever the family situation permits (Chien, 1997). Thus, higher education functions more to prevent females from permanent withdrawal of their employment, rather than to make positive contribution to her continuous employment.

Occupational status is another significant human capital for females. It implies social resources that may be used to alleviate the immediate pressure from childcare or household management, especially if the relative value of employment is higher than hiring others to perform the task (Council of Labor Affairs, R.O.C., 1996; Sassen, 1988). In addition, the higher the occupational status, the more difficult it is to resume the original work once left. Since the withdrawal cost is greater for females with higher occupational status, they tend to maintain their work continuity despite family demands from various life stages (Sorensen, 1983; Chien and Hsueh, 1996).

3. The Compatibility Between Work and Family Roles

For mothers with preschoolers, the compatibility between work and family roles is perhaps the most salient factor in their employment decision at this family stage. It is pointed out that due to existing better benefits of the public sector, females employed by the government are much less likely to leave or to withdraw from their work, whether after marriage or after childbirth, (Walker, 1988; Chang, 1996, 1988). In other words, much lower role conflicts are perceived and the consequent compatible family and work role are maintained by female public employees.

The informal work is shown to be another domain with possible compatibility between family and work roles. In Taiwan, the informal sector comprises a substantial proportion of female labor force (Report on the Manpower Utilization Survey, 1997), because it allows females to allocate their time between work and family roles and is thus considered suitable for mothers with small children (Kao, 1999; Lu, 1994).

Another related concept is the changing gender role attitude which is used as a proxy indicator of the dominant social norm. Generally speaking, modern gender role attitude is related to employment continuity across different family life stages (Yi, et al., 1998; Waite and Stolzenberg, 1976; Smith-Lovin and Tickamayer, 1978; Waite, 1978). Females who identify with modern gender roles are more likely to endorse the intrinsic value of employment, and in return, the possibility of work continuity is enhanced (Desai and Waite, 1991; Moen and Smith, 1986). In other words, female employment is affected not only by economic, familial, or human capital resources, the socio-cultural norm also presents serious constraint in the decision-making of female's employment patterns. Gender role attitude is thus become significant in the prediction of female's employment behaviors (Rexroat, 1992).

4. The Socialization Aspect

Female's employment patterns or the decision to take continuous employment may reflect the value system internalized from the socialization process. Relevant studies point out the importance of mother's work experience in explaining adult daughter's labor force participation (Starrels, 1992). Likewise, growing up in the urban environment and specific ethnic background are associated with more modern gender role attitudes as well as with stronger work orientation (Dai, 1978; Yamaguchi, 2000; Mathur, 1994; Yi, et al., 2000). We would expect that these backgrounds contribute to female's employment continuity.

Other relevant demographic factors include marriage timing as well as birth rates. Early marriage for females is prone to produce withdrawal from work after marriage or after childbirth (Sorensen, 1983; Chang, 1996). In contrast, females with late marriage usually possess higher work role identification and higher occupational achievement which facilitate continuous employment. High birth rate is also shown to discourage mothers with preschool children to take employment. In short, females with more births and shorter birth intervals are less likely to be employed continuously (Waite, 1980 ; Mott, 1972; Young, 1978).

The Family Life Cycle and Female's Employment: Taiwan

In Taiwan, the premarital employment of females has been prevalent since the launch of the economic development in the 1960s. Specifically, the most noticeable period of female's labor force participation increase was between 1966 and 1973 (Chen and Hsiung, 1997). It was a period characterized by the export processing manufacturing of labor intensive economy. Factories, especially textiles and plastics, recruit unmarried females from rural areas to join the assembly line work. These unmarried daughters sent back their earnings to help brothers' education or other family needs (Gallin, 1982). The economic contribution of the female labor force at that time is not only present at the national level but also crucial for the economy at home.

However, after marriage and after childbirth, a substantial proportion of the female employees withdraws from the job market and resumes the traditional housewife role. It has been documented that household management as well as childcare remain to be the most important duty for most Taiwanese females (Yi and Kao, 1986). For these females, the conflict between work and family demand is constant and has often resulted in withdrawal from the labor market. In 1993, more than half (50.4%) females with premarital work experience discontinued their employment either due to marriage or because of childbirth (Chien, 1997). It is clear that the traditional value of female's family responsibility maintains its dominance in the employment decision.

Since female's employment reflects the family life cycle variation, mothers with small children generally have lower employment rate (Yi, 1994). However, data reveal that since 1988, the labor force participation rate of increase has been the highest for mothers with preschool children in Taiwan (Yi, 1999). In addition, as mentioned above, after children enter the school or after the launching stage, the second female re-employment and its resultant M-shaped employment pattern have not been observed in Taiwan (Wang, 1995; Chien and Hsueh, 1996; Hsueh, 2000).

