

Chapter 2 Literature Review

Theories and empirical studies related to female labor force participation are reviewed in this chapter. Theories include work motivation theory, human capital theory, opportunity cost theory, theory of the allocation of time, family life cycle theory, additional worker effect, gender-role attitudes, and discouraged-worker effect. These theories explain the factors that influence female labor force participation. Empirical studies either reexamine the theories, or given detailed information drawn from practical cases.

Generally speaking, there are four main factors that influence female labor force participation. These four main factors are personal, family, social, and economic factors. Theories of work motivation, human capital, and opportunity cost cover the personal factors. Theories of the allocation of time and family life cycle explain the family factors. Theory of gender-role attitudes is used to incorporate the social factors. Furthermore, additional worker effect and discouraged-worker effect are to explain the economic factors.

2.1 Personal Factors

Personal factors are the factors that come from an individual labor, and influence female labor force participation. Personal factors include individual work motivation, human capital, and opportunity cost. As below, each has a theory and practical studies to explain and describe how the influence works on decision-making in respect of female labor force participation.

2.1.1 Work Motivation Theory

In general, work motivations are categorized into two; one is intrinsic work motivation, and the other is extrinsic work motivation. Intrinsic work motivation includes self-achievement, self-reliance, and satisfaction. It is the pleasure and value received by a person from work itself. Extrinsic work motivation includes payment, status, and praise. It is the value gained by a person from the work surroundings (Robbins, 1998).

Work motivation and individual preference are two key factors that influence women's decisions to be, or not to be, involved in the labor market. Work motivation and individual preference consist not only of satisfaction of achievement, but also the need to interact with the society, expectations about development of her own abilities and talent, and the wish to be economically independent. Therefore, employment motive of a female labor may comprise self-fulfillment and financial needs (Cotton, 1989).

Kao (1990) suggests that there is positive relation between achievement motivation and level of educational attainment, and highly educated females often have higher work motivation to participate in the labor market.

Also, females who are in higher job positions, such as the professionals, often have higher identification with employment. It is because most of their work motivation is coming from intrinsic motivation (Lu, 1982). After these females reenter the labor market, there are few interruptions (Desai and Waite, 1991).

2.1.2 Human Capital and Opportunity Cost Theory

Human capital theory was developed by American economists Gary Becker and Theodore Schultz.⁵ In early economic theories, labor is considered as one of the production factors, and is embodied as human capital. According to Becker's view

⁵ Gary Becker frequently applies economic theories to human behavior in his researches. His research contribution consists human capital, allocation of time in the family, crime and punishment, and discrimination on the markets for labor and goods.

(Becker, 1964), human capital is similar to “physical means of production”, such as factories and machines. Moreover, human capital can be enlarged via education, training, medical treatment. It postulates that expenditure on training and education is costly, and should be considered as an investment since it is undertaken with a view to increasing personal outputs and incomes.

As mentioned above, people who invest in human capital expect benefits such as higher future earnings. The cost of human capital investment consists of three components. The first one is direct costs, which is also called out-of-pocket costs. The second one is indirect costs, which is called as opportunity costs, such as foregone earnings during the period of learning or training. In economics, opportunity cost is the loss of potential gain from the best alternative to any choice. And, the third one is the physical losses.

Since there are costs and benefits, whether the investment should be undertaken or not is computed through the net present value method. The net present value method uses a market interest rate to discount the net earnings of the investment to its present value in order to compute the return on a human capital investment. If the net present value is positive, the investment should be considered and practiced (McConnell and Brue, 1995).

Moreover, a labor’s output partly depends on the rate of return on one’s human capital. That’s the reason why the human capital approach is often used to explain occupational wage differentials. Generally speaking, higher education represents more human capital, which also implies higher salary. A female labor who has higher salary will incur a higher opportunity cost by quitting her job. That is why a higher level of educational attainment is advantageous for (married) females to continue their work (Waite, 1976, 1980; Li, 1996).

Chien and Hsueh (1996) suggest that for university graduated females, the

probability to continually work is 66.8%, and the probability to never work is 5.5%. But for elementary school educated females, the possibility to continually work is 30.5%, and the possibility to never work is 16.2%. Li (1996) also indicates that higher educated females, after they quit a job, return after small periods of interruption.

