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Chinese Taipei

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1. Introduction

It has been widely recognized that the female workforce, either salaried or unsalaried, and including family workers, housekeepers, and community volunteers, makes a substantial contribution to the economy. Among governments, unions, women's groups, and other members of civil society, greater attention has been focused on the significant role unpaid female workers play in national economies and the fact that this contribution is neither acknowledged or reflected in national employment and income statistics. As cited in the framework paper of this research project, the inclusion of unpaid, non-market sector work could boost national Gross Domestic Product (GDP) figures by 11 to 35 percent in those economies surveyed by the United Nations Development Programme (UNDP). Other estimates are even higher (Gibb, 1999).

The realization of the importance of unpaid workers, and in particular the contribution of unpaid female workers, to the economy, is gaining attention at many levels in Chinese Taipei. While inroads have been made in acknowledging the importance of the female labour force and of unpaid work in general, no attempt has ever been made to estimate the contribution of unpaid family workers and female housekeepers to the economy. As an active player in the region, Chinese Taipei must ascertain the contribution of unpaid work and female housekeeping jobs to its economy so that comparisons among APEC members can be made.

Based on the data sets available, this paper proposes an alternative way of estimating the economic contribution of unpaid workers and housekeepers to the economy of Chinese Taipei. First, the paper will offer a brief overview of the current data on the characteristics of unpaid family workers and housekeepers. Second, an analysis of the estimated contribution of unpaid labour to the economy will be presented. A full description of the estimation methodology is included in Appendix 1. Finally, relevant policies and action programs promoting women's participation in the labour force will be reviewed. The emphasis presented in this analysis lies more on the potential of increasing labour market productivity than on gender equality in general.

2. The Data and Measurements

The data used in this paper are based on material collected by the Directorate-General of Budget, Accounting, and Statistics (DGBAS), including monthly human resource surveys, time-use surveys, and work experience surveys. The last two surveys are conducted on an irregular schedule. The human resource survey is carried out through a two-stage random sampling scheme, with the sampling ratio remaining constant at about a half percent of the total population.

The human resource survey records data on the personal, socioeconomic, and job characteristics for each respondent, including sex, age, educational level, marital status, labour force status, earnings, weekly working hours, industry, occupation, and working status, etc. For the employed labour force, the information collected on working status can be utilized to identify paid and unpaid workers. Among the unpaid workers of the labour force, the category of female housekeepers can be distinguished from others, based on the major activities performed in the timeframe covered by the survey.

It is important to note that although information on the number of working hours of unpaid family workers is available in the survey, their earnings are recorded as nil, and that neither the number of working hours nor earnings information is gathered for those not included in labour force, including housekeepers. This suggests that the human resource survey is unable to provide any direct information on the contributions of unpaid family workers and housekeepers to overall economic activities.

To overcome these data limitations, a methodology to indirectly extract an estimate of this contribution was devised. For unpaid family workers, the information on working hours in the human resource survey was used to associate their contribution with paid workers (operationally defined as employers, employees, and the self-employed). To ascertain the average daily working hours of housekeepers and community volunteers, information was extracted from the time-use survey.

3. Characteristics of Unpaid Female Workers and Housekeepers

In recent decades, Chinese Taipei has undergone dramatic changes in many aspects of its economy, including social modernization, demographic transition, political democratization, industrial restructuring, and educational advancement. Under this process of development, women have achieved moderate progress in their participation in the labour market. The female labour force participation rate increased from 35.5 percent in 1970 to 39.3 percent in 1980, to 44.5 percent in 1990, and then 45.6 percent in 1998. However, the current rate is low compared to other economies at a similar stage of development. As in other cases, family responsibilities and labour market activities are competing claims on women's time. Women in Chinese Taipei follow a traditional path, tending to consider the home as the focal point of their lives.

Among employed women, however, classification by working status has changed significantly since the 1950s. As shown in Table 1, the proportion of unpaid family workers was over one-half the population before 1960. It dropped to 21 percent in 1980, 16 percent in 1995, and currently registers 15 percent. In the same period, there was also a decrease in the proportion of self-employed own account workers. The major increase in the share of the employed is observed in the category of private sector employees. The proportion was only about 25 percent 1960. It jumped to 56 percent in 1980, 61 percent in 1990, and recently reached 64 percent. The significant shift of employed women from unpaid family workers to private sector employees reflects the modernization process of the economy and the society.

In recent years, the number of female unpaid family workers has hovered at around 560,000. Table 2 shows a breakdown by personal characteristics. The data reveal that these unpaid workers share similar characteristics with the self-employed, in terms of age and educational attainment. They tend to be in the 25-54-age bracket, followed by those aged 55-64. The figures further indicate that more than one-half of self-employed and unpaid workers received only primary education. Almost 20 percent of them finished junior education and about the same proportion completed the secondary school level. With regard to job characteristics (data not shown), unpaid workers and the self-employed also share some similarities in industrial and occupational job distribution. Both are more concentrated in the agricultural sector and in commerce, working as vendors or sellers. Table 2 shows that unpaid workers are more similar to the self-employed than to other classifications of female workers.