Therefore, female employment in Taiwan is most likely a product of or a compromise between the traditional value and family's economic consideration. Marriage and childbirth are undoubtedly two critical stages for females to leave the job market, family life cycle will thus present a context of evaluation where females confront different degrees of familial demands in their employment decisions. Whether to continue or to withdraw from the labor force becomes a challenge for females with various resources in the decision-making process.

The Female Employment in Mainland China

Over the last few decades, there were basically two forces that shape female's employment in Mainland China. Before 1976, political force was the fundamental element in understanding female's work patterns. Female liberation was viewed an essential part of the socialist reform. As a consequence, females' labor force participation was considered a normative routine or a necessary social practice conducive to the societal development (Daiwen, 1997). All females, before marriage as well as after marriage, were expected to join the labor force, and life-time employment was arranged by the state (Fei, 1997).

After 1970s, the massive economic reform brought significant impact on female employment in Mainland China. In rural areas where the reform influence was evident, a new division of labor or a new gender role model was emerged—men taking employment and women stay farming (Ren and Dong, 1997). In other words, the previous "gender free" labor force of the rural population has transformed into a new pattern with men moving toward non-farm employment while women managing the farming business. Moreover, the rise of township-village enterprises also encourages rural women to add a second employment (or non-farm occupation) besides farming at home (Fei, 1997).

The impact of economic reform on urban females' employment closely follows the privatization of industries in Mainland China. To search for urban jobs in the present market

structure aggravates the magnitude of unemployment problems not experienced before under the total socialist regime. Among laid-off workers, female is usually the first victim. Therefore, while the past history has witnessed a continuous female employment regardless of marriage and childbirth, state nowadays promotes the ideology for females returning to the family in order to alleviate pressures from unemployment. This of course will lead to a substantial change with regard to gender role relations (Friedrich Naumann Foundation, 1994). We thus expect Tianjin and Shanghai females will experience significant transition in their social context of employment. Also, the possible influence of the free market orientation on female's employment may be revealed in the family life cycle variations.

In short, different political systems and different routes of the economic development are likely to form very different employment patterns for our three female samples. The economic reform over the last two decades in Mainland China has resulted in rapid industrial and commercial development in Tianjin and Shanghai. Although the long-term effect of political influences certainly does not fade away over night, significant discrepancies between public versus private sector regarding the economic institutional reform is emerging. Impacts on female's employment as well as her adjustment strategy is thus worth attention. Therefore, this paper will first examine female's employment patterns across family life stages in three Chinese societies; then the analysis will focus on the comparison between factors significantly explaining the pattern variations of female employment in Taiwan, Tianjin, and Shanghai.

METHODS

Data and Sample

Data were taken from three corresponding surveys conducted in Taiwan (1995), Tianjin (1996) and Shanghai (1999). An island-wide two-stage random probability sampling procedure was taken with a target of 500 married couples aged 20-64 plus 500 married females of the same age range in Taiwan. Due to the increasing difficulty of getting access to face interview, a first-wave targeted 1000 random couple samples as well as additional 1500 random substitute couple samples were selected at the beginning. Out of 9 stratified geographical units, 516 married couples and 442 married females completed the survey and they became the final sample of this study.

For the Tianjin survey, two urban areas and one rural area were purposely chosen and probability random sampling procedures were applied to the selection of 4 Jieh from each area, then to 2 residential committees of each Jieh, and lastly 12 couples of each residential committee. Among 300 married couples and 200 married females interviewed, 500 females are included in the analysis (For details, please refer to Yi, et al., 2000). In Shanghai data, six urban areas and three rural areas were first chosen from stratified random sampling procedure, then similar selection rule was applied to 500 married couple samples. The wives samples enter into the comparison.

Since the main concern of this paper is to examine how females adapt their employment behavior to various family life stages, married females without children are thus excluded from the analysis. For those having children, the family life cycle may be distinguished into

“before marriage”, “married to first child birth”, “having preschoolers” (or after the first child to the youngest child aged 6 and under), “having school age children” (or youngest child aged 6 to 15), and “the present stage” (including the empty nest or the retirement). It is clear that if marriage and childbirth are two potential barriers affecting female’s continuous employment, the first three family life stages certainly represent the heaviest family demand for married females in their employment decisions. 938 Taiwanese females, 485 Tianjin and 487 Shanghai females fulfill the above criteria and became our final sample.