Work experience includes accumulation of tenure and familiarity with work, which too implies human capital. Females who have more work experience before marriage are less likely to exit from the labor market after getting married (Waite, 1976, 1980). Females' salary not only indicates the direct cost of exiting from the labor market, but also represents a female's capability to pay for childcare. Females who earn higher salaries will have lower possibility of quitting after marriage or giving a birth (Waite, 1976, 1980).

The job position, as well as the salary, is also an indicator of human capital. Females who are in high job positions would be more keen to continue in their jobs and careers because it will be difficult for them to be back to the same position once they quit their jobs. Related researches also show that females who are in lower job positions actually tend to leave the labor market after marriage (Sorensen, 1983; Chien and Hsueh, 1996). Chien and Hsueh (1996) also found out that compared with those who work continually, females holding higher job positions avoid permanently quitting after giving birth to a child.

2.2 Family Factors

How the family factors affect female labor force participation could be tracked by the allocation of time in the household and the family life cycle. Female labor force participation varies with the pattern of allocation of time in the family. Also, different stages in the family life cycle bring different impacts to a female's job career.

2.2.1 Theory of the Allocation of Time

Becker's theory of allocation of time regards households as a small factory which produces basic goods. Allocation of time involves dividing time between work, household production, and household consumption, in order to maximize its utility.

As a small factory producing basic goods, a household have to pay two kinds of cost. One is the direct cost of buying semi-manufactured goods on the market. The second is the time expenditure, which equals to wages multiplied by the time that has been spent on goods produced in the household.

The Becker income effect suggests that a rise in the wage rate raises income; after all, the household can purchase more goods. Then, the hours of work decrease because it takes more time to consume the goods. The Becker substitution effect considers that after a rise in the wage rate, the households substitute goods for time in production of commodities. Also, households replace goods-intensive commodities for time-intensive commodities in consumption. In the end, households increase hours of work (McConnell and Brue, 1995).

The income and substitution effects indicate that when wage of one member of the household increases; it not only changes the incentive to work but also the household production and consumption. In other words, it means that distribution of work and allocation of time within the household will be modified.

Becker considers that labor is released from the household, with capital substituting labor in housework. Therefore, it is less economical to ask one member of the family to be totally specialized in household production, such as child care by the wife. He thought that these processes would explain the increase of married females' job participation.

2.2.2 Family Life Cycle Theory

The concept of family life cycle originated from Lommis and Hamilton (1936). The family life cycle comprises formation, development, augmentation, and decline. In more practical words, the family life cycle may start with the marriage of a new couple, and then goes under the process of giving a birth, children's growth, till one of the couple passes away. Glick (1947) first divided the family life cycle into: marriage, giving birth to the first child, giving birth to the last child, the first child getting married, the last child getting married, one of the couples passes away, and the other one too passes away (Liu, 2002). Not only the family has to face new challenges in each stage, but also the family members have different interactions in each period.

The connection between female labor force participation and life cycle development is embodied by the decision of working or not working in each stage of family life cycle. In general, a female, who has preschool-age children, has to spend more time on taking care of her little children. Without others' help, most of these mothers might quit their jobs, and then stay at home to care for their little kids. Later, when their children grow up, they would want to participate in the labor market again. Chang (1980) points out that child care is usually the main reason for female labors to quit their jobs. If there are relatives who can take care of children, females will remain in the labor market, instead of quitting.

Li and Yang (2004) find that while increase of human capital and economic growth enhances female labor force participation, the responsibility of caring for families appears a negative influence. In general, compared to job or career, the family is still the most important concern for married females. It is necessary for a female to go to work before the establishment of a new family, but her job or career could be temporarily or permanently given up after getting married.

Moreover, the decision to stay or withdraw from the labor market for childbearing and child care has substantial implications for a female's later life. Females who elect to

stay at home rather than work, in the early stages of family life cycle, such as marriage and child rearing, are much less likely to work in the later stages of their lives. Otherwise, these females tend to command lower wages than females who continuously stay in the labor market (Mincer and Polachek, 1974).

Kao (1990) suggests that in general, females' careers are often interrupted because of a child birth or other family factors. Also, the working period in the whole life of a female is shorter than a male. If a female expects her career to be interrupted, she will invest less in her human capital. Moreover, expectations also influence female labor force participation. That is, women will choose occupations which are less challengeable and need lower skills.

2.3 Social Factors

The social factors come from acceptable social values and practices pertaining to female labor force participation. If a society views female labor force participation negatively, then there will be fewer females participating in the labor market. On the other hand, female labor force participation will be higher if the society expects and encourages females to pursue their careers. In this section, the theory of gender-role attitudes is applied to explain the connection between social values and labor force participation of females.