Besides the unpaid labour they perform for family-owned businesses, women also contribute substantially to the economy and society by performing most of the family duties such as childbearing, childrearing, and housekeeping. These family responsibilities keep many women out of the labour force. Table 3 shows the distribution of reasons for not participating in the labour force (excluding the aged and the disabled). It is clear that the number and structure of the female non-labour force is very different from the male non-labour force. In 1997, for example, women accounted for 72 percent of the total number of those not in the labour force. Women cited housekeeping as the main reason for not working, a very minor reason among their male counterparts.

The fact that women assume the major housekeeping responsibilities has not changed much in the process of economic development and social modernization. The category of housekeepers accounted for 79.4 percent of the females out of the labour market in 1978 (Table 3). It has decreased only about 10 percentage points in two decades. This decrease has been mainly due to an increase in the proportion of those attending school. Currently, 70 percent of the female non-labour force are occupied with housekeeping. In 1997 the number was recorded at 2.6 million, or 72 percent of the female labour force. This is much larger than the number of unpaid family workers (546,000).

The data in Table 2 reveal that unpaid workers and housekeepers are extremely similar to each other in terms of age, number of children, education, and marital status. For this reason, unpaid workers and housekeepers can be considered as the same sub-group of the whole population. The housekeepers are also similar to the self-employed in educational attainment, age and marital status. Unpaid female workers (working for family businesses and in the household) and, to a lesser extent, the self-employed, are characterized as being slightly older and with less education and having slightly more children than the average.

To explore the possibility of inducing housekeepers into the labour market, it is useful to examine their work experiences. Table 4 provides information on civilians aged 15 and over by their current status in the labour force. Among the 2.67 million female housekeepers, 72 percent held full-time jobs. The remainder (27 percent) did not even hold part-time jobs. It is interesting to note the percentage of housekeepers in full-time jobs (72 percent) is higher than that of the unemployed (70 percent), and only slightly lower than those intending to work but not seeking jobs. The data suggest a high potential for housekeepers to be drawn into the labour market.

This section has focused on the basic characteristics of unpaid female workers. It was shown that housekeepers and unpaid workers in family businesses share many personal characteristics with self-employed workers. The data further indicate that housekeepers are definitely a source of potential workers for the labour force. To further study this potential, this paper will next estimate the potential earnings of unpaid female workers and housekeepers, based on the available data generated on the self-employed.

4. Estimated Earnings for Female Unpaid Workers and Housekeepers

This paper aims to ascertain the extent that the aggregate earnings of employers/employees and the self-employed will be inflated if the estimated earnings of unpaid family workers and the potential earnings of housekeepers are taken into account. In light of the fact that unpaid workers are more similar to the self-employed than to employers/employees, the estimation process involves two stages. At the first stage, the earnings function of the self-employed serves as a proxy for the earnings function of unpaid family workers. At the second stage, the earnings function of the self-employed, excluding economic factors (i.e., industry, occupation, and hours of work), is designed as a proxy for the potential earnings function of housekeepers. A detailed description of this methodology is found in Appendix 1.

Estimates of the earning function for unpaid family workers and housekeepers are documented in Tables A1 and A2 of the Appendix, respectively. On the basis of these two estimated earning functions, Table 5 outlines the estimated aggregate earnings for female unpaid family workers and the potential aggregate earnings for female housekeepers. For Chinese Taipei as a whole, the observed aggregate monthly earnings of female paid workers (i.e., employers, employees, and the self-employed) will be inflated by a factor of 15 percent if the estimated aggregate earnings of unpaid family workers are included. The inflation factor would reach 66 percent if the potential aggregate earnings of female housekeepers were taken into account. If the two groups were included simultaneously, the extent of inflation would climb to 81 percent. Estimates were made under the assumption that unpaid workers and housekeepers would receive the same earnings as paid workers with otherwise similar characteristics. The figures in Table 5 also suggest that the estimated aggregate earnings of unpaid workers and the potential aggregate earnings of housekeepers as well as their inflation factors tend to vary systematically with personal characteristics and socio-economic status.

At the individual level, the better-educated are more productive than the less educated. At the aggregate level, however, the figures in Table 5 indicate a decrease in the inflation factor with education for both unpaid workers and housekeepers. The underlying reason is that the numbers of better-educated are lower. For unpaid workers, the inflation factor will fall from 39 percent for those with a primary school education to as low as 2 percent for the university educated. The inflation factor of housekeepers also exhibits a declining trend by educational level (197% for the least-educated and 14% for the best educated). The less-educated are apparently more important than the better-educated in terms of their potential contribution to the total actual earnings of the economy.

With respect to the age cohort, the observed aggregate earnings of paid workers, the aggregate estimated earnings of unpaid workers, and the potential earnings of housekeepers all show a convex pattern in the sense that the level increases and then decreases with age. For both unpaid workers and housekeepers, age further indicates a positive effect on the inflation factor. With regard to marital status, the married group plays the most important role in contributing to the total aggregate earnings.