Variables

1. Female’s Employment Patterns

As stated above, for our research purpose, the family life cycle will include three consecutive family stages: “before marriage”, “marriage to first child born”, and “first child born to the youngest child not yet entering school”. Female’s employment patterns are defined according to these stages as well and five patterns are distinguished. Those who work before marriage, and continue to work after marriage, after childbirth, after having preschoolers at home are labeled “employment continuity”. In contrast, females with premarital work experience but leave the labor force after getting married are categorized into “leave at marriage” group. Likewise, females who work before marriage as well as after marriage, but withdraw from employment after the childbirth are called “leave at childbirth”. For those who take employment only after marriage fall into the “work after marriage” category. Needless to say, “the never employed” is another group in female’s employment patterns.

It should be noted that informal work sector has been an important employment locus for Asian females, especially in Taiwan. Many a females may take formal job before marriage, but enter into the informal family business after marriage. For these respondents, the work continuity category needs to be separated into at least three situations: work continuity in the formal sector, work continuity in the informal sector, work continuity in and out formal/informal sectors. In other words, it is expected that the flexibility available for married females taking informal work may reduce the role pressure from working in the formal sector, and therefore, will reflect in the proportion of our female samples who falls into each category.

2. The Human Capital and Work Conditions

From Table 1, it can be seen the average age of three samples is similar: 47.2 for Taiwanese, 47.1 for Tianjin, and 45.1 for Shanghai females. Average education is the highest among Shanghai samples (9.2), followed by Tianjin samples (8.8 years), then the Taiwanese sample (7.8). As for occupation, the meaningful status to be studied should be the one that is closely linked to female’s employment decision. Hence, for females who choose to stay in the labor force, the job before childbirth is the key in the decision process. Similarly, those who leave at marriage, the job before marriage serves as our reference; and those who leave at childbirth, again the job before childbirth will be focused. The result shows that white collar work (36%) along with labor job (38%) are two main occupational types for Taiwanese females. Farming (31% and 35%) and labor (37% and 42%), in contrast, are Tianjin and Shanghai samples’ major job categories. The status of the tertiary sector is obviously less developed in Mainland

China. But it should be noted that Tianjin females report the highest proportion in the professional and managerial jobs (18%), much higher than their Taiwanese and Shanghai counterparts (8% and 4%).

With regard to the relative contribution of income toward family economy, the subjective evaluation of personal income from the occupation before marriage or before childbirth is used. 3 points are given to the income considered having important effect; 2 points for those with moderate effect; 1 point for income with small effect; and 0 for those who report no effect at all. In average, Tianjin females report greater contribution of their income to the family economy (2.37), Taiwanese and Shanghai females report similar contribution (1.55 and 1.54).

3. Attitudinal Factors

Gender role attitude is composed of four typical items: Mother's employment is harmful to preschool children; Men's responsibility is earning a living while women's is taking care of homes; Most important familial issues should be decided by men; Generally speaking, men are more suitable than women to be boss at work. Five points scale was constructed in that higher score implies more modern attitudes toward gender roles. Tianjin and Shanghai females reveal more modern gender role attitude (15.3 and 14) than the Taiwanese counterpart (11.8).

The work value is intended to ascertain female's intrinsic value about employment. Two items are asked: "If the financial situation can afford a comfortable life, there is no need to continue working" and "As long as the situation permits, one should continue working". Higher score represents endorsement of work's intrinsic value. It turns out Tianjin sample has slightly lower score of the work value (7.6 vs. 8.2, 8.1).

4. Socialization Background

Mother's education on three societies is similarly low, 2.4, 2.9 and 3.4 for Taiwan, Tianjin, and Shanghai respectively. Ethnic background indicated by father's originality shows that non-local origin females are only a minority in Taiwan (8%) and in Shanghai (9.2%), but non-Tianjin origin has a high of 37%. The rural/urban background clearly points out a divergence between these samples. Regarding the present residence, Shanghai sample has higher urban proportion (67%), followed by Taiwan (52%), lastly by Tianjin (48%). However, the place respondent lived the longest before age 15 shows urban dominance for Taiwanese sample (68%), followed by Shanghai (59%), and a relatively less urban experience for the Tianjin sample (47%). It is thus possible to distinguish the rural to rural, urban to urban, and rural to urban migration among our samples.