Theory of Gender-role Attitudes

Under a certain kind of social and cultural circumstances, gender role attitude is the common people's cognition of the role of a male or a female. And, it is the attitude that an individual has about his or her gender role (Chang, 1992). Lo (2000) suggests that gender role attitudes are the attitudes toward generally accepted behaviors of a male or a female. They are the viewpoints, feelings, and evaluations to the gender role of a male or a female that evolve from the society and its culture.

Through gender-role attitudes, different roles required to be played in the economy and the society are divided by gender, according to individuals' cognition. Because of gender difference, males and females are expected to take on different responsibilities and have varied rights (Bielby, 1991). Traditional gender-role attitudes have separated males and females in terms of two areas of activities: males should participate in the labor market and females belong to the household. It assumes that females were born to belong to the household and to be good at housework. Even if a female participates in the labor market, she is thought to have temporary work career but have permanent job of housekeeping (Liu, 1992). On the other hand, modern gender-role attitudes suggest males and females have equal opportunities to pursue careers, and have the same responsibilities of household tasks (Yi and Kao, 1986).

Recognition and expectation of gender-role influence females' intentions and behavior toward labor force participation (Lu, 1993). Educational attainment is an important indicator to measure gender-role attitudes of females. In general, higher educated females have more modern gender-role attitudes (Lu, 1981; Yi, 1987; Tang and Tsang, 1990). Females who have more modern gender-role attitudes have higher identification with jobs and careers, and, there is more possibility for them to work at each stage of family life cycle.

Compared with senior females, young females have more progressive gender-role attitudes (Lu, 1981). Young females not only identify more with continuous employment, but also are more inclined towards uninterrupted careers (Dai, 1978; Lu, 1981).

The level of educational attainment of a female's parents and work experience of a female's mother represent different degrees of socialization and role demonstration. Working experience of a female's mother is especially an important variable to explain female labor force participation (Chen, 1992). The possibility of continuous

employment for married females is enhanced by 15% if the mother has worked for more than 1 year. Meanwhile, the probability that these females have never worked decreases by 11% (Chien and Hsueh, 1996).

Moreover, the level of educational attainment of a female's husband could also be influential. Highly educated husbands tend to support their wives to participate in the labor market, because they have more modern gender-role attitudes. Usually, wives of those highly educated husbands have more possibilities to work without interruption (Sorensen, 1993).

2.4 Economic Factors

The economic factors involve the macro economy surrounding females. How the economic factors affect females participating in the labor market is presented by the additional worker effect and the discouraged-worker effect. The additional worker effect, caused by shortage of family income, induces increase of labor supply. Discouraged-worker effect, on the contrary to the additional worker effect, presents decrease of (female) labor supply.

2.4.1 Additional Worker Effect

Additional worker effect takes place when a family's primary breadwinner loses his or her job and in order to maintain the family's income, other family members participate in the labor market (McConnell and Brue, 1995). In other words, it means unemployment of a household member will lead to another household member's participation in labor supply.

Ehrenberg and Smith (1997) have presented an example to explain the additional worker effect. In a traditional family, the husband is the main breadwinner, and is responsible for performing the market work. The wife is employed full-time at home.

As a recession results in the husband becoming unemployed, his wife may substitute for him and participate in market work in order to sustain the family's economic status. As long as the recession lasts, the husband might remain an unemployed worker awaiting recall, though he is still a member of the labor force. Since the wife starts to seek a job or to work, she has become an added member of the labor force.

According to the additional worker effect, the main reason for a female to participate in the labor market is using her salary/wage to make up the shortfall in family income. Mincer (1962) applied Friedman's (1957) "permanent income hypothesis" to explain the relation between female labor force participation and the husband's income. In permanent income hypothesis, household consumption is only influenced by longer-term income; it is not related to current income.⁶ So, when the husband's income decreases temporarily and the family is facing shortage of money, the wife will join the labor market in order to enhance the total income.

A family's economic situation often reflects the demand for extra income. At the same time, it also affects the wife's decision to work or not to work after giving a birth. Waite (1976, 1980) concluded from her research that the husband's yearly income has the most significant influence on the wife's intention toward work, or the decision to quit after giving birth to the first child. However, Young (1978) and McLaughlin (1982) suggested that only the interruption period is impacted by the family's economic situation. This indicates that when a wife is under heavier pressure because of the family's economic condition, she will go back to the labor market as soon as possible after giving a birth.