As expected, there is a clear distinction in aggregate earnings by industry and by occupation. For the actual earnings of the paid workers and the estimated earnings of the unpaid workers, the tertiary industry accounted for the biggest share, 68 percent and 49 percent, respectively. In terms of occupational composition, the largest amount of earnings is registered in the category of technicians and clerks for paid workers, and in service and sales workers for unpaid workers. Due to the effect of the distribution of the unpaid workers, however, the extent of enlarging the total earnings is particularly distinctive for the primary

industry and for agricultural workers (see Table 5).

The observed and estimated aggregate earnings also vary with the geographic location of the labour market. Table 5 suggests that the aggregate earnings level for paid workers are highest in the northern region and lowest in the east. A similar pattern emerges for the estimated earnings of unpaid workers and for the potential earnings of housekeepers. This finding is closely related to the industrial distribution and relative population size among the four regions. In terms of the inflation factor, the highest level is seen in the central region for both unpaid workers and housekeepers (24 percent and 77 percent, respectively), but the lowest level is observed in the north for unpaid workers (9 percent) and in the east for housekeepers (54 percent).

Based on the monthly aggregate earnings, this section has demonstrated the significance of unpaid female workers and housekeepers to the whole economy. If unpaid workers received wages, the aggregate earnings in Chinese Taipei are estimated to increase by 15 percent. If the potential earnings of housekeepers were included in national accounting, the total earnings would be boosted by 66 percent. It should be noted that the variable of working hours is crucial in estimating earnings. Unfortunately, due to data limitations, this factor was not taken into consideration in all of the estimate processes.

In 1992-97, self-employed females worked for 47.3 hours a week on average. The corresponding figure for unpaid workers was 45.2 hours. Given the small difference, the estimated earnings of unpaid workers based on the earnings function of the self-employed is reasonable. Consequently, the inflation potential of 15 percent made by unpaid workers to total earnings is acceptable.

As shown in Table 6, a recent survey (DGBAS, 1999) reports that the female non-labour force daily perform about 3.4 hours of household work. This is equivalent to one-half of the weekly working hours of self-employed women (47.3 as mentioned above). For this reason, we conclude that total female earnings would be increased by 33 percent if the value of household work were included. It should be noted that women in the labour force also devote substantial daily blocks of time to household work (2.15 hours for the employed and 1.68 hours for the unemployed). For future research, the value of unpaid household work conducted by women in the labour market should also be assessed and taken into account. This is particularly important given that the number of employed women (3.6 million) is much larger than the number of housekeepers (2.6 million) in Chinese Taipei.

5. Policy and Programs

Chinese Taipei experienced labour shortages in the period 1985 to 1995. At the same time, the female labour force participation rate remained low, at about 45 percent. To tap into its human capital resources and potential, policies were developed and implemented to encourage women's involvement in the market. Many ad hoc action programs were created to meet this purpose. In August 1994, a major "Program of Promoting Female Employment" was formally adopted. The program aimed to facilitate women's engagement in gainful economic activities and to increase their employment stability. Based on Articles 24 and 26 of the Employment Services Act and other relevant documents, the program sought to achieve its goal by winning support and participation from government and civil society. Among the program's basic operating premises were:

- enforcement of labour laws in order to ensure the rights and benefits of employed females;
- expansion of Vocational Training Programs for Women, in order to foster skills development for employment;
- removal of barriers to female employment;
- enhancement of employment services for women; and
- provision of other programs and channels to facilitate female employment.

Table 7 records the major achievements for the period July 1996 to the end of 1998. In its efforts to enforce the relevant labour laws, some 50,000 establishments were inspected under the program to ensure proper working conditions and adequate occupational health and safety environments were in place. An additional 1,905 cases were checked for working conditions specifically related to the employment of women, for example, night shifts.

Chinese Taipei is well known for its extensive vocational training programs. Under the auspices of the

program, training programs specifically designed for women were carried out by trade unions, occupational associations, professional institutions, and other NGOs. Approximately 26,852 women received general skills training. Another 11,780 were trained for a second area of specialty to increase their employment opportunities.

In terms of enhancing employment services for women, the program also provides information on employment opportunities, especially part-time employment, flex-time employment, and family-friendly workplaces. For this purpose, specific surveys and seminars were conducted with an aim of improving the quality of employment services to women. Table 7 shows that the program attracted almost 135,000 applications. At the same time, about 17,000 suitable job opportunities were identified by the program. The number of successful job placements (45,335) is more than the registered vacancies. This fact indicates that the regular channels of employment services are functioning well.

Inadequate or non-existent childcare arrangements are a frequent barrier to women entering or re-entering the workforce. To counter this obstacle, the program provided assistance to set up childcare facilities (including care centers and kindergartens). The program provided 414 business and industrial establishments with financial assistance to establish or improve their care facilities. In total, the number of care centers set up numbers more than 25,000. The amount of financial support provided by the program was NT\$684 million with an average contribution per center of NT\$27,000.