5. Family Related Variables

As stated above, family during the child rearing stage, or "after the first childbirth to the youngest child aged 6 or under", is considered the period with heaviest family burden. It is also the stage married females are prone to withdraw from the labor force to concentrate on

TABLE 1

SAMPLE CHARACTERISTICS OF TAIWAN, TIANJIN AND SHANGHAI

	Taiwan	Tianjin	Shanghai
<u>Economic and human capital</u>			
Age	47.2	47.1	45.1
Years of schooling	7.8	8.8	9.2
Work before marriage or childbirth*			
Professionals/Managers	7.8	17.8	4.2
Clerks and service workers	35.8	14.6	18.4
Agricultural workers	18.7	30.5	35.2
Labor workers	37.7	37.1	42.2
The effect of respondent's income*	1.55	2.37	1.54
<u>Attitudinal factors</u>			
Gender role attitude	11.8	15.3	14.0
Work value	8.2	7.6	8.1
<u>Socialization background</u>			
Years of mother's schooling	2.4	2.9	3.4
Ethnic background			
Mainlander /Non-Tianjin /Non-Shanghai	7.8	36.9	9.2
Fukienese, Hakka /Tianjin /Shanghai	92.2	63.1	90.8
Present residence			
Rural	48.5	52.0	33.3
Urban	51.5	48.0	66.7
Rural/Urban background			
Rural	31.8	53.4	40.7
Urban	68.2	46.6	59.3
<u>Family related</u>			
Family structure			
Nuclear	53.3	16.5	50.1
Non-nuclear	46.7	83.5	49.9
Age of first marriage	22.5	24.0	24.5
Number of children	2.96	1.70	1.4
N	939	485	487

* Exclude (1) females without premarital work experience
(2) females who work after childbirth

familial roles. Therefore, we choose the family structure of this family life cycle to see if females co-reside with other kins and may hence have direct childcare support at that stage. Interestingly, while Taiwan and Shanghai samples have higher percentage living in the nuclear structure (53% and 50%), Tianjin sample exhibits an overwhelming trend of co-residence (83.5%) at that time.

The other demographic variables show Taiwanese females enter the marriage at younger age than Tianjin and Shanghai (22.5 years old vs. 24 and 24.5 years old), they also tend to have more number of children than their counterpart (2.96 vs. 1.7 and 1.4).

RESULTS

Female's Employment Patterns

For a typical **Taiwanese** female respondent in our study, she is most likely working before getting married (88.8%). Nevertheless a substantial proportion of females (35%) will withdraw from the labor force at marriage, and another smaller group (10%) remains in the labor force after marriage but quite job at the childbirth (see Table 2). In contrast, 44% continue their employment regardless of marriage or childbirth, and this continuous employment type becomes the most salient category of female's employment patterns. Among wives who never leave the work force even when children are in preschool ages, a little bit more than half (23%) has always been employed in the formal sector. However, what should be noted is the function informal sector plays for married females. Altogether, 20.6% continue their labor force participation by taking informal employment sometime or all the time since being employed. These women may be regarded using the flexibility provided by the informal sector to meet the family demand.

Hence, marriage and childbirth are indeed major life events for married females in Taiwan with regard to their employment behavior. 45% of our female sample will leave the labor force either because of marriage or due to the childbirth (Column 1, 2.3.6). If we accept the informal employment as a possible work pattern compatible with the family role, then up to 66% of Taiwanese female respondents are affected by the family life stages in their employment behaviors.

On the other hand, **Tianjin** female sample's employment pattern is characterized by being unaffected by family life cycle. 73% continue their labor force participation from before marriage to after marriage, and during child-rearing stages. Formal job is clearly the main work type and comprises more than half of females' work patterns (53.4%). Only 8.9% will withdraw from work at family life stages like marriage and childbirth. This implies a high stability of female's work behaviors not influenced by the traditional family role bestowed upon females. Of course, there are females who need to cope with the role conflicts between work and family spheres, and 19.8% indicate taking informal employment in their work history (% similar as the Taiwanese sample). In contrast to Taiwanese sample, a little more Tianjin female starts working only after marriage (8.8% vs. 4.3%); but less experiences the reentry to the job market after childbirth (1.8% vs. 5.7%).

TABLE 2

MARRIED FEMALE'S EMPLOYMENT PATTERNS IN TAIWAN, TIANJIN AND SHANGHAI: ACROSS THREE FAMILY CYCLES (FLC*)

	Taiwan (%)	Tianjin (%)	Shanghai (%)
1. Continuous employment	43.7	73.2	92.1
Formal	23.1	53.4	55.2
Informal	8.0	9.9	17.2
In and Out Formal/Informal	12.6	9.9	19.7
2. Leave at marriage	29.3	3.1	0.8
3. Leave at childbirth	10.1	5.8	1.2
4. Never work	6.9	7.2	0
5. Work after marriage only	4.3	8.8	3.1
6. Quit at marriage and return at FLC 3	5.7	1.8	2.7
<i>N</i>	939	485	487

*FLC1 : before marriage

FLC2 : after marriage to first child born

FLC3 : first child born to last child aged 6 or under

The married female's employment patterns in **Shanghai** is close to Tianjin's, but with much higher proportion never quitting from the labor force. As high as 92% report continual employment which may be decomposed into dominant formal work (55.2%), substantial informal job (17.2%) and in/out the formal/informal sector (19.7%). Evidently, 37% of Shanghai sample has been participated in the informal sector and that becomes the highest of three samples. In contrast, the rest categories are minimal among Shanghai females, with no one ever experiences "never employed".