Kao and Chen (1994) applied time-series data to test the causal relation between

⁶ The main conclusion of this hypothesis is that transitory changes in income do not affect long run consumer's consuming behavior.

unemployment rate and female labor force participation. They found there exists a positive correlation between unemployment rate and labor force participation rate of females. In other words, increase in unemployment rate will draw some more females to enter the labor market, and cause the appearance of the additional worker effect.

Chu (2002) analyses statistics of Taiwan, and suggests that additional worker effect exists, except at the stage of low unemployment rate in the long-run. In the short-run, wives who are not part of labor force originally will change their decision of labor supply when unemployment rate is about 2% to 3%. The probability of these wives joining the labor market increases by 4.6 percentage points. In the long-run, it is more possible for them to enter the labor market when unemployment rate is speedily increasing.

2.4.2 Discouraged-worker Effect

In economics, a discouraged worker is a person of legally employable age, is able to work, who is now unemployed, and who has not attempted to seek employment in the last four weeks. Generally speaking, a discouraged worker has given up looking for a job because he or she was unable to find a suitable job in the labor market, or the worker applied for jobs but met with no success. The discouraged worker effect often occurs when the economy is under recession.

In recession, an excess of labor supply over demand results in a fall in real wages, and a decrease of the probability to have a job. Thus, the expected wage of the unemployed workers declines and unemployed workers often think the expected pay-off or wage is not worth the effort to look for a job. Also, they find it more difficult to apply for jobs successfully. Therefore, these people find it more acceptable and more productive to spend hours at home, rather than to spend time on searching a job. Because these unemployed workers would become discouraged to look for employment

or to look forward to be reemployed during the recessionary periods, they will tend to withdraw from the labor market (McConnell and Brue, 1995).

While the discouraged worker effect is supposed to work against the additional worker effect, most empirical studies infer that the discouraged-worker effect dominates, causing a decrease of labor force participation and an increase of unemployment rate in a recession (McConnell and Brue, 1995).

Empirical studies suggest that the labor market is more attractive to females when the economy is more prosperous or when the service industry is more developed. On the contrary, when the economy is in recession, females have fewer incentives to participate in the labor market or to continue their work. Female labor force participation rate decreases, and the discouraged-worker effect appears then (Waite, 1980; Kao and Chen, 1994).

Hsu and Hwang (2000) used the statistics of persons who want to work but have not looked for jobs, as they are discouraged workers. They observed that compared with the period of 1990 to 1994, the number of females who want to work but have not looked for work increased in the period from 1995 to 1999. The economy was more recessionary from 1995 to 1999. This implies that female labor force participation is much influenced by the economy. They also found that the discouraged-worker effect obviously existed in Taiwan, except in areas such as Taipei city and Kaohsiung city.

2.5 Summary

The work motivation theory stresses that work satisfaction, self-achievement, and economic considerations would draw female labors into labor market. Females who have high work motivation will have more inclination to work and to be in the labor market.

As human capital theory has mentioned, educational attainment, on-the-job training, and health are the three elements of human capital. Females who are highly educated or have more working experience are the ones with more human capital. And, females with more human capital have to pay higher opportunity cost when they choose not to participate in the labor market.

The family life cycle theory mentions that family life cycle will largely determine married females' intention whether to participate in the labor market. Females are affected by each stage of family life cycle. For example, they would choose to quit after getting married or giving a birth. Some females would not participate in the labor market once they have retired or quit. Some of them would consider coming back to the labor market when their children have grown up.

In traditional gender-role attitudes, the division of a male and a female labor is that a female is responsible for the family caring and household work. If the society supports the traditional gender-role attitudes more, females are less inclined to participate in the labor market. If the society or the individuals have more modern gender-role attitudes, males and females have similar household responsibilities. Then, females will have the same right to develop their careers as males.

Additional worker effect suggests that a family member who is not in the labor force before will decide to seek a job and join the labor market, when another family member is unemployed. Generally, the additional worker effect means that a non-labor-force female will become an additional worker, in order to maintain the family's income while her husband is unemployed because the economy is in recession.

Discouraged-worker effect means that a discouraged worker gives up looking for a job because he or she finds it difficult to get a job. Usually, the discouraged-worker effect happens in recession, and females are obviously influenced by this effect.