From the above discussion, it is clear that Chinese Taipei has adopted an aggressive approach to the promotion of female employment, as evidenced by the impressive performance of the Program of Promoting Female Employment. The available data, however, is not sufficient to fully evaluate the impact of the program. It can be assumed that these efforts made by Chinese Taipei could be useful in further research on the linkages between paid and unpaid workers in the economy.

6. Conclusion

As in most other economies, female unpaid workers in Chinese Taipei are an important part of its economy. The female labour force participation rate is 46 percent. The majority of women not in the labour force (2.64 million) are housekeepers who receive no pay. Even among the 3.68 million employed women, 550,000 are unpaid family workers. One major aim of this paper is to assess the contribution made by unpaid family workers and housekeepers to the economy of Chinese Taipei. For this purpose, the potential aggregate earnings of the two groups were estimated on the basis of their personal characteristics and the earnings function of self-employed women.

The estimates indicated that the observed aggregate earnings of female paid workers (i.e., employees, and the self-employed) increased by 15 percent if the estimated earnings of unpaid family workers are included. Taking into account the difference in weekly working hours between housekeepers and self-employed women, the analysis concluded that total female earnings would be enlarged by 33 percent if the potential earnings of housekeepers were included. In sum, the unpaid female workers and housekeepers could have contributed to the economy by raising up the total observed aggregate earnings by 48 percent if they had been paid for their work.

The estimates offered in this paper are by no means a complete survey of all types of unpaid female work. For example, women in the labour force also spend time on housework. At the same time, the number of females in the labour force is one million more than the number of housekeepers. The value of the housework done by employed women is quite substantial and needs to be further assessed. Another concern is the voluntary work by women. According to a recent survey, however, only 6.6 percent of housekeepers currently perform voluntary work (Table 8). This figure is perhaps not significant in Chinese Taipei for the moment.

Many programs have been undertaken in Chinese Taipei to promote female participation in the labour market. They were embraced in the 1994 Program of Promoting Female Employment which included measures to alleviate barriers to women's employment in the workforce, enforce labour laws, expand vocational training for women, and disseminate information on employment opportunities and services.

The achievements of the program have been impressive; however, its effectiveness can be more fully

evaluated when more detailed data is available. It is true that the current female labour force participation rate of 46 percent is considered low for Chinese Taipei. There has been a substantial increase in the participation rates of the primary working ages (20-49) in the past few decades, as the participation rate of the 15-19 age group declined considerably due to education (Tsay, 1995). The re-entry of women into the labour market after middle-age is on the upswing (Tsay, 1998). However, the number of women out of the labour market due to household responsibilities remains enormous (2.64 million). In an attempt to build linkages between paid and unpaid work, it is important to understand their job-related characteristics, attitudes, and opinions.

Table 8 reveals that 76 percent of housekeepers had previous work experience compared to 24 percent who had never worked. As expected, there is a clear relationship between working experience and women's educational attainment. Among those who had never worked, the leading reason for not working was at the request of their husband or family (26 percent). It is interesting to note that the proportion does not vary much with education, except at the highest level. The data point to the important role played by the husbands and family. Other economic and job-related reasons for not working are not as important. For those who had once worked, the major reasons for quitting a previous job were taking care of children (37 percent) and voluntary resignation due to marriage or childbirth. The findings further highlight the importance of family considerations in employment decisions.

Among housekeepers, almost 70 percent have no intention of entering the labour market in the coming year. The proportion intending to work for sure is only 5 percent. The remaining 26 percent would work if they found a suitable job. The data suggest that the intention to work among housekeepers is rather low, probably between 5 and 15 percent. For those who intend to work conditionally, slightly more are concerned about childcare arrangements (37 percent) than about working conditions (31 percent). They desire to work as clerks (21 percent) or sales and service workers (17 percent). With regard to working schedules, the top choice is for part-time work (36 percent), followed by full-time hours with a fixed schedule (25 percent), and then full-time with a flexible schedule (16 percent). The amount of working time appears a more important consideration than flexibility in the working schedule.

For those who would definitely consider working in the coming year, one-half expressed no need of services from the government. Among those who stated they would need services, nearly one-quarter mentioned job information on services and training. This response could be due to the fact that jobs had already been arranged for this group of housekeepers. Those who did see the need for such services, may not appreciate or be informed about the employment services offered by governmental agencies.

In conclusion, most women who remain outside the labour market as housekeepers do so due to family-related reasons and considerations. It is clear that more weight is placed on the family than on the market. Under these circumstances, employment promotion programs should not be limited to the labour market issues. More attention should be directed to the lives of housekeepers and the cultural role of the family. This focus is particularly crucial when the housekeepers do not appreciate existing official employment services, which could help them balance employment opportunities with family responsibilities.

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Appendix 1: Estimation of Aggregate Earnings for Unpaid Workers and Housekeepers

The estimation of aggregate earnings for unpaid workers and housekeepers is based on the human resource surveys of Chinese Taipei. These data is the most reliable in that they provide the most detailed information on personal, socio-economic, and job characteristics.