In short, female employment patterns in Taiwan and Mainland China can be differentiated by the family life cycle. Taiwanese females adjust employment behaviors by withdrawal from the labor market at marriage or at childbirth. Tianjin and Shanghai females not only continue their employment from premarital stage to having preschool children at home, formal job also continues to be the most important work type for these mothers. In addition, the high proportion of continuous employment falls in the informal category (47%, 40%, and 27% for Taiwan, Shanghai, Tianjin samples), not only demonstrates the significance of informal employment in this work pattern, but also implies the compatibility of this work type and the family demand.

The Cohort Variation

Female's employment pattern undoubtedly reflects her overall employment opportunity,

which in turn is shaped by the macro-societal context. In order to ascertain if the macro environment does affect female's employment, samples are separated into three cohorts to compare possible variations revealed in the employment patterns.

Table 3 shows female's employment patterns for age cohorts of 20-39, 40-49, and 50 or above. Five main work categories are listed for investigation: continuous formal employment, continuous informal employment, leave at marriage cycle, leave at childbirth cycle, and never work. Since informal employment is argued to compensate possible incompatibility between work and family roles, those who only have informal employment experience as well as those who ever work in the informal sector are combined into one category.

From Table 3, it can be seen a steady decline of the continuous employment as female's age cohort progresses in **Taiwan** (50.5%, 43.9%, 37.9%). A further scrutiny shows that for older cohort of age 50 and above, informal employment is obviously much more important than formal ones—28.6% vs. 9.3%. In contrast, the middle aged (40-49) and the younger cohort (20-39) demonstrate a higher tendency to take formal employment. Interestingly, these various employment patterns among females of different cohorts echo the historical macro-economic structure in Taiwan. Older women are more likely to participate in the informal sector such as non-paid family workers or agricultural laborers.

Another finding worth attention is that in each cohort, approximately 40% withdraw from the labor force due to marriage or childbirth. But older females are much more likely to leave at time of marriage rather than at childbirth; while for middle and younger age cohorts, to leave at childbirth has gradually become substantial. In addition, the proportion of females who never work in any family life stage is positively associated with age cohort, which again supports the significance of recent female's labor force participation trend.

The employment pattern of three **Tianjin** female cohorts exhibits an entirely different picture. Although the continuous employment maintains its dominance and does not vary much by cohort differences (77%, 80%, 65%), middle-aged and younger females are more likely to take informal employment. This is consistent with the economic reform strategy where the feminization of farming business is in practice to make room for males to enter into the industrial employment. Informal employment is hence increasing among younger females.

Likewise, it is younger females who are more likely to withdraw from the labor force at time of marriage or at childbirth (12.4%). The percentage of employment discontinuity within the younger cohort is more than doubled in comparison with the older female cohort (5%). The movement of the return to the family is clearly exercised not on older female cohort but on younger cohort.

With regard to **Shanghai** sample, among the continuous employment category, two opposing trends clearly appear. The proportion of formal employment decreases with the progress of age while informal employment increases with the advancement of age groups. This pattern resembles that of the Taiwanese, except in much more steep slope and ends with relatively equal proportion between formal and informal employment for older cohort in Shanghai. However, different from the Tianjin sample, informal employment is less important

TABLE 3
MARRIED FEMALE'S EMPLOYMENT PATTERNS BY COHORT: TAIWAN, TIANJIN AND SHANGHAI

Age Cohort Employment Patterns	Taiwan			Tianjin			Shanghai					
	20-39	40-49	50+	Total	20-39	40-49	50+	Total	20-39	40-49	50+	Total
Continuous Employment	50.5	43.9	37.9	43.7	77.1	80.0	65.2	73.2	89.6	98.2	85.1	92.1
Formal	34.7	27.5	9.3	23.1	52.8	57.8	51.4	53.4	69.0	56.4	41.1	55.2
Informal	15.8	16.4	28.6	20.6	24.3	22.2	13.8	19.8	20.6	41.8	44.0	36.9
Quit at marriage	24.9	29.2	32.8	29.3	12.4*	9.6*	5.0*	8.9*	5.6*	0.5*	1.4*	2.0*
Quit at childbirth	13.2	10.5	7.2	10.1								
Never work	3.0	5.0	12.0	6.9	5.3	4.5	11.1	7.2	0	0	0	0
Others	8.3	11.4	9.9	10.0	5.9	5.9	18.8	10.7	4.8	1.4	13.5	5.8
N	265	342	332	939	169	135	181	485	126	220	141	487
	(28.2)	(36.4)	(35.4)	(100)	(34.9)	(27.8)	(37.3)	(100)	(25.9)	(45.2)	(29.0)	(100)

* Only limited number of Tianjin and Shanghai females quit work at marriage or at childbirth, they are thus combined into one category.

for younger cohort, but much more salient for middle and older cohorts. Other employment patterns only assume small percentages.