The proposed method of estimation in this paper is fairly straightforward. Since unpaid family workers and female housekeepers are more similar to the self-employed than to employers and employees, the earning function of the self-employed can thus be applied as a surrogate for the earning function of unpaid family workers and female housekeepers.

The proposed estimation method and procedure are as follows. Since the surveys do not record the information on the work experiences of female housekeepers, we must construct two earning functions of the self-employed. One is the proxy for the earning function of unpaid family workers, and the other is for the earning function of female housekeepers.

The pre-determined explanatory variables for the earning function of the self-employed include sex (male, female), age marital status (single, married, divorced/separated, widowed), educational level (primary, junior high, senior high, college, university+), weekly work hours (wrkhrs), industry (primary, secondary, tertiary), occupation (manager, professional, agricultural worker, craft/trade worker, operator/assembler, low skilled worker), current job seniority (jobdeni), and regional dummy variables (Taipei City, Taipei Prefecture, Shinchu City, Taichung City, Kaohsiung City, other cities, rural prefectures); in other words, let $W^1_{Sif Emped}$ represent the first earning function, then $W^1_{Sif Emped}$ reads as

$$W^1_{Sif Emped} = W^1_{Sif Emped} (Sex, Age, Marital Status, Education, Work Hours, Industry, Occupation, Job Seniority, Regional Dummy Variables).$$

With respect to the second earning function, the surveys do not offer us the information on the economic characteristics of female housekeepers; explanatory variables like industry and occupation can not be included in the earning function of housekeepers. Thus, let $W^2_{Hus Kper}$ be the second earning function, then $W^2_{Sif Emped}$ can be expressed as

$$W^2_{Hus Kper} = W^2_{Sif Emped} (Sex, Age, Marital Status, Education, Work Hours, Regional Dummy Variables).$$

To achieve our goal, the computation procedures are as follows. At the first stage, we construct the earning function of the self-employed by regressing their earnings on their personal characteristics and the remaining variables representing working experiences and socioeconomic status. At the second stage, in recognition of the similarity between unpaid family workers and housekeepers, the earning function of unpaid family workers can serve as a proxy for the corresponding function of housekeepers. Thus, similar to the first stage, we estimate the earning function of unpaid family workers again, but their economic variables (occupation and industry) are not included in the equation. At the third stage, we separately aggregate the earning of employers, employees, and the self-employed and the estimated earnings of unpaid family workers and female housekeepers. Based on the observed and estimated aggregate earnings, we can thus assess how much the monthly aggregate earnings will be inflated if the estimated earnings of unpaid workers and the potential earnings of housekeepers are taken into account.

The empirical estimation results of $W^1_{Sif Emped}$ and $W^2_{Hus Kper}$ are summarized separately in the Appendix Tables A1 and A2. Explanatory variables in both earning functions exhibit a general pattern. As expected, males exhibit a higher level of earnings than females. The estimated coefficients for Age and Ln (Age) also indicate that age has a convex effect on the earnings of unpaid workers; namely, the level of earnings will go up and then down as age increases. As for the effect of marital status, the single and divorced/separated have lower levels of earnings than their married counterparts. The estimated coefficients for the dummies of educational levels suggest that education has a very strong positive effect, with this positive effect being particularly significant for the better-educated. The effects of industry and occupation are also distinct in the sense that workers in the secondary and the tertiary sectors have higher levels than those in the primary sector and that those in the higher occupational hierarchy tend to have higher earnings. In addition, the regional effect is significant in the sense that those residing in the major cities record higher levels of earnings in general.

Table 1. Structure of the Employed by Working Status, 1951-1999

Year	Total Number (1,000)	% Distribution by Working Status				
		Employer	Self-Employed	Unpaid Worker	Private Employee	Government Employee
<i>Female</i>						
1951	821	1.20	15.50	53.70	10.50	19.00
1960	963	1.10	12.60	50.50	24.70	11.30
1970	1,396	1.00	12.20	42.00	36.50	8.30
1980	2,191	1.30	10.90	21.40	56.30	10.60
1985	2,709	1.30	9.90	21.00	57.50	10.30
1990	3,108	1.50	9.00	17.60	61.20	10.80
1995	3,487	1.80	8.40	16.10	62.30	11.40
1996	3,560	1.80	8.51	15.90	61.94	11.85
1997	3,613	1.99	8.33	15.11	62.86	11.71
Feb.1999	3,732	1.74	8.33	14.90	63.77	11.25
<i>Male</i>						
1951	2,072	2.60	42.30	18.90	26.40	9.90
1960	2,510	2.50	38.20	17.50	26.70	15.10
1970	3,180	3.70	32.40	10.50	39.00	14.50
1980	4,357	6.00	25.50	5.30	49.70	13.40
1985	4,719	6.00	27.00	5.00	49.50	12.40
1990	5,175	6.80	24.40	3.80	52.90	12.00
1995	5,558	7.50	22.40	3.70	55.50	10.90
1996	5,508	7.64	22.42	3.50	55.45	10.98
1997	5,562	7.82	21.83	3.33	56.26	10.79
Feb.1999	5,606	7.74	22.03	3.23	57.26	9.74

Source: Yearbook of Manpower Survey Statistics , years cited.