In short, the cohort variation of female employment patterns for Taiwan and Mainland China samples reveals diverse trend. Taiwanese females tend to be employed in the formal sector as cohort age declines. Also, marriage and childbirth remain to be two stages where females tend to quit from the labor force. Tianjin females, on the contrary, are more likely to take informal employment as age cohort declines. Although high labor force participation across family stages is observed, younger cohort rather than the older counterpart is more likely to leave the work force at marriage or at childbirth, implying the effect of family life cycle on cohort employment patterns. Despite the highest continuous employment, Shanghai sample demonstrates an unexpected pattern—more similar to Taiwan than to Tianjin. A clear trend can be ascertained from different cohorts. Continuous informal employment assumes much more significance as age cohort develops in contrast with the importance of formal work for younger cohorts. Cohort variation appears to be a useful indicator for the macro societal context.

The Multiple Analysis

We will now turn to the effect of relevant factors on female's employment patterns across family life stages. Separate results of three samples are presented in Table 4, Table 5 and Table 6. Three main employment types are distinguished, namely, the continuous employment in the formal sector, the continuous employment in the informal sector (which includes both informal job only and ever taking informal jobs), and quitting work at marriage or at childbirth. Since the informal employment as well as the withdrawal are regarded as possible solutions to the incompatibility arisen from female's employment, the formal employment will thus serve as the reference group.

All equations in Table 4-6 are highly significant and most signs of exogenous variables are in the predicted direction.³

The Taiwan Sample

The result on Taiwanese samples points out that middle-aged cohort (vs. the older cohort), more educational years, employed as professional/manager or as laborers (vs. the typical female clerical work), and income being more important to the family economy are significant in explaining female's taking formal employment instead of working in the informal sector (Table 4, column A). Rural background despite later migration to either urban or rural areas is associated with informal employment during different family life stages. The contrast between quitting job and formal employment shows younger and middle-aged cohorts, higher occupational status (professional/managerial), important effect of income to the family,

³ Table 4 lists three sets of coefficients: (A) shows the percentage change in the log odds of females taking informal employment relative to the formal employment; (B) is the percentage change in the log odds of females quitting work at two specific family life cycles relative to the formal employment; and (C) is the derived result from (A) and (B) in which females quitting job because of marriage and childbirth are compared with those who take informal employment.

TABLE 4

**MULTINOMINAL LOGIT COEFFICIENTS OF FACTORS AFFECTING
MARRIED FEMALE'S EMPLOYMENT PATTERNS IN TAIWAN**

	(A) Ln(P _i /P _f)	(B) Ln(P _q /P _f)	(C) Ln(P _q /P _i)
Economic and human capital			
Cohort			
41-49 (vs. 50+)	-0.6302*	-0.6968**	-0.0665
20-39 (vs. 50+)	-0.5991	-0.8399***	-0.2408
Years of schooling	-0.1197**	-0.0625	0.0573
Work before marriage or at childbirth			
Professionals/Managers	-0.9272**	-1.3070***	-0.3799
Agricultural workers	0.4893	-0.5585	-1.0478***
Labor workers (Clerks and service workers)	-1.1902***	-0.2332	0.9569***
The effect of respondent's income	-0.6487***	-0.7894***	-0.1407
Attitudinal factors			
Gender role attitude	0.0369	-0.1110	-0.1479**
Work value	-0.0040	-0.0632**	-0.0592**
Socialization background			
Years of mother's schooling	-0.0223	-0.0606*	-0.0382
Mainlander (vs. Fukienese, Hakka)	0.0880	-0.0534	-0.1415
Rural to Rural (vs. Urban to Urban)	0.8668**	-0.2221	-1.0889***
Rural to Urban (vs. Urban to Urban)	0.9535**	0.0698	-0.8837***
Family related			
Family structure	-0.1119	-0.1194	-0.0075
Age of first marriage	-0.0077	0.0037	0.0114
Number of children	0.0834	0.0242	-0.0591
Constant	1.7838	4.9785	3.1948***
LL		-662.2892	
N		780	

i = continuous employment in the informal sector

f = continuous employment in the formal sector

q = quit work at marriage or at childbirth

*p<.05 **p<.01 ***p<.001

preference toward intrinsic work values, and mothers more educated are significant for females to continue their employment in the formal sector (column B).

If we accept the underlying hierarchical assumption regarding female's employment patterns with formal employment being most progressive, informal employing in the middle, and withdrawal from the labor force being the most traditional, then by adding the comparison set on quitting versus informal employment (column C), several interesting findings from Table 4 deserve attention:

(1) Middle-aged cohort is indeed affected by the economic transition in Taiwan. They are more likely than the older cohort to take formal job (vs. informal or withdrawal). But it is the young cohort who is most likely to continue their formal employment rather than quitting at critical family life stages. The cohort variation is evident in the comparison between formal employment and other employment types and informal pattern is probably losing its importance for the younger cohort.

(2) Education is an important human capital facilitating Taiwanese females taking formal employment. However, the fact that education does not explain the contrast between quitting work and continuous employment (in formal as well as in informal sectors) implies that without other supportive mechanisms, higher education does not prevent females from quitting work when confronting the role demand of marriage or childbirth.

(3) Taiwanese females who grow up in the rural area are clearly much more likely than their urban counterpart to be involved in the informal employment. The rural background has significant impact on female's taking informal job regardless of their present residence. The concentration of females with rural living experience in the informal sector reflects both the flexible schedule permitted in this work type as well as the rural migrant's accommodation in urban cities.

(4) The effect of personal income from the formal employment is clearly an important consideration for females to continue their employment across family life stages. If the salary is more important to the family economy, females are more likely to continue being formally employed instead of taking informal job or quit work.

(5) The endorsement of intrinsic work value contributes to female's continuous employment as compared to withdrawal at marriage or at childbirth. Likewise, modern gender role attitude is also conducive to female's taking informal job and stay in the labor force rather than quitting from the labor force.

The Tianjin Sample

Due to small numbers of females who withdraw from the labor force at time of marriage or at childbirth, the equation of Tianjin and Shanghai samples will be limited to one set of comparison only: continuous employment in the informal sector versus in the formal sector. The result of Table 5 may be compared with Taiwanese samples in Table 4.

As can be seen, similar as Taiwanese females, higher education and more important effect of income to the family are significant in the account of Tianjin female's taking formal

TABLE 5

**MULTINOMINAL LOGIT COEFFICIENTS OF FACTORS AFFECTING
MARRIED FEMALE'S EMPLOYMENT PATTERNS IN TIANJIN**

	$\ln(P_i/P_f)$
Economic and human capital	
Cohort	
4 1-49 (vs. 50+)	1.1782**
20-39 (vs. 50+)	1.8703***
Years of schooling	-0.2124**
Work before marriage or at childbirth	
Professionals/Managers	1.1340
Agricultural workers	1.5238**
Labor workers	0.9909
(Clerks and service workers)	
The effect of respondent's income	-1.1440***
Attitudinal factors	
Gender role attitude	0.0219
Work value	-0.0042
Socialization background	
Years of mother's schooling	0.0785
Non-Tianjin (vs. Tianjin)	-1.4556***
Rural to Rural (vs. Urban to Urban)	4.0424***
Family related	
Family structure	-0.3530
Age of first marriage	-0.0396
Number of children	-0.1125
Constant	-0.3261
LL	-93.7300
N	355

i = continuous employment in the informal sector

f = continuous employment in the formal sector

*p<.05 **p<.01 ***p<.001

employment in contrast to the informal employment. Rural migrants are also more likely to find informal employment in Tianjin. Nevertheless, two samples depart from here in that younger and middle-aged cohorts in Tianjin instead of the older cohort are more likely to be involved in the informal job. In addition, those migrant not originated in Tianjin are the group likely to be employed in the formal sector while Tianjin residents tend to participate in the informal employment. It is clear that the economic reform in Mainland China has brought non-conventional work opportunities for females, and informal employment is certainly one such segment. Therefore, females with higher human capital as well as with better local resources are the first group responding to the emerging economic structure.

The Shanghai Sample

Table 6 reports factors accounted for the continual employment in the formal versus in the informal sectors among Shanghai females. Higher education and preference toward intrinsic work values are positively related to formal jobs. Those with rural background and not originated from Shanghai are more likely to take informal work. Compared with Taiwanese and Tianjin samples, the importance of income contribution as well as the cohort effect lose their significance in the model. Nevertheless, education (to the formal employment) as well as rural background (to the informal employment) remain to be important predictors in all three samples.

CONCLUSION

The linkage between work and family institutions may be studied from numerous aspects. This paper focuses on how marriage and childbirth as the most critical family life stages may affect female's employment behaviors. Premarital stage, marriage to first childbirth, and first childbirth to last child at preschool ages are three consecutive family stages selected in the analysis. Possible interaction between cohort and female's labor behavior is also examined. Female samples from Taiwan, Tianjin, and Shanghai are compared with an assumption that different political and economic development may produce different outcomes on female's employment patterns.