Table 2. Compositions of Female Self-employed, Unpaid Workers, and Housekeepers by Personal Characteristics, 1992-97.

Personal Characteristics	Composition(%)		
	Self-employed	Unpaid Worker	Housekeeper
<i>Total</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>
Age			
15-24	3.74	6.18	5.03
25-34	20.24	23.42	26.00
35-54	58.80	54.90	44.13
55-64	14.43	13.34	20.81
65+	2.79	2.16	4.04
Marital Status			
Single	9.32	6.51	1.45
Spoused	71.43	92.54	89.90
Divorced/Separated	5.53	0.29	2.09
Widowed	13.72	0.66	6.56
Education			
Primary	55.55	53.97	51.37
Junior High	18.15	19.15	20.36
Senior High	21.61	22.61	22.99
J College	3.19	3.10	3.51
University+	1.50	1.17	1.77
Child Number			
0	30.18	9.83	13.12
1-2	26.32	31.70	39.10
3-4	36.74	48.07	38.16
5+	6.76	10.40	9.63

Note: Compiled from the 1992-97 Human Resource Surveys of Taiwan, DGBAS.

Table 3. Structure of the Non Labour Force with Working Ability by Reason of Not Working

Year	Total Number (1,000)	% Distribution by Reason of Not Working			
		Intend to Work but Not Seeking for Work	Attending School or Preparing for Entrance Exams	Housekeeping	Others
<i>Female</i>					
1978	2,952	1.02	18.20	79.37	1.41
1985	3,238	0.79	22.01	76.12	1.08
1990	3,461	0.85	24.36	73.56	1.24
1995	3,664	1.06	26.42	71.34	1.17
1997	3,719	0.97	28.05	69.86	1.16
<i>Male</i>					
1978	878	3.52	80.03	1.96	14.49
1985	1,117	3.84	71.53	0.74	23.89
1990	1,264	4.02	70.93	1.62	23.43
1995	1,375	4.95	71.56	0.73	22.84
1997	1,427	5.05	71.20	0.56	23.13

Source: Yearbook of Manpower Survey Statistics , years cited.

Table 4. Work Experience of Civilians Aged 15 Years and Over by Current Status of Labor Force

Current labor force status	Civilians aged 15 and over (1, 000)	Ever took full-time jobs (%)	Never took full-time jobs (%)		
			Subtotal	Ever took part-time jobs	Never took part-time jobs
			<i>Male</i>		
Total	8,097	86.34	13.66	0.24	13.42
Labor force	5,797	99.34	0.66	0.10	0.56
Employed	5,636	99.90	0.10	0.10	-
Unemployed	161	79.65	20.35	0.18	20.17
Not in labor force	2,300	53.58	46.42	0.60	45.82
Intend to work but not seeking for job	60	76.57	23.43	1.28	22.15
Attending or preparing to attend school	965	2.38	97.62	1.02	96.61
Busy in housekeeping	6	89.71	10.29	-	10.29
Old age or disable	929	92.29	7.71	0.21	7.50
Others	341	88.33	11.67	0.38	11.29
			<i>Female</i>		
Total	8,155	73.91	26.09	0.57	25.52
Labor force	3,680	98.83	1.17	0.45	0.72
Employed	3,592	99.54	0.46	0.46	-
Unemployed	88	69.85	30.15	-	30.15
Not in labor force	4,474	53.42	46.58	0.67	45.91
Intend to work but not seeking for job	31	76.93	23.07	-	23.07
Attending or preparing to attend school	1,035	3.89	96.11	1.00	95.11
Busy in housekeeping	2,668	72.42	27.58	0.52	27.06
Old age or disable	699	52.35	47.65	0.76	46.89
Others	41	67.71	32.29	0.53	31.76

Table 5. The Extent of Inflation in Monthly Aggregate Earnings due to the Inclusion of Unpaid Family Workers and Housekeepers

Unit: Million NT\$, %

Characteristics	Aggregate Earnings			Inflation Extent(%)		
	Employer/te + Self-employed (Actual Earnings) [1]	Unpaid Worker (Estimated Earnings) [2]	Housekeeper (Potential Earnings) [3]	[2]/[1]	[3]/[1]	(2)+[3]/[1]
Education						
Primary	12974	5,080	20,522	39.16	158.17	197.33
Junior High	8652	2,124	9,801	24.55	113.28	137.83
Senior High	24646	2,486	11,888	10.09	48.23	58.32
J College	12015	371	1,928	3.09	16.05	19.14
University+	10,675	181	1,292	1.69	12.10	13.79
Total	68,961	10,242	45,430	14.85	65.88	80.73
Age						
15-24	11,448	414	2,025	3.62	17.69	21.31
25-34	24,725	2,692	13,530	10.89	54.72	65.61
35-54	29,956	6,048	21,874	20.19	73.02	93.21
55-64	2,592	978	7,119	37.75	274.69	312.43
65+	241	110	882	45.65	366.00	411.65
Total	68,961	10,242	45,430	14.85	65.88	80.73
Marital Status						
Single	23,359	438	483	1.87	2.07	3.94
Spoused	40,633	9,731	41,852	23.95	103.00	126.95
Divorced/Separated	2,533	23	86	0.93	31.81	32.74
Widowed	2,436	49	2,290	2.02	93.99	96.01
Total	68,961	10,242	45,430	14.85	65.88	80.73
Industry						
Primary	1,185	2,961	-	-	249.78	-
Secondary	20,906	2,233	-	-	10.68	-
Tertiary	46,871	5,048	-	-	10.77	-
Total	68,961	10,242	-	14.85	-	-
Occupation						
Manager	2,787	16	-	0.56	-	-
Professional	8,966	89	-	0.99	-	-
Technician/Clerk	28,247	1,186	-	4.20	-	-
Service/Sales Worker	12,355	3,640	-	29.46	-	-
Agri Worker	1,113	2,955	-	265.52	-	-
Craft/Trade Worker	2,170	777	-	35.78	-	-
Operator/Assembler/Low Skilled	13,324	1,580	-	11.86	-	-
Total	68,961	10,242	-	14.85	-	-
Residential Place						
Northern	35,001	3,182	20,575	9.09	58.78	67.87
Central	14,209	3,417	11,001	24.05	77.42	101.47
Southern	17,911	3,339	12,855	18.64	71.77	90.41
Eastern	1,841	305	999	16.57	54.28	70.85
Total	68,961	10,242	45,430	14.85	65.88	80.73

Table 6. Daily Time Allocation for Staying at Home (Excluding Sleeping) and for Doing Household Work by Sex and Labour Force Status, March 1998

Unit: Hours per Day

Labour Force Status	Staying at Home (excluding sleeping)	Doing Household Work
Males	5.33	1.00
Employed	5.05	1.00
Unemployed	6.50	0.93
Non-Labor Force	7.53	1.09
Females	7.96	2.70
Employed	6.18	2.15
Unemployed	7.00	1.68
Non-Labor Force	10.18	3.39

Source: *Report of the Survey on Social Development Trends, 1998*, Tables 39 and 40. Taipei: DGBAS.

Table 7. Performance Records of the Program of Promoting Female Employment, 1996-1998.

Item	July-Dec. 1996	1997	1998	Total
Labour Inspection of Establishments)	(No.			
Working Conditions	1,611	4,753	5,178	11,542
Health and Safety	6,432	15,570	15,327	37,329
Child + Female Employment	586	1,138	181	1,905
Vocational Training for Females Persons)	(Number of			
General Training	4,285	7,726	14,841	26,852
Second Speciality	3,534	4,096	4,150	11,780
Employment Services of Persons)	(No.			
Application	22,611	41,359	70,916	134,886
Vacancy	2,586	6,428	7,944	16,958
Placement	7,585	14,999	22,751	45,335
Removal of Barriers (Assistance to Set Up Child Care Facilities)				
Establishments Received Assistance	109	100	205	414
No. of Care Centers Set Up	37	4,072	21,224	25,333
Amount (NT\$ in 1,000)	36,178	599,228	48,698	684,104

Source: Bureau of Vocational Training, Council of Labor Affairs.

Table 8: Work Related Characteristics and Opinions of Female Housekeepers by Education, 1998

Unit: %

Characteristics	Education			
	All Levels	Jr. High and Less	Sr. High & Vocational	University and Above
Doing Voluntary Work	6.57	5.35	6.73	17.83
Never Worked Outside the Family	23.98	30.31	11.54	9.25
Major Reasons for Never Worked Outside the Family				
Requested by Husband (Family)	25.78	25.75	27.03	21.19
Family can Afford Economically	16.12	15.25	20.23	24.39
Unable to Find Suitable Job	6.76	6.70	7.74	3.98
No Intension to Work	8.76	8.50	9.66	12.64
Reason for Quitting Job (among those ever worked)				
Voluntary (marriage + child)	31.33	27.66	38.32	33.23
Requested by Husband (Family)	4.22	3.65	5.45	4.01
Requested by Employer	0.85	0.47	1.74	0.40
Child Care	37.39	35.11	40.89	41.56
Intension to Work in the Coming Year				
Definitely Not to Work	68.77	72.20	62.15	60.37
Work if Right Job	26.32	22.85	32.90	35.33
Definitely to Work	4.91	4.95	4.95	4.30
Considerations by those intending to work if there is a right Job				
Childcare Arrangement	36.67	29.61	49.17	37.27
Working Conditions	30.90	33.23	25.58	34.84
Desired Work by those intending to work if there is a right Job				
Manager/Professional	7.31	3.88	9.49	21.12
Clerical	20.79	12.70	32.56	30.55
Sales/Service	17.27	18.96	15.31	13.51
Manual Worker	8.62	12.76	3.60	0.19
Desired Type of Working Time by those intending to work if there is a right Job				
Full-time, Fixed Schedule	25.37	25.12	28.34	16.58
Full-time, Flex Schedule	15.75	14.53	15.66	23.69
Part-time	36.16	37.41	33.54	37.42
Official Services Needed by those definitely to work				
Job Information	25.91	24.73	25.97	38.92
Employment Matching	17.74	17.80	19.67	8.71
Reemployment Training	22.76	20.75	24.68	37.00
No need	51.05	52.74	48.97	41.23

Source: Report on the 1998 Survey of Women's Employment Status. Taipei: Council of Labour Affairs.

Appendix Table 1. Wage Regression Function for Unpaid Family Workers

Explanatory Variable	Parameter Estimate	Standard Error	<i>t</i>	<i>p-value</i>
Constant Term	-8.6698	0.9586	-9.0	0.0001
Male	1.1173	0.0325	34.4	0.0001
Age	-0.1118	0.0072	-15.6	0.0001
Ln(Age)	4.1446	0.3200	13.0	0.0001
Single	-0.5054	0.0496	-10.2	0.0001
Divorced/Separated	-0.3245	0.0682	-4.8	0.0001
Junior High	0.1564	0.0353	4.4	0.0001
Senior High	0.2769	0.0367	7.6	0.0001
J College	0.3936	0.0661	6.0	0.0001
University+	0.7934	0.1029	7.7	0.0001
Secondary Industry	1.0468	0.3421	3.1	0.0001
Tertiary Industry	0.4986	0.3397	1.5	0.0001
Manager	2.0409	0.1790	11.4	0.0001
Professional	1.1964	0.1339	8.9	0.0001
Agricultural Worker	-1.1743	0.3409	-3.4	0.0001
Craft/Trade Worker	-0.3973	0.0523	-7.6	0.0001
Operator/Assembler	-0.1811	0.0452	-4.0	0.0001
Low Skilled	-0.6641	0.0674	-9.9	0.0001
Taipei City	0.3293	0.0465	7.1	0.0001
Taipei Prefecture	0.3089	0.0338	9.1	0.0001
Shinchu City	0.6010	0.1177	5.1	0.0001
Taichung City	0.5519	0.0651	8.5	0.0001
Kaohsiung City	0.4265	0.0602	7.1	0.0001

Appendix Table 2. Wage Regression Function for Housekeepers

Explanatory Variable	Parameter Estimate	Standard Error	<i>t</i>	<i>p-value</i>
Constant Term	-8.8919	0.1794	-49.6	0.0001
Male	1.2121	0.0091	133.2	0.0001
Age	-0.1164	0.0017	-70.0	0.0001
Ln(Age)	4.1611	0.0665	62.6	0.0001
Single	-0.5255	0.0125	-42.1	0.0001
Divorced/Separated	-0.3407	0.0440	-7.7	0.0001
Junior High	0.1129	0.0103	11.0	0.0001
Senior High	0.1870	0.0102	18.3	0.0001
J College	0.3103	0.0184	16.8	0.0001
University+	1.0034	0.0309	32.5	0.0001
Taipei City	0.2155	0.0135	15.9	0.0001
Taipei Prefecture	0.3212	0.0097	33.3	0.0001
Shinchu City	0.6611	0.0269	24.6	0.0001
Taichung City	0.5747	0.0163	35.2	0.0001
Tainan City	0.0744	0.0168	4.4	0.0001
Kaohsiung City	0.3064	0.0177	17.3	0.0001

Note: Compiled from the 1992-97 Human Resource Surveys of Taiwan, DGBAS.

Table 1. Structure of the Employed by Working Status, 1951-1999

Year	Total Number (1,000)	% Distribution by Working Status				
		Employer	Self- Employed	Unpaid Worker	Private Employee	Government Employee
<i><u>Female</u></i>						
1951	821	1.20	15.50	53.70	10.50	19.00
1960	963	1.10	12.60	50.50	24.70	11.30
1970	1,396	1.00	12.20	42.00	36.50	8.30
1980	2,191	1.30	10.90	21.40	56.30	10.60
1985	2,709	1.30	9.90	21.00	57.50	10.30
1990	3,108	1.50	9.00	17.60	61.20	10.80
1995	3,487	1.80	8.40	16.10	62.30	11.40
1996	3,560	1.80	8.51	15.90	61.94	11.85
1997	3,613	1.99	8.33	15.11	62.86	11.71
Feb.1999	3,732	1.74	8.33	14.90	63.77	11.25
<i><u>Male</u></i>						
1951	2,072	2.60	42.30	18.90	26.40	9.90
1960	2,510	2.50	38.20	17.50	26.70	15.10
1970	3,180	3.70	32.40	10.50	39.00	14.50
1980	4,357	6.00	25.50	5.30	49.70	13.40
1985	4,719	6.00	27.00	5.00	49.50	12.40
1990	5,175	6.80	24.40	3.80	52.90	12.00
1995	5,558	7.50	22.40	3.70	55.50	10.90
1996	5,508	7.64	22.42	3.50	55.45	10.98
1997	5,562	7.82	21.83	3.33	56.26	10.79
Feb.1999	5,606	7.74	22.03	3.23	57.26	9.74

Source: Yearbook of Manpower Survey Statistics , years cited.