With regard to possible effect of the family life cycle, the result points out that Mainland Chinese females are characterized by the continuous employment, mostly in the formal sector, across family life stages. Less than 10% leave the work force due to marriage and childbirth. Taiwanese females, on the contrary, are substantially constrained by their familial demands in that almost 40% withdraw from the labor force after marriage or after childbirth.

As to the cohort variation, a proxy indicator for the macro-structural context, results from Taiwan and Tianjin render significant direct support; while Shanghai data lose its importance. Specifically, the advancement of female's age cohort in Taiwan is positively associated with informal job and negatively associated with formal job. Consistent with nation's economic development, the informal employment plays an important function for older females facing the challenge from the incompatibility of work and family roles. In addition, the timing of quitting job for Taiwanese females has gradually postponed from marriage to childbirth as cohorts get younger.

TABLE 6

**MULTINOMINAL LOGIT COEFFICIENTS OF FACTORS AFFECTING
MARRIED FEMALE'S EMPLOYMENT PATTERNS IN SHANGHAI**

	Ln (P _i /P _f)
Economic and human capital	
Cohort	
41-49 (vs. 50+)	0.7035
20-39 (vs. 50+)	-0.1401
Years of schooling	-0.2988*
Work before marriage or at childbirth	
Professionals/Managers	-0.6920
Agricultural workers	4.1168***
Labor workers (Clerks and service workers)	-2.4962***
The effect of respondent's income	-0.1170
Attitudinal factors	
Gender role attitude	0.0107
Work value	-0.3435*
Socialization background	
Years of mother's schooling	0.1102
Non-Shanghai(vs. Shanghai)	2.8219***
Rural to Rural (vs. Urban to Urban)	3.5356***
Family related	
Family structure	0.5029
Age of first marriage	-0.0167
Number of children	0.0478
Constant	3.2274
LL	147.453
N	449

i = continuous employment in the informal sector

f = continuous employment in the formal sector

p*<.05 *p*<.01 ****p*<.001

Among Tianjin females, the ongoing economic reform appears to produce informal employment opportunities for younger females. Under the dual effects of the feminization of farming in the rural areas as well as the access to private entrepreneurship in the urban area, younger and middle-aged females are more likely to participate in the informal labor force. Therefore, Tianjin females may appear to exhibit an unexpected employment pattern in that proportion of the informal work is increasing among younger cohorts. However, the inner dynamics is different in rural and urban areas. Equally important is the small percentage rise of quitting job at marriage or at childbirth for young cohort implying the effect of family life stages on the employment pattern are emerging among young females in Tianjin.

Shanghai females reveal the most active labor force participation in both formal and informal employment. The multinomial analyses show, similar to other two samples, higher education leads to greater likelihood of taking formal job, and rural background results in higher possibility to engage in informal works. But the cohort effect as well as the economic contribution are not significant in explanation. Moreover, divert from their Tianjin counterpart, the Shanghai origin (or the local base) actually contributes to the formal employment while Tianjin origin tends to be located in the informal sector. Whether the economic reform may take different routes in northern versus southern regions in Mainland China and thus produces differential contexts for these two samples requires further investigation.

Overall, we can see that Taiwan, Tianjin and Shanghai female samples all act according to the external demand from macro as well as from micro structure in their employment patterns across various family life stages. Cohort variations clearly indicate how females respond to the emergence of new employment opportunity. Older Taiwanese females take informal work to accommodate potential incompatibilities of work and family roles; while younger females concentrate more on the formal employment and tend to continue working until child-rearing stage. Tianjin females not only adjust their employment behavior between formal and informal work structure, younger cohort actually adopts different strategies in accordance with their external context. Hence, rural Tianjin females stay home farming and urban Tianjin females participate in the informal sector, leading to an relatively unconventional female employment patterns. Shanghai females engaging in formal employment may be distinguished from Tianjin samples in that labor constitutes a significant component. It is suspected that the recent drastic economic booming of the greater Shanghai area sustains more formal labor work for local females in this occupational category.

In short, Regarding the possible effect of family life cycle on female's employment, the exceedingly high labor force participation rate in Mainland China does not endorse such an argument, but evidence from Taiwan does confirm this hypothesis. Since the role of the informal sector as a structural response to the economic development in that region has been documented, informal employment is thus compared with formal type of work and various factors affecting married female's employment patterns are delineated. Therefore, it is concluded that Chinese families during stages with the heaviest burdens tend to adopt flexible strategy to meet the incompatibility between work and family demands. And a likely strategy is for married females of the family to take informal employment which varies by cohort as well as by the local origin.